



# Caltrain Modernization Program Peninsula Corridor Electrification Project (PCEP)



## Executive Monthly Progress Report

April 30, 2023

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**TABLE OF CONTENTS**

1.0 Executive Summary..... 1-1

    1.1 Introduction..... 1-1

    1.2 Program Cost and Budget..... 1-1

    1.3 Program Progress and Schedule ..... 1-1

    1.4 Change Management Board (CMB)..... 1-1

    1.5 This Month’s Accomplishments..... 1-2

    1.6 Upcoming work ..... 1-3

    1.7 Critical Items ..... 1-3

2.0 Safety..... 2-1

3.0 IMS Program Schedule..... 3-1

    3.1 Introduction ..... 3-1

    3.2 Critical Path ..... 3-2

    3.3 Schedule Contract Milestone Analysis ..... 3-3

4.0 Cost and Budget..... 4-1

    4.1 Introduction..... 4-1

    4.2 Program Budget and Cost..... 4-1

    4.3 Program Shared Risk Pool and Contingency ..... 4-2

    4.4 Electrification Design Builder Contract Incentives ..... 4-3

    4.5 Program Cash Flow and Funding..... 4-3

    4.6 Issues ..... 4-4

5.0 Change Management..... 5-1

    5.1 Introduction..... 5-1

    5.2 Change Orders ..... 5-1

    5.3 Issues ..... 5-2

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## **1.0 EXECUTIVE SUMMARY**

### **1.1 Introduction**

The Peninsula Corridor Electrification Project (PCEP) will upgrade 51 miles of diesel service to electrified service from San Francisco to San Jose (Tamien Station). The PCEP scope of work includes design and construction of an overhead contact system, traction power facilities, modification of the existing signaling and grade crossing protection system to make it compatible with the electrified railroad, substation improvements at Pacific Gas and Electric (PG&E) substations, and modifications at existing tunnels and Caltrain's maintenance facility. It also includes the design, manufacturing, assembly, testing, and delivery of the Electric Multiple Units (EMUs).

Caltrain completed a thorough assessment of all aspects of the program including cost, schedule, risks, and organization after the global settlement in 2021. Caltrain re-baselined the program budget and schedule in December of 2021. Caltrain finished a schedule reforecast in March 2023 and is committed to deliver PCEP and achieve revenue service in September of 2024.

### **1.2 Program Cost and Budget**

On December 6, 2021, the JPB adopted a new PCEP program budget of \$2,442,690,697. On January 31, 2023 Caltrain received a \$367 million funding award from California's Transit and Intercity Rail Capital Program's (TIRCP) Cycle 6 Existing Project Reserve, representing the remaining funding needed to complete the project. The project is now fully funded in the amount of \$2,442,690,697. As of April 2023, the project is on budget:

- The current project total cost at completion (EAC) is the same as the Board adopted budget of \$2.44 billion.
- As of April 2023, a total of \$7.09M has been drawn down from the Shared Risk Pool of \$50 million. In April 2023, \$1.86M was drawn from the Shared Risk Pool.
- As of April 2023, a total of \$3.52M has been drawn from the project contingency of \$40 million. In April 2023, there was no draw from project contingency.
- As of April 2023, no new awards have been made from the Project incentive pool of \$18.5 million.
- As of April 2023, no incentive was issued from the milestone incentive pool of \$15 million.

### **1.3 Program Progress and Schedule**

As of April 30, 2023, the overall project completion is 82.19%. The current program schedule is projecting a PCEP substantial completion date of April 2024 and Revenue Service by September 2024. Staff is implementing a 2023 path to completion with 31 weekend area focused bus bridges to maximize track access to allow system integration testing, signal cutovers, and proactive OCS construction productivity mitigations for the remaining PCEP work. There were four (4) weekend partial bus bridges implemented through April 2023.

### **1.4 Change Management Board (CMB)**

In April 2023, the following Change Order items were brought to CMB for approval:

- IRL 180 – Segment 2 Low Voltage Power Connections Not Available to Support Cutover (November 1, 2021 through November 30, 2022)
- IRL 307 – Segment 2 Low Voltage Power Connections Not Available to Support Cutover (December 1, 2022 through March 31, 2023)

## **1.5 This Month's Accomplishments**

The project team has completed the following notable activities for the month of April 2023:

