

Caltrain Modernization Program Peninsula Corridor Electrification Project (PCEP)



Executive Monthly Progress Report

September 30, 2023

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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 rebaselined 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 September 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 September 2023, a total of \$11.0M has been drawn down from the Shared Risk Pool of \$50 million. In September 2023, \$252,938.00 was drawn from the Shared Risk Pool.
- As of September 2023, a total of \$12.2M has been drawn from the project contingency of \$40 million. In September 2023, there was no draw from project contingency.
- As of September 2023, no new awards have been made from the Project incentive pool of \$18.5 million.
- As of September 2023, no incentive was issued from the milestone incentive pool of \$15 million.

1.3 **Program Progress and Schedule**

As of September 29, 2023, the overall project completion is 88.08%. 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.

1.4 Change Management Board (CMB)

In September 2023, no items were brought to the CMB for approval:

1.5 This Month's Accomplishments

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

- Successfully energized Traction PowerStation 1 both lines.
- Completed all 2SC Signal and Crossing cutovers for all Segments.
- Continued to monitor 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 developed and measured against the reforecast schedule.
- Continued to coordinate low voltage power drop applications with PG&E and utilizing generators to support project testing and cutovers.
- Hosted FTA Administrator tour of PCEP project
- Held EMU Public event at San Francisco 4Th and King.
- Completed all OCS Wire
- Continued bi-weekly project completion road map meeting with Design-Build Contractor Executives to monitor OCS productivities and addressed TPS findings. Additional third-party crews have been working on regulations since June 2023.
- Completed operations planning, ambassador, and rail service planning effort for Segments 1 and 2 OCS construction weekend area closures for October three weekends bus bridge.
- Competed Segment 3 Live run testing up to San Antonio.
- Completed Live run Testing with Civil speed up to 79 mph at the mainline
- Continued Operator's refresher training at the Drill Track.
- Held Monthly CMB meeting for program status and change order approval.
- Continued to work with FRA on Submitted Programmatic Agreement (PA) amendment review and approval.
- Continued safety special task force working group, including TASI, Rail Operations and PCEP to address communications, process, and procedure improvements.
- Continued providing PCEP progress updates to funding partners, leadership, elected officials, citizens, and business community.
- Continued Rail Activation effort on taking on isolation and protection service post completion of Milestone 1.
- Completed EMU PTC Field Integrated testing on mainline.
- Complete EMU EMI Testing
- Finalized short circuit test sequence and test dates with PG&E support.
- Continue project close out effort and finalize Segment 4 and Segment 3 punch list items.
- Received Temporary Use Permit (TUP) for Milestone 1 limits (Diridon to San Antionio) and Drill Track, Caltrain commenced first EMU burin in Test on main line.
- Performed TPS1 load bank test successfully.
- Complete service plan and special train schedule for October Segment 1 and 2 OCS remaining weekend area closure.

1.6 Upcoming work

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

- Complete all OCS Regulations for Segments 1 and 2
- Complete Segments 1 and 2 Sectionalization Testing
- Perform the remaining 5 short circuit testing.
- Complete Guadalupe OCS installation and test once Guadalupe project hands off MT2 in October of 2023
- Continue to coordinate with Broadband Project, work with vehicle manufacturer and revise EMU production schedule that includes broadband equipment installation.
- Continue bi-weekly project completion road map meeting with Design-Build Contractor Executives to address path to substantial completion.
- Continue operations planning, ambassador, and rail service planning minor issues efforts for Segment 1 and 2 live runs.
- Continue to coordinate with PG&E on low voltage power drop applications, and distribution line de-energization work.
- Complete 3 joint punch list walks.
- Hold Monthly CMB meeting for program status and change order approval.
- Compete certification of conformance for Milestone 1 limits which will provide 14 miles electrified line for EMU burn-in September 2023.
- Complete EMU revenue service maintenance program, EMU storage plan, diesel fleet exit plan, and fleet management plan.
- Complete Programmatic Agreement (PA) amendment and finalize burial agreement and treatment plan.
- Continue EMU acceptance testing (burn in)
- Receive four more EMU trainsets.
- Complete end to end full corridor live runs prior to substantial completion.
- Finalize Substantial Completion and Final Acceptance Check List.

