

Quarterly Progress Review Meeting No. 22 December 5, 2022

Peninsula Corridor Electrification Project (PCEP)
Peninsula Corridor Joint Powers Board (JPB)/Caltrain
San Mateo, CA

December 19, 2022

PMOC Contract Number: 69319519D000019
Task Order Number: 69319520F300099 (TO 99)

OPs Referenced: #01 Administrative Conditions and Requirements
#25 Recurring Oversight and Related Reports

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1 EXECUTIVE SUMMARY

1.1 Introduction

This report summarizes Quarterly Progress Review Meeting (QPRM) No. 22 between the Federal Transit Administration (FTA); the FTA's Project Management Oversight Contractor (PMOC), Kal Krishnan Consulting Services, Inc. (KKCS); and the Peninsula Corridor Joint Powers Board (JPB)/Caltrain. JPB/Caltrain is the Project Sponsor for the Peninsula Corridor Electrification Project (PCEP).

The meeting was held at the JPB's headquarters in San Carlos, California on December 5, 2022; this was the first in-person QPRM since the onset of the COVID-19 coronavirus pandemic in early 2020. The meeting also used Microsoft Teams video collaboration software to communicate via the Internet and a call-in number was also provided.

1.2 Project Description

The Peninsula Corridor Electrification Project (PCEP) is a Core Capacity Improvement Project (CC) located on the peninsula between San Francisco and San Jose, California.

The PCEP consists of the electrification of 51 miles of Caltrain's double-tracked commuter rail line between the 4th and King Station in San Francisco and the Tamien Station in San Jose, and the purchase of 96 Electric Multiple Unit (EMU) vehicles that will be configured as sixteen (16) six-car trainsets. These EMUs will replace approximately 75 percent of Caltrain's current average weekday diesel powered service. The initial EMU order was supplemented in December 2018 when the JPB exercised an option to purchase an additional 37 EMUs; the resulting fleet will consist of nineteen (19) seven-car trainsets; the additional EMUs are not funded through the JPB's Core Capacity grant. The project also includes modifications to the wayside signal system and grade crossing warning systems to accommodate the new electrified rail system, and the installation of Supervisory Control and Data Acquisition (SCADA) equipment to monitor and control the electrification equipment. The infrastructure scope also includes modification by "notching" of four (4) existing rail tunnels to accommodate the expanded clearance envelope of the electrified vehicles. Caltrain's Central Equipment Maintenance and Operation Facility (CEMOF) will also be modified to service the electrified vehicles.

The PCEP is part of a larger JPB initiative known as the Caltrain Modernization Program (CalMod). The CalMod program has separately installed a Positive Train Control (PTC) system, which is an advanced signal system that includes federally mandated safety improvements. The JPB is in the extended Revenue Service Demonstration phase of the PTC project and is interoperable with all tenant railroads. The Federal Railroad Administration (FRA) approved the JPB's Positive Train Control Safety Plan (PTCSP) on December 17, 2020.

1.3 Project Status

The PCEP has a Full Funding Grant Agreement (FFGA) under the FTA's Capital Investment Grant (CIG) program for Core Capacity Improvement Projects; the project is in construction.

The FFGA for the PCEP was executed on May 23, 2017. The JPB issued a full notice to proceed (NTP) to the EMU supplier on June 1, 2017, and to the Electrification design-build contractor on June 19, 2017.

The PMOC, at the FTA's request, conducted a virtual Risk Refresh workshop consisting of four (4) half-day sessions that were held on December 8, 10, 15, and 17, 2020. The FTA,

based on the results of the December 2020 Risk Refresh effort, designated the PCEP an “At-Risk” project in a letter dated June 30, 2021. The FTA took this action because the PCEP has experienced significant cost overruns and schedule delays. The FTA, following its designation of the PCEP as an at-risk project, requested that the JPB submit a Project Recovery Plan by October 8, 2021.

The JPB, in response to the FTA’s at-risk designation, made significant changes to the PCEP management team in early-September 2021. The JPB retained Pranaya Shrestha as the new Interim Chief Officer (ICO) to lead the PCEP team. The JPB, and the PCEP’s new team, took immediate actions to respond to the underlying issues and put the project on a path toward recovery. The JPB requested that the due date for the Recovery Plan be extended to allow the new management team to complete a comprehensive assessment of the PCEP. The FTA agreed to defer the submittal of the plan until Mr. Shrestha and his team could complete additional risk and budget reviews. The JPB has submitted two drafts of its Recovery and Remediation Plan for the PMOC’s review and submitted its Recovery Plan to the FTA on April 1, 2022. The FTA and the PMOC reviewed the April 1, 2022, Plan and provided comments to the JPB on May 25, 2022. *The JPB submitted its Recovery Plan to the FTA on September 30, 2022, and the PMOC is reviewing the plan.*

PG&E provided 115kV power to energize the PCEP’s TPSS 2 in San Jose on August 27, 2022. BBII continues to test various elements of the installed TPS system in preparation for energizing Segment 4 for EMU testing. The JPB expects Segment 4 to be energized in January 2022.

The JPB has now received a total of four (4) EMU trainsets from Stadler US, Inc. The vehicles continue to undergo static testing at the CEMOF until power is available for running tests. The next delivery is expected in spring 2023; the completed trainsets are being held in Salt Lake City due to a lack of available storage capacity at the JPB.

