Modernization Program
Peninsula Corridor Electrification Project (PCEP)

September 2017
Monthly Progress Report

September 30, 2017

Funding Partners

Federal Transit Administration (FTA) Core Capacity

FTA Section 5307 (Environmental / Pre Development only)

FTA Section 5307 (Electric Multiple Unit (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

City and County of San Francisco (CCSF) Contribution

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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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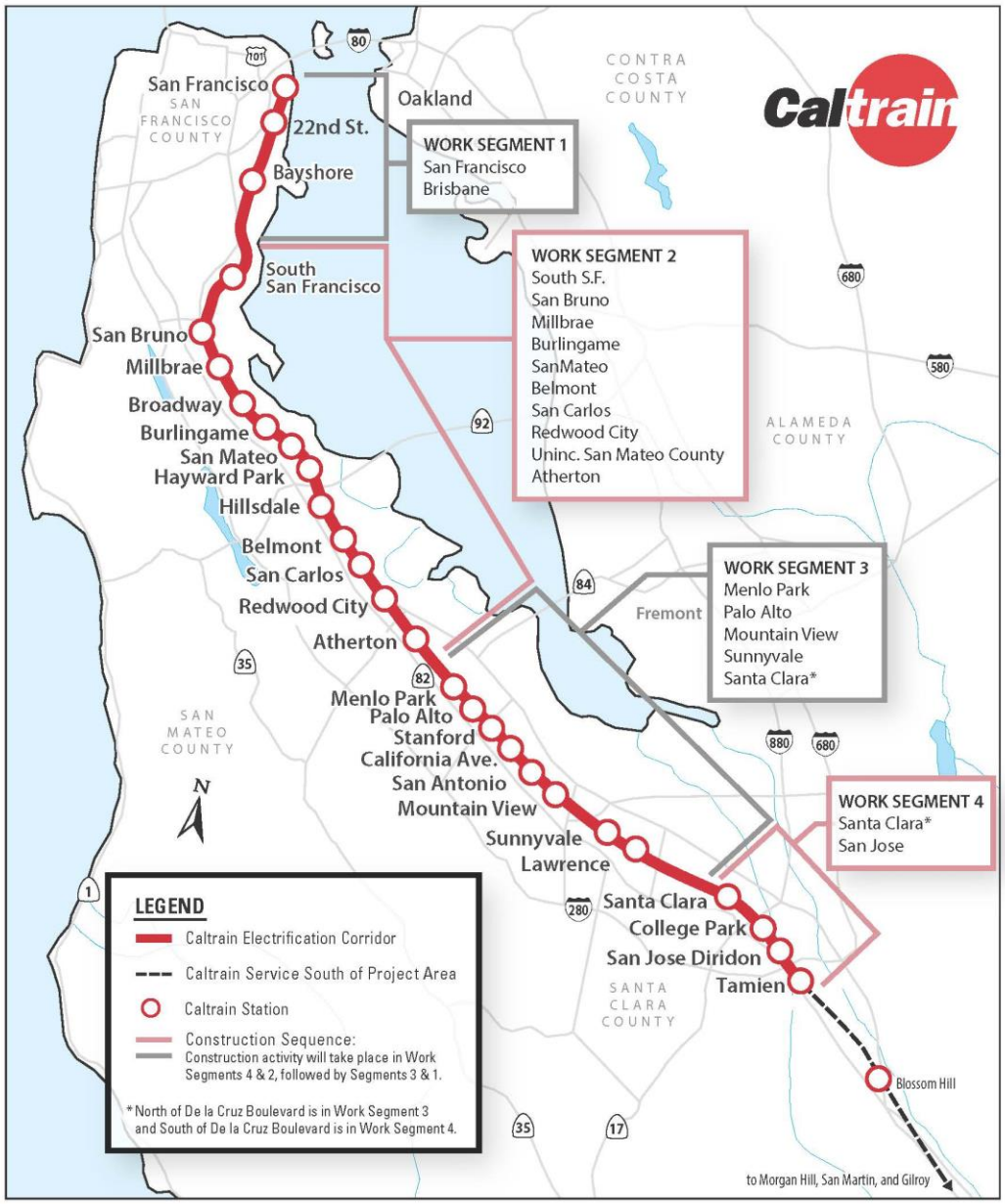
2.0 EXECUTIVE SUMMARY

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 "Issued for Construction" (IFC) Overhead Contact System (OCS) layout designs were completed for Segment 2 Work Area 5, which will allow the start of OCS foundation construction. In preparation for foundation installations, test piles were installed and access and staging area preparation began. IFC layouts for Segment 2 Work Area 4 are expected to be completed in October. Tree pruning and removal continued in Segment 2 Work Area 5 and began in Work Area 4. Potholing of existing signal cables for signal design and construction was completed, and relocation of conflicting signal cables began.

The Supervisory Control and Data Acquisition (SCADA) contract was executed in September and the Notice to Proceed (NTP) will be issued in October.

EMU Preliminary Design Review meetings were held to review features such as ventilation, the car shell, door controls, and propulsion in preparation for car shell manufacturing in October. The PCEP team continues to address system-wide interface issues involving the EMU design and the existing wayside infrastructure, the electrification project, and the Communications-Based Overlay Signal System (CBOSS)/Positive Train Control (PTC) 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 Balfour Beatty Infrastructure, Inc. (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, California State Department of Transportation (Caltrans), CBOSS and others.

Activity this Month

Funding Partners: CHSRA: Ian Ferrier

Major topics included: PG&E power quality study and the interconnections feasibility study, coordination between the PCEP and CBOSS projects, the utility relocation process and design progression updates from utility companies, tunnel design, the SCADA contract status, progress on Design-Build (DB) contract, upcoming changes to the contract in preparation for the Change Management Board (CMB), and coordination with third parties on design review and permitting for the project.

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

September 12 Funding Partners: CHSRA: Ian Ferrier; Metropolitan Transportation Commission (MTC): Trish Stoops; SFCTA: Luis Zurinaga

Major topics included: The Program Management Plan update to reflect the current status of the project, which should be done by mid-October, the outreach team holding discussions to finalize the bike configuration decision, training for the electronic signature process, the safety team continuing to raise awareness of good safety practices as September is Rail Safety Month, and the September 26 groundbreaking ceremony for the 25th Avenue Grade Separation Project.

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: CHSRA: Ian Ferrier and Wai-on Siu

Major topics included: A new vehicle dynamic envelope developed to incorporate the fixed step of the current Caltrain cars, OCS terminating and sectionalizing configurations for CEMOF coordinated with the pantograph locations on the trains, preparation of schedules of activities to include the Los Gatos Bridge Project drill track construction, PG&E power to energize the traction power substations (TPS), electric locomotive delivery and DB construction and systems integration testing activities, safety certification, and community outreach.

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: CHSRA: Ian Ferrier and Wai-on Sui; SFCTA: Luis Zurinaga

Due to delays in federal funding, the MPS was frozen in February. The FFGA was received in May and now the overall schedule is being refined to establish a new baseline. In September's MPS monthly meeting, key interface components of the draft MPS re-baseline were reviewed. At this time it is anticipated that the revised baseline will be completed in the October timeframe.

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 ongoing risk monitoring and monthly risk assessment meetings.

Activity this Month

Funding Partners*****: CHSRA: Ian Ferrier

The annual Risk Refresh Workshop was held in place of the monthly Risk Assessment Meeting. Nineteen risks were retired. Thirty-two risks were added to the risk register in September. See the Risk Management section (Section 11) in this report for more details.

***** The funding partners were briefed on the changes to the risk register resulting from the Risk Refresh. Partners were unintentionally left off of the Risk Refresh Workshop meeting invitation.

Change Management Board (CMB) – Monthly

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

Activity this Month

Funding Partners: CHSRA: Boris Lipkin and Bruce Armistead; MTC: Trish Stoops; SFCTA: Luis Zurinaga; SMCTA: Joe Hurley; VTA: Krishna Davey and Carol Lawson

Major topics included: informational discussion items about the number of wheelchair lifts on the EMU vehicles, updates on track access delays, updates on differing site condition field orders and potential contract incentives as part of the BBI contract.

Potential contract changes will follow the PCEP Change Order Procedure. Once approved changes are executed, they will be reported in the Change Management section (Section 9) of this report.

BBII Contract

No changes were identified for consideration.

Stadler Contract

No changes were identified for consideration.

SCADA Contract

No changes were identified for consideration.

2.2 Schedule

The Revenue Service Date (RSD), which is the date the project is deemed completed, is delayed due to the FFGA delay and resulting effect on availability of permanent power from PG&E. Without adjustment for contingency, the RSD is forecast as December 2021. With the addition of approximately five months of contingency to account for potential risk to the project, the RSD is anticipated as April 2022. Due to FTA contingency requirements, an FFGA RSD will also be tracked. This date is forecast as August 22, 2022.

Table 2-1 indicates milestone dates for the MPS. At this time, not all milestones have been established as the revised Program Plan continues to be refined.