- Measuring monthly project schedule against the reforecast that reflects the path to completion with 31 focused area weekend closures. The reforecast schedule does not change the Project completion date. Interim milestones have been adjusted to reflect the focused area weekend closures.
- Continued to coordinate low voltage power drop applications and distribution line de-energization work. Confirmed with PG&E on TPS 2 short circuit testing.
- Provided emergency response on March 14<sup>th</sup> due to heavy rain and windstorm; helped the railroad clear fallen tree on the ROW. The assessment of storm damage has been completed and incorporated into the Project schedule.
- Performed readiness reviews for weekend bus bridges for OCS Segment 2 construction.
- Completed Rail Service Plan for weekend partial area closure from Millbrae to San Francisco to support Segment 2 OCS construction.
- Continued focused area limited weekend shutdown work from Belmont to Menlo Park.
- The Project team continues to utilize the OCS weekly quantity tracker to monitor weekly planned quantities vs. actual production.
- Continued negotiation on railroad isolation and protection change order.
- Continued development of OCS/TPS maintenance service scope and resource planning.
- Continued safety special task force working group, including TASI, Rail Operations and PCEP to address communications, process, and procedure improvements. Railroad will implement 10 feet foul instead of 4 feet in mid-May.
- Continued providing PCEP progress updates to funding partners, leadership, elected officials, citizens, and business community.
- Continued Rail Activation effort on path to energization for Segment 4 and CEMOF.
- Continued field validation, pretesting, and complete documentation required to perform short circuit retest. To mitigate risk, the team is scheduled to perform a load bank test at TPS 2 the first week of May.
- Continued working with Caltrans on Segments 3 and 1 encroachment permits.
- Completed EMU Storage Plan and interim EMU maintenance plan.
- Completed Segment 3 signal cutovers at Palo Alto, Mountain View and Sunnyvale in April 2023. As of April 2023, the project has completed Segments 2, 3 and 4 cutovers.
- Held FTA Quarterly progress meeting on site with Caltrain ED.

**1.6 Upcoming work**

For the next six months, the PCEP team has set additional goals as described below:

- Continue bi-weekly project completion road map meeting with Design-Build Contractor Executives to address OCS productivities and TPS findings.
- Continue operations planning, ambassador, and rail service planning effort for weekend area closures for Segments 1 and 2 OCS construction in June and July, and Segment 1 cutover scheduled in June and August 2023.
- Perform Segment 3 loop and hi-pot testing and sectionalization testing.
- Continue to coordinate with PG&E low voltage power drop applications, and distribution line de-energization work.
- Complete EMU maintenance training.
- Perform short circuit re-test in May 2023.
- Complete TPS documentation audit, field validation and test audit.
- Plan for Segment 4 Drill Track and Segment 4 Live runs and full energization.
- Energize CEMOF for EMU commissioning.
- Hold Monthly CMB meeting for program status and change order approval.
- Develop EMU revenue service maintenance program and diesel fleet exit plan.
- Finalize PCEP EIR tree mitigation approach.
- Continue work with FTA and complete Programmatic Agreement (PA) amendment and finalize burial agreement and treatment plan.
- Complete newly defined Milestone 1 (Segments 3 and 4), which will provide 20 miles electrified line for EMU burn-in in summer of 2023.

The PCEP Project is currently on budget and on time for achieving Revenue Service in September of 2024.

**1.7 Critical Items**

As of April 2023, PCEP has completed Segment 2 signal cutover, fulfilled the \$410M funding gap, and has adequate RWIC to support field construction. The top critical items and related actions are highlighted below.

**Table 1-1. Critical Issues and Actions**

Critical Issues	Actions
<p>Overhead Contact System (OCS) installation delay due to low productivity</p> <p>Note: The project OCS work was on hold from March 10, 2022, to March 28, 2022 during the safety stand down.</p> <p>Segment 2 OCS was damaged during high wind and heavy rainstorms in late December 2022 and early January 2023</p>	<ul style="list-style-type: none"> <li>• Additional BBII OCS crew training for regulation and variance in the OCS design / installation due to re-design &amp; accommodations to resolve foundation Differing Site Conditions (DSC) issues – Completed.</li> <li>• Hiring additional BBII OCS staff members to prevent schedule slippage and help in future installation planning – Completed.</li> <li>• Hold OCS construction scheduling recovery workshop for remaining OCS installation and testing – Completed.</li> <li>• Increase OCS crews and OCS wiring equipment to increase productivity – Completed.</li> </ul>

**Peninsula Corridor Electrification Project  
Monthly Progress Report – April 2023**

Critical Issues	Actions
	<ul style="list-style-type: none"> <li>• More track access including weekend area closures for remaining Segments 1 and 2 OCS construction and testing. Weekend bus bridge construction started on February 11, 2023.</li> <li>• OCS storm repair work for Segment 2 is planned for September 2023 due to rainstorm and long lead time for materials.</li> <li>• Bring on more regulating crews in May 2023. Mass will start regulating work in the first week of June 2023.</li> <li>• Procure more equipment parts and ensure all equipment is performing well for construction – Completed.</li> <li>• Bring on equipment fitters and warehouse material manager on site – Completed.</li> </ul>
<p>Unsuccessful TPS 2 short circuit test delays drill track and Segment 4 mainline energization</p>	<ul style="list-style-type: none"> <li>• Perform comprehensive root cause analysis and develop corrective action plan – Completed.</li> <li>• Implement configuration change control process including design drawing, shop drawings, as-built version control to ensure all parties are using the same set of drawings for TPS2 testing – On-going.</li> <li>• Perform technical working groups including all vendors and EOR – On-going.</li> <li>• Weekly management team briefing on corrective action status – On-going.</li> <li>• Perform independent assessment of the TPS.</li> <li>• Develop SSWP for all work performed at TPS for Caltrain review and approval.</li> <li>• Perform field verification and pre-testing before short circuit re-test.</li> <li>• Perform load bank testing prior to short circuit re-test.</li> </ul>



