



**Modernization Program**  
Peninsula Corridor Electrification Project (PCEP)



# May 2017

# Monthly Progress Report

May 31, 2017



## Funding Partners



Federal Transit Administration (FTA) Core Capacity  
FTA Section 5307 (Environmental / Pre Development only)  
FTA Section 5307 (EMU only)



Prop 1B (Public Transportation Modernization & Improvement Account)  
Caltrain Low Carbon Transit Operations Cap and Trade



Proposition 1A  
California High Speed Rail Authority (CHSRA) Cap and Trade



Carl Moyer Fund



Bridge Tolls (Funds Regional Measure (RM) 1/RM2)



San Francisco County Transportation Authority (SFCTA)/San Francisco Municipal Transportation Agency (SFMTA)



San Mateo County Transportation Authority (SMCTA) Contribution  
SMCTA Measure A



Santa Clara Valley Transportation Authority (VTA) Measure A  
VTA Contribution



San Francisco Contribution

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**Table of Contents**

	<b>Page</b>
<b>1.0 BACKGROUND .....</b>	<b>1-1</b>
<b>2.0 EXECUTIVE SUMMARY .....</b>	<b>2-1</b>
2.1 Funding Partners Participation in PCEP .....	2-2
2.2 Schedule .....	2-4
2.3 Budget .....	2-5
2.4 Board Actions .....	2-6
2.5 Government and Community Affairs .....	2-6
<b>3.0 ELECTRIFICATION – INFRASTRUCTURE .....</b>	<b>3-1</b>
3.1 Electrification .....	3-1
3.2 Supervisory Control and Data Acquisition (SCADA) .....	3-2
3.3 Tunnel Modification .....	3-3
<b>4.0 ELECTRIC MULTIPLE UNITS .....</b>	<b>4-1</b>
4.1 Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications .....	4-1
<b>5.0 SAFETY .....</b>	<b>5-1</b>
<b>6.0 QUALITY ASSURANCE .....</b>	<b>6-1</b>
<b>7.0 SCHEDULE .....</b>	<b>7-1</b>
<b>8.0 BUDGET AND EXPENDITURES .....</b>	<b>8-1</b>
<b>9.0 CHANGE MANAGEMENT .....</b>	<b>9-1</b>
<b>10.0 FUNDING .....</b>	<b>10-1</b>
<b>11.0 RISK MANAGEMENT .....</b>	<b>11-1</b>
<b>12.0 ENVIRONMENTAL .....</b>	<b>12-1</b>
12.1 Permits .....	12-1
11.2 Mitigation Monitoring and Reporting Program (MMRP) .....	12-1
<b>13.0 UTILITY RELOCATION .....</b>	<b>13-1</b>
<b>14.0 REAL ESTATE .....</b>	<b>14-1</b>
<b>15.0 THIRD PARTY AGREEMENTS .....</b>	<b>15-1</b>
<b>16.0 GOVERNMENT AND COMMUNITY AFFAIRS .....</b>	<b>16-1</b>

<b>17.0</b>	<b>DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION AND LABOR STATISTICS</b> .....	<b>17-1</b>
<b>18.0</b>	<b>PROCUREMENT</b> .....	<b>18-1</b>
<b>19.0</b>	<b>TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS</b> .....	<b>19-1</b>

**List of Tables**

	<b>Page</b>
Table 2-1 Schedule Status .....	2-5
Table 2-2 Budget and Expenditure Status.....	2-5
Table 6-1 Quality Assurance Audit Summary .....	6-1
Table 7-1 Schedule Status .....	7-2
Table 7-2 Critical Path Summary .....	7-2
Table 7-3 Near-Term, Near-Critical with Less Than Three Months of Float.....	7-3
Table 8-1 Electrification Budget & Expenditure Status .....	8-1
Table 8-2 EMU Budget & Expenditure Status .....	8-2
Table 8-3 PCEP Budget & Expenditure Status.....	8-2
Table 11-1 Monthly Status of Risks.....	11-2
Table 11-2 Risk Classification .....	11-3
Table 14-1 Real Estate Acquisition Overview.....	14-1
Table 15-1 Third-Party Agreement Status .....	15-1

**List of Figures**

	<b>Page</b>
Figure 2-1 PCEP Work Segments.....	2-1
Figure 10-1 Funding Plan.....	10-1

**List of Appendices**

	<b>Page</b>
Appendix A – Acronyms.....	A-1
Appendix B – Funding Partner Meetings.....	B-1
Appendix C – Schedule.....	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 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 the San Francisco Station (at the intersection of Fourth and King Streets in San Francisco) and the Tamien Station in San Jose. Caltrain will continue Gilroy service and support existing tenants.

An electrified Caltrain will better address Peninsula commuters' vision of environmentally friendly, 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:

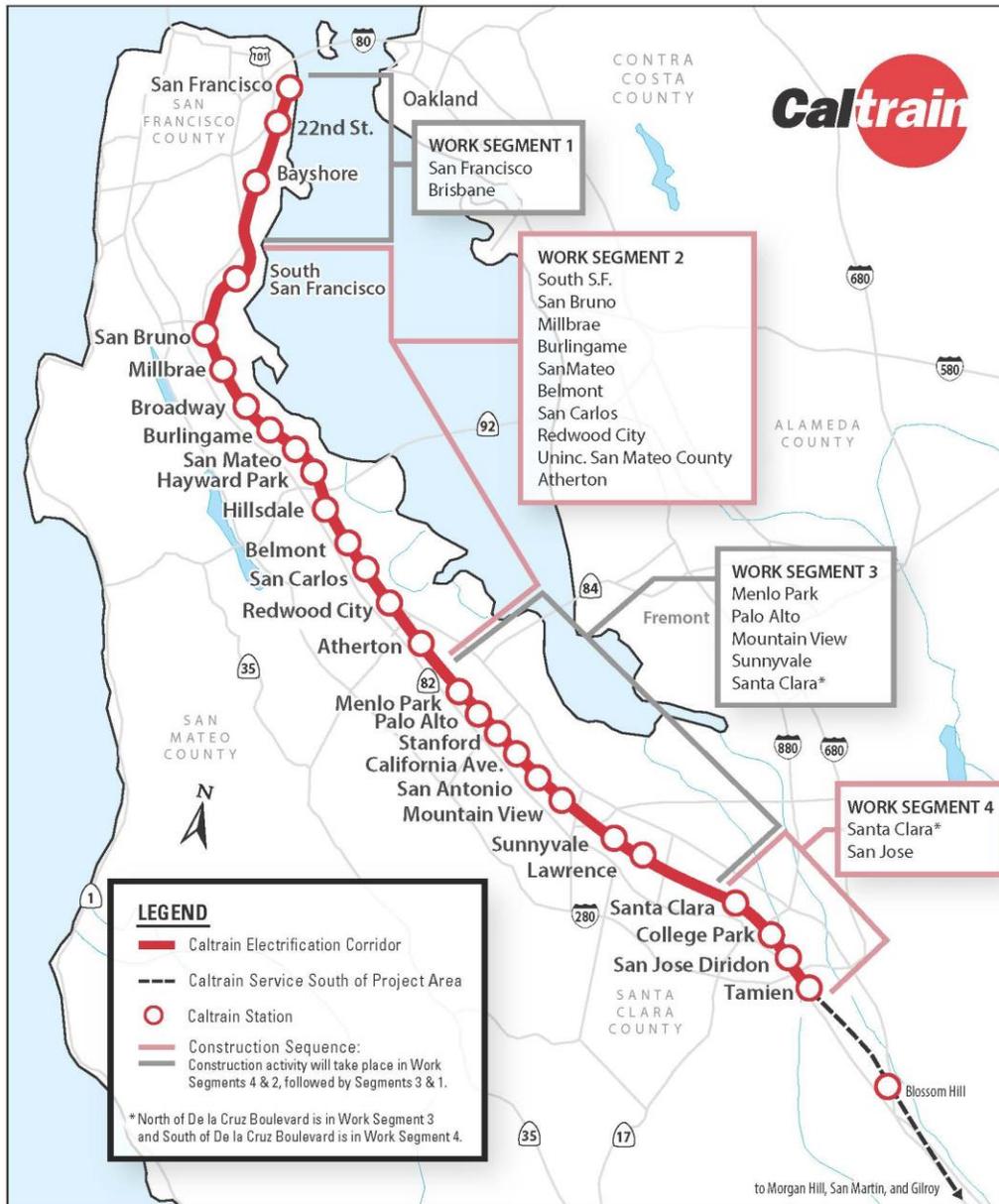
- **Improved Train Performance, Increased Ridership Capacity and Increased Service:** Electrified trains can accelerate and decelerate more quickly than diesel-powered trains, allowing Caltrain to run more efficiently. In addition, because of their performance advantages, electrified trains will enable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