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

1.7 Critical Items

As of September 2023, PCEP has energized traction power substations, completed All Segment 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.

Critical Issues	Actions
Overhead Contact System (OCS) installation delay due to low productivity	 Additional BBII OCS crew training for regulation and variance in the OCS design / installation due to re- design & accommodations to resolve foundation
Note: The project OCS work was on hold from March	Differing Site Conditions (DSC) issues – Completed.
10, 2022, to March 28, 2022, during the safety stand down.	 Hiring additional BBII OCS staff members to prevent schedule slippage and help in future installation planning – Completed.
Segment 2 OCS was damaged during high wind and heavy rainstorms in late December 2022 and early January 2023	 Hold OCS construction scheduling recovery workshop for remaining OCS installation and testing – Completed.
	 Increase OCS crews and OCS wiring equipment to increase productivity – Completed.

Table 1-1. Critical Issues and Actions

Peninsula Corridor Electrification Project Monthly Progress Report – September 2023

Critical Issues	Actions
Complete TPS Short Circuit Tests TPS 2 short circuit test delays drill track and Segment 4 mainline energization. TPS 2 Short circuit test was performed in May 2023 with 	 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. OCS storm repair work for Segment 2 is planned for September 2023 due to rainstorm and long lead time for materials. Completed Bring on more regulating crews in May 2023. Mass will start regulating work in the first week of June 2023 – Completed. Procure more equipment parts and ensure all equipment is performing well for construction – Completed. Bring on equipment fitters and warehouse material manager on site – Completed. Perform comprehensive root cause analysis and develop corrective action plan – Completed. Implement configuration change control process including design drawing, shop drawings, as-built
some follow up actions. • TPS 1 Short Circuit Test is scheduled for October 21st.	 version control to ensure all parties are using the same set of drawings for TPS2 testing – On-going. Perform technical working groups including all vendors and EOR – On-going. Weekly management team briefing on corrective action status – On-going. Perform independent assessment of the TPS – Completed. Develop SSWP for all work performed at TPS for Caltrain review and approval – On-going. Perform field verification and pre-testing before short circuit re-test – Completed. Perform load bank testing prior to short circuit re-test. – Completed. Developed remaining short circuit tests required for system completion – on going.
Theft of impedance bond or grounding cables may delay segment live run testing because the system (or portions of the system) cannot be energized without impedance bonds	 Monitor hot spot areas in segments 1, 3 and 4. Perform just in time replacement right before the testing. Report Theft incidents with Transit PD Enhance security with cameras and other monitoring systems. Work with Communications on high voltage safety messages Distribute high voltage safety fliers to the homeless encampments. Implement asphalt cover for impedance bonds that have been repeatedly stolen. – on-going

2.0 SAFETY

There were no reportable injuries in September 2023. Total reportable injuries remain at 5 for the year. The Reportable Injury Rate (RIR) for 2023 YTD is currently 1.33. Overall, since the project's construction started in 2017, the RIR is at 1.52, which remains below the national average of 2.5.



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. Caltrain initiated the 10'/10' rule: 10' from track and 10' from overhead wires.

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 was conducted in San Francisco in early October. Redwood City, San Carlos and Belmont are being conducted this month. All first Responder training will be completed by the end of October.

Trainings for Police Departments along the corridor are also currently being scheduled by the Transit Police.

To date there have been 96 classes for Emergency Responders (769 people trained) while over 225 3rd party contractors and tenant railroad employees have been trained.