1.4 Project Cost and Funding

The JPB received a grant for \$647 million in Section 5309 Core Capacity funding from the FTA. The balance of the project is being financed by a combination of regional, state, and local funds plus additional FTA funding under the Section 5307 Urbanized Area Formula program. The estimated capital cost of the PCEP in the FFGA is \$1,930,670,934 in the year of expenditure (YOE).

The PCEP’s new leadership focused on resolving the dispute with BBII, as noted above, and “scrubbing” the project budget; these activities were conducted concurrently. Based on the global settlement with BBII and its own scrubbing of the project budget and schedule, the PCEP team produced a re-baselined budget of \$2.44 billion for the PCEP. The re-baselined budget, excluding pre-Project Development expenditures, is \$2.39 billion in comparison to the FFGA budget of \$1.930.7 billion. The JPB approved the \$2.44 billion budget on December 6, 2021. The JPB has developed a potential funding strategy to support the additional expenditures and continues to refine that strategy. One element of the funding plan is \$52.4 million in Capital Investment Grant (CIG) funds from the American Rescue Plan Act (ARPA) that has already been approved by the FTA. *The JPB updated its funding plan for the remainder of the shortfall in its Recovery Plan, however, no additional funds have been committed. The JPB currently now forecasts that its available funding will be exhausted in approximately June or July 2023 unless additional funds are received.*

1.5 Project Schedule

The JPB had a very aggressive schedule for completing the PCEP. During the Project Development (PD) Phase, the JPB solicited and received proposals for a Design-Build (D-B) contract for the electrification system and for the supply of its EMU rail vehicles. The JPB executed a design-build (D-B) contract for the electrification work with Balfour-Beatty Infrastructure, Inc. (BBII) on August 15, 2016. The JPB executed a contract for the EMU vehicles with Stadler US on August 15, 2016. The JPB issued Limited Notices to Proceed (LNTPs) for both the Electrification and EMU contracts on September 6, 2016. The LNTPs were extended from March 1, 2017, to June 30, 2017, when the award of the FFGA was delayed. A full NTP was issued to the EMU supplier on June 1, 2017, and to the Electrification design-build contractor on June 19, 2017. The JPB issued a full Notice to Proceed (NTP) on its Tunnel Modifications contract on October 6, 2018. The tunnel contractor completed most of the work during a series of weekend outages in 2019 and completed the installation of the overhead contact system (OCS) hardware in the tunnel during six (6) additional weekend outages in February and March 2020. The tunnel contractor has completed unpowered testing of the OCS system and will return to complete final powered testing after the OCS system is energized. The JPB issued a full NTP to the CEMOF modifications contractor on September 16, 2019. *Construction work at the CEMOF was delayed by various factors but was completed on July 13, 2022; the project is now in close-out.*

The global settlement between the JPB and BBII established a new Final Completion Date (FCD) for the Electrification contract of July 31, 2024, and a new Overall Substantial Completion Date of April 30, 2024. The settlement, as noted above, includes incentives for early completion of cutovers, early substantial completion, early Final Completion, and early achievement of Revenue Service prior to the Final Completion Date. BBII prepared and submitted a re-baselined schedule as part of the global settlement negotiation process, and the JPB has reviewed and accepted that schedule. The details of BBII's re-baselined schedule have been incorporated into the JPB's Master Project Schedule. *The JPB has proposed a December 31, 2024, Required Completion Date (RCD) in its Recovery Plan.*

The project's critical path now runs through the completion of the OCS and integrated testing of the overall system. Assembly of the EMU trainsets continues to be affected by supply chain impacts and workforce shortages. Stadler has updated its delivery schedule, which now shows delivery of the 14th trainset (TS-14) in March 2024. Fourteen (14) trainsets are required to satisfy the Core Capacity requirements of the FFGA. The commencement of the Electrified Revenue Service is dependent on the completion of the Electrification contract elements and the availability of permanent power from the Pacific Gas and Electric Company (PG&E) to complete testing and initiate full operations with the EMU fleet. The JPB is now considering how they will initiate electrified revenue service, i.e., incrementally or after the EMU fleet is sufficient to support regular service.

1.6 Significant Unresolved Issues

- *Timely completion of the overhead contact system remains the critical path to the completion of the project. BBII's productivity has been less than required, despite added resources, and the project schedule is showing small continuing loss of float. The JPB has requested that BBII prepare a plan to recover the lost time. The JPB is considering a plan proposed by BBII which is intended to reach substantial completion of the contract by the end of the calendar year 2023. This plan would require significant changes to Caltrain's*

operating schedule, with support by bus bridges, to provide BBII with longer uninterrupted periods of access to the corridor.

- *BBII is conducting a series of tests in Segment 4 following the energization of TPSS-2. The Sectionalization tests were successfully conducted in October 2022; however, the follow-on short-circuit test was unsuccessful. The JPB has requested that BBII audit its TPS installation, and that is underway. The short-circuit re-test is now expected in December 2022 with live-wire testing of the EMU to follow in January 2023.*
- *The JPB continues to pursue the resolution of its discussions with the Union Pacific Railroad (UPRR) regarding protection at the UPRR's Reed Street crossing in Segment 4. The JPB is hopeful that a viable solution has been identified. The plans require approval by the City of Santa Clara and a GO-88B permit from the California Public Utilities Commission (CPUC).*

1.7 PMOC Observations

The PCEP has made significant progress since the last quarterly meeting. The importance of the energization of TPSS-2 by PG&E can't be overstated.

The senior staff that has been added to the project are making substantial contributions, and the recent addition of support staff for the discipline leads will make the team even more effective.