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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. Work along the Caltrain Electrification Corridor has been divided into four work segments as shown in Figure 2-1. PCEP activities are described and summarized by work segments.

**Figure 2-1 PCEP Work Segments**



The Federal Transit Administration (FTA) and Peninsula Corridor Joint Powers Board (JPB) completed all administrative and statutory requirements for the Full Funding Grant Agreement (FFGA) of \$647 million in Core Capacity. On February 17, the JPB was informed by the FTA that a decision was made to defer execution of the pending \$647 million FFGA for the PCEP until the Administration developed the President's Fiscal Year (FY) 2018 Budget (anticipated in mid-June). In light of this news, the existing Limited Notice to Proceed (LNTP) with Balfour Beatty Infrastructure, Inc. (BBII) for the Electrification Project and Stadler for the EMU vehicles was extended to June 30, 2017.

On May 23, 2017, the FTA signed the FFGA in preparation for releasing the FY2017 funds appropriated in the recently enacted 2017 Consolidated Omnibus Appropriations Bill. In addition to the \$1.3 billion already secured from local, regional and state commitments, the FFGA commits the final funding needed to start construction of PCEP. The Notices to Proceed (NTP) for both contracts are expected to be issued in June.

The PCEP team continues work with BBII on the Overhead Contact System (OCS) design. The 65% OCS layout design for Segment 2 work areas 5 and 4 were returned to BBII for advancement to 95%. BBII continued pothole location layouts in Segment 2 Work Area 3 and continued preparation of test results from geotechnical borings, which are reviewed by the PCEP team as they are made available. The PCEP team reviewed plans for the inspection of existing signal cables, which will be inspected for compatibility with the future electrified railroad.

Stadler continued to progress numerous management submittals, including the Master Program Schedule (MPS), an updated Contract Deliverables Requirement List (CDRL), and an updated System Safety and Quality Assurance Plan. The PCEP team is currently reviewing these submittals and working with Stadler to finalize these deliverables in June. Electric Multiple Unit (EMU) design coordination continues with Conceptual Design at approximately 90% complete. The PCEP team continues to address system-wide interface issues involving the emerging EMU design and the existing wayside infrastructure, the Electrification Project, and the Communications-Based Overlay Signal System (CBOSS) Project.

## **2.1 Funding Partners Participation in PCEP**

The PCEP has a series of weekly, biweekly, monthly and quarterly meetings to coordinate all aspects of the program. The meetings are attended by project staff with participation by our funding partners in accordance with the Funding Partners Oversight Protocol. A summary of funding partner meetings and invitees can be found in Appendix B.

This section of the report provides a summary of the discussions and decisions made at the meetings and a list of funding partners who attended the meetings.

### **Electrification – Engineering Meeting – Weekly**

Purpose: To discuss status, resolution and tracking of BBII and Electrification design-related issues, to discuss and monitor the progress of utility relocation compared to schedule, and to discuss third-party coordination activities with Pacific Gas and Electric (PG&E), CHSRA, Union Pacific Railroad (UPRR), Bay Area Rapid Transit (BART), California State Department of Transportation (Caltrans), CBOSS and others.

Activity this Month

Funding Partners: CHSRA - Ian Ferrier

Major topics included: PG&E Interconnection Status and Power Quality Study, utility relocation, CBOSS interface, CHSRA interface, tunnel modifications and Request for Information (RFI) status, and the significant progress being made on UPRR review of the OCS design.

**PCEP Delivery Coordination Meeting – Bi-Weekly**

Purpose: To facilitate high-level coordination and information sharing between cross-functional groups regarding the status of the work for which they are responsible.

Activity this Month

Funding Partners: May 9: SFCTA - Luis Zurinaga and CHSRA - Ian Ferrier

May 23: No meeting

Major topics included: Preparations for the construction phase of the BBII contract, reports on the status of other JPB capital projects that interface with the PCEP, outreach initiatives involving design of the EMUs, and tools for data management that are now live.

**Systems Integration Meeting – Bi-Weekly**

Purpose: To discuss and resolve issues with inter-system interfaces and to identify and address interface points which have yet to be addressed.

Activity this Month

Funding Partners: May 10 and May 24: CHSRA - Ian Ferrier attended with Wai-on Siu by teleconference

Major topics included: An update on progress of CBOSS/Positive Train Control (PTC) integration, the Balfour Beatty Interim Systems Integration plan, the use of software for all the PCEP Systems Integration interfaces, and review of the Systems Integration action items. Thirteen System Integration action items were closed.

**Master Program Schedule (MPS) Meeting – Monthly**

Purpose: To review the status of the MPS and discuss the status of major milestones, critical and near critical paths, upcoming Board review items, and progress with the contracts, among others.

Activity this Month

Funding Partners: SFCTA, CHSRA, and VTA

Due to the schedule freeze there were no significant updates from the previous month, so no May meeting was held.

**Risk Assessment Meeting – Monthly**

Purpose: To identify risks and corresponding mitigation measures. For each risk on the risk register, mitigation measures have been identified and are being implemented. Progress in mitigating these risks is confirmed at the monthly risk assessment meetings.

Activity this Month

Funding Partners: SFCTA, CHSRA, and VTA

The May Risk Assessment Committee meeting was not held because the updates from the previous meeting did not significantly change.

**Change Management Board (CMB) – Monthly**

Purpose: To review, evaluate, and authorize proposed changes to PCEP.

Activity this Month

Funding Partners: SFCTA, CHSRA, and VTA

The CMB kick-off meeting was on April 26 and was focused on the functionality of the CMB and how review and voting on potential changes would occur. Due to scheduling conflicts, the May 31 meeting was postponed until June 7.

**2.2 Schedule**

The Revenue Service Date (RSD) in the 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.

Due to delays in federal funding the MPS was frozen in February. With receipt of the FFGA in May 2017 the overall schedule is now being re-evaluated, and a revised baseline will be established in the coming months.