3.0 IMS PROGRAM SCHEDULE

3.1 Introduction

The Integrated Master Schedule (IMS) Program Summary Schedule depicted in

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

		20	20			2021		_		20	22			20)23			2	024		
	Q1	Q2	Q3	Q4	Q1 (Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
PCEP Milestones	Constru	ction Sta	ırt Date- Sej	pt 6, 2016	;											09/15/23 Milestone Test Track	,	(RSD)	vice Date 09/26/24 FFGA RO		24
Electrification - BBII OCS						OCS	Foundatio	on 01/14/2	22								3 & 4) DCS System 11/9/23	Complete			
Electrification - BBII Traction Power Facility											2 Energizatoi 08/27/22			PS-1 Energiza 08/2	6/23		Traction Po 11/17/23	ower Comp	lete		
Electrification - BBII Signal													Seg 4 CO Compl	Δ		Signals Sys)8/20/23 nul-System	stem Comp				
Electrification - BBII Integrated Testing & Final Acceptance						07/01/21							gment 4 - R	eadiness for 6/02		Te	esting 12/1	17/23 04/	bstantial C 01/24	ompletion Final Acceptan 07/30/2	
Power Infrastructure - PG&E							EG	S In Service	03/15/22	FMC	In Service -	Curcuit # 2				/	PG&E 12/31/	Work Com /23		CADA Cont	
SCADA - WABTEC	01/09/20	0														On-Site	e Support			12/31 1000 Hour	r Test
CEMOF - ProVen	01/09/20										Substant 05/24/2	tial Comple 2	tion							Comple 10/16 Approx 42 after R	/24 -days
Tunnel Modifications - ProVen			Co	nstruction 09/17	n Completio 7/20	n		enue Service								Start Burn- 09/21/23	inTest			Burn-in T /13/24	est
EMU - Stadler							Arriv	val at JPB	03/20/ 22						Z				e-Revenue	RSD	
Revenue Service Date (RSD Period)													14	ŧtn Reven	Data Da	ce Trainset ate	Arrive at 04/04	/24 Servi	ice Testing	09/26/:	
Data Date as of 10/01/2023				Milestone	_	Reforecast		Continge					Actual		Foreca	ast	Critic	04/01/2 al Path			A RCD 1/24*

Figure 3-1. Master Program Summary Schedule

3.2 Critical Path Analysis

The current critical path has changed this month to the final Segment 4 Short Circuit Testing. This work is followed by Live Run Testing in Segments 1 and 2 followed by the 92-day Project Schedule Contingency, Substantial Completion, and Final Acceptance. The Longest Path plot (shown below) represents the as submitted critical path for the BBII September 2023 Update schedule.

V Layout: PCEP0923A - MPP	R LP Plot - USE Filter All: GCS - Act Type	<> LoE, I	Longest	Path																			
Activity ID	Activity Name	Orig	Rem	Total	Start	Finish	TAR TF		Tar	Tar Start	Tar Finish	Date	Qtr 4, 202			Qtr 1, 202			Qtr 2, 2024			Qtr 3, 2024	
		Dur	Dur	Float				OD	RD			Variance	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
🖬 🚞 JAG Edit: PCE	P Update - Sep 2023																						
Dec 2023																							
TS-04-4076	SC Test 4 - TPS 2 Short Circuit Test	1	1	0	12/01/23	12/01/23*	13	1	1	12/01/23	12/01/23	0	П	é TS-0∙	1-4076								
■ TS-04-4100	Segment 4 Integrated Testing - Live Run Test Guadalupe Section	1	1	0	12/01/23	12/02/23	8	1	1	12/01/23	12/02/23	0		占 TS-0	4-4100								
TS-02-2000	Segment 2 Live Run Testing	5	5	0	12/02/23	12/17/23	8	5	5	12/02/23	12/17/23	0		ab I	\$-02-20	00							
TS-01-1000	Segment 1 Live Run Testing	5	5	0	12/02/23	12/17/23	8	5	5	12/02/23	12/17/23	0	L	न्ह	S-01-10	00							
TS-00-0062	Pre-Revenue Power Scenerio Test	2	2	0	12/22/23	12/23/23	52	5	5	03/23/24	03/31/24	38		-			~	_D TS-00	-0062				
= TS-00-0066	Pre-Revenue Power Scenerio Test - Contingency for Re-Test and or Deficiency	2	2	0	12/30/23	12/31/23		0							TS-00	-0066							
■ GC-00-10540	Scheduled Substantial Completion (CCO 255 Incentive)	0	0	1		12/31/23	107	0	0		12/17/23	-14		*	• GC-00)-10540							
Jan 2024																							
FTC-0001	Project Schedule Contingency	92	92	0	01/01/24	04/01/24	1	76	76	01/16/24	04/01/24	15		L	0			FTC-	0001				
Apr 2024																							
😑 GC-00-9990	Scheduled Substantial Completion	0	0	0		04/01/24*	1	0	0		04/01/24	0					-	\$ GC-0	0-9990				
PC-00-0990	Overall Schedule / Substantial Completion Completion Milestone	0	0	1		04/01/24	1	0	0		04/01/24	0					-	\$ PC-0	0-0990				
SM-00-20020	Final Punchlist	60	60	0	04/02/24	05/31/24	1	60	60	04/01/24	05/31/24	-1					ا			SM-00-	20020		
Jun 2024													1										
😑 GC-00-9930	Final Acceptance Inspection	60	60	0	06/01/24	07/30/24	1	60	60	05/31/24	07/30/24	-1							-			GC-00	-9930
Jul 2024																							
GC-00-9920	Final Acceptance	0	0	0		07/30/24*	1	0	0		07/30/24	0									۲	GC-00	-9920