The problems being encountered by BBII as it completes the testing and commissioning of Segment 4 are not unusual for complex projects at this phase. However, the nature of the problems raises concern about BBII's quality program and its attention to detail. The PCEP leadership is rightly concerned and appears to be taking appropriate steps to address the situation.

Both JPB and its contractors are anxious to complete Segment 4 so that testing of the EMUs can commence, and the testing and commissioning teams can move on to the next project elements. Segment 4 is important, but it is not on the project's critical path. The PMOC encourages the PCEP team to take the additional time to make sure all requirements have been satisfied, including adequate time to review submissions, rather than trying to force an activity to meet an arbitrary milestone date.

Finding a replacement for the former lead scheduler is good news, and the PMOC hopes to see a fully integrated schedule, which adds the rail activation activities to the current IMS, very soon. The PMOC remains concerned that the PCEP team is still not taking appropriate steps to prepare to defend against another schedule related claim. This is despite the fact that PCEP knows that BBII is tracking all schedule delays.

1.8 Action Items

No new Action Items were identified during QPRM No. 22. Action Item 13.02 will remain open until completed. The current list of Action Items is attached as Appendix D.

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1 Welcome, Introductions and Introductory Comments – Michelle Bouchard

Michelle Bouchard asked Jim Brown of the PCEP Safety team to provide a safety moment. Mr. Brown said that close calls should not be ignored because the next time the result may be an accident.

1.1 FTA – Ray Tellis

Ray Tellis opened the meeting by congratulating Ms. Bouchard on her appointment as Executive Director of Caltrain and thanked her for her contributions to the agency. He also thanked her for the very timely communications following a recent series of incidents.

- It has been a long time since there has been a face-to-face meeting between the FTA and Caltrain, and it is important that these meetings occur.
- Covid continues to climb in the Bay area, and this is no time for complaisance.
- Mr. Tellis announced that Janice Abaray is the acting Director of the Region's Office of Program Management and Oversight.
- Mr. Tellis thanked Luis Zurinaga and the other funding partners, and the FRA and CPUC for their contributions to the project.
- The electrification phase has lots of safety implications and acknowledged Tahir Khattak from FTA HQ, and the PMOC; it's a partnership that includes the entire project team.

1.2 Introductions - All

Mr. Tellis asked the attendees to introduce themselves.

Ms. Bouchard asked Steve Artus from CPUC and Mark Adamczyk from FRA if they had any comments, hearing none, the introductions continued.

1.3 Caltrain – Michelle Bouchard

Ms. Bouchard said it is good to see everyone in person and to finally have a full staff.

- The PCEP team and Caltrain are laser focused on starting service in 2024.
- A Roadmap to Completion is being created. It includes targeted shutdowns over the corridor and single tracking such as occurring now during the cutovers.
- Some of the questions that need to be answered:
 - How to get the work done?
 - How to treat the customers?
 - There will be concrete details for the January Board meeting.
 - OCS needs to get caught up.
 - Testing and commissioning in late 2023 and early 2024.
- JPB is pursuing funding from others including:
 - TIRCP grant applications go in tomorrow.
 - There are some federal opportunities, but they prefer all state monies.
 - One possibility is a Senate earmark of \$51 million in CIG funds from the THUD Committee.
 - FRA Inter-city Rail might also have potential.
- Caltrain hosted the IEEE in November.

- The Commuter Rail Summit was held in San Jose last week.
- Average weekday ridership is about 30% of pre-pandemic levels
 - Saturday ridership is about 66%
 - Sunday ridership is about 85%
 - Building occupancy in San Francisco is worrying.

Mr. Tellis remarked that he was glad to see the other General Managers supporting Caltrain as a Regional priority.

1.4 **FTA Update** – Ray Tellis

Mr. Tellis presented a brief PowerPoint update on the FTA programs.

- The Bi-partisan Infrastructure Law (BIL) has \$108 billion for transit.
- FTA is adding 200 FTE, the first big increase in many years; recruiting is a challenge.
- Speaking to the Region IX organization chart, Mr. Tellis commented that it is a large office, and they are committed to supporting the PCEP; “anything you need.”
- Mr. Tellis mentioned a recent grant award to Phoenix, and Notice of Funding Opportunity (NOFOs) for replacing old railcars, and \$3 million for standards development.
- New TIFIA loans are available for Transit Oriented Development (TOD) through the Build America Bureau.
- San Francisco did not participate in the major U.S. recovery.
- Build America Buy America Act (BABA)presents some challenges.
 - FTA requested comments regarding waivers.
 - Pre-November 10, 2022 contracts would be grandfathered, also a de-minimus waiver for small contracts.
- The BIL includes hiring preferences related to the use of labor for transportation construction projects.
- Price adjustments are now allowed for supply chain disruptions on existing federally funded projects, when permitted under the contracts.
- A Joint Office of Energy and Transportation was created through the BIL to facilitate collaboration between the USDOE and USDOT. This might be valuable to SamTrans and its Battery Electric Bus program.
- The Public Transit Agency Safety Plan is due on December 31, 2022.
- FTA is opening a Transit Workforce Center with a tool kit to provide hands-on help in the hiring, training, and retention of public transit employees.

Ms. Bouchard said that the JPB really appreciated the lifeline that FTA provided during the pandemic.

- Ridership recovery is happening, but slowly. Previously, Caltrain got 75% of its costs from the farebox. Caltrain is approaching a “fiscal cliff.”
 - The transit agencies are working with the Metropolitan Transportation Commission (MTC) to aggregate the needs of Caltrain, Bay Area Rapid Transit District (BART), and the ferry system.