**Table 2-1 Schedule Status**

Milestones <sup>1,2</sup>	Program Plan	February <sup>3</sup>	May <sup>4</sup>
Receipt of FFGA	12/15/2016	mid-June	05/23/2017
Notice to Proceed (NTP) to Electrification DB Contractor	N/A	TBD	June 2017
NTP to EMU Manufacturer	N/A	TBD	June 2017
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
First Eight Miles of Electrification Complete to Begin Testing	04/08/2019	10/08/2019	10/08/2019
Delivery of First 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:

- <sup>1</sup> 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 DB and EMU contractors, changes to milestones will be thoroughly vetted prior to reflecting those changes in the Monthly Report.
- <sup>2</sup> Program Plan only considered a Notice to Proceed (NTP). It did not account for an LNTP and Full NTP.
- <sup>3</sup> February represents the last month the MPS was updated prior to the schedule freeze.
- <sup>4</sup> There was no formal update of the MPS in May; however, this table has been revised to reflect known or expected updates to FFGA and Contractor NTPs.

### 2.3 Budget

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**

Description of Work	Budget (A)	Cost This Month (B) <sup>1</sup>	Cost To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,316,125,208	\$ 9,660,597	\$ 184,603,546	\$ 1,131,521,662	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$ 624,062	\$ 34,115,449	\$ 630,011,876	\$ 664,127,325
<b>PCEP TOTAL</b>	<b>\$ 1,980,252,533</b>	<b>\$ 10,284,660</b>	<b>\$ 218,718,994</b>	<b>\$ 1,761,533,538</b>	<b>\$ 1,980,252,533</b>

Notes regarding tables above:

- <sup>1</sup> Column B "Cost This Month" represents the cost of work performed this month.
- <sup>2</sup> Column C "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

## **2.4 Board Actions**

There were no actions related to the PCEP at the May 4 JPB board meeting.

Future anticipated board actions include:

- June
  - JPB Capital Budget adoption [Finance]
  - PCEP budget adoption [Finance]\*
- July
  - Real estate closed session – Segments 1 and 3 acquisitions [Real Estate]\*
  - *Resolution of Necessity (RON) – Segment 2 parcels by San Mateo County Transit District (SamTrans)\**
  - Approval to execute PG&E Supplemental Agreement #3: Final Design [Engineering]\*
- August
  - Award of Supervisory Control and Data Acquisition (SCADA) sole source [Project Delivery]\*
  - Quarterly Update presentation to board (in support of Executive Director's report) [Program Management]
- To Be Scheduled
  - *RON – Segment 4 parcels by VTA\**
  - Approval to execute PG&E Supplemental Agreement #4: Construction [Engineering]\*
  - Authority to procure used electric locomotives [Project Delivery]\*
  - Ambassador Request for Proposal award [External Affairs]\*

\*Dependent on FTA issuance of FFGA.

*Italics indicate board/council approvals by other agencies.*

## **2.5 Government and Community Affairs**

A number of community relations and outreach events took place during the month of May. PCEP team participated in a total of 12 meetings with stakeholders.

### **3.0 ELECTRIFICATION – INFRASTRUCTURE**

This section reports on the progress of the Electrification, 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 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, and seven paralleling stations (PS). Electrification will be performed using a DB delivery method.

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

- The PCEP team continued to work with the DB contract on the OCS design. 65% OCS layouts for Segment 2 work areas 5 and 4 were returned to the contractors for advancement into 95%. The team also reviewed and provided comments for 65% OCS layouts for Segment 4, work areas A and B.
- The PCEP team continued to review and coordinate signal and communication design submittals with BBII. Signal drawings were presented to UPRR, a freight operator on the Caltrain corridor, for review and comment as well. The PCEP team and the DB contractors attended a joint technical working session with UPRR.
- BBII continued pothole location layouts in Segment 2 Work Area 3.
- BBII continued preparation of test results from geotechnical borings. The results are reviewed by the PCEP team as they're made available. Spoils from geotechnical borings are being removed from the right of way (ROW).
- Potholing of utilities at proposed OCS locations continued in Segment 4 work areas A and B and Segment 2 Work Area 3. Results from potholing are used for design purposes in the 65% design submittals.
- Potholing of existing signal cables for signal design and construction continued in all segments.
- The PCEP team reviewed plans submitted by BBII for upcoming inspection of the existing signal cables. Existing signal cables will be inspected for compatibility with the future electrified railroad.
- Coordination efforts with PG&E continued for infrastructure improvements and TPS interconnects. The PCEP team continues to work with PG&E for the finalization of Protection Scheme Studies. PCEP has engaged a PG&E-recommended firm to complete the final study required for the final design of PG&E's infrastructure improvements.

- BBII continued selection process for PG&E preferred teams for the interconnection with PG&E at both TPSs. A recommendation of sub-contractor has been provided to the PCEP team and the subcontract will be executed in June. The design of the interconnection is currently an allowance within the BBII DB contract, with construction being a change order.

**Activity Next Month**

- Continue to work with BBII on design and field investigation activities. The designs will include the continued progression of the OCS and Signal systems and other civil infrastructures such as overhead bridge protections.
- Continue potholing activities at proposed OCS locations. Potholing will continue in Segment 2 Work Area 3 and will move into Segment 2 work areas 2 and 1 as BBII advances the OCS design at specific locations.
- Begin to clear out existing obstructions found during the potholing activities in preparation of upcoming foundation installations.
- Continue potholing of signal cables in all segments in support of signal system design.
- Continue inspection of signal cables in support of signal system design.
- Review BBII work plans for upcoming construction activities.
- Coordination efforts will continue with PG&E on interconnection design and final design for PG&E infrastructure. The PCEP and BBII teams will continue design and coordination of the 115 kV interconnections between PG&E and Caltrain's future substations. Coordination meetings continue to be held every two weeks.
- Begin design reviews and coordination with local jurisdictions for 65% OCS design in Segment 2 work areas 5 and 4 and Segment 4. The jurisdictions will include South San Francisco, San Bruno, Millbrae, Burlingame, Santa Clara and San Jose.

**3.2 Supervisory Control and Data Acquisition (SCADA)**

SCADA is a system that monitors and controls field devices for electrification, including substations, PSs and sectionalization. SCADA will be integrated with the base operating system for Caltrain Operations and Control, which is the Rail Operations Center System.

**Activity This Month**

- The PCEP team received SCADA proposal from Rockwell Collins and are in the process of reviewing the proposal.

**Activity Next Month**

- Begin negotiations for the SCADA contract.

### **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 has requested the PCEP team 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 DB contractor's efforts in Segment 1.

#### **Activity This Month**

- The PCEP team continued coordination efforts with the design team on drawings and specifications on Tunnel 1 and Tunnel 4 Drainage Rehab Project.
- PCEP team continued coordination efforts with UPRR and other stakeholders. 95% design drawings have been provided to the UPRR for review.

#### **Activity Next Month**

- PCEP staff will meet with Caltrain internal stakeholders to review and resolve comments on 95% design drawings and specifications.
- PCEP staff will conduct a constructability review with Caltrain internal stakeholders.
- PCEP staff will continue design for 100% Plans and Specifications.

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#### **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 fixed trainsets. Power will be obtained from the OCS via roof-mounted pantographs, which will power the electric 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 continued to progress numerous management submittals, including the MPS, an updated CDRL, and an updated System Safety and Quality Assurance Plan. The PCEP team is currently reviewing these submittals and working with Stadler to finalize these deliverables in June 2017.
- EMU design coordination discussions were held with representatives from Caltrain Operation and Maintenance, Caltrain Outreach, the FRA, Safety and Quality Assurance personnel, Electrification, and Program Scheduling.
- Conceptual Design Reviews continue with an emphasis on closing related design review items. Conceptual Design is approximately 90% complete.
- The PCEP team continues to address system-wide interface issues involving the emerging EMU design and the existing wayside infrastructure, the Electrification Project, and the CBOSS Project.