Figure 3-2. Critical Path Schedule

3.3 Schedule Contract Milestone Analysis

Contractor	Milestones	Reforecast Dates (Dec 2022)	Current Dates (Aug 2023)	Milestone Finish Date Variance	Total Float	Remarks
BBII	Segment 4 Completion (Final Short Circuit Test Report Delivered to JPB)	2/5/2023	5/31/2023	-115		Completed
BBII	Signal Cutovers and Systems Completion	8/20/2023	8/20/2023	0		Completed
BBII	Traction Power Substation #1 Energization	9/12/2023	8/26/2023	17		Completed
BBII	Completion of Milestone 1 (Segments 3 and 4)	5/28/2023	9/15/2023	-110		Completed
BBII	OCS Construction Completion	10/2/2023	11/9/2023	-38	23	This date does not include Guadalupe Bridge work.
BBII	OCS Construction Completion (Guadalupe Bridge)	10/25/2023	11/30/2023	-36	2	This milestone date includes the delivery of Guadalupe Bridge back to BBII on 10/21/2023.
BBII	System Integration Testing Start (Segment 4)	4/10/2023	06/05/2023	-55	0	JPB Continues to perform SIT testing in Segment 3 and 4.
BBII	System Integration Testing Completion	11/18/2023	12/17/2023	-29	0	Delayed by SC Test 4 – TPS 2 Short Circuit Test and Segments 1 and 2 Live Run Testing
BBII	Scheduled Substantial Completion	4/1/2024	4/1/2024	0	0	
Stadler	14th Trainset Arrival at JPB Site	10/12/2023	4/5/2024	-176	-10	The date committed to deliver the first 14 Trainsets by 3/24/2024 has slipped to 4/5/2024 (same as August Update).
BBII	Scheduled Final Acceptance	7/30/2024	7/30/2024	0	0	
JPB	Revenue Service Date (RSD)	9/26/2024	9/26/2024	0	N/A	

Figure 3-3. Contract Milestone Analysis

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 September 30, 2023.

4.2 Program Budget and Cost

Description of Work	Current Budget	Cost This Month	Cost To Date	Estimate To Complete	Estimate At Completion	Variance at Completion
	(A) ¹	(B) ²	(C) ³	(D)	(E) = (C) + (D)	(F) = (A) – (E)
Electrification	\$1,749,139,439	\$21,617,407	\$1,645,225,441	\$109,448,181	\$1,754,673,622	\$(5,534,183) ⁴
EMU	\$693,551,258	\$15,372,575	\$540,960,986	\$147,056,089	\$688,017,075	\$5,534,183
PCEP TOTAL	\$2,442,690,697	\$36,989,982	\$2,186,186,427	\$256,504,270	\$2,442,690,697	\$0

Table 4-1. Budget Summary by Project

^{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.

^{4.} Column F "Variance at Completion" includes forecasted transfer of contingency from EMU to Electrification project.