Table 2-1 Schedule Status[1]

Milestones	Program Plan (April 2016)	Revised Program Plan (September 2017)[4]
Start of Electrification Construction	03/20/2017	08/16/2017[2] (A)
First Eight Miles of Electrification Complete to Begin Testing	04/08/2019	11/21/2019
Arrival of First Vehicle at JPB	06/25/2019	07/30/2019
PG&E Provides Permanent Power	09/01/2020	09/09/2021
Start Pre-Revenue Testing	09/08/2020	09/10/2021
RSD (w/o Risk Contingency)	08/16/2021	12/09/2021
RSD (w/ Risk Contingency)	12/30/2021	04/22/2022
FFGA RSD[3]	N/A	08/22/2022

Notes regarding the table above:

A. Actual date.
1. Schedule status is an approximation as the details of the revised MPS remain under review.
2. Reflects start of tree removal.
3. FFGA RSD did not exist at the time of the April 2016 Program Plan.
4. Program Plan dates may continue to shift slightly as the re-baseline process nears completion.

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)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
Electrification Subtotal	$ 1,316,125,208	$ 1,316,125,208	$ 9,304,902	$ 257,652,163	$ 1,058,473,045	$ 1,316,125,208
EMU Subtotal	$ 664,127,325	$ 664,127,325	$ 1,165,579	$ 66,457,212	$ 597,670,113	$ 664,127,325
PCEP TOTAL	**$ 1,980,252,533**	**$ 1,980,252,533**	**$ 10,470,480**	**$ 324,109,375**	**$ 1,656,143,157**	**$ 1,980,252,533**

Notes regarding tables above:

1. Column B “Current Budget” includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

2.4 Board Actions

- Resolution of Necessity for one Segment 4 parcel

Future anticipated board actions include:

- October
  - Addendum #2 to the Final Environmental Impact Report (FEIR) and approval of the inclusion of OCS pole alignment modifications to not preclude CHSRA future service
  - Addendum #3 to the FEIR and approval of the inclusion of interconnection and PG&E substation design level detail for the PCEP
- To Be Scheduled
  - Cooperative Agreement with CCSF
  - PG&E Supplemental Agreement #4: Construction
  - Authority to procure used electric locomotives
  - Ambassador Request for Proposal (RFP) award
  - Switching station real estate transaction

2.5 Government and Community Affairs

A number of community relations and outreach events took place during the month. The PCEP team participated in a total of nine 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 kV, 60-Hertz, single phase, alternating current supply system consisting of two TPSs, one switching station, and seven paralleling stations (PS). Electrification will be performed using a DB delivery method.

Activity This Month

- Continued discussions with BBII on revisions to the Time Impact Analysis (TIA) to update the schedule and determine the impacts of FFGA delays. Agreement on the schedule was reached at the end of the month and the TIA will be officially accepted in early October.
- Continued progression of design with BBII for the OCS. IFC OCS layouts for Segment 2 Work Area 5 were returned to the contractor with a Statement of No Objection by both JPB and the UPRR, which will allow the contractors to start construction of OCS foundations in that work area. IFC layouts for Segment 2 Work Area 4 are expected to be completed in October. BBII also continues to advance the OCS layout designs for Segment 4 and other work areas in Segment 2.
- Continued to review and coordinate signal and communication design submittals with BBII. The project team and BBII prepared to meet for a workshop with the signal designers to further advance signal design solutions and prepare for the next meeting with the UPRR.
- 95% TPS specifications and plans for TPS-2 were submitted to the PCEP project team for review.
- Continued design review coordination with local jurisdictions for the OCS design in Segment 2 Work Areas 5 and 4 and Segment 4, including responses to comments from jurisdictions and finalization of OCS pole colors in select station areas.
- Continued coordination efforts with PG&E for infrastructure improvements and TPS interconnects. The PCEP team continues to work with PG&E for the finalization of protection scheme studies.
- Held the kickoff meeting to discuss the parameters of the feasibility study for the 115 kV interconnections between the future Caltrain substations and PG&E's substations. The study is expected to be completed in October.
- The PCEP team and BBII continue to work through Site Specific Work Plans (SSWP) for upcoming field work including the start of on-track OCS foundation installation, which is expected to begin in October to meet schedule constraints.

- Potholing of utilities at proposed OCS locations continued in Segment 2 Work Areas 5 and 4 in preparation of foundation installation. BBII also continued to remove obstructions found during the potholing process, such as loose concrete, asphalt, and other debris.
- BBII installed test piles in advance of OCS foundation installation.
- BBII begin preparation of access and staging areas, starting with the South San Francisco station in preparation of foundation installation.
- Relocation of signal cables found in conflict with planned OCS foundations began and will continue as conflicts are identified.
- Potholing of existing signal cables for signal design and construction was completed.
- BBII continued tree pruning and removal in Segment 2 Work Area 5 and began in Work Area 4.

Activity Next Month

- Accept TIA and resolve contract changes related to the TIA.
- Continue work with BBII on field investigation activities and designs, which will include the progression of the OCS, traction power, bonding and grounding, signal systems, and other civil infrastructures such as overhead bridge protections.
- Continue potholing and clearing of obstructions at proposed OCS locations. Potholing will continue in Segment 2 and will move into Segment 4 as foundation installation starts in Segment 2.
- Continue coordination with UPRR on signal and OCS design.
- Continue review of BBII work plans for upcoming construction activities.
- Coordinate 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.
- Continue design reviews and coordination with local jurisdictions.
- Continue tree pruning and removals.
- Continue preparation of access and staging areas in Segment 2 for start of foundation installation.
- Begin OCS foundation installation in Segment 2 Work Area 5.

3.2 Supervisory Control and Data Acquisition (SCADA)

SCADA is a system that monitors and controls field devices for electrification, including substations, PSs and the OCS. 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 SCADA contract was awarded at the August board meeting and executed in September.

Activity Next Month

- Issue NTP and schedule kickoff meeting.

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 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.
- Completed review for the 100% plans and specifications. Comments have been compiled for project team to respond.
- Continued preparations of final documents for the contract to be issued for bid.

Activity Next Month

- Continue coordination efforts with UPRR and other stakeholders.
- Complete comment resolution for 100% plans and specifications.
- Complete contract documents to prepare for bid.

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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

- Preliminary Design Reviews meetings have been conducted for car shell, coupler/draft gear, heating, ventilation, air conditioning, door controls, propulsion, auxiliary electric, accessible toilet room, lighting and PTC.
- EMU design coordination discussions continue with representatives from Caltrain Operations and Maintenance, Caltrain Public Outreach, the Federal Railroad Administration (FRA), the FTA Project Management Oversight Contractor, Safety and Quality Assurance personnel, and PCEP Program Scheduling.
- Public outreach related to onboard bike storage is complete. The stacking option was selected.
- 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/PTC Project.

Activity Next Month

- Continue Conceptual Design Reviews.
- Continue to work with the FRA on EMU compliance issues.
- Prepare for late October 2017 commencement of car shell manufacturing.

4.1 Centralized Equipment Maintenance and Operations Facility (CEMOF) Modifications

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

Activity This Month

- Stakeholder coordination of final concepts.
- Continued development of concept for facility upgrade that addresses Caltrain Operation and Maintenance needs, and is with scope and budget of the CalMod Program.
- Integration efforts with stakeholders to determine completion deadline.

Activity Next Month

- Continue stakeholder coordination of final concepts.

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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

- The focus on project safety communications continues to be a priority. The monthly project Safety and Security Certification meeting was held on September 13, Fire/Life Safety meeting was held on September 27, and the Capital Safety Committee met on September 28 with both internal and external safety stakeholders. In addition, project staff participated in BBII monthly "All Hands" workforce meeting and contractor safety committee meetings.
- Project safety staff provided a presentation on the topics of "Fatigue Awareness" to BBII contractor staff and "Working Safety on Railroad Property" for project staff.
- Project safety staff continues to provide input and oversight of the contractor SSWP safety provisions including the BBII job hazard analysis and recommended mitigations. Throughout September, safety staff continued to increase its safety construction oversight presence by performing day and night inspections of work being performed by BBII subcontractors.
- Project safety staff continued to closely work with JPB, PCEP, BBII and Transit America Services, Inc. (TASI) representatives to follow up on the recommended corrective actions resulting from incident investigations that were performed in July.

Activity Next Month

- Monthly safety communication meetings continue to be scheduled for the Project Safety and Security Certification Committee, Fire/Life Safety Committee, and other project-related contractor and JPB safety meetings designed to discuss project safety priorities.
- New OCS foundation work will begin in October and safety staff will focus on performing site safety inspections to assess safety work practice and identify opportunities for improvement.
- An EMU safety workshop is being planned for the end of October and will include Operations staff who will provide input on the functional aspects of the vehicle design. This information will be utilized to support the development of the EMU Operating Hazard Analysis.
- Project safety will continue to work closely with contractor staff to identify safety improvement opportunities.

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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

- Staff meetings with BBII QA/Quality Control management representatives continue bi-weekly.
- A draft revision of the PCEP Quality Management Plan issued in August is under review for preliminary comments.
- Regularly scheduled design reviews and surveillance began on project design packages and will continue through spring of 2018.
- A purchase order was issued for Signet Testing Laboratories until the Request for Proposal (RFP) for the procurement of a quality assurance lab is awarded.