- A Ridership Growth Task Force has been created and has hired a consultant.
- Caltrain has also hired a consultant to assist with a Strategic Financial Plan.

Janice Abaray remarked that she is glad to be meeting in-person.

3 PCEP Program Update – Pranaya Shrestha

- The PCEP was re-baselined in December 2021.
- The JPB realized in March 2022 that the OCS was not as complete as needed, and asked BBII to add senior resources; this was completed in April 2022, and the workforce was re-trained.
- Long lead-time items are being purchased now with some possible re-design.
- BBII has increased crews from eight (8) to thirteen (13) and has added on-track equipment; this was completed in September.
- During the last two (2) months, production just hasn't gotten to where it needs to be.
- Twenty (20) percent of the project still remains, this is the most difficult and challenging part.
 - BBII is looking at re-sequencing work between Millbrae and 4th and King with limited shutdowns. This might buy-back float.
 - The objective is to achieve revenue service by December 31, 2023.
- A Task Force has been created to develop recommendations on the start of revenue service, i.e., all EMU or phase-in.
- PCEP is benefiting from unique oversight including FTA, CHSRA, and other agencies. Mr. Shrestha thanked everyone for their contributions.

Ms. Abaray asked if Caltrain is looking at the local event calendar when it schedules shutdowns. Ms. Shrestha said yes, they do look at the events, but Caltrain must be selfish. In Denver, Regional Transportation District (RTD) took a three (3) week shutdown of service and the public supported them. JPB is looking at a period from February thru the end of November 2023, to essentially "rip off the band-aid."

- The budget is trending in the right direction. Only a few million dollars have been spent from the \$90 million shared-risk pool. \$1.37 million in cost incentives plus \$2.8 from the shared-risk pool.
- BBII is working with the JPB to resolve and address issues and enhance trust and relationships. Unfortunately, a confidential survey shows things moving in the wrong direction.
- The failed short-circuit test found issues. One problem is that completed work sits too long.
- A Readiness Review will be performed in January 2024 before Segment 4 is powered up. Integrated testing will be done on Segment 4; long lead-time issues are common.
- Stadler is being paid up-front for long lead-time items. Workforce turnover continues to be a challenge.
- PCEP is preparing an upcoming critical items list monthly for Ms. Bouchard, also a weekly critical issues list.
- There will be a laser focus each week; the goal is to do end-to-end System Integrated Testing next fall (2023). Passengers will need to be notified in advance, and currently, both SamTrans and VTA have a shortage of bus operators to support bus bridges.

The PMOC asked whether Stadler has asked for additional money. Mr. Shrestha said that Stadler had asked during their September visit, but any relief has to be consistent with the contract. Stadler is the best contractor he has dealt with during his career. The JPB has asked Hatch-LTK to develop a revised storage plan.

Mr. Tellis remarked that the reduction in Change Orders from \$7 million per month to \$300,000 as a result of implementing the risk pool is a great lesson learned. He encouraged the JPB to prepare lessons learned now, and consider a presentation at the next FTA Construction Workshop. Mr. Tellis also said that he heard Mr. Shrestha's comment on the challenges that oversight by multiple entities brings, and he does not want that to be a distraction.

Janice Abaray asked if this re-structuring of the schedule will impact BBII's milestone incentives. Mr. Shrestha said that it will. The first step is to develop a plan that everyone agrees to, then work out the commercial issues. The goal is a safe, high-quality project. The JPB expects to put a lot of weight on the end dates.

4 COVID-19 Impacts to Cost and Schedule – Pranaya Shrestha

- COVID continues to impact Stadler's production, and the delivery schedule has been adjusted to reflect these impacts. Supply chain issues and employee turnover continue to impact production.

5 Safety- Jim Brown

- 2022 has been a challenging year, with two (2) serious incidents.
- Everybody went back to work following the incident in March, but there have been a few injuries in the last couple of months.
- BBII holds pre-work briefings, and we have three (3) points of contact; BBII, TASI, and Mike Meader, Caltrain's new Acting Safety Director.
- The current focus is on the upcoming OCS work.
- BBII's Recordable Incident Rate (RIR) for 2022 is now 2.79, which is greater than the national average of 2.5 for civil construction.
- There was a serious incident on August 5, 2022, when a worker fell through a wooden deck structure in Palo Alto. The worker is recovering at home. The wooden structure is being replaced with a steel structure.
- A lot of training is underway; it extends to all employees and third-party contractors.
- The safety task force formed after the March 10, 2022 incident continues to meet.
 - A new protocol has been developed that requires both the Roadway Worker in Charge (RWIC) and the contractor's foreman to sign off before track and time protection can be released.
 - A new electronic process has just been implemented that requires a specific electronic code to be transmitted to the dispatcher. Before protection can be released.
- OCS and EMU emergency preparedness training was provided to Santa Clara County Fire Dept trainers in September 2022 and safety awareness training has been scheduled for Segment 3 fire departments in January 2023
- Caltrain's annual full-scale emergency response drill was held on November 20, 2022, and for the first time, included a wire-down element.

- Safety and Security Certifications are underway. The latest Certification Element Items List (CEIL) update shows sixteen (16) Design and Construction/Testing packages are complete and 4 are awaiting final construction verification by BBII.
- The process that will be used for electrifying the Santa Clara Drill Track, the first portion of Segment 4 to be energized is as follows:
 - Balfour Beatty will submit a safety certification package for each segment to include the safety certifiable elements signed Design Criteria Conformance Checklists, Construction Specification Conformance Checklists (CSCC), Engineer of Record (EOR) test results, and Certificates of Operational Conformance (COC).
 - The JPB will issue a Temporary Use Notice (TUN) for each segment once the COC has been signed and accepted.