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	\$16,209,823	\$998,503,046	\$98,530,835	\$1,097,033,881					
EMU Procurement	\$556,072,601	\$564,986,271	\$13,732,160	\$447,488,828	\$117,497,443	\$564,986,271					
Minor Construction Contracts (Tunnel, CEMOF, SCADA, Non- BBI OCS)	\$67,055,072	\$68,091,194	\$0	\$64,943,792	\$2,382,275	\$67,326,067					
Real Estate Acquisition & Support	\$34,914,177	\$34,914,177	\$24,480	\$24,557,398	\$10,356,779	\$34,914,177					
PG&E, Utilities	\$132,088,994	\$132,088,994	-\$288,547	\$206,703,467	-\$78,444,073	\$128,259,394					
Management Oversight & Support	\$312,699,697	\$315,007,767	\$3,066,886	\$284,768,984	\$30,238,783	\$315,007,767					
TASI Support	\$114,488,767	\$114,488,767	\$2,967,591	\$107,795,341	\$28,733,128	\$136,528,469					
Finance Charges	\$9,898,638	\$9,898,638	\$35,778	\$9,776,649	\$121,989	\$9,898,638					
Insurance	\$6,581,851	\$6,581,851	\$0	\$6,291,001	\$290,850	\$6,581,851					
Other Required Projects & Services	\$9,084,176	\$10,484,176	\$176,045	\$5,731,807	\$4,952,369	\$10,684,176					
Environmental Mitigation	\$14,438,866	\$13,038,866	\$0	\$1,294,369	\$11,544,497	\$12,838,866					
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$48,217,887	\$1,065,765	\$28,331,743	\$19,886,144	\$48,217,887					
Contingency	\$40,000,089	\$27,742,227	\$0	\$0	\$10,413,251	\$10,413,251					
Total	\$2,442,690,697	\$2,442,690,697	\$36,989,982	\$2,186,186,427	\$256,504,270	\$2,442,690,697					

 Table 4-2. Budget Summary by Major Elements

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.

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	\$0	\$1,253,451	\$2,246,549
3	Different Site Condition for Duct bank	\$2,800,000	\$0	\$435,798	\$2,364,202
4	Condition of existing Fiber backbone infrastructure	\$3,150,000	\$0	\$402,275	\$2,747,725
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	\$507,167	\$31,405
8	EMI Nonconformance by EMU Vendor	\$750,000	\$0	\$13,184	\$736,817
9	Reed Street Cutover	\$90,000	\$111,765	\$111,765	-\$21,765
10	Availability of low voltage power for cutover testing	\$1,120,000	\$0	\$2,381,123	-\$1,261,123
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	\$157,418	\$10,083
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	\$353,277	-\$203,277
18	Impact from Caltrain other capital or third-party projects	\$2,166,683	\$0	\$888,836	\$1,277,846
19	Track access delay for BBII Construction	\$1,800,000	\$57,155	\$807,596	\$992,405
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	\$845,576	-\$345,576
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	\$84,019	\$2,202,812	\$9,797,188
NA	Unidentified	\$54,179	\$0	\$0	\$54,179
	BBII Risk Pool Total	\$50,000,000	\$252,938	\$11,013,897	\$38,986,103

Table 4-3. Shared Risk Pool Status as of September 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 as well as transfers from contingency forecasted to be needed.

Change Order ID	Contingency	
	PCEP Contingency Budget	\$40,000,088
STA-056-CCO-038	Allowance for Electric Power Cost at TTCI	(\$132,365)
STA-056-CCO-041	Manual Phase Break	(\$43,520)
STA-056-CCO-042	(\$8,021,124)	
ARINC-061-CCO- 005	(\$1,036,122)	
PROV-070-CCO-056	Proven Tunnels Final Settlement	\$1,000,000
PROV-071-CCO-069	Proven CEMOF Final Settlement	(\$1,000,000)
BT-027D	Legal Support FY23 - PG&E Counsel	(\$200,000)
BT-029D	GFI Electrification FY23-24 Additional Staff	(\$2,108,070)
STA-056-CCO-053	Stadler – Passenger Convenience Outlets	(\$716,661)
	Remaining Contingency	\$27,742,227
BT-049	CNPA – Mary Ave Pre-emption (Non-PCEP)	\$116,000
PG&E-042-BT-5	PG&E – Supplemental Agreement 4 – EAC Update	\$3,829,600
BT-035C	TASI Support – Electrification (2023-2024) rev1	(\$22,039,703)
PROV-070-CLOSE	Proven Tunnels – Close out of Final Actuals	\$184,910
PROV-071-CLOSE	Proven CEMOF – Close out of Final Actuals	\$580,217
	Forecasted Remaining Contingency	\$10,413,251

Table 4-4	. Program	Contingency	Drawdown	Balance
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Note: EAC Contingency reflects forecast contingency.