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

- A PCEP team member will be visiting Stadler's final assembly facility in early June.
- Closeout of Conceptual Design Review open items will continue.

#### **4.1 Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications**

The CEMOF Modifications project will provide safe work areas for performing maintenance on the new EMUs.

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

- There were no related activities this month.

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

- Complete conceptual design options for CEMOF modification requirements.

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## **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 to review and plan 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**

- Safety staff continued to review BBII and Stadler's safety and security contract documentation deliverables to ensure they meet PCEP requirements. Safety staff has been facilitating meetings with BBII and Stadler to advance project safety and security program implementation.
- Revisions to the Safety and Security Management Plan (SSMP) were made and the SSMP was submitted to the Project Management Oversight Contractor for review.
- SFMTA provided letter to PCEP confirming that they will not be running overhead wire across the 16<sup>th</sup> Street grade crossing.
- Performed night inspections of potholing and utility location work being performed by BBII.
- Received 65% Safety and Certification Design checklists for OCS and TPSs.

### **Activity Next Month**

- Monthly meeting for the Safety and Security Certification Review Committee (SSCRC) (2<sup>nd</sup> Wednesday of the month) will be held for the development and review of certifiable elements including critical safety items for all aspects of the project.
- Monthly meeting for the Fire/Life Safety and Security Committee (4<sup>th</sup> Wednesday of the month) will be held to discuss access points along the ROW for emergency responders.
- Site visits to BBII subcontractor work areas for potholing operations are planned.

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**6.0 QUALITY ASSURANCE**

The Quality Assurance (QA) staff performs technical reviews 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 Stadler’s and BBII’s Quality Management Plan (QMP), which includes a Design Quality Plan (DQP), is now closed and the document has been approved.
- Staff meetings with BBII QA/Quality Control (QC) management representatives continue bi-weekly.
- An audit of BBII’s second-tier subcontractor’s soils laboratory, Cooper Testing Lab, was conducted with no findings.
- An audit of BBII Document Control was conducted with three findings.
- An audit of the BBII QC laboratory, Inspection Services Inc., was conducted with four findings.

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
Audits Conducted	3	26
<b>Audit Findings</b>		
Audit Findings Issued	7	23
Audit Findings Open	7	7
Audit Findings Closed	0	16
<b>Non-Conformances</b>		
Non-Conformances Issued	0	4
Non-Conformances Open	0	0
Non-Conformances Closed	0	4

**Activity Next Month**

- Two audits are planned and scheduled: BBII/PGH Wong 95% OCS structures and PGH Wong/Alstom Design Control.
- Regularly scheduled design reviews and surveillances will begin on project design packages and will continue through the late summer.
- Request for Proposal (RFP) for the PCEP Quality Assurance Laboratory is being finalized and will be going out for bid shortly.

## **7.0 SCHEDULE**

The MPS has been frozen as of the end of February 2017. The freeze of the schedule was due to delays to federal funding (FFGA), which resulted in delays in issuing NTPs to the Electrification DB contractor and EMU manufacturer. These delays extend to additional program elements as well. With receipt of the FFGA in May 2017 the effects of the delays are now being evaluated. In the coming months a revised baseline will be established and reporting on the MPS will resume. While the effect of these delays is being evaluated there will be no formal update to the MPS.

As indicated in Table 7-1, the RSD, which is the date in which the project is deemed completed, remains unchanged in the MPS. 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. 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 last update prior to the schedule freeze (February 2017) and the current informal schedule update (May 2017) to capture any potential changes in the schedule. A complete summary schedule, reflective of the last formal update (February 2017) can be found in Appendix C.

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**

As the FFGA has now been received the MPS is under review for evaluation of variances. Once this review is complete and a revised program baseline is established, variances will be reported against the revised baseline.

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report**

**Table 7-1 Schedule Status**

Milestones <sup>1,2</sup>	Program Plan	February <sup>3</sup>	May <sup>4</sup>
Receipt of FFGA	12/15/2016	mid-June	05/23/2017
NTP to Electrification DB Contractor	N/A	TBD	June 2017
NTP to EMU Manufacturer	N/A	TBD	June 2017
Start of Electrification Major Construction	03/20/2017	07/24/2017	07/24/2017
First Eight Miles of Electrification Complete to Begin Testing	04/08/2019	10/08/2019	10/08/2019
Delivery of First 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:

<sup>1</sup> 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 DB and EMU contractors, changes to milestones will be thoroughly vetted prior to reflecting those changes in the Monthly Report.

<sup>2</sup> Program Plan only considered an NTP. It did not account for an LNTP and Full NTP.

<sup>3</sup> February represents the last month the MPS was updated prior to the schedule freeze.

<sup>4</sup> There was no formal update of the MPS in May; however, this table has been revised to reflect known or expected updates to FFGA and Contractor NTPs.

**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 Car Shell to Assembly Facility	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 <sup>1</sup>	08/31/2020	08/31/2020
Vehicle Manufacturing & Assembly to Provide First Five Trainsets	11/13/2017	09/09/2020
Pre-Revenue Operations	09/22/2020	12/10/2020
Potential Limited Service <sup>1</sup>	12/31/2020	12/31/2020
RSD w/out Risk Contingency <sup>1</sup>	08/16/2021	08/16/2021
RSD w/ Risk Contingency <sup>1</sup>	12/30/2021	12/30/2021

Note:

<sup>1</sup> Milestone activity

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

<b>WBS</b>	<b>Activity</b>	<b>Responsibility</b>
Utilities	PG&E Supplemental Agreement #3 for Final Design Approval	Project Delivery
Utilities	PG&E Final Design	Project Delivery
Utilities	Overhead Utility Relocation	Project Delivery

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**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.