## 2.0 SAFETY

There was one (1) reportable injury in April 2023. The Reportable Injury Rate (RIR) for 2023 YTD is currently 3.24. Overall, since the project’s inception, the RIR is at 1.98, which remains below the national average.

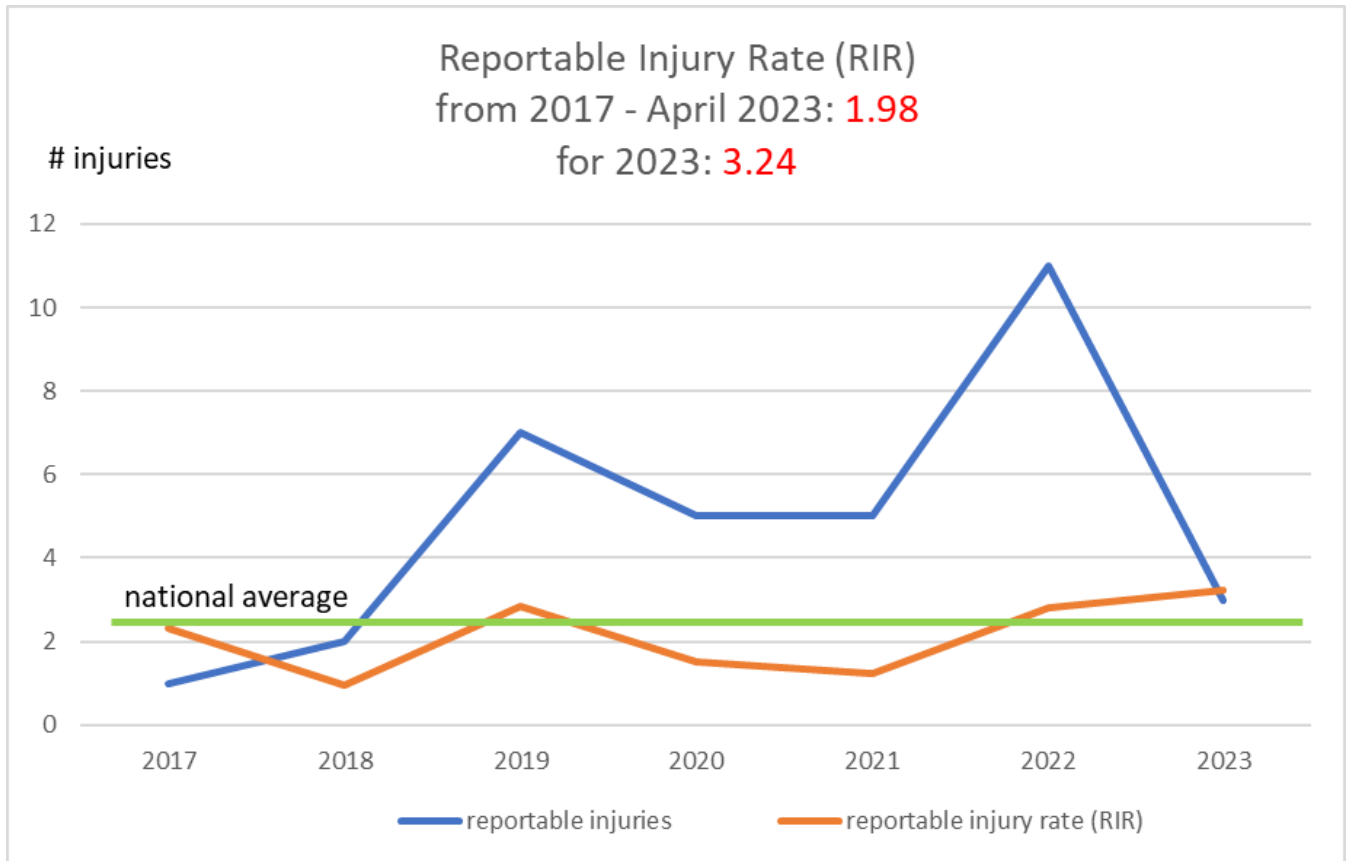


Figure 2-1. Project Reportable Injury Rate (RIR) by Year

### Completed Work

Safety staff continues to coordinate with contractors to identify opportunities to improve safety performance. Organizational-wide safety briefings are being performed to ensure staff understand the application of post incident mitigation measures including rules and procedural changes designed to enhance safety. Project Safety continues to reinforce jobsite safety practices throughout the Caltrain alignment, investigate incidents, and identify mitigation measures to prevent re-occurrences. Safety project coordination meetings continue to be conducted monthly to promote a clear understanding of project safety requirements. In addition, Caltrain Safety continues weekly calls with the lead safety staff from Caltrain, PCEP, BBII, and TASI to discuss safety performance and ongoing initiatives.