The total Program Contingency as of the December 2021 Re-Baseline Budget totaled \$90M including Allocated and Unallocated Contingency, and BBII Risk Pool. Table 4-5 summarizes the current remaining and forecasted contingency balance as of the monthly update.

		Shared Risk Pool with BBII	Pi	су	
	Total E = (A+D)	BBII Risk Pool (A)	Allocated (B)	Unallocated (C)	Subtotal D = (B+C)
PCEP Contingency	\$90,000,088	\$50,000,000	\$24,115,581	\$15,884,507	\$40,000,088
Drawn Contingency	(\$23,271,758)	(\$11,013,897)	(\$8,521,124)	(\$3,736,738)	(\$12,257,862)
Remaining Contingency	\$66,728,330	\$38,986,103	\$15,594,457	\$12,147,769	\$27,742,227
Pending Changes	(\$19,054,782)	(\$1,725,806)	(\$13,432,281)	(\$3,896,694)	(\$17,328,976)
Forecasted Remaining Contingency	\$47,673,548	\$37,260,297	\$2,162,176	\$8,251,075	\$10,413,251

 Table 4-5. Overall Program 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 4-6 provides a status of Design-Build Contractor incentives Budgeted, Awarded, and remaining Balance.

Incentives	Budgeted	Awarded	Balance
Contract Incentive:			
Quality	\$1,250,000	\$1,000,000	\$250,000
Safety	\$2,500,000	\$1,000,000	\$1,500,000
Community Outreach	\$2,500,000	\$2,000,000	\$500,000
DBE	\$900,000	\$0	\$900,000
Total Contract Incentive	\$7,150,000	\$4,000,000	\$3,150,000
Milestone Incentive:			
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
Total Milestone Incentive	\$15,000,000	\$0	\$15,000,000

Table 4-6. BBII Incentives

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 4-7. Cost and Funding Issues Identified, and Actions Taken for September 2023

Issues	Actions	
Late receiving of PG&E \$99 million reimbursement	Work with PG&E to project reimbursement date.	

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/CCO

The following Shared Risk items were executed in September 2023:

- Track Access Delays June 2023 was executed on September 19, 2023, for \$57,155.
- Downguy & Pullbox Scope at Stanford Station for Aerial Utilities was executed on September 19, 2023, for \$19,019.
- CCO-045 Option 2 EMU Payment and LD Schedule was executed on September 19, 2023, for no additional cost to the Contract.
- 22nd Street Station OH Line was executed on September 22, 2023, for \$65,000.
- Additional Costs Associated with Reed Street Solution was executed on September 27, 2023, for \$111,765.
- 5.2.2 CMB Approved Items
 - No items to report for this period.
- 5.2.3 Upcoming Change Orders/Shared Risk Items
 - EMU Convenience Outlet Modification
 - Isolation and Protection for Railroad
 - Debris Pile Removal at FDN 46.1-19
 - Tap Settings Change (to 26.5kv)
 - Pole Recoloring at 4th & King Station
 - 4th & King Flagpole Removal
 - 25th Ave Grade Separation
 - High Voltage Warning Signage
 - CEMOF Metallic Object(s) Anchorage and G&B
 - Testing for Step & Touch Potential at TPFs
 - Pantograph Security Analysis
 - PES Install at CEMOF
 - TAD July 2023
 - Test Train Passing CEMOF Isolation Limits
 - Stanford Station Lighting Undergrounding
 - CCO-043 EMU Passenger Broadband Integration

5.3 Issues

Issues	Actions
Segment 4 Maintenance Option in the existing BBII	 Define EMU testing and burn in work schedule -
Contract was never exercised. Maintenance of	Completed. BBII provides isolation and protection once Segment 4 is
OCS/TPS for Milestone 1 limits (Diridon to San	powered up. TASI takes over isolation and inspection for Milestone 1
Antonio) will be needed once Milestone 1 is	limits starting October 2 nd , 2023. TASI proposed OCS/TPS Maintenance service for
complete and once Caltrain is using it for EMU burn	Caltrain's evaluation. Execute TAIS basic service amendment to include
in under 25kV.	OCS/TPS Maintenance