**Table 8-1 Electrification Budget & Expenditure Status**

Description of Work	Budget (A)	Cost This Month (B) <sup>1</sup>	Cost To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
<b>ELECTRIFICATION</b>					
Electrification <sup>3</sup>	\$ 696,610,558	\$ 7,992,200	\$ 100,558,068	\$ 596,052,490	\$ 696,610,558
Tunnel Notching	\$ 11,029,649	\$ -	\$ -	\$ 11,029,649	\$ 11,029,649
Real Estate	\$ 28,503,369	\$ 51,888	\$ 6,415,602	\$ 22,087,767	\$ 28,503,369
Private Utilities	\$ 63,515,298	\$ 68,370	\$ 4,998,996	\$ 58,516,303	\$ 63,515,298
Management Oversight <sup>4</sup>	\$ 141,526,164	\$ 1,378,153	\$ 68,095,556	\$ 73,430,608	\$ 141,526,164
Executive Management	\$ 7,452,866	\$ 62,552	\$ 3,126,868	\$ 4,325,998	\$ 7,452,866
Planning	\$ 7,281,997	\$ 51,236	\$ 4,577,381	\$ 2,704,616	\$ 7,281,997
Community Relations <sup>5</sup>	\$ 2,789,663	\$ 580	\$ 992,603	\$ 1,797,060	\$ 2,789,663
Safety & Security	\$ 2,421,783	\$ 27,391	\$ 612,631	\$ 1,809,152	\$ 2,421,783
Project Management Services	\$ 19,807,994	\$ 143,320	\$ 7,711,833	\$ 12,096,161	\$ 19,807,994
Engineering & Construction	\$ 11,805,793	\$ 61,906	\$ 2,191,111	\$ 9,614,683	\$ 11,805,793
Electrification Engineering & Management	\$ 50,461,707	\$ 700,430	\$ 17,719,024	\$ 32,742,684	\$ 50,461,707
IT Support	\$ 331,987	\$ -	\$ 331,987	\$ 0	\$ 331,987
Operations Support	\$ 1,445,867	\$ 7,125	\$ 397,830	\$ 1,048,038	\$ 1,445,867
General Support	\$ 4,166,577	\$ 73,820	\$ 1,551,122	\$ 2,615,455	\$ 4,166,577
Budget / Grants / Finance	\$ 1,229,345	\$ 71,425	\$ 358,394	\$ 870,951	\$ 1,229,345
Legal	\$ 2,445,646	\$ 114,405	\$ 2,317,097	\$ 128,549	\$ 2,445,646
Other Direct Costs	\$ 5,177,060	\$ 63,963	\$ 1,874,319	\$ 3,302,741	\$ 5,177,060
Prior Costs 2002 - 2013	\$ 24,707,878	\$ -	\$ 24,333,358	\$ 374,520	\$ 24,707,878
TASI Support	\$ 55,275,084	\$ 149,475	\$ 2,299,292	\$ 52,975,792	\$ 55,275,084
Insurance	\$ 4,305,769	\$ -	\$ 1,155,769	\$ 3,150,000	\$ 4,305,769
Environmental Mitigations	\$ 14,972,645	\$ -	\$ 472,000	\$ 14,500,645	\$ 14,972,645
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	\$ 5,056,838	\$ 20,512	\$ 241,236	\$ 4,815,602	\$ 5,056,838
Contingency	\$ 276,970,649	\$ -	\$ -	\$ 276,970,649	\$ 276,970,649
Owner's Reserve	\$ -	\$ -	\$ -	\$ -	\$ -
<b>ELECTRIFICATION SUBTOTAL</b>	<b>\$ 1,316,125,208</b>	<b>\$ 9,660,597</b>	<b>\$ 184,603,546</b>	<b>\$ 1,131,521,662</b>	<b>\$ 1,316,125,208</b>

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. Cost To Date for "Electrification" include 5% for Contractor's retention until authorization of retention release.
4. The agency labor is actual through March 2017 and accrued from April 2017 to current reporting period.
5. "Community Relations" carried a higher accrual in April 2017 than actuals. The correction is reflected in May 2017.

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report**

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

Description of Work	Budget (A)	Cost This Month (B) <sup>1</sup>	Cost To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
EMU	\$ 550,899,459	\$ -	\$ 13,918,140	\$ 536,981,319	\$ 550,899,459
CEMOF Modifications	\$ 1,344,000	\$ -	\$ -	\$ 1,344,000	\$ 1,344,000
Management Oversight <sup>3</sup>	\$ 64,139,103	\$ 611,491	\$ 20,049,455	\$ 44,089,649	\$ 64,139,103
Executive Management	\$ 5,022,302	\$ 65,207	\$ 1,872,404	\$ 3,149,898	\$ 5,022,302
Community Relations	\$ 1,685,614	\$ 3,694	\$ 341,533	\$ 1,344,081	\$ 1,685,614
Safety & Security	\$ 556,067	\$ 16,713	\$ 200,882	\$ 355,185	\$ 556,067
Project Management Services	\$ 13,275,280	\$ 68,320	\$ 5,139,831	\$ 8,135,449	\$ 13,275,280
Engineering & Construction	\$ 89,113	\$ -	\$ 23,817	\$ 65,296	\$ 89,113
EMU Engineering & Management	\$ 32,082,556	\$ 233,850	\$ 8,934,964	\$ 23,147,593	\$ 32,082,556
IT Support	\$ 1,027,272	\$ 11,341	\$ 274,119	\$ 753,153	\$ 1,027,272
Operations Support	\$ 1,878,589	\$ 2,038	\$ 298,890	\$ 1,579,698	\$ 1,878,589
General Support	\$ 2,599,547	\$ 48,574	\$ 744,369	\$ 1,855,178	\$ 2,599,547
Budget / Grants / Finance	\$ 712,123	\$ 50,730	\$ 203,001	\$ 509,123	\$ 712,123
Legal	\$ 1,207,500	\$ 60,390	\$ 848,662	\$ 358,838	\$ 1,207,500
Other Direct Costs	\$ 4,003,139	\$ 50,634	\$ 1,166,983	\$ 2,836,157	\$ 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	\$ 12,572	\$ 147,854	\$ 1,793,946	\$ 1,941,800
Contingency	\$ 38,562,962	\$ -	\$ -	\$ 38,562,962	\$ 38,562,962
Owner's Reserve	\$ -	\$ -	\$ -	\$ -	\$ -
<b>EMU SUBTOTAL<sup>3</sup></b>	<b>\$ 664,127,325</b>	<b>\$ 624,062</b>	<b>\$ 34,115,449</b>	<b>\$ 630,011,876</b>	<b>\$ 664,127,325</b>

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. The agency labor is actual through March 2017 and accrued for April 2017 to current reporting period.

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

Description of Work	Budget (A)	Cost This Month (B) <sup>1</sup>	Cost To Date (C) <sup>2</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
Electrification Subtotal	\$ 1,316,125,208	\$ 9,660,597	\$ 184,603,546	\$ 1,131,521,662	\$ 1,316,125,208
EMU Subtotal	\$ 664,127,325	\$ 624,062	\$ 34,115,449	\$ 630,011,876	\$ 664,127,325
<b>PCEP TOTAL</b>	<b>\$ 1,980,252,533</b>	<b>\$ 10,284,660</b>	<b>\$ 218,718,994</b>	<b>\$ 1,761,533,538</b>	<b>\$ 1,980,252,533</b>

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.

## **9.0 CHANGE MANAGEMENT**

The change management process establishes a formal administrative work process associated with the initiation, documentation, coordination, review, approval and implementation of changes that occur during the design, construction or manufacturing of the PCEP. The change management process ensures the prudent use of contingency and that the impact of the change is accounted for.

Currently the two PCEP contracts are Balfour Beatty Inc. and Stadler. Future PCEP contracts such as CEMOF Modifications, SCADA and the Tunnel Notching will also follow the change management process.

### **Activity This Month**

- No changes were approved in May.