### Upcoming Work

The Fire/Life Safety Committee continues to work with emergency responders along the

Caltrain corridor on emergency preparedness in advance of energization. The safety team has updated the OCS and EMU emergency responder safety familiarization presentations to include voiceover features for use by the Fire Departments. The presentation will also be shared with other emergency responder jurisdictions through the project Fire/Life Safety Committee.

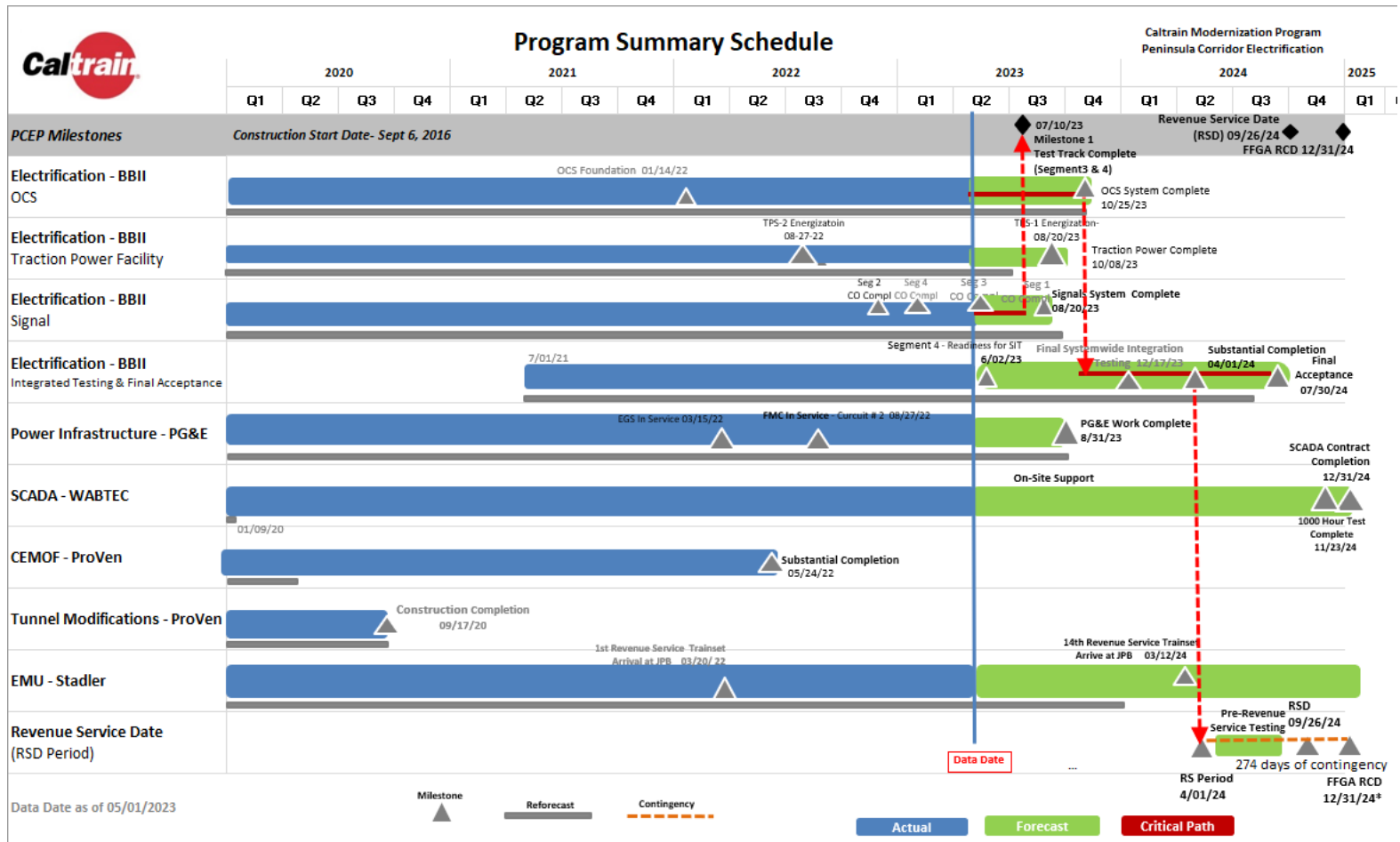
OCS and EMU First Responder training for the Palo Alto Fire Department was completed on April 6, 2023. Additional training is currently scheduled for Menlo Park during the first week in May.