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	35
Audit Findings		
Audit Findings Issued	0	24
Audit Findings Open	0	0
Audit Findings Closed	0	24
Non-Conformances		
Non-Conformances Issued	0	4
Non-Conformances Open	0	0
Non-Conformances Closed	0	4

Activity Next Month

- Four audits are planned and scheduled: BBII/PGH Wong Design of Segment 2 Work Areas 4 and 5, Street Crossings at 65%, BBII/PGH Wong, Design of Segments 4A and 4B Control Point Signaling at 65%

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7.0 SCHEDULE

Due to delays in federal funding, the MPS was frozen in February. The FFGA was received in May and now the overall schedule is being re-evaluated. In July a revised high-level Program Plan was established (a summary of which can be found in Appendix C), which reflected a delay to the RSD, the date on which the project is deemed completed. The delay to RSD was caused primarily due to delay to FFGA and the resulting effect on availability of permanent power from PG&E.

Without adjustment for contingency, the RSD is forecast as December 2021, representing a four-month delay from the April 2016 Program Plan. With the addition of approximately five months of contingency to account for potential risk to the project, the RSD is anticipated as April 2022, which also represents a similar four-month delay to the Program Plan. Due to FTA contingency requirements, an FFGA RSD will also be tracked. This date is forecast as August 22, 2022.

Table 7-1 indicates milestone dates for the MPS. At this time, not all milestones have been established as the revised Program Plan continues to be refined. 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 approved the MPS is under review for evaluation of variances. Once this review is complete and a revised Program Plan is established, variances will be reported against the revised plan.

Table 7-1 Schedule Status[1]

Milestones	Program Plan (April 2016)	Revised Program Plan (September 2017)[4]
Start of Electrification Construction	03/20/2017	08/16/2017[2](A)
First Eight Miles of Electrification Complete to Begin Testing	04/08/2019	11/21/2019
Arrival of First Vehicle at JPB	06/25/2019	07/30/2019
PG&E Provides Permanent Power	09/01/2020	09/09/2021
Start Pre-Revenue Testing	09/08/2020	09/10/2021
RSD (w/o Risk Contingency)	08/16/2021	12/09/2021
RSD (w/ Risk Contingency)	12/30/2021	04/22/2022
FFGA RSD[3]	N/A	08/22/2022

Notes regarding the table above:

A. Actual date.
1. Schedule status is an approximation as the details of the revised MPS remain under review.
2. Reflects start of tree removal.
3. FFGA RSD did not exist at the time of the April 2016 Program Plan.
4. Program Plan dates may continue to shift slightly as the re-baseline process nears completion.

Table 7-2 Critical Path Summary[1]

Activity	Start	Finish
PG&E Final Design and Construction to provide Permanent Power	April 2016	09/09/2021
Pre-Revenue Testing	09/10/2021	12/09/2021
RSD w/out Risk Contingency[2]	12/09/2021	12/09/2021
RSD w/ Risk Contingency[2]	04/22/2022	04/22/2022

Note:
1. Critical path is an approximation as the details of the revised MPS remain under review.
2. Milestone activity.

Table 7-3 Near-Term, Near-Critical with Less Than Three Months of Float[1]

Work Breakdown Structure	Activity	Responsibility
Vehicles	EMU Design	Project Delivery

Note:
1. Near-Term, Near-Critical Path is an approximation as the details of the revised MPS remain under review.

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)	Current Budget[1] (B)	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
ELECTRIFICATION						
Electrification[4]	$ 696,610,558	$ 696,696,030	$ 4,967,608	$ 157,161,597	$ 539,534,433	$ 696,696,030
SCADA	$ -	$ 3,446,917	$ -	$ -	$ 3,446,917	$ 3,446,917
Tunnel Modifications	$ 11,029,649	$ 11,029,649	$ -	$ -	$ 11,029,649	$ 11,029,649
Real Estate	$ 28,503,369	$ 28,503,369	$ 309,248	$ 10,620,257	$ 17,883,112	$ 28,503,369
Private Utilities	$ 63,515,298	$ 63,515,298	$ 781,374	$ 7,045,998	$ 56,469,301	$ 63,515,298
Management Oversight[5]	$ 141,506,257	$ 141,526,164	$ 1,619,204	$ 74,744,643	$ 66,781,521	$ 141,526,164
Executive Management	$ 7,452,866	$ 7,452,866	$ 97,425	$ 3,534,617	$ 3,918,249	$ 7,452,866
Planning	$ 7,281,997	$ 7,281,997	$ 36,238	$ 4,842,067	$ 2,439,929	$ 7,281,997
Community Relations	$ 2,789,663	$ 2,789,663	$ 43,732	$ 1,124,525	$ 1,665,138	$ 2,789,663
Safety & Security	$ 2,421,783	$ 2,421,783	$ 54,228	$ 831,006	$ 1,590,777	$ 2,421,783
Project Mgmt Services	$ 19,807,994	$ 19,807,994	$ 177,887	$ 8,357,270	$ 11,450,724	$ 19,807,994
Eng & Construction	$ 11,805,793	$ 11,805,793	$ 97,415	$ 2,570,646	$ 9,235,148	$ 11,805,793
Electrification Eng & Mgmt	$ 50,461,707	$ 50,461,707	$ 917,223	$ 21,488,300	$ 28,973,408	$ 50,461,707
IT Support	$ 312,080	$ 331,987	$ -	$ 331,987	$ 0	$ 331,987
Operations Support	$ 1,445,867	$ 1,445,867	$ 9,134	$ 465,606	$ 980,261	$ 1,445,867
General Support	$ 4,166,577	$ 4,166,577	$ 82,071	$ 1,931,991	$ 2,234,586	$ 4,166,577
Budget / Grants / Finance	$ 1,229,345	$ 1,229,345	$ 30,970	$ 492,540	$ 736,805	$ 1,229,345
Legal	$ 2,445,646	$ 2,445,646	$ 2,576	$ 2,353,673	$ 91,973	$ 2,445,646
Other Direct Costs	$ 5,177,060	$ 5,177,060	$ 70,304	$ 2,087,058	$ 3,090,002	$ 5,177,060
Prior Costs 2002 - 2013	$ 24,707,878	$ 24,707,878	$ -	$ 24,333,358	$ 374,520	$ 24,707,878
TASI Support	$ 55,275,084	$ 55,275,084	$ 331,868	$ 3,727,689	$ 51,547,394	$ 55,275,084
Insurance	$ 3,500,000	$ 4,305,769	$ 850,000	$ 2,555,769	$ 1,750,000	$ 4,305,769
Environmental Mitigations	$ 17,686,958	$ 14,972,644	$ -	$ 522,000	$ 14,450,644	$ 14,972,644
Required Projects	$ 17,337,378	$ 17,337,378	$ -	$ 367,028	$ 16,970,350	$ 17,337,378
Maintenance Training	$ 1,021,808	$ 1,021,808	$ -	$ -	$ 1,021,808	$ 1,021,808
Finance Charges	$ 3,168,200	$ 5,056,838	$ 445,600	$ 907,182	$ 4,149,656	$ 5,056,838
Contingency	$ 276,970,649	$ 273,438,260	$ -	$ -	$ 261,389,672	$ 261,389,672
Forecasted Costs and Changes[6]	$ -	$ -	$ -	$ -	$ 12,048,588	$ 12,048,588
ELECTRIFICATION SUBTOTAL	**$ 1,316,125,208**	**$ 1,316,125,208**	**$ 9,304,902**	**$ 257,652,163**	**$ 1,058,473,045**	**$ 1,316,125,208**

Notes regarding tables above:

1. "Current Budget" includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
4. Cost To Date for "Electrification" includes 5% for Contractor's retention until authorization of retention release.
5. The agency labor is actual through August 2017 and accrued for September 2017.
6. "Owner's Reserve" is replaced with "Forecasted Costs and Changes" where the amount indicates identified potential changes.

Table 8-2 EMU Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget[1] (B)	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
EMU	$ 550,899,459	$ 550,899,459	$ -	$ 43,569,480	$ 507,329,979	$ 550,899,459
CEMOF Modifications	$ 1,344,000	$ 1,344,000	$ -	$ -	$ 1,344,000	$ 1,344,000
Management Oversight[4]	$ 64,139,103	$ 64,139,103	$ 896,436	$ 22,343,512	$ 41,795,592	$ 64,139,103
Executive Management	$ 5,022,302	$ 5,022,302	$ 126,780	$ 2,186,406	$ 2,835,896	$ 5,022,302
Community Relations	$ 1,685,614	$ 1,685,614	$ 28,759	$ 407,375	$ 1,278,239	$ 1,685,614
Safety & Security	$ 556,067	$ 556,067	$ 11,066	$ 250,919	$ 305,148	$ 556,067
Project Mgmt Services	$ 13,275,280	$ 13,275,280	$ 203,172	$ 5,552,920	$ 7,722,361	$ 13,275,280
Eng & Construction	$ 89,113	$ 89,113	$ -	$ 23,817	$ 65,296	$ 89,113
EMU Eng & Mgmt	$ 32,082,556	$ 32,082,556	$ 386,429	$ 10,017,341	$ 22,065,215	$ 32,082,556
IT Support	$ 1,027,272	$ 1,027,272	$ 9,993	$ 319,346	$ 707,926	$ 1,027,272
Operations Support	$ 1,878,589	$ 1,878,589	$ -	$ 279,059	$ 1,599,530	$ 1,878,589
General Support	$ 2,599,547	$ 2,599,547	$ 56,253	$ 863,469	$ 1,736,078	$ 2,599,547
Budget / Grants / Finance	$ 712,123	$ 712,123	$ 33,209	$ 283,692	$ 428,431	$ 712,123
Legal	$ 1,207,500	$ 1,207,500	$ -	$ 867,662	$ 339,838	$ 1,207,500
Other Direct Costs	$ 4,003,139	$ 4,003,139	$ 40,775	$ 1,291,506	$ 2,711,634	$ 4,003,139
TASI Support	$ 2,740,000	$ 2,740,000	$ -	$ -	$ 2,740,000	$ 2,740,000
Required Projects	$ 4,500,000	$ 4,500,000	$ -	$ -	$ 4,500,000	$ 4,500,000
Finance Charges	$ 1,941,800	$ 1,941,800	$ 269,143	$ 544,220	$ 1,397,580	$ 1,941,800
Contingency	$ 38,562,962	$ 38,562,962	$ -	$ -	$ 37,529,202	$ 37,529,202
Forecasted Costs and Changes[5]	$ -	$ -	$ -	$ -	$ 1,033,760	$ 1,033,760
EMU SUBTOTAL	**$ 664,127,325**	**$ 664,127,325**	**$ 1,165,579**	**$ 66,457,212**	**$ 597,670,113**	**$ 664,127,325**