### **Activity Next Month**

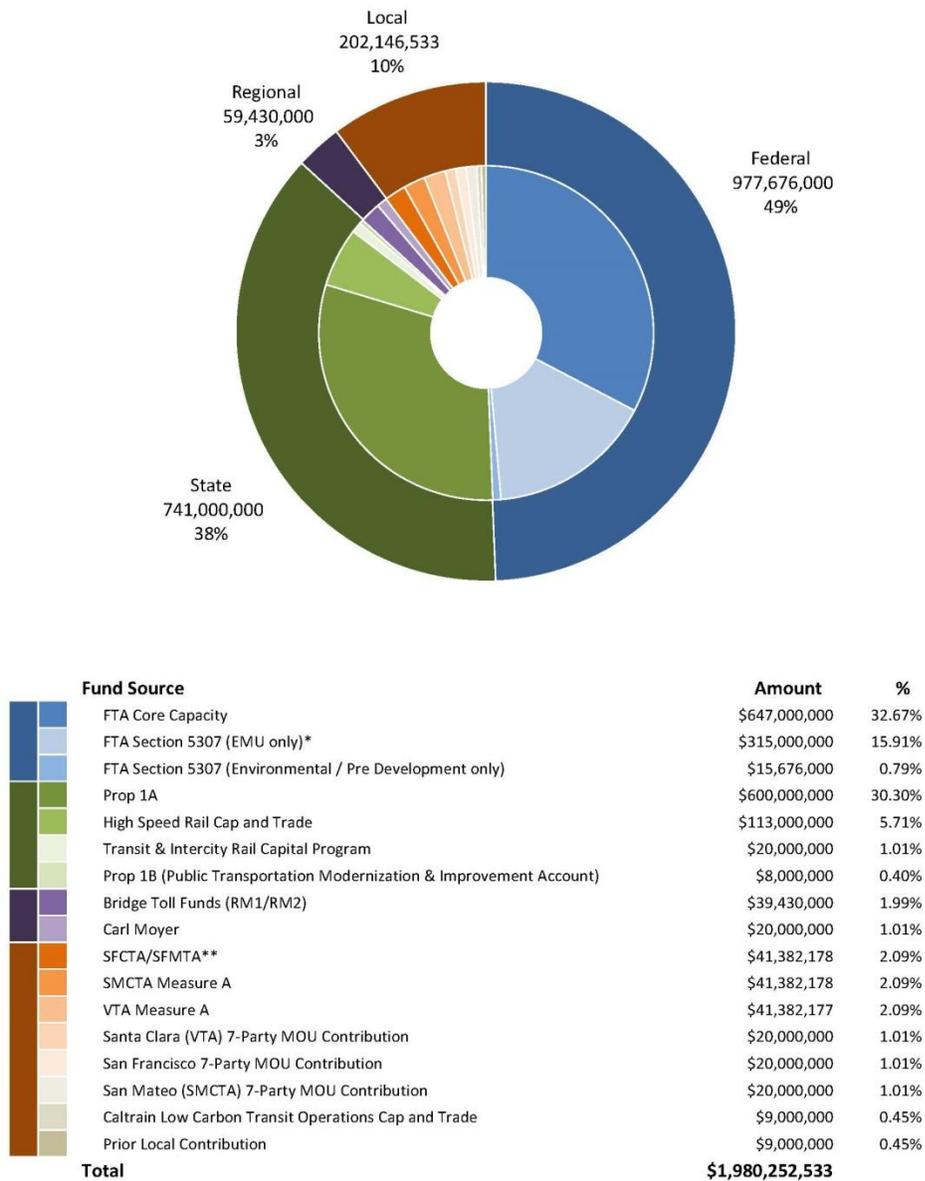
- Potential contract changes will be considered at the June 28 Change Management Board (CMB) meeting.

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**10.0 FUNDING**

Figure 10-1 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 May, the JPB received the FFGA from the FTA. The Agreement provides the project with a commitment of \$647 million in Federal funding, with \$72.9 million available immediately and an additional \$100 million to be made available in the next two months with the balance based upon annual appropriations.

**Figure 10-1 Funding Plan**



Notes:

\*Includes necessary fund transfer with SMCTA

\*\*Includes \$4M CMAQ Transfer considered part of SF local contribution

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## **11.0 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's 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 meets monthly to identify risks and corresponding mitigation measures. Each risk is graded based on the potential cost and schedule impacts they could have on the project. This collection of risks has the greatest potential to affect the outcome of the project and consequently is monitored most closely. For each of the noted risks, as well as for all risks on the risk register, mitigation measures have been identified and are being implemented. Progress in mitigating these risks is confirmed at monthly risk assessment meetings attended by project team management and through continuous monitoring of the Risk Management Lead.

The team has identified the following items as top 10 risks for the project:

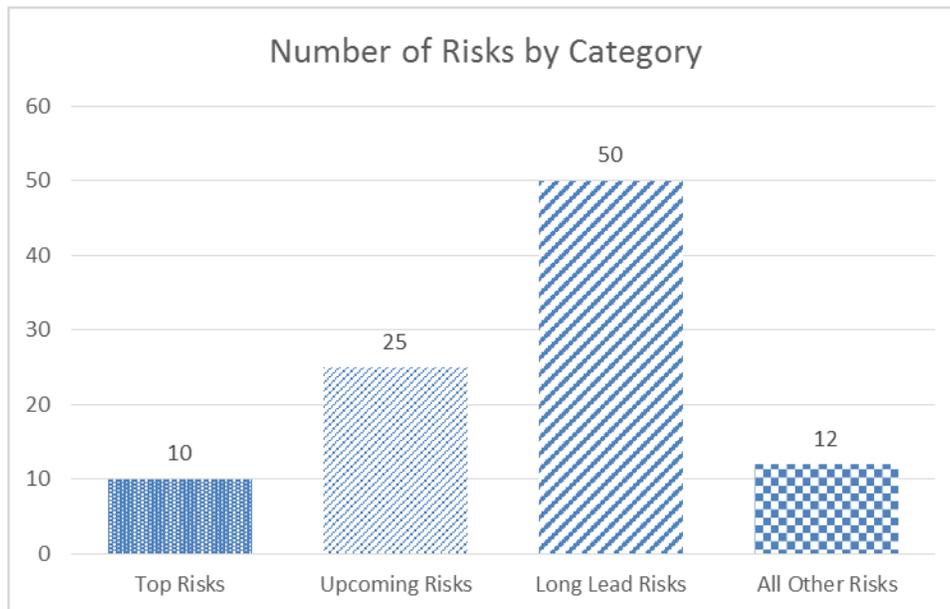
- Delay in execution of FFGA would cause a delay in issuing NTP. This risk was retired on May 23 with the receipt of the FFGA.
- Upgrades to the PG&E power stations to deliver permanent power may not be designed and constructed in time.
- Relocation of overhead utilities must precede installation of catenary wire and connections to TPSs. Relocation work will be performed by others and may not be completed to meet the DB contractor's construction schedule.
- As-built drawings that will be furnished to DB contractors could be incomplete.
- Demands on Transit America Services, Inc.'s (TASI) manpower may exceed staffing resources to support construction and testing for the electrification contract.
- Relocation of underground utilities must precede construction of catenary pole foundations. Potholing will identify any need for revisions to pole placement, which may result in a need for additional ROW or relocation of the utility by others.
- Working PTC signal system may not be in place in advance of integrated testing and commissioning. Federally-mandated PTC system required by December 31, 2018.
- Inconsistencies within internal processes, such as the Site Specific Work Plan, could delay decision making and approvals thereby impeding construction progress.
- Grade crossing design modifications to accommodate the 25kV traction power system could result in delays.
- JPB is responsible for system Integration/configuration activities (interaction between existing and new systems):
  - Need appropriate agency and contractor staffing.
  - Need a systems (including SCADA) and Operations and Maintenance subject matter expert.

**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.
- The Risk Management team attended Electrification, Project Delivery, and Systems Integration meetings to monitor developments associated with risks and to identify new risks.