6 **Agency Trends** – Ted Burgwyn

- Caltrain has been running 104 trains per day since August 2021; above pre-pandemic levels.
- Service was reduced to 88 trains per day in May 2022 to accommodate single-tracking and the cutover between Belmont and Millbrae.
- Service is being reduced to 68 trains per day from December 5-18, 2022 to accommodate the cutover between Belmont and Mountain View, and weekend service has been replaced by a bus-bridge between those stations.
- More service adjustments are planned for 2023.
 - Average weekday ridership is about 33% of pre-pandemic levels
 - Saturday ridership is higher at approximately 66% and Sunday is about 77%.

7 **Legal Issues** – Michelle Bouchard

Ms. Bouchard said everything is okay.

8 **Organization** – Michell Bouchard, Pranaya Shrestha

- The focus until recently has been on increasing senior staff, that has changed to increasing support staff and clerical resources.
- Ms. Bouchard added that Caltrain is adding and promoting staff because it is mostly consultants at the present.
 - Mike Meader and Dave Genova have joined the team, both were formerly with Denver RTD.
- Mr. Shrestha said they are adding a Project Close-out Manager to make sure that they have all the right documents when they get to the end. A Document Control Manager has just been hired.
- A specialized testing engineer may also be needed.
- The Rail Activation Committee is helping to prepare a Request for Proposals (RFP) for OCS/TPS Maintenance Services.
 - This will be a best-value selection and is expected to be advertised in early 2023.
 - One goal is to have the selected firm assist with the final punch-listing of the systems.
- Ms. Bouchard said her team is trying to assess Caltrain's organizational needs.
 - There is also a focus on Caltrain's non-PCEP capital program.

The PMOC mentioned that there is a need to complete the integration of Caltrain's rail activation activities and schedule into the Master Integrated Program Schedule. This topic grew into a wider discussion which was tabled and discussed in a post-QPRM meeting.

9 Project Description – Pranaya Shrestha

9.1 Project Management Plans and Sub-plans

10 Key Project Issues – Pranaya Shrestha

- The plan that is being discussed with BBII would provide a safer work environment by shutting down operations during weekends.
- The project is facing a cash flow challenge.

Ray Tellis asked about the prospects for the State of California funding, and if there is a Plan B if that does not happen. Ms. Bouchard said they are counting on State funding to solve the cash flow challenge. They have authorized and sold \$150 million in bonds, and the Board authorized the use of another \$60 million in Measure RR funds. Another financing will start in January 2023.

Mr. Tellis asked about the role of the funding consultant. Ms. Bouchard said their role is to help Caltrain understand the “fiscal cliff” and look out into the future 5-7 years. The plan is to start the financing in January so that the money can be available by June or July 2023. They should know about State funding in January, and that money should be available immediately. Another consulting firm has been engaged just to help identify PCEP funding and prepare the grant applications.

11 Environmental Mitigation Status – Stacy Cocke

- The JPB is waiting for the State Historic Preservation Officer's (SHPO) response to the New Programmatic Agreement.

Mr. Tellis mentioned that the PMOC should include a review of environmental monitoring plan items during its on-site visits. The PMOC responded that that is a topic that is discussed during each visit or virtual monitoring call.

- Ms. Cocke provided a more thorough explanation of the status of the new (replacement) for the expired Programmatic Agreement. The lapse in the original agreement has not had any impact on how environmental monitoring is accomplished for the covered elements.

The agenda proceeded out of order because of Ms. Bouchard's need to leave early, and the slower pace of earlier agenda items.

12 PMOC Observations

- The PCEP has made significant progress since the last quarterly meeting. The importance of the energization of TPSS-2 by PG&E can't be overstated.
- The senior staff that has been added to the project are making substantial contributions, and the recent addition of support staff for the discipline leads will make the team even more effective.
- The problems being encountered by BBII as it completes the testing and commissioning of Segment 4 are not unusual for complex projects at this phase. However, the nature of the problems raises concern about BBII's quality program and its attention to detail. The PCEP leadership is rightly concerned and appears to be taking appropriate steps to address the situation.
- Both JPB and its contractors are anxious to complete Segment 4 so that testing of the EMUs can commence, and the testing and commissioning teams can move on to the next project elements. Segment 4 is important, but it is not on the project's critical path. The PMOC encourages the PCEP team to take the additional time to make sure all requirements have been satisfied, including

adequate time to review submissions, rather than trying to force an activity to meet an arbitrary milestone date.

- Finding a replacement for the former lead scheduler is good news, and the PMOC hopes to see a fully integrated schedule, which adds the rail activation activities to the current IMS, very soon. The PMOC remains concerned that the PCEP team is still not taking appropriate steps to prepare to defend against another schedule related claim. This is despite the fact that PCEP knows that BBII is tracking all schedule delays.

Sherry Bullock responded that the PCEP team has asked BBII for a Corrective Action Plan related to the recent test failure, and Michell Bouchard has elevated the request to BBII's executive leadership.

Janice Abaray mentioned that there have been multiple meetings with the scheduling team to discuss best practices. Mr. Tellis underscored the importance of the PMOC's final issue.