Notes regarding tables above:

1. "Current Budget" includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
4. The agency labor is actual through August 2017 and accrued for September 2017.
5. "Owner's Reserve" is replaced with "Forecasted Costs and Changes" where the amount indicates identified potential changes.

Table 8-3 PCEP Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
Electrification Subtotal	$ 1,316,125,208	$ 1,316,125,208	$ 9,304,902	$ 257,652,163	$ 1,058,473,045	$ 1,316,125,208
EMU Subtotal	$ 664,127,325	$ 664,127,325	$ 1,165,579	$ 66,457,212	$ 597,670,113	$ 664,127,325
PCEP TOTAL	**$ 1,980,252,533**	**$ 1,980,252,533**	**$ 10,470,480**	**$ 324,109,375**	**$ 1,656,143,157**	**$ 1,980,252,533**

Notes regarding tables above:

1. Column B "Current Budget" includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

Appendix D includes costs broken down by Standard Cost Code (SCC) format. This format is required for reporting of costs to the FTA. The overall project total in the SCC format is lower than the project costs in table 8-3. This is due to the exclusion of costs incurred prior to the project entering the Project Development phase.

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 accounts for impacts of the changes and ensures prudent use of contingency.

Currently the three PCEP contracts are BBII, Stadler, and SCADA. Future PCEP contracts such as CEMOF Modifications and the Tunnel Notching will also follow the change management process.

A log of all executed change orders can be found in Exhibit E.

Executed Contract Change Orders (CCOs) This Month

Electrification Contract

Change Order Authority (5% of BBII Contract)		**5% x $696,610,558 = $34,830,528**
Date	Description	CCO Amount
	No changes this month	
	Total	

EMU Contract

Change Order Authority (5% of Stadler Contract)		**5% x $550,899,459 = $27,544,973**
Date	Description	CCO Amount
9/22/2017	CCO 00001 – Contract General Specification and Special Provision Clean-up	$0
	Total	

SCADA Contract

Change Order Authority (15% of ARINC Contract)		**15% x $3,446,917 = $517,038**
Date	Description	CCO Amount
	None to date	
	Total	

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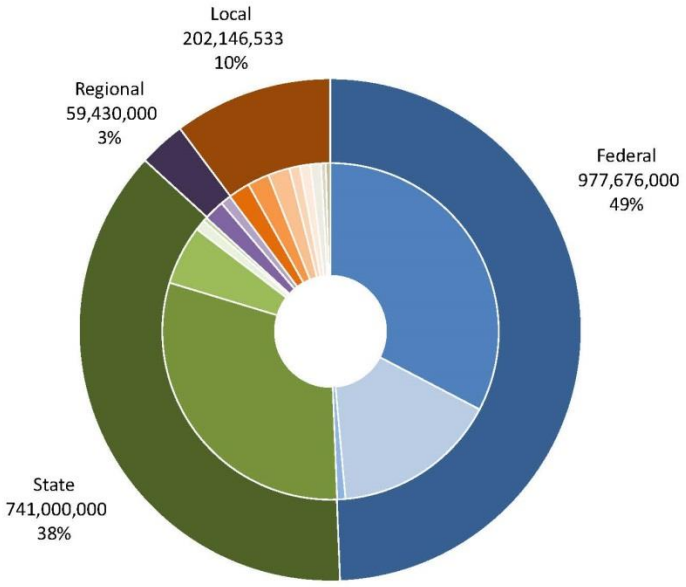
10.0 FUNDING

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. As previously noted, the JPB received approval of the FFGA from the FTA in May 2017. The Agreement provides the project with a commitment of $647 million in federal funding, with $72.9 million available immediately. An additional $100 million in Fiscal Year 2017 funding has been made available by FTA through the annual apportionment process and those funds are now included as part of the FFGA.

Figure 10-1 Funding Plan



Fund Source	Amount	%
FTA Core Capacity	$647,000,000	32.67%
FTA Section 5307 (EMU only)*	$315,000,000	15.91%
FTA Section 5307 (Environmental / Pre Development only)	$15,676,000	0.79%
Prop 1A	$600,000,000	30.30%
High Speed Rail Cap and Trade	$113,000,000	5.71%
Transit & Intercity Rail Capital Program	$20,000,000	1.01%
Prop 1B (Public Transportation Modernization & Improvement Account)	$8,000,000	0.40%
Bridge Toll Funds (RM1/RM2)	$39,430,000	1.99%
Carl Moyer	$20,000,000	1.01%
SFCTA/SFMTA**	$41,382,178	2.09%
SMCTA Measure A	$41,382,178	2.09%
VTA Measure A	$41,382,177	2.09%
Santa Clara (VTA) 7-Party MOU Contribution	$20,000,000	1.01%
San Francisco 7-Party MOU Contribution	$20,000,000	1.01%
San Mateo (SMCTA) 7-Party MOU Contribution	$20,000,000	1.01%
Caltrain Low Carbon Transit Operations Cap and Trade	$9,000,000	0.45%
Prior Local Contribution	$9,000,000	0.45%
Total	**$1,980,252,533**	

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.

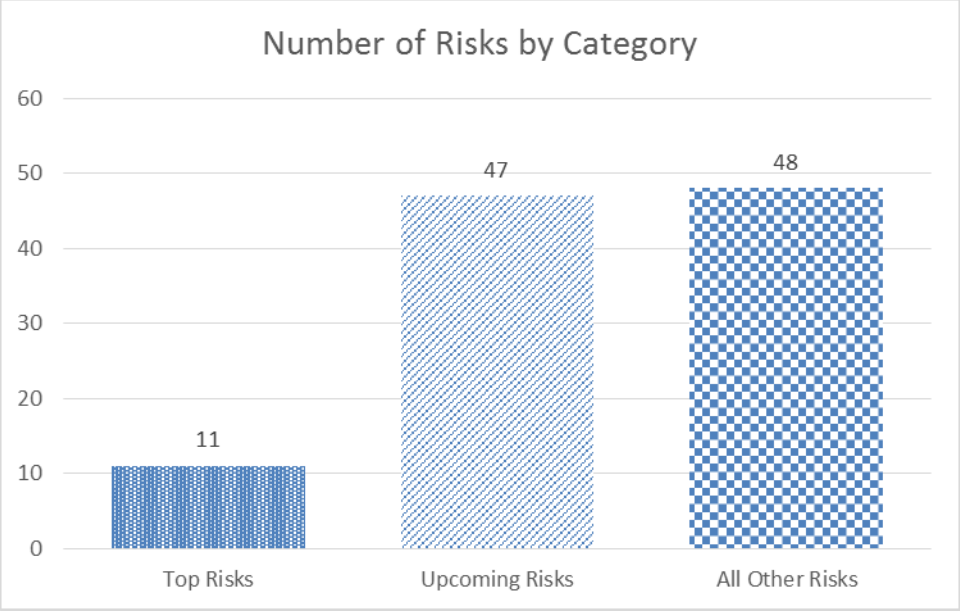
The team has identified the following items as top risks for the project:

- BBII may be unable to develop grade crossing modifications that meet operational requirements prior to scheduled sub-system testing of the grade crossings.
- Costs for upgrades to PG&E power stations may exceed the current budget.
- A complex and diverse collection of major program elements may not be successfully integrated with existing operations and infrastructure.
- Relocation of Verizon must precede installation of foundations and connections to Traction Power Substations (TPS). Relocation work will be performed by others and may not be completed to meet BBII's construction schedule.
- Additional work in the form of signal/pole adjustments may be required to remedy sight distance impediments arising from modifications to original design.
- Working PTC signal system may not be in place in advance of integrated testing and commissioning.
- Design changes may necessitate additional implementation of environmental mitigations not previously budgeted.
- 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 BBII's construction schedule.
- Collaboration across multiple disciplines may fail to comprehensively address all of the elements required to operate and maintain an electrified railroad and decommission the current diesel fleet.
- BBII may be unable to get permits required by jurisdictions for construction in a timely manner.
- TASI may be unable to deliver sufficient resources to support construction and testing for the electrification contract.