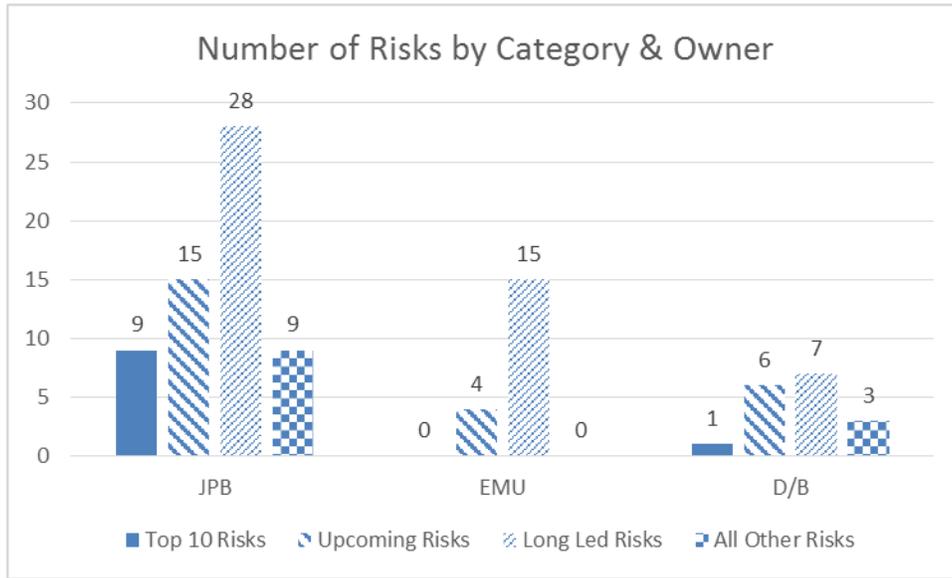
Tables 11-1 and 11-2 show the risks identified for the program. Risks are categorized as: top risk, upcoming risk, long-lead, and all other risks. The categories are based on a rating scale composed of schedule and cost factors. Simply put, top risks are considered to have a significantly higher than 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 11-1 Monthly Status of Risks**



**Total Number of Active Risks = 97**

**Table 11-2 Risk Classification**



**Total Number of Active Risks = 97**

**Activity Next Month**

- Update risk descriptions, effects, mitigations and retirement dates.
- Conduct weekly monitoring of risk mitigation actions and continue publishing risk register.

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## **12.0 ENVIRONMENTAL**

### **12.1 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 (SFWQCB), the California Department of Fish and Wildlife (CDFW), and the San Francisco Bay Conservation Development Commission.

Section 106 of the NHPA process and Section 7 of the ESA process have concluded.

#### **Activity This Month**

- Applications for environmental permit amendments from the USACE, SFWQCB, and CDFW were prepared to cover minimal increases to impacts on wetlands and other waters resulting from overhead contact system pole foundation installation.
- All applications were submitted on May 2.
- On May 5, CDFW issued the minor permit amendment.
- On May 30, USACE issued the minor permit amendment.

#### **Activity Next Month**

- Coordinate with the SFWQCB to provide any additional information needed to obtain the minor permit amendment.

### **12.2 Mitigation Monitoring and Reporting Program (MMRP)**

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 PCEP team has prepared a MMRP to ensure that mitigation measures identified in the PCEP Environmental Impact Report (EIR) are fully implemented during project implementation. PCEP will implement the mitigation measures through its own actions, those of the DB 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**

- Environmental compliance monitors continued to be present during design phase investigation activities (geotechnical and potholing activities) occurring in areas that require environmental compliance monitoring. The monitoring was conducted in accordance with measures in the MMRP in an effort to minimize potential impacts on sensitive environmental resources.

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report**

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- Protocol-level surveys for sensitive avian species continued at previously identified potential habitat locations and surveys for nesting birds ahead of design phase activities continued (nesting bird season is February 1<sup>st</sup> through August 31<sup>st</sup>).
- Noise and vibration monitoring also occurred during the design phase investigation activities, and non-hazardous soil was removed from the ROW in segments 2 and 4.
- Preparation and coordination with local jurisdictions of Draft Tree Impact and Replacement Plans for construction segments 2 and 4.

**Activity Next Month**

- Environmental compliance monitors will continue to monitor design phase investigation activities (geotechnical and potholing activities) occurring in areas that require environmental compliance monitoring.
- Biological surveyors will continue surveys for nesting birds ahead of design phase investigation activities occurring during the nesting bird season and biological survey teams will continue to conduct protocol level surveys for sensitive avian species.
- Noise and vibration monitoring of design phase investigation activities will continue to occur and non-hazardous soil will be removed from construction segments 1 and 3.
- Continue preparation and coordination with local jurisdictions of Draft Tree Impact and Replacement Plans for construction segments 2 and 4.

### **13.0 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. This 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.
- PCEP team is working to provide utility companies with existing utility data. The utility data will be critical for utility companies to design the relocations.
- PCEP team continued to work with Verizon to resolve the relocation of fiber optics cable within the Caltrain ROW.

#### **Activity Next Month**

- Monthly meetings will continue with telecom and power carriers.
- PCEP team will continue to coordinate with utility owners on the next steps of relocations, including support of any required design information.
- PCEP team will continue to work with utility owners to update the relocation schedule.

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**14.0 REAL ESTATE**

The PCEP requires the acquisition of a limited amount of real estate. In general, Caltrain uses existing ROWs for the PCEP, but in certain locations, will need to acquire small portions of additional real estate to expand the 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. 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 14-1 below provides a brief summary of the Real Estate acquisition overview for the project.

- The RE team continues negotiations on offers pending, including working through relocation of two commercial businesses.
- After receipt of the FFGA, project staff coordinated with SamTrans and VTA to have Resolution of Necessity (RON) hearings at the first possible meeting after receipt of the FFGA. The scheduled dates are July 5 for SamTrans (Segment 2) and August 3 for VTA (Segment 4).
- The RE team will contact all property owners to inform them of the schedule moving forward in an attempt to finalize negotiated settlement with as many owners as possible.
- Appraisal continued in segments 1 and 3 and technical staff responded to a number of RFIs to support the appraisal process.

**Activity Next Month**

- Negotiations for all outstanding offers will continue.
- Appraisals for segments 1 and 3 will be completed.
- SamTrans will hear RONs for Segment 2 on July 5, 2017 and eminent domain actions will be filed and served immediate thereafter.

**Table 14-1 Real Estate Acquisition Overview**

Segment	No. of Parcels Needed*	No. of Appraisals Completed	Offers Presented	Offers Accepted	Acquisition Status		
					Escrow Closed	Value Litigation	Parcel Possession
<b>Segment 1</b>	8	0	0	0	0	0	0
<b>Segment 2</b>	27	26	25	15	13	0	13
<b>Segment 3</b>	11	4	0	0	0	0	0
<b>Segment 4</b>	9	9	8	0	0	0	0
<b>Total</b>	<b>55</b>	<b>39</b>	<b>33</b>	<b>15</b>	<b>13</b>	<b>0</b>	<b>13</b>

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.

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**15.0 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 15-1 Third-Party Agreement Status**

Type	Agreement	Third-Party	Status
Governmental Jurisdictions	Construction & Maintenance <sup>1</sup>	City & 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	PG&E	Executed <sup>2</sup>
	Operating Rules	CPUC	Executed
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit	Executed <sup>3</sup>
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	Not needed <sup>4</sup>
	Trackage Rights	UPRR	Executed <sup>3</sup>

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 17 cities and three counties along the Caltrain ROW and within the PCEP limits in connection with the design and construction of the PCEP.
2. The Master Agreement and Supplemental Agreements 1, 2 and 5 have been executed. Supplemental Agreements 3 and 4 are to be negotiated and executed.
3. Utilizing existing agreements.
4. Caltrans Peer Process utilized. Formal agreement not needed.