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report – April 2023**

**3.0 IMS PROGRAM SCHEDULE**

**3.1 Introduction**

The Integrated Master Schedule (IMS) Program Summary Schedule depicted in **Figure 3-1** shows the schedule status of the major PCEP projects. The current schedule dates for this program schedule were based on BBII’s April 2023 Progress Schedule as well as the Stadler April 2023 EMU Progress Schedule. The Revenue Service Date (RSD) remains as September 26, 2024 and Full Funding Grant Agreement (FFGA) Revenue Completion Date (RCD) remains December 31, 2024.



**Figure 3-1. Master Program Summary Schedule**



**3.3 Schedule Contract Milestone Analysis**

The failed short circuit testing and continuing delay in obtaining the Caltrans Encroachment Permit for Segments 1 and 3 has become the most critical path (1st Critical Path) for the completion of Milestone No. 1. This Milestone has been redefined to include Segment 3 and 4 for more electrified mileage to test the Trainsets. Overall, Milestone No. 1 is currently showing an anticipated completion of July 9, 2023, which is now 42 days later than the Reforecast date of May 28, 2023. JPB is coordinating the effort of obtaining the Caltrans Encroachment Permit for Segments 1 and 3 to prevent the bridge barrier work from further delaying the live run testing. Load bank pretesting both the circuits and equipment are planned in early May to minimize potential issues for Traction Power Substation 2 Short Circuit Retest.

<b>Milestones</b>	<b>Reforecast (Dec 2022) Dates</b>	<b>Current (Apr 2023) Forecast</b>	<b>Milestone Finish Date Variance</b>	<b>Remarks</b>
Segment 4 Completion	05-Feb-23	02-Jun-23	-117	Delayed by the failed short circuit testing which has delayed the EMU live runs within Segment 4. Note: This finish date does not include the Guadalupe Bridge scope of work.
System Integration Testing Start (Segment 4)	21-May-23	18-Jun-23	-28	Delayed by energization delay of the Overhead Contact System (OCS)
Completion of Milestone 1 (Segments 3 and 4)	28-May-23	09-Jul-23	-42	Delayed by failures in bonding and grounding short circuit testing as well as significant weather delays through storm damage or heavy rain during the month of March 2023
Traction Power Substation #1 Energization	12-Sep-23	17-Jul-23	57	Duration improvement from solving battery and other issues at Traction Power Substation #2.
Signal Cutovers and Systems Completion	20-Aug-23	20-Aug-23	0	
OCS Construction Completion	02-Oct-23	25-Oct-23	-23	Delayed by reconstruction and testing of OCS at the Guadalupe Bridge.
System Integration Testing Completion	25-Nov-23	26-Nov-23	-1	Delayed by delays to the live run testing in Segment 1 and 2 until the OCS System in those segments can be energized
14th Trainset Arrival at JPB Site	12-Oct-23	12-Mar-24	-152	Delayed by Stadler experiencing multiple problems obtaining parts and subassemblies from their Suppliers. They are committed to deliver the first 14 Trainsets by 22-Mar-24.
Substantial Completion	01-Apr-24	01-Apr-24	0	
Scheduled Final Acceptance	30-Jul-24	30-Jul-24	0	
Revenue Service Date (RSD)	26-Sep-24	26-Sep-24	0	
FFGA Revenue Completion Date (RCD)	31-Dec-24	31-Dec-24	0	

**Figure 3-3. Contract Milestone Analysis**

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report – April 2023**

**4.0 COST AND BUDGET**

**4.1 Introduction**

This section presents an update on program cost and budget. On December 6, 2021, the JPB adopted a new Program budget of \$2.44 billion. Table 4-1 depicts a summary level of program budget, costs, and estimate at completion based on the latest update of the Electrification and EMU projects as of April 30, 2023.

**4.2 Program Budget and Cost**

**Table 4-1. Budget Summary by Project**

Description of Work	Current Budget (A) <sup>1</sup>	Cost This Month (B) <sup>2</sup>	Cost To Date (C) <sup>3</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)	Variance at Completion (F) = (A) – (E)
Electrification	\$1,749,139,439	\$18,890,417	\$1,533,987,390	\$215,152,048	\$1,749,139,439	\$0
EMU	\$693,551,258	\$688,351	\$508,123,187	\$185,428,071	\$693,551,258	\$0
<b>PCEP TOTAL</b>	<b>\$2,442,690,697</b>	<b>\$19,578,768</b>	<b>\$2,042,110,578</b>	<b>\$400,580,119</b>	<b>\$2,442,690,697</b>	<b>\$0</b>

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

Table 4-2 depicts program budget, costs, and estimate at completion summarized by major elements of work. This budget table provides additional detail for the program and is broken down by major contracts for Electrification and EMU, minor contracts, real estate, utilities, project management oversight and other indirect support costs.