Activity This Month

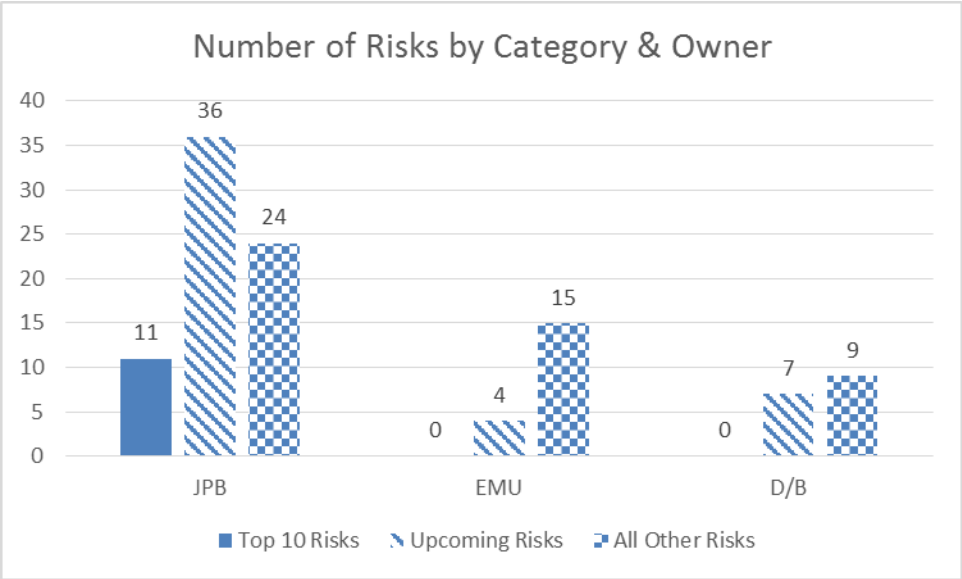
- A two-day risk refresh workshop was conducted to 1) refine and incorporate contractor-owned risks into the PCEP risk register and 2) review and update all other risks on the current risk register. Certain risks were retired, revised, regraded, and added to the risk register.
- Updates were made to 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 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, 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. All other risks are risks not falling into other categories.

Table 11-1 Monthly Status of Risks



Total Number of Active Risks = 106

Table 11-2 Risk Classification



Total Number of Active Risks = 106

Activity Next Month

- Document risk refresh workshop and incorporate changes into risk register.
- Conduct weekly monitoring of risk mitigation actions and continue publishing risk register.
- Update risk descriptions, effects, mitigations and retirement dates based on weekly monitoring.
- Continue reviewing risks on project risk register with Systems Integration database.
- Update Risk Identification and Mitigation Plan.

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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, San Francisco Bay Regional Water Quality Control Board (SFWQCB), the California Department of Fish and Wildlife, 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

- No permit updates occurred.

Activity Next Month

- No permit updates are planned.

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 were present during project activities occurring in areas that required monitoring. The monitoring was conducted in accordance with measures in the MMRP in an effort to minimize potential impacts on sensitive environmental resources.
- Noise and vibration monitoring also occurred during project activities, and non-hazardous soil was removed from the right of way (ROW).
- Surveys for nesting birds ahead of project activities continued through September 15 (nesting bird season is February 1 through September 15), and pre-construction surveys for sensitive wildlife ahead of project activities occurred.

- Environmentally Sensitive Area (ESA) staking occurred to delineate jurisdictional waterways, and other potentially sensitive areas, that should be avoided during upcoming construction activities, and wildlife exclusion fencing installation was initiated adjacent to portions of the alignment designated for wildlife exclusion fencing.
- Silt fencing installation occurred at equipment staging areas in accordance with the project-specific Stormwater Pollution Prevention Plan.
- Archaeological exploratory trenching was initiated within known archaeological sites and other culturally sensitive areas in Segment 2.

Activity Next Month

- Environmental compliance monitors will continue to monitor project activities occurring in areas that require monitoring in an effort to minimize potential impacts on sensitive environmental resources in accordance with the MMRP.
- Noise and vibration monitoring of project activities will continue to occur and non-hazardous soil will continue to be removed.
- Tree trimming and removal will continue in Segment 2, and biological surveyors will continue to conduct pre-construction surveys for sensitive wildlife species ahead of project activities.
- ESA staking will continue to occur in Segment 2 to delineate jurisdictional waterways and other potentially sensitive areas that should be avoided during upcoming project activities.
- Wildlife exclusion fencing will continue to be installed in Segment 2 prior to upcoming construction activities adjacent to potentially suitable habitat for sensitive wildlife species.
- Archaeological exploratory trenching will continue to occur prior to construction activities within culturally sensitive areas.

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

- Work continued with all utilities on review of overhead utility line relocations based on the current preliminary design.
- Continued individual coordination with utility companies on relocation plans and schedule for incorporation with project master schedule.
- Continued to work on relocation design review for PG&E and coordinate with PG&E on permitting and work planning.
- Continued to work with Verizon to resolve the relocation of fiber optic cable within the Caltrain ROW.
- Conducted partnering session with the utility owners to identify issues and potential resolutions, upcoming goals for the project, and actions for the project moving forward.

Activity Next Month

- Continue monthly meetings with telecom and power carriers.
- Continue to coordinate with utility owners on the next steps of relocations, including support of any required design information.
- Update the relocation schedule as information becomes available from the utility owners.
- Continue work with Verizon to relocate their parallel aerial fiber optic cable, including possible interim options.
- Continue review of relocation design from PG&E and coordinate with PG&E on permitting and work planning for relocations.

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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 Safely Zones (easements). There are two larger full acquisition areas required for wayside facilitates. 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 in Segment 4.
- There are three active eminent domain actions in Segment 2, with the other property owners either settling or in active negotiations to settle.
- One eminent domain action was filed in Segment 4. Possession is expected though an Order for Possession in February 2018, in time to meet the project schedule.
- Seven appraisals were completed in Segment 3 with six offers made.
- One parcel was cancelled in Segment 3.
- The remaining appraisals continued in Segments 1 and 3 and technical staff responded to a number of Requests for Information (RFI) to support the appraisal process.
- Completed for Segments 1 and 3.

Activity Next Month

- Negotiations for all outstanding offers will continue.

Table 14-1 Real Estate Acquisition Overview

Segment	No. of Parcels Needed*	No. of Appraisals Completed	Offers Presented	Offers Accepted	Acquisition Status		
					Escrow Closed	Eminent Domain Action Filed	Parcel Possession
Segment 1	8	0	0	0	0	0	0
Segment 2	27	26	25	21	18	3	18
Segment 3	11	7	6	0	0	0	0
Segment 4	9	9	8	0	0	1	0
Total	**55**	**42**	**39**	**21**	**18**	**4**	**18**

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.

Status of Segment 2 and Segment 4 ROW Acquisition

- Segment 2
  - Three eminent domain actions have been filed with possession expected in January 2018.
  - Exception: UPRR requested JPB follow their utility approval process.
- Segment 4
  - The Loop Bus eminent domain actions were filed, providing access by February 2018.
  - One parcel agreed to terms and paperwork is being processed.
  - Exception: PG&E property – JPB working with BBII to redesign the poles that impact PG&E operations.

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[1]	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[2]
	Operating Rules	CPUC	Executed
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit	Executed[3]
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	Not needed[4]
	Trackage Rights	UPRR	Executed[3]

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, 3 and 5 have been executed. Supplemental Agreement 4 is the remaining agreement 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 this month:

Presentations/Meetings

- Pre-Construction Community Meeting: San Mateo
- Local Policy Maker Group
- City Staff Coordinating Group
- Millbrae City Council
- JPB Citizens Advisory Committee
- Redwood City Chamber of Commerce
- Menlo Park Chamber of Commerce
- Silicon Valley Bike Coalition and San Francisco Bike Coalition

Third Party/Stakeholder Actions

Issued for Construction OCS Pole Design Review Documents were shared with the following cities:

- Millbrae
- San Bruno
- South San Francisco

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17.0 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION AND LABOR STATISTICS

The DB electrification contract has a DBE goal of 5.2%.