13 Real Estate – Brian Fitzpatrick

- The status of the Brisbane properties remains unchanged; all of the documents have been provided to the local management team and the JPB is waiting for their action. This transaction cannot be forced because of the lack of eminent domain authority in the City and County of San Francisco.

14 Construction – Andy Mutz, Stacy Cocke

- The focus is on OCS pole erection in Segments 1 and 2.
- BBII is making progress, they've installed 21,000 feet of wire.
- The signal crews are slightly ahead of schedule on the final set of Segment 2 cutovers that just got underway.

The PMOC commented that it would be helpful to have a dashboard to record construction progress because the totals reported by BBII and JPB differ. Mr. Mutz replied that the JPB has the data, but it has not been compiled yet.

The PMOC suggested that BBII be asked to provide a daily force report each morning showing the prior day's management and labor count by the employer, on-site equipment, and significant material deliveries. This can be reconciled with the contractor's Certified Payroll.

- Stacy Cocke reported on PG&E progress.
 - The short-circuit re-test is expected to occur on January 7-8, 2023.
 - She is working with PG&E to define the interface between PG&E and the project.
 - One bright spot has been the Lessons Learned on the construction of Paralleling Station 6 (PS-6), which had been lagging in progress.
- Sherry Bullock commented that BBII has not had a senior traction power lead for a long time.
- Michelle Bouchard remarked that the JPB has communicated with the Federal Energy Regulatory Commission (FERC) regarding an early release of \$68 million in cost allocation funds that the JPB has paid; this would help relieve the cash flow problem.
- Segment 3 cutovers are scheduled to start in February 2023 with Phase 4 which has no crossings.
 - Segment 3 cutovers phases 1, 2, and 3 will be complete by the end of May; this is also the planned date for completion of Milestone 1.

- 2SC must still be installed on the Reed Street crossing which is controlled by UPRR and also serves the Capitol Corridor. UPRR opposes the length of the proposed median, which must be approved by the City of Santa Clara and CPUC. A possible solution is to delay the installation of 2SC until the curve geometry is revised in the future to increase the speed through the curve.
- Ms. Bouchard said that there have not been many occasions for Caltrain to interact with the UPRR recently.

15 Readiness for Operations – Lin Guan

- The Rail Activation Committee continues to meet weekly.
- TASI is committed to completing its training by mid-January 2023; this will meet one of the requirements for the start of live-wire testing.
- Isolation procedures are in place for activities in Segment 4; this is controlled by a BBII employee.
- Standard Operating Procedures (SOPs) have been prepared for CEMOF operations.
- Caltrain has received the FRA's comments on its Draft Emergency Preparedness Plan and is preparing the response; the plan must be approved by the FRA.

The PMOC mentioned that an experienced safety consultant has been retained to assist with the OP-54 review.

16 Vehicle Update – Greg Cameron

- Preparations are underway for testing the EMUs with 25kV power in January 2023.
- Delivery of additional trainsets has been delayed until spring 2023 due to a lack of space at Caltrain.
- The 14th trainset is now scheduled for delivery in March 2024.
- Hatch-LTK is preparing a new storage plan.

17 Current/Future Projects – Rob Barnard

- The Broadband Wireless Communications Project has been awarded; work will begin in early 2023.
- Rehabilitation of the Bayshore station is underway.
- An NTP was issued in November 2022 to the contractor for the Guadalupe River Bridge replacement; work is expected to start in January 2023.
- Mike Boozma, formerly with the Honolulu Authority for Rapid Transit (HART) has joined Caltrain.

The PMOC asked if there are any environmental issues related to the Broadband project. Mr. Barnard said that it is permitted under an environmental Categorical Exclusion (CatEx).

- PG&E's FMC and East Grand Substations are 100% complete.
- Caltrain is working with the Altamont Corridor Express (ACE), one of its tenant railroads, on multiple grade separation plans. The Broadway grade separation in Burlingame is expected to cost \$320 million.

18 Budget and Cost – Ira Ray

- The project is 76% complete as of September 30, 2022, with \$1.8 billion spent.

- Approximately \$4 million of the \$90 million in contingency has been drawn.
- A \$1.036 million Change Order was issued to Aeronautical Radio, Incorporated (ARINC) for an extension of the SCADA contract.
- An \$2 million increase in contract value was authorized for Gannet Fleming electrification support services.
- Current funding will be sufficient to carry the PCEP through June-July 2023.
 - BBII submitted a revised cash flow last week (November 28 – December 2); it is under review.

19 Schedule – Jeff Werner

- The scheduled dates for Revenue Service and Required Completion are still holding.
- Milestone 1 is now scheduled for completion on May 27, 2023.
- There is negative 20 days float on the longest critical path; BBII has been consuming approximately 3 days of float per month. BBII has been notified that a recovery plan must be prepared.
- BBII's P6 update is expected in January 2023.
- Caltrain is reforecasting using BBII's June 2022 schedule.
- BBII is documenting concurrent delays.
- The OCS/TPS Maintenance procurement is scheduled for March 2023. The procurement is expected to take six to nine months.

The PMOC asked if there is any specialist testing included for the big transformers? Caltrain responded that none is included because BBII retains responsibility until final completion.

20 Risk Update – Sherry Bullock

- Risk 209, lack of sufficient Roadway Worker Protection Resources, is the top risk. BBII is requesting more RWIC than agreed to previously. Crews have increased from 8 to 12-13. An RWIC workshop is planned for January 2023.
- The other top risks remain largely unchanged.