**Table 4-2. Budget Summary by Major Elements**

Description of Work	Re-Baseline Budget	Current Budget	Cost This Month	Cost To Date	Estimate To Complete	Estimate At Completion
Electrification	\$1,097,149,881	\$1,097,149,881	\$13,193,833	\$917,528,775	\$179,505,106	\$1,097,033,881
EMU Procurement	\$556,072,601	\$556,248,486	\$0	\$420,210,493	\$144,452,993	\$564,663,486
Minor Construction Contracts (Tunnel, CEMOF, SCADA, Non-BBI OCS)	\$67,055,072	\$68,091,194	\$0	\$64,677,734	\$3,413,459	\$68,091,194
Real Estate Acquisition & Support	\$34,914,177	\$34,914,177	\$32,986	\$24,052,357	\$10,861,820	\$34,914,177
PG&E, Utilities	\$132,088,994	\$132,088,994	\$471,589	\$204,034,318	-\$75,774,924	\$128,259,394
Management Oversight & Support	\$312,699,697	\$315,007,767	\$3,089,399	\$269,617,046	\$45,390,721	\$315,007,767
TASI Support	\$114,488,767	\$114,488,767	\$1,774,608	\$97,279,623	\$17,209,144	\$114,488,767
Finance Charges	\$9,898,638	\$9,898,638	\$0	\$9,361,780	\$536,858	\$9,898,638
Insurance	\$6,581,851	\$6,581,851	\$0	\$6,118,411	\$463,440	\$6,581,851
Other Required Projects & Services	\$9,084,176	\$10,484,176	\$352,862	\$4,216,324	\$6,467,852	\$10,684,176
Environmental Mitigation	\$14,438,866	\$13,038,866	\$434	\$1,242,663	\$11,596,203	\$12,838,866
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$48,217,887	\$663,057	\$23,771,053	\$24,446,834	\$48,217,887
Contingency	\$40,000,089	\$36,480,012	\$0	\$0	\$32,010,612	\$32,010,612
<b>Total</b>	<b>\$2,442,690,697</b>	<b>\$2,442,690,697</b>	<b>\$19,578,768</b>	<b>\$2,042,110,578</b>	<b>\$400,580,119</b>	<b>\$2,442,690,697</b>

### 4.3 Program Shared Risk Pool and Contingency

Caltrain and Balfour Beatty Infrastructure, Inc. (BBII) continue implementing new mechanisms to ensure a collaborative approach to Project delivery. The management team meets every week to review the issues log focusing on risk mitigation and issues resolution.

As part of global settlement, a shared risk pool of \$50 million was established to manage risks and mitigation proactively and collaboratively with the design-build contractor. Table 4-3 shows the current shared risk drawdown for the current month and to-date as well as the remaining balance of the shared Risk Pool by Risk Category. Any shared risk items (27 Risk IDs listed below in Table 4-3) that are above \$250,000 require Change Management Board (CMB) approval.

**Table 4-3. Shared Risk Pool Status as of April 2023**

Risk ID	Risk Description	Risk Amount	Current Month	Executed to Date	Remaining Balance
1	Permanent Power Availability	\$268,572	\$0	\$178,365	\$90,207
2	Different Site Condition for OCS Foundation	\$3,500,000	\$45,089	\$1,031,193	\$2,468,807
3	Different Site Condition for Duct bank	\$2,800,000	\$26,525	\$435,798	\$2,364,202
4	Condition of existing Fiber backbone infrastructure	\$3,150,000	\$0	\$256,450	\$2,893,550
5	Availability of TASI Resource	\$5,777,820	\$0	\$0	\$5,777,820
6	Signal Cutover access and work window	\$5,607,150	\$0	\$0	\$5,607,150
7	Condition of existing signal system	\$538,572	\$0	\$29,125	\$509,447
8	EMI Nonconformance by EMU Vendor	\$750,000	\$0	\$0	\$750,000
9	Reed Street Cutover	\$90,000	\$0	\$0	\$90,000
10	Availability of low voltage power for cutover testing	\$1,120,000	\$1,744,137	\$1,744,137	-\$624,137
11	Third party Permits	\$150,000	\$0	\$0	\$150,000
12	SCADA integration for the entire alignment	\$159,524	\$0	\$0	\$159,524
13	Tunnel OCS Compatibility	\$167,500	\$0	\$0	\$167,500
14	Supply chain issue due to COVID 19	\$300,000	\$0	\$28,923	\$271,077
15	End to end Systems integration commissioning	\$2,100,000	\$0	\$0	\$2,100,000
16	Existing Caltrain Operating systems interface and integration	\$1,400,000	\$0	\$71,920	\$1,328,080
17	Third party Approval	\$150,000	\$0	\$13,140	\$136,860
18	Impact from Caltrain other capital or third-party projects	\$2,166,683	\$0	\$697,117	\$1,469,565
19	Track access delay for BBII Construction	\$1,800,000	\$47,768	\$228,538	\$1,571,462
20	Additional light Maintenance and Protection Needs	\$280,000	\$0	\$164,531	\$115,469
21	Crossing Protection	\$220,000	\$0	\$102,334	\$117,666
22	Power facilities	\$500,000	\$0	\$0	\$500,000
23	NCR's	\$0	\$0	\$0	\$0
24	Potholing	\$1,700,000	\$0	\$107,547	\$1,592,453
25	Pre-Revenue Service Operational Testing	\$250,000	\$0	\$0	\$250,000
26	TRO Contingency	\$3,000,000	\$0	\$0	\$3,000,000
27	Contingency	\$12,000,000	\$0	\$2,003,026	\$9,996,974
NA	Unidentified	\$54,179	\$0	\$0	\$54,179
	<b>BBII Risk Pool Total</b>	<b>\$50,000,000</b>	<b>\$1,863,519</b>	<b>\$7,092,145</b>	<b>\$42,907,855</b>