	Payment	Percentage
September	$184,694	0.027%
To date	$1,795,031	0.258%

Upcoming solicitations for DBE/Small Business Enterprise to be determined:

- Tunnel modifications
- CEMOF facility upgrades for EMUs
- On-call safety & security support for PCEP

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18.0 PROCUREMENT

Contract Activity

- No contract activity

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

- RFQ – Construction Inspection and Testing Services

IFB/RFQ/RFP Received this Month:

- RFQ response from Signet Testing Labs, Inc. - Construction Inspection and Testing Services

Contract Awards this Month:

- Signet Testing Labs, Inc. for Construction Inspection and Testing Services for $5,000

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

- Multiple WDs & POs issued to support the program needs

In Process IFB/RFQ/RFP/Contract Amendments:

- RFP – 17-J-S-062 – On-Call Ambassador Support Services
- RFP – 17-J-S-070 – On-Call Quality Assurance Independent Testing Laboratory
- Memorandum of Understanding – Purchase of Electric Locomotive for testing of electrification system
- RFP – Refurbishment of Electric Locomotive for PCEP

Upcoming Contract Awards:

- No upcoming contract awards

Upcoming IFB/RFQ/RFP:

- IFB – Tunnel Modifications
- IFB – CEMOF Facility Upgrades for EMUs
- RFP – On-Call Safety and Security Support 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:

Date	Milestone
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 FFGA
2017	FTA finalized the FFGA for $647 million in Core Capacity funding, met all regulatory requirements including end of Congressional Review Period (February) FTA FFGA executed, committing $647 million to the project (May) JPB approves $1.98 billion budget for PCEP (June) Issued NTP for Stadler (June 1) Issued NTP for Balfour (June 19) Construction began (August)

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APPENDICES

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Appendix A – Acronyms

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

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

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

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Appendix B – Funding Partner Meetings

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Funding Partner Meeting Representatives

Updated July 25, 2017

Agency	CHSRA	MTC	SFCTA/SFMTA/CCSF	SMCTA	VTA
FTA Quarterly Meeting	• Bruce Armistead • Boris Lipkin • Ben Tripousis (info only) • Ian Ferrier (info only) • Wai Siu (info only)	• Anne Richman • Glen Tepke	• Luis Zurinaga	• April Chan • Peter Skinner	• Jim Lawson
CHSRA Quarterly Meeting	• Bruce Armistead • Boris Lipkin • Ben Tripousis • John Popoff	• Trish Stoops	• Luis Zurinaga	• April Chan • Peter Skinner	• Krishna Davey
Funding Oversight (monthly)	• Ben Tripousis • Kelly Doyle	• Anne Richman • Glen Tepke • Kenneth Folan	• Anna LaForte • Maria Lombardo • Luis Zurinaga • Monique Webster • Ariel Espiritu Santo	• April Chan • Peter Skinner	• Jim Lawson • Marcella Rensi • Michael Smith
Change Management Board (monthly)	• Bruce Armistead • Boris Lipkin	• Trish Stoops	• Luis Zurinaga • Tilly Chang (info only)	• Joe Hurley	• Krishna Davey • Jim Lawson • Carol Lawson • Nuria Fernandez (info only)
Master Program Schedule Update (monthly)	• Ian Ferrier • Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Jim Lawson
Risk Assessment Committee (monthly)	• Ian Ferrier • Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey
PCEP Delivery Coordination Meeting (bi-weekly	• Ian Ferrier	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey
Systems Integration Meeting (bi-weekly	• Ian Ferrier • Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey

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Appendix C – Schedule

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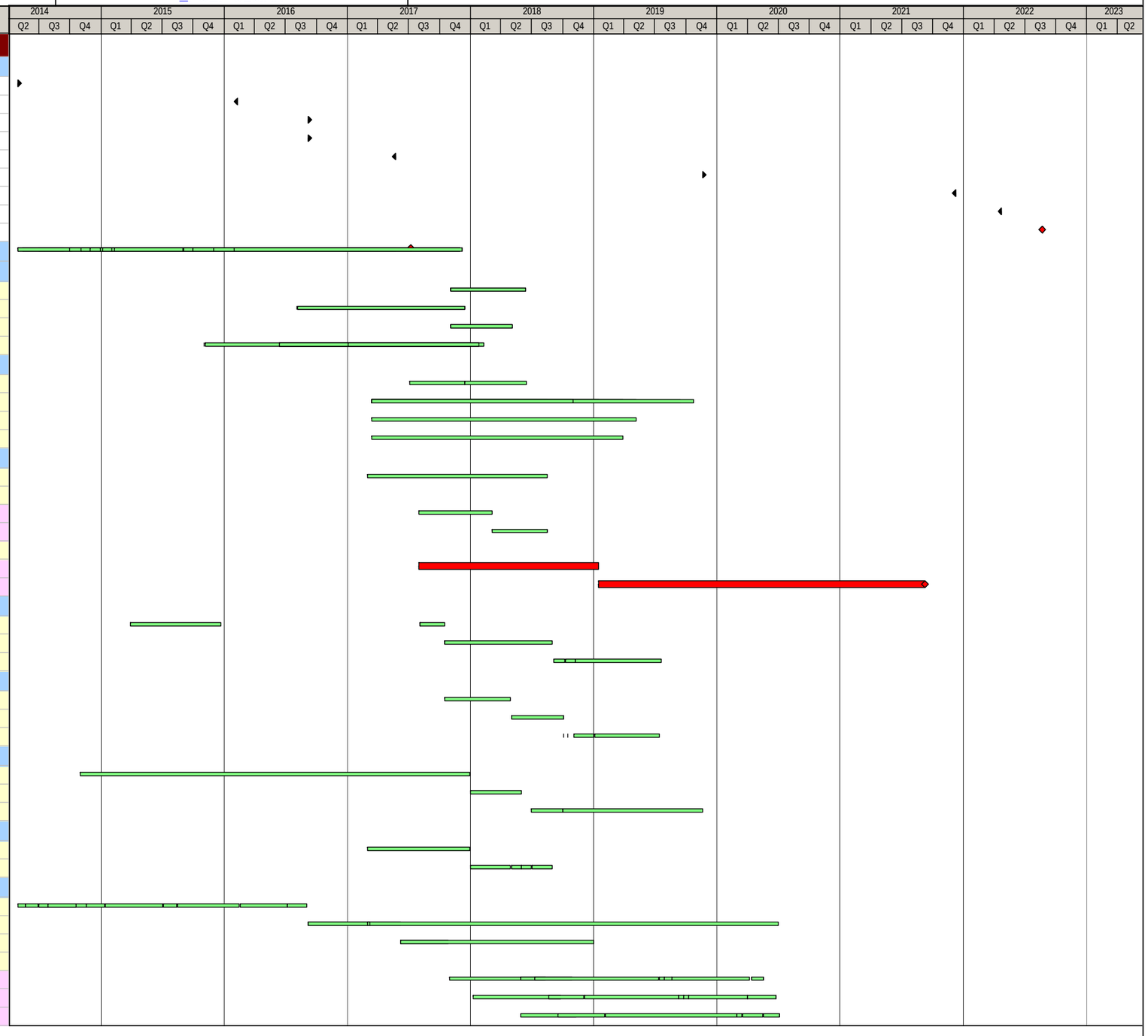
ELECTRIFICATION SCHEDULE (BBII) TIA#1 R5...

_PCEP C16.XX

10/23/17 14:12

#	Activity Name	Duration	Start	Finish
1	**MASTER PROGRAM SCHEDULE C16.XX**	101m	05/01/14 A	08/22/22
2	**MILESTONES**	98m	05/01/14 A	08/22/22
3	Start	0m	05/01/14 A	
4	NEPA Reevaluation Complete	0m		02/11/16 A
5	LNTP to Electrification Contractor	0m	09/06/16 A	
6	LNTP to Vehicle Manufacturer	0m	09/06/16 A	
7	FTA Issues FFGA	0m		05/23/17
8	Segment 4 (Test Track) Complete	0m	11/21/19	
9	Revenue Service Date (RSD) w/out Risk Contingency	0m		12/09/21
10	Revenue Service Date (RSD) w Risk Contingency (JPB Target)	0m		04/22/22
11	Revenue Service Date (RSD) w/ Risk Contingency (FFGA RSD)	0m		08/22/22
12	**PLANNING / APPROVALS**	44m	05/01/14 A	12/07/17
13	**REAL ESTATE ACQUISITION**	31m	11/05/15 A	06/13/18
14	**SEGMENT 1**	7m	11/02/17	06/13/18
15	**SEGMENT 2**	16m	08/04/16 A	12/15/17
16	**SEGMENT 3**	6m	11/02/17	05/03/18
17	**SEGMENT 4**	27m	11/05/15 A	02/09/18
18	**OVERHEAD UTILITY RELOCATION**	31m	03/13/17	10/24/19
19	**SILICON VALLEY POWER (SVP)**	11m	07/06/17	06/15/18
20	**PG&E**	31m	03/13/17	10/24/19
21	**CITY OF PALO ALTO (CoPA)**	25m	03/13/17	05/06/19
22	**AT&T**	24m	03/13/17	03/27/19
23	**PG&E INFRASTRUCTURE**	54m	03/01/17	09/09/21
24	**INTERCONNECT (Supporting TPS-2)**	17m	03/01/17	08/15/18
25	**INTERIM POWER**	12m	08/01/17	08/15/18
26	***DESIGN & PERMITTING***	7m	08/01/17	03/06/18
27	***CONSTRUCTION***	5m	03/06/18	08/15/18
28	**PERMANENT POWER**	49m	08/01/17	09/09/21
29	***DESIGN & PERMITTING***	17m	08/01/17	01/15/19
30	***CONSTRUCTION***	31m	01/16/19	09/09/21
31	**SCADA**	51m	03/30/15 A	07/19/19
32	**PREPARE SOLE SOURCE & AWARD**	30m	03/30/15 A	10/16/17
33	**DESIGN**	10m	10/16/17	08/31/18
34	**INSTALLATION & TEST**	10m	09/04/18	07/19/19
35	**CEMOF**	21m	10/16/17	07/15/19
36	**DESIGN**	6m	10/16/17	04/30/18
37	**BID & AWARD**	5m	05/01/18	10/04/18
38	**CONSTRUCTION**	9m	10/05/18	07/15/19
39	**TUNNEL MODIFICATION**	60m	10/31/14 A	11/19/19
40	**DESIGN**	37m	10/31/14 A	12/29/17
41	**BID & AWARD**	5m	01/02/18	06/01/18
42	**CONSTRUCTION**	16m	06/29/18	11/19/19
43	**ELECTRIC LOCOMOTIVE**	18m	03/01/17 A	08/31/18
44	**BID & AWARD**	10m	03/01/17 A	12/29/17
45	**REHAB / TEST/ TRAIN / SHIP**	8m	01/02/18	08/31/18
46	**EMU**	89m	05/01/14 A	08/20/21
47	**DEVELOP RFP, BID & AWARD**	28m	05/01/14 A	09/02/16 A
48	**DESIGN**	46m	09/06/16 A	06/30/20
49	**PROCUREMENT (Material)**	19m	06/08/17	12/31/18
50	**MANUFACTURING**	46m	10/30/17	08/20/21
51	***TRAINSET 1***	31m	10/30/17	05/18/20
52	***TRAINSET 2***	30m	01/09/18	06/24/20
53	***TRAINSET 3***	26m	05/28/18	07/03/20