The PMOC suggested that the risk lead do a fresh risk elicitation to gather ideas from the new senior management team.

The PMOC asked what risks have been identified in the new "Path to Completion." Ms. Bullock said that is being considered as the plan is developed.

21 Quality – Stephen Chao

- BBII is not writing an NCR on the failed short-circuit test. The JPB will be requesting that BBII prepare and submit a Corrective Action Plan.
- The Quality team is involved in the development of the Certificate of Operational Conformance.
- BBII is benefitting from the lessons learned in Segment 4 and that is translating to improvements in Segments 1, 2, and 3. BBII is implementing a process improvement program.

The PMOC suggested that the Quality team look into record keeping by seconded executive consultants.

- The Quality team is getting access to BBII's records to complete its Buy America review.

22 Public Outreach – Brent Tietjen

- The public outreach efforts have been very significant both in preparation for electrification and considering the proposed Path to Completion.
- An additional outreach to the homeless community is planned for December 14, 2022.

23 Action Items – PMOC

- No Action Items were added to the list.

24 Wrap-up – The meeting adjourned at 2:05 pm.

Appendix A: List of Acronyms

AAR	Association of American Railroads
ADA	Americans with Disabilities Act
AIM	Accelerating Innovative Mobility
APTA	American Public Transportation Association
APC	Automated Passenger Counter
ARINC	Aeronautical Radio, Incorporated
ARPA	American Rescue Plan Act of 2021
ASME	American Society of Mechanical Engineers
AVT	Alternative Vehicle Technology
BA	Buy America
BAAH	breaker- and-a-half
BAFO	Best and Final Offer
BART	Bay Area Rapid Transit District
BBII	Balfour-Beatty Infrastructure, Inc.
BIL	Bipartisan Infrastructure Law
BUILD	Better Utilizing Investments to Leverage Development
CalMod	Caltrain Modernization Program
CAR	Corrective Action Request
CARB	California Air Resources Board
CARES	Coronavirus Aid, Relief, and Economic Security Act
CBOSS	Communications Based Overlay Signal System
CC	FTA's Core Capacity Improvement Program
CCIP	Contractor Controlled Insurance Program
CCSF	City and County of San Francisco
CDFW	California Department of Fish and Wildlife
CDRL	Contract Document Requirement List
CEMOF	Central Equipment Operations and Maintenance Facility
CEO	Chief Executive Officer
CEQA	California Environmental Quality Act
CFO	Chief Financial Officer
CGA	Construction Grant Agreement
CHSRA	California High Speed Rail Authority
CIG	Capital Investment Grant
CMB	Change Management Board
CNPA	Concurrent Non-Project Activity
CO	Change Order
CP	Control Point
CPM	Critical Path Method
CPUC	California Public Utilities Commission
CRISI	Consolidated Rail Infrastructure and Safety Improvements
CRRSAA	Coronavirus Response and Relief Supplemental Appropriations Act of 2021
CSCG	City/County Staff Coordinating Group
CWT	Constant Warning Time
DART	Days Away, Restricted or Transferred

D-B	Design-Build
DBE	Disadvantaged Business Enterprise
DCN	Design Change Notice
DEIR	Draft Environmental Impact Report
DMU	Diesel Multiple Units
DOT	Department of Transportation
DRB	Dispute Resolution Board
DSC	Differing Site Conditions
EA	Environmental Assessment
EAC	Estimate at Completion
ECHO	Electronic Clearing House Operation
EE	Entry into Engineering
EEO	Equal Employment Opportunity
EIC	Employee in Charge
EIR	Environmental Impact Report
EMI	Electromagnetic Interference
EMU	Electric Multiple Unit Rail Vehicle
EOI	Electrical Operating Instruction
ESA	Environmental Site Assessment
ESZ	Electrical Safety Zone
FAI	First Article Inspection
FAQ	Frequently Asked Questions
FAST	Fixing America's Surface Transportation Act
FASTER	Faster Bay Area Initiative
FAT	First Article Test
FCA	Financial Capacity Assessment
FCD	Final Completion Date
FEIR	Final Environmental Impact Report
FERC	Federal Energy Regulatory Commission
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FLSC	Fire Life Safety Committee
FMOC	Financial Management Oversight Consultant
FMP	Fleet Management Plan
FONSI	Finding of No Significant Impact
FQT	Field Qualification Test
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTE	Full-time Equivalent
FY	Fiscal Year
GO	California Public Utilities Commission General Order
HART	Honolulu Authority for Rapid Transportation
HEALS	Health, Economic Assistance, Liability Protection and Schools Act
HEROES	Health and Economic Recovery Omnibus Emergency Solutions Act
HISEP	High-Intensity Strategic Enforcement Program
H.R.2	116th Congress (2019-2020)