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## **16.0 GOVERNMENT AND COMMUNITY AFFAIRS**

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 DB contractor's effectiveness in implementing its Public Involvement Program. The following PCEP-related external affairs meetings took place in May:

### **Presentations/Meetings**

- City/County Staff Coordinating Group
- Local Policy Maker Group
- Silicon Valley Bike Coalition
- San Francisco Bike Coalition
- STV Engineering
- JPB Citizens Advisory Committee
- JPB Bike Advisory Committee
- Caltrain Commuter Coalition
- San Mateo County Economic Development Association (2)
- Peninsula Corridor Working Group
- Menlo Park Chamber

### **Third Party/Stakeholder Actions**

- None to report

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**17.0 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION AND  
LABOR STATISTICS**

DBE and labor statistics will be reported after construction has commenced.

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## **18.0 PROCUREMENT**

### **Contract Activity**

- No contract activities for May.

### **Invitation for Bid (IFB)/Request for Qualifications (RFQ)/ Request for Proposals (RFP) Issued this Month:**

- No solicitations issued for May.

### **IFB/RFQ/RFP Received this Month:**

- RFP #17-J-S-061 – Received proposal for SCADA.

### **Contract Awards this Month:**

- Contract #17-J-Q-072 – Ambassador Services (Short-term Agreement).
- Contract #17-J-U-77 – On-Call Consulting Support Services for PG&E Infrastructure Improvements for PCEP.
- Contract #17-J-U-076 – On-Call Technical Consulting Support Services for PG&E's Substations for PCEP.

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

- Multiple WDs & POs were issued to support the program needs for May.

### **In Process IFB/RFQ/RFP:**

- RFP – 17-J-S-062 – On-Call Ambassador Support Services.
- RFP – 17-J-S-070 – On-Call Quality Assurance Independent Testing Laboratory.

### **Upcoming Contract Awards:**

- Contract #17-J-S-061 – Advanced Information Management Traction Power SCADA System for PCEP.

### **Upcoming IFB/RFQ/RFP:**

- Purchase of Electric Locomotive for testing of electrification system.
- Refurbishment of Electric Locomotive for PCEP.

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## **19.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS**

Below is a timeline showing major project accomplishments from 2001 to 2017:

<b>Date</b>	<b>Milestone</b>
2001	Began federal National Environmental Policy Act (NEPA) Environmental Assessment (EA) / state EIR clearance process
2002	Conceptual Design completed
2004	Draft NEPA EA/EIR
2008	35% design complete
2009	Final NEPA EA/EIR and Finding of No Significant Impact (FONSI)
2014	RFQ for electrification RFI for EMU
2015	JPB approves final CEQA EIR JPB approves issuance of RFP for electrification JPB approves issuance of RFP for EMU Receipt 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 best and final offers 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 BBII, the apparent best-value electrification firm JPB approves contract award (LNTP) BBII JPB approves contract award (LNTP) Stadler FTA approval of entry into engineering for the Core Capacity Program Application for Full Funding Grant Agreement (FFGA)
2017	FTA finalized the FFGA for \$647 million in Core Capacity funding, met all regulatory requirements including end of Congressional Review Period (Feb 2017) FTA Full Funding Grant Agreement executed, committing \$647 million to the project (May 2017)

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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>BBII</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>FNTF</b>	<b>Full Notice to Proceed</b>
<b>Caltrans</b>	<b>California Department of Transportation</b>	<b>FFGA</b>	<b>Full Funding Grant Agreement</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>LNTF</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>Estimate at Completion</b>	<b>NCR</b>	<b>Non Conformance Report</b>
		<b>NEPA</b>	<b>National Environmental Policy Act (Federal)</b>

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report**

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

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

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Appendix B – Funding Partner Meetings

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**Funding Partner Meeting Representatives**

Updated June 27, 2017

Agency	MTC	SFCTA/SFMTA/CCSF	CHSRA	VTA
<b>FTA Quarterly Meeting</b>	<ul style="list-style-type: none"> <li>• Anne Richman</li> <li>• Glen Tepke</li> </ul>	<ul style="list-style-type: none"> <li>• Luis Zurinaga</li> </ul>	<ul style="list-style-type: none"> <li>• Bruce Armistead</li> <li>• Boris Lipkin</li> <li>• Ben Tripousis (info only)</li> <li>• Ian Ferrier (info only)</li> <li>• Wai Siu (info only)</li> </ul>	<ul style="list-style-type: none"> <li>• Jim Lawson</li> </ul>
<b>CHSRA Quarterly Meeting</b>	None	None	<ul style="list-style-type: none"> <li>• Bruce Armistead</li> <li>• Boris Lipkin</li> <li>• Ben Tripousis</li> <li>• John Popoff</li> </ul>	None
<b>Funding Oversight (monthly)</b>	<ul style="list-style-type: none"> <li>• Anne Richman</li> <li>• Glen Tepke</li> <li>• Kenneth Folan</li> </ul>	<ul style="list-style-type: none"> <li>• Anna LaForte</li> <li>• Maria Lombardo</li> <li>• Luis Zurinaga</li> <li>• Monique Webster</li> <li>• Ariel Espiritu Santo</li> </ul>	<ul style="list-style-type: none"> <li>• Ben Tripousis</li> <li>• Kelly Doyle</li> </ul>	<ul style="list-style-type: none"> <li>• Jim Lawson</li> <li>• Marcella Rensi</li> <li>• Michael Smith</li> </ul>
<b>Change Management Board (monthly)</b>	None	<ul style="list-style-type: none"> <li>• Luis Zurinaga</li> <li>• Tilly Chang (info only)</li> </ul>	<ul style="list-style-type: none"> <li>• Bruce Armistead</li> <li>• Boris Lipkin</li> </ul>	<ul style="list-style-type: none"> <li>• Krishna Davey</li> <li>• Jim Lawson</li> <li>• Carol Lawson</li> <li>• Nuria Fernandez (info only)</li> </ul>
<b>Master Program Schedule Update (monthly)</b>	None	<ul style="list-style-type: none"> <li>• Luis Zurinaga</li> </ul>	<ul style="list-style-type: none"> <li>• Ian Ferrier</li> <li>• Wai Siu</li> </ul>	<ul style="list-style-type: none"> <li>• Jim Lawson</li> </ul>
<b>Risk Assessment Committee (monthly)</b>	None	<ul style="list-style-type: none"> <li>• Luis Zurinaga</li> </ul>	<ul style="list-style-type: none"> <li>• Ian Ferrier</li> <li>• Wai Siu</li> </ul>	<ul style="list-style-type: none"> <li>• Krishna Davey</li> </ul>
<b>PCEP Delivery Coordination Meeting (bi-weekly)</b>	None	<ul style="list-style-type: none"> <li>• Luis Zurinaga</li> </ul>	<ul style="list-style-type: none"> <li>• Ian Ferrier</li> </ul>	<ul style="list-style-type: none"> <li>• Krishna Davey</li> </ul>
<b>Systems Integration Meeting (bi-weekly)</b>	None	<ul style="list-style-type: none"> <li>• Luis Zurinaga (when available)</li> </ul>	<ul style="list-style-type: none"> <li>• Ian Ferrier</li> <li>• Wai Siu</li> </ul>	<ul style="list-style-type: none"> <li>• Krishna Davey</li> </ul>

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Appendix C – Schedule

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