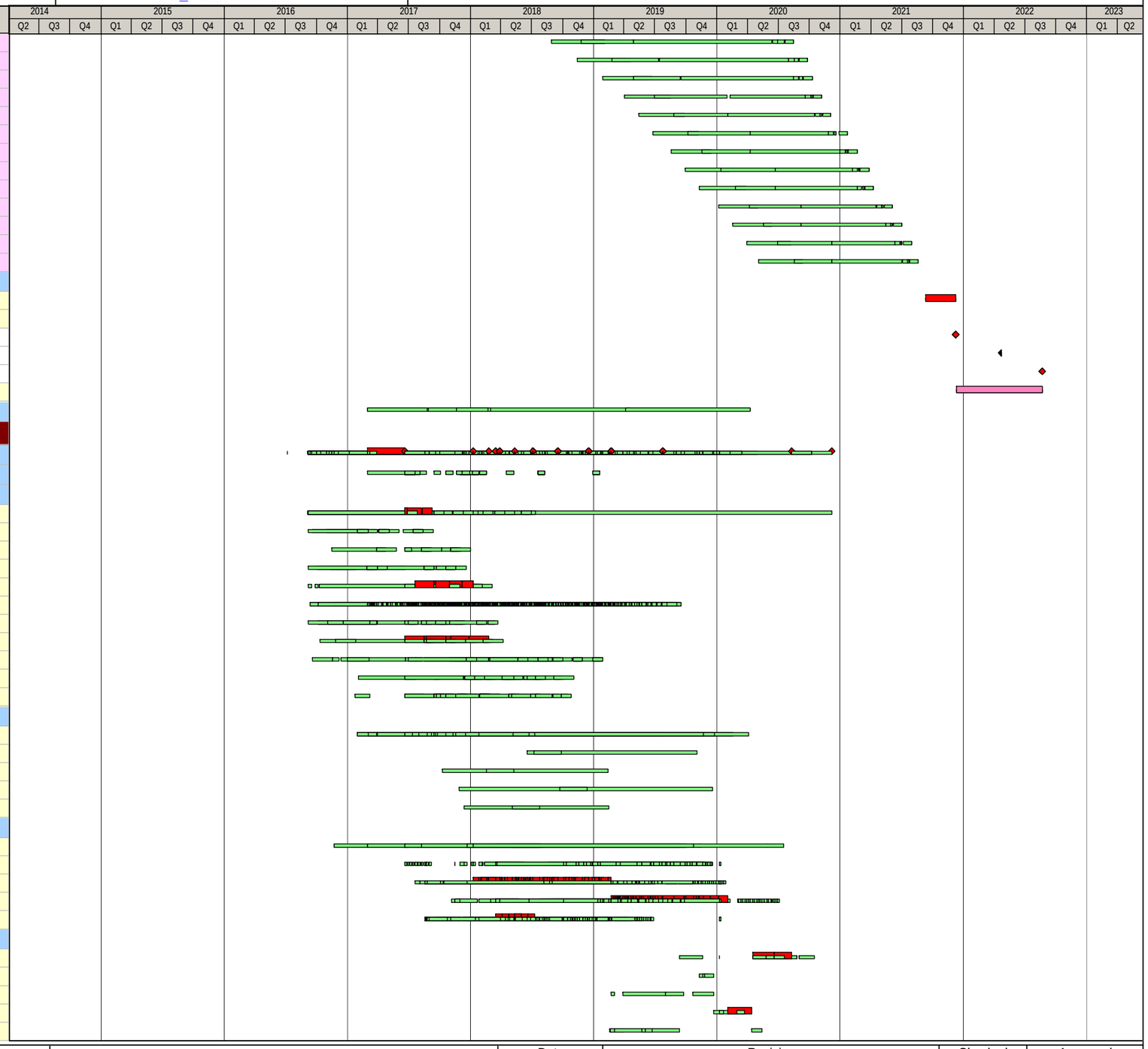


All Activities
Critical
Start Milestone
Finish Milestone
Critical Milestone
Risk Contingency

Filename: _BB TIA1R5 030115-1...

Date	Revision	Checked	Approved
	Updates & Revisions Completed By A. Christofas		
	Checked By S. Iyer		
	Approved By		

#	Activity Name	Duration	Start	Finish
54	*TRAINSET 4*	24m	08/27/18	08/14/20
55	*TRAINSET 5*	23m	11/12/18	09/25/20
56	*TRAINSET 6*	21m	01/28/19	10/09/20
57	*TRAINSET 7*	20m	04/01/19	11/06/20
58	*TRAINSET 8*	19m	05/13/19	12/04/20
59	*TRAINSET 9*	19m	06/24/19	01/22/21
60	*TRAINSET 10*	18m	08/19/19	02/19/21
61	*TRAINSET 11*	18m	09/30/19	03/26/21
62	*TRAINSET 12*	17m	11/11/19	04/09/21
63	*TRAINSET 13*	17m	01/06/20	06/04/21
64	*TRAINSET 14*	17m	02/17/20	07/02/21
65	*TRAINSET 15*	16m	03/30/20	07/30/21
66	*TRAINSET 16*	16m	05/04/20	08/20/21
67	**TESTING / STARTUP PHASE**	11m	09/10/21	08/22/22
68	**PRE-REVENUE TESTING**	3m	09/10/21	12/09/21
69	**REVENUE OPERATIONS**	8m	12/09/21	08/22/22
70	Revenue Service Date (RSD) w/out Risk Contingency	0m		12/09/21
71	Revenue Service Date (RSD) w Risk Contingency (JPB Target)	0m		04/22/22
72	Revenue Service Date (RSD) w/ Risk Contingency (FFGA RSD)	0m		08/22/22
73	**RISK CONTINGENCY**	12m	12/10/21	08/22/22
74	**OPERATIONAL READINESS PHASE**	37m	03/01/17	04/09/20
75	***ELECTRIFICATION SCHEDULE (BBII) TIA#1 R5***	52m	07/07/16 A	12/07/20
76	**General**	80m	07/07/16 A	12/07/20
77	**Permits**	32m	03/01/17	01/18/19
78	**Design**	77m	09/06/16 A	12/06/20
79	**All Work Areas**	77m	09/06/16 A	12/06/20
80	**Segment 2 WA 5**	18m	09/07/16 A	09/12/17
81	**Segment 2 WA 4 & 5**	21m	11/16/16 A	01/01/18
82	**Segment 2 WA 4**	23m	09/07/16 A	12/18/17
83	**Segment 2 & 4**	27m	09/07/16 A	03/05/18
84	**Segment 4**	55m	09/12/16 A	09/17/19
85	**Segment 2**	28m	09/07/16 A	03/23/18
86	**Segment 2 WA's 1, 2 ,& 3**	27m	10/12/16 A	04/07/18
87	**Segment 1 & 3**	43m	09/19/16 A	01/27/19
88	**Segment 1**	32m	02/02/17 A	11/02/18
89	**Segment 3**	32m	01/23/17 A	10/25/18
90	**Procurement**	58m	01/30/17 A	04/03/20
91	**All Work Areas**	58m	01/30/17 A	04/03/20
92	**Segment 1**	25m	06/18/18	11/01/19
93	**Segment 2**	25m	10/09/17	02/12/19
94	**Segment 3**	38m	11/27/17	12/19/19
95	**Segment 4**	21m	12/12/17	02/13/19
96	**Construction/Installation**	43m	11/22/16 A	07/16/20
97	**All Work Areas**	66m	11/22/16 A	07/16/20
98	**Segment 1 (8 Mi)**	47m	06/19/17	01/13/20
99	**Segment 2 (21.1 Mi)**	46m	07/20/17	01/28/20
100	**Segment 3 (15.4 Mi)**	48m	11/06/17	07/03/20
101	**Segment 4 (6.6 Mi)**	28m	08/18/17	01/13/20
102	**Testing & Commissioning**	30m	02/18/19	10/14/20
103	**All Work Areas**	20m	09/12/19	10/14/20
104	**Segment 1**	2m	11/09/19	12/23/19
105	**Segment 2**	6m	02/22/19	12/23/19
106	**Segment 3**	2m	12/23/19	04/13/20
107	**Segment 4**	22m	02/18/19	05/12/20



All Activities | Finish Milestone
Critical | Critical Milestone
Start Milestone | Risk Contingency

Filename: _BB TIA1R5 030115-1...