HSR	High Speed Rail
HVAC	Heating, Ventilation, and Air Conditioning
IBEW	International Brotherhood of Electrical Workers
ICAP	Internal Cost Allocation Plan
ICO	Interim Chief Officer
IFB	Invitation for Bids
I-ETMS	Wabtec's Interoperable - Electronic Train Management System
IFC	Issue for Construction
IMS	Integrated Master Schedule
INVEST	Investing in a New Vision for Environment and Surface Transportation in America Act
IRR	Incident Rate Ratio (Safety)
JPB	Peninsula Corridor Joint Powers Board
KKCS	Kal Krishnan Consulting Services, Inc.
LNTP	Limited Notice to Proceed
LPMG	Local Policy Makers Group
MCC	Management Capacity and Capability
MCP	Major Capital Project
MCS	Modern Communication Systems
MMRP	Mitigation Monitoring and Reporting Program (Environmental)
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MPS	Master Project Schedule
MRR	Material Receiving Report
MRS	Modern Railway Systems
MTC	Metropolitan Transportation Commission
NCR	Non-Conformance Report
NCTD	North County Transit District
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOFO	Notice of Funding Opportunity
NPRM	Notice of Proposed Rulemaking
NTI	National Transit Institute
NTP	Notice to Proceed
NTSB	National Transportation Safety Board
NYCTA	New York City Transit Authority
OCS	Overhead Contact System
OHA	Operational Hazard Analysis
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
P3	Public-Private Partnership
PCEP	Peninsula Corridor Electrification Program
PCWG	Peninsula Corridor Working Group
PD	Project Development Phase
PEPRA	California Public Employees' Pension Reform Act
PG&E	Pacific Gas and Electric

PHA	Preliminary Hazard Analysis
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
PRO	Pre-Revenue Operation
PRS	Phased Revenue Service
PS	Paralleling Station
PSP	Product Safety Plan (FRA)
PTASP	Public Transportation Agency Safety Plan
PTC	Positive Train Control
PTCSP	Positive Train Control Safety Plan
PTG	Parsons Transportation Group
QA	Quality Assurance
QC	Quality Control
QMP	Quality Management Plan
RAB	Rail Alignment and Benefits Study
RAC	Rail Activation Committee
RAMP	Real Estate Acquisition Management Plan
RAP	Rail Activation Plan
RCD	Required Completion Date (FFGA)
RFA	Request for Amendment (FRA)
RFMP	Rail Fleet Management Plan
RFP	Request for Proposal
RIMP	Risk Identification and Management Plan
RIR	Recordable Incident Rate
ROW	Right of Way
RSD	Revenue Service Demonstration (FRA)
RTD	Regional Transportation District
RWIC	Roadway Worker in Charge
RWP	Roadway Worker Protection
SamTrans	San Mateo County Transit District
S&P	Standard & Poor's
SCADA	Supervisory Control and Data Acquisition
SCC	Standard Cost Category
SCVTA/VTA	Santa Clara Valley Transportation Authority
SCVWD	Santa Clara Valley Water District
SEPTA	Southeastern Pennsylvania Transportation Authority
SF	City of San Francisco
SFCTA	San Francisco County Transportation Authority
SHPO	State Historic Preservation Office
SIT	System Integration Testing
SITP	System Integration and Testing Plan
SJ	City of San Jose
SMART	Sonoma Marin Area Rail Transit
SMCTA	San Mateo County Transportation Authority
SMCTD	San Mateo County Transportation District
SME	Subject Matter Expert

SMS	Safety Management System
SOGR	State of Good Repair
SPUR	San Francisco Planning and Urban Research
SSCC	Safety and Security Certification Committee
SSCP	System Safety Certification Plan
SSDCC	Safety and Security Design Certification Committee
SSF	South San Francisco
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSF	South San Francisco
SSPP	System Safety Program Plan
SSWP	Site Specific Work Plans
SVP	Silicon Valley Power
SWS	Switching Station
TAD	Track Access Delay
TAM	Transit Asset Management
TASI	Transit America Services, Inc.
TES	Traction Electrification System
TIA	Time Impact Analysis
TIGER	Transportation Investment Generating Economic Recovery
TIP	Transportation Improvement Program
TIRCP	Transit and Intercity Rail Capital Program
TJPA	Transbay Joint Powers Authority
TLOA	Transmission Load Operating Agreement
TOD	Transit Oriented Development
TPD	Trains per Day
TPS	Traction Power System
TPSS	Traction Power Substation
TrAMS	Transportation Award Management System
TSA	Transportation Security Administration
TSO	Transit Safety Office
TTCI	Transportation Technology Center, Inc.
TriMet	Tri-County Metropolitan Transportation District of Oregon
TVA	Threat and Vulnerability Analysis
2SC	Two Speed Check
UPRR	Union Pacific Railroad
<i>USDOE</i>	<i>United States Department of Energy</i>
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VE	Value Engineering
VTA	Santa Clara Valley Transportation Authority
WA	Work Area
WPC	Wayside Power Cubicle
YOE	Year of Expenditure

Appendix B: QPRM No. 22 Meeting Agenda

AGENDA

FTA QUARTERLY PROGRESS REVIEW MEETING

Grantee/Project Sponsor: Peninsula Corridor Joint Powers Board (Caltrain)

Project: Peninsula Corridor Electrification Project (PCEP)

Location: 1250 San Carlos Ave., San Carlos, CA 94070

Microsoft Teams Meeting Link:

Call-in: +1 323-618-1873; Phone Conference ID: 179 148 17#

Date: Monday, December 5, 2022

Time: 10:30 AM to 12:30 PM (PST)

Participants: Federal Transit Administration (FTA)
Caltrain
Federal Railroad Administration
California Public Utilities Commission (CPUC)
Project Management Oversight Contractor (PMOC)

1. Opening Remarks

- FTA Ray Tellis
 - General Updates
- Caltrain Michelle Bouchard
- FRA
- CPUC

2. Participants Introduction All

3. Executive Summary Pranaya Shrestha

4. COVID-19 Impacts to Cost & Schedule Pranaya Shrestha

5. Safety Sal Gilardi

- System-wide Trends/Update
- Injuries/Incidents/Training
- Safety Task Force
- Emergency Preparedness