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report – April 2023**

In addition to the established Risk Pool with BBII, the Re-Baseline Budget includes a program contingency of \$40 million to cover non-BBII potential changes and unknowns. Table 4-4 provides a detailed status of approved transfers from contingency due to executed Contract Change Orders and approved Budget Transfers.

**Table 4-4. Program Contingency Drawdown Balance**

Change Order	Description	Current Budget Contingency	EAC Contingency
<b>Project Contingency</b> Previously Reported Balance		<b>\$36,480,012</b>	<b>\$36,206,012</b>
STA-056-CCO-043	Stadler Project Time Extension	\$0	(\$8,025,000)
PG&E-SA4-EAC	PG&E Supplemental Agreement 4 EAC Projection	\$0	\$3,829,600
<b>PROJECT CONTINGENCY REMAINING BALANCE</b>		<b>\$36,480,012</b>	<b>\$32,010,612</b>

Note: EAC Contingency reflects forecast contingency.

**4.4 Electrification Design Builder Contract Incentives**

The Global Settlement with BBII also includes incentives based on Milestone completions and remaining contract incentives. Table 4-5 provides a status of Design-Build Contractor incentives Budgeted, Awarded, and remaining Balance.

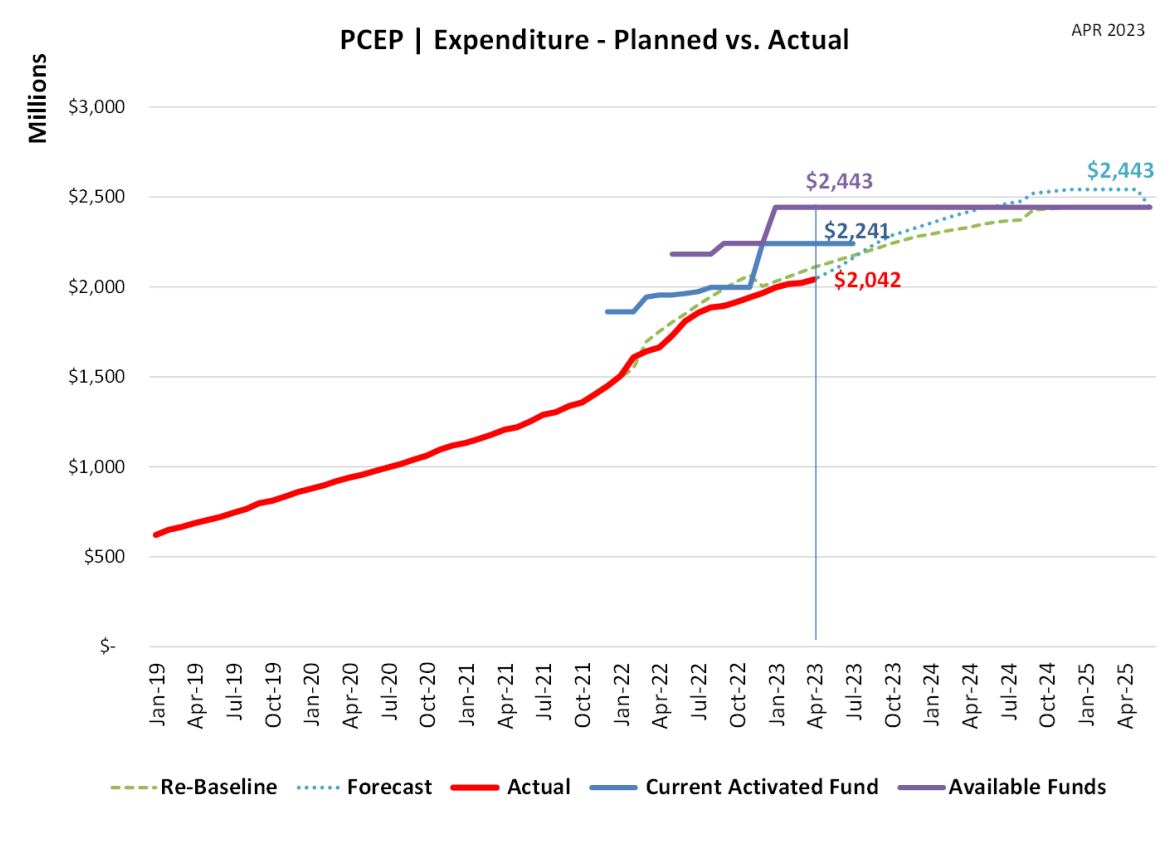
**Table 4-5. BBII Incentives**

Incentives	Budgeted	Awarded	Balance
<b>Contract Incentive:</b>			
Quality	\$1,250,000	\$1,000,000	\$250,000
Safety	\$2,500,000	\$875,000	\$1,625,000
Community Outreach	\$2,500,000	\$1,750,000	\$750,000
DBE	\$900,000	\$0	\$900,000
<b>Total Contract Incentive</b>	<b>\$7,150,000</b>	<b>\$3,625,000</b>	<b>\$3,525,000</b>
<b>Milestone Incentive:</b>			
Early Signal and Crossing Cutover	\$4,000,000	\$0	\$4,000,000
Early Project Substantial Completion (NTE)	\$8,000,000	\$0	\$8,000,000
Early Revenue Service	\$3,000,000	\$0	\$3,000,000
<b>Total Milestone Incentive</b>	<b>\$15,000,000</b>	<b>\$0</b>	<b>\$15,000,000</b>

**4.5 Program Cash Flow and Funding**

The remaining program expenditures are cash flowed in Figure 4-1. With the award of the full funding, the program does not expect any cash flow issues due to funding.





**Figure 4.1. Expenditure – Funding Cash Flow**

**4.6 Issues**

**Table 4-6. Cost and Funding Issues Identified, and Actions Taken for April 2023**

Issues	Actions
Late receiving of PG&E \$99 million reimbursement	<ul style="list-style-type: none"> <li>• Work with PG&amp;E to project reimbursement date.</li> <li>• May need to hold \$100 million bond until PG&amp;E reimbursement is made to support project cash flow needs for FY25.</li> </ul>

## **5.0 CHANGE MANAGEMENT**

### **5.1 Introduction**

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

### **5.2 Change Orders/Shared Risk Pool**

#### **5.2.1 Executed Shared Risk**

The following Shared Risk items were executed in April 2023:

- Reed Street Civil Improvements – Sunken Costs was executed on April 10, 2023 for \$45,088.
- Segment 2 Low Voltage Power Connections Not Available to Support Cutover (Generators) from November 1, 2021 through November 30, 2022 was executed on April 18, 2023 for \$819,540.
- Final Tie in and Additional Conduit at CP Tunnel MP 4.78 was executed on April 18, 2023 for \$26,525.
- Track Access Delays June 2022 was executed on April 24, 2023 for \$47,768.
- Segment 2 Low Voltage Power Connections Not Available to Support Cutover (Generators) from December 1, 2022 through March 31, 2023 was executed on April 26, 2023 for \$924,599.

#### **5.2.2 CMB Approved Change Order Items**

- IRL 180 – Segment 2 Low Voltage Power Connections Not Available to Support Cutover (November 1, 2021 through November 30, 2022).
- IRL 307 – Segment 2 Low Voltage Power Connections Not Available to Support Cutover (December 1, 2022 through March 31, 2023).

#### **5.2.3 Upcoming Change Orders/Shared Risk Items**

- Isolation and Protection for Railroad Change Order.
- Stadler Time Extension and Added Work.
- EMU Convenience Outlet Modification.
- DSC – Unmarked Storm Drain Pipe Damage at CMV Siding 02 06.

**5.3 Issues**

**Table 5-1. Change Management Issues Identified and Actions Taken for April 2023**

Issues	Actions
<p>Segment 4 Maintenance Option in the existing BBII Contract was never exercised. Maintenance of OCS/TPS for Segment 4 will be needed post Segment 4 substantial completion once Caltrain is using it for EMU testing under 25kV.</p>	<ul style="list-style-type: none"> <li>• Define EMU testing and burn in work schedule – Completed.</li> <li>• BBII provides isolation and protection once Segment 4 is powered up.</li> <li>• Prepare Request for Proposal for OCS/TPS SOW – Completed.</li> <li>• Maintenance Service for public procurement strategy has changed to implementing amendment to railroad operator and maintainer TASI for OCS/TPS maintenance work.</li> <li>• Develop evaluation criteria for TASI Maintenance Service proposals.</li> <li>• Recommend for award and obtain JPB board approval.</li> </ul>