Date	Revision	Checked	Approved
	Updates & Revisions Completed By A. Christofas		
	Checked By S. Iyer		
	Approved By		

Appendix D – Standard Cost Codes

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Description of Work	Approved Budget (A)	Cost This Month (B)	Cost To Date (C)	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)
10 - GUIDEWAY & TRACK ELEMENTS	**$14,256,739**	**$0**	**$0**	**$14,256,739**	**$14,256,739**
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	$2,500,000	$0	$0	$2,500,000	$2,500,000
10.07 Guideway: Underground tunnel	$8,110,649	$0	$0	$8,110,649	$8,110,649
10.07 Allocated Contingency	$3,646,090	$0	$0	$3,646,090	$3,646,090
30 - SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	**$2,265,200**	**$0**	**$0**	**$2,265,200**	**$2,265,200**
30.03 Heavy Maintenance Facility	$1,344,000	$0	$0	$1,344,000	$1,344,000
30.03 Allocated Contingency	$421,200	$0	$0	$421,200	$421,200
30.05 Yard and Yard Track	$500,000	$0	$0	$500,000	$500,000
40 - SITEWORK & SPECIAL CONDITIONS	**$255,072,402**	**$1,276,762**	**$46,374,879**	**$218,400,190**	**$264,775,069**
40.01 Demolition, Clearing, Earthwork	$3,077,685	$170,000	$170,000	$2,907,685	$3,077,685
40.02 Site Utilities, Utility Relocation	$62,192,517	$728,395	$5,000,889	$57,191,628	$62,192,517
40.02 Allocated Contingency	$25,862,000	$0	$0	$25,862,000	$25,862,000
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	$2,200,000	$0	$0	$2,200,000	$2,200,000
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks	$32,579,208	$46,500	$84,000	$32,495,208	$32,579,208
40.05 Site structures including retaining walls, sound walls	$568,188	$0	$0	$568,188	$568,188
40.06 Pedestrian / bike access and accommodation, landscaping	$804,933	$0	$0	$804,933	$804,933
40.07 Automobile, bus, van accessways including roads, parking lots	$284,094	$0	$0	$284,094	$284,094
40.08 Temporary Facilities and other indirect costs during construction	$107,343,777	$331,868	$41,119,989	$75,926,454	$117,046,444
40.08 Allocated Contingency	$20,160,000	$0	$0	$20,160,000	$20,160,000
50 - SYSTEMS	**$502,706,079**	**$1,033,258**	**$6,968,826**	**$489,708,702**	**$496,677,528**
50.01 Train control and signals	$97,589,149	$0	$1,000,000	$95,789,148	$96,789,149
50.01 Allocated Contingency	$1,651,000	$0	$0	$1,651,000	$1,651,000
50.02 Traffic signals and crossing protection	$23,879,905	$0	$0	$23,879,905	$23,879,905
50.02 Allocated Contingency	$1,140,000	$0	$0	$1,140,000	$1,140,000
50.03 Traction power supply: substations [1]	$70,671,121	$0	$2,948,853	$67,722,268	$70,671,121
50.03 Allocated Contingency	$28,464,560	$0	$0	$28,464,560	$28,464,560
50.04 Traction power distribution: catenary and third rail	$253,683,045	$1,033,257	$3,019,972	$249,655,831	$252,675,803
50.04 Allocated Contingency	$18,064,000	$0	$0	$13,842,691	$13,842,691
50.05 Communications	$5,455,000	$0	$0	$5,455,000	$5,455,000
50.07 Central Control	$2,090,298	$0	$0	$2,090,298	$2,090,298
50.07 Allocated Contingency	$18,000	$0	$0	$18,000	$18,000
60 - ROW, LAND, EXISTING IMPROVEMENTS	**$35,675,084**	**$262,137**	**$8,551,277**	**$27,123,807**	**$35,675,084**
60.01 Purchase or lease of real estate	$25,927,074	$262,137	$8,527,080	$17,399,995	$25,927,074
60.01 Allocated Contingency	$8,748,010	$0	$0	$8,748,010	$8,748,010
60.02 Relocation of existing households and businesses	$1,000,000	$0	$24,198	$975,803	$1,000,000
70 - VEHICLES (96)	**$625,544,147**	**$894,361**	**$60,297,805**	**$565,432,102**	**$625,729,907**
70.03 Commuter Rail	$589,167,291	$894,361	$60,297,805	$529,903,247	$590,201,051
70.03 Allocated Contingency	$9,472,924	$0	$0	$8,624,924	$8,624,924
70.06 Non-revenue vehicles	$8,140,000	$0	$0	$8,140,000	$8,140,000
70.07 Spare parts	$18,763,931	$0	$0	$18,763,931	$18,763,931
80 - PROFESSIONAL SERVICES (applies to Cats. 10-50)	**$325,532,351**	**$6,289,219**	**$150,883,587**	**$179,067,124**	**$329,950,712**
80.01 Project Development	$130,350	$0	$280,180	-$149,830	$130,350
80.02 Engineering (not applicable to Small Starts) [2]	$181,346,859	$3,776,440	$114,560,066	$70,939,957	$185,500,022
80.02 Allocated Contingency [3]	$1,742,144	$0	$0	$2,007,341	$2,007,341
80.03 Project Management for Design and Construction [4]	$72,910,901	$1,242,991	$28,676,727	$44,234,173	$72,910,901
80.03 Allocated Contingency	$9,270,000	$0	$0	$9,270,000	$9,270,000
80.04 Construction Administration & Management	$23,677,949	$370,102	$2,194,595	$21,483,354	$23,677,949
80.04 Allocated Contingency	$19,537,000	$0	$0	$19,537,000	$19,537,000
80.05 Professional Liability and other Non-Construction Insurance	$4,305,769	$850,000	$2,555,769	$1,750,000	$4,305,769
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.	$6,341,599	$49,686	$2,616,250	$3,725,349	$6,341,599
80.06 Allocated Contingency	$556,000	$0	$0	$556,000	$556,000
80.07 Surveys, Testing, Investigation, Inspection	$3,287,824	$0	$0	$3,287,824	$3,287,824
80.08 Start up	$1,797,957	$0	$0	$1,797,957	$1,797,957
80.08 Allocated Contingency	$628,000	$0	$0	$628,000	$628,000
Subtotal (10 - 80)	**$1,761,052,001**	**$9,755,737**	**$273,076,373**	**$1,496,253,865**	**$1,769,330,238**
90 UNALLOCATED CONTINGENCY [5]	**$162,620,295**	**-$77,380**	**$0**	**$154,342,058**	**$154,342,058**
Subtotal (10 - 90)	**$1,923,672,296**	**$9,678,357**	**$273,076,373**	**$1,650,595,922**	**$1,923,672,296**
100 FINANCE CHARGES	**$6,998,638**	**$792,123**	**$1,451,403**	**$5,547,235**	**$6,998,638**
Total Project Cost (10 - 100)	**$1,930,670,934**	**$10,470,480**	**$274,527,776**	**$1,656,143,158**	**$1,930,670,934**

Notes:

(1) 50.03 – Budget transfer to 80.02 and 80.03 to incorporate higher than anticipated design cost for SCADA. This transfer does not change the overall approved Broad approved SCADA Contract amount.

(2) 80.02 – Reallocated Budget from 50.03 for SCADA Design cost.

(3) 80.02 Allocated Contingency – Reallocated Budget from allocated contingency to accommodate the SCADA design cost.

(4) 80.03 – Reallocated Budget from 50.03 for SCADA Design cost.

(5) 90.00 - August Financial Charges accruals were assigned to 90.00. The accruals are reassigned to 100.00 in this reporting period.

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Appendix E – Change Order Logs

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Change Order Logs

Electrification Contract

Change Order Authority (5% of BBII Contract) **5% x $696,610,558 = $34,830,528**

Date	Description	CCO Amount	Percent of Authority[1]	Remaining Authority
8/31/2017	CCO 00001 - Track Access Delays for 2016, Quarter 4	$85,472		
	Total	**$85,472**	**0.25%**	**$34,745,056**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.

EMU Contract

Change Order Authority (5% of Stadler Contract) **5% x $550,899,459 = $27,544,973**

Date	Description	CCO Amount	Percent of Authority[1]	Remaining Authority
9/22/2017	CCO 00001 – Contract General Specification and Special Provision Clean-up	$0		
	Total	**$0**	**0%**	**$27,544,973**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.

SCADA Contract

Change Order Authority (15% of ARINC Contract) **15% x $3,446,917 = $517,038**

Date	Description	CCO Amount	Percent of Authority[1]	Remaining Authority
	None to date			
	Total	**$0**	**0%**	**$517,038**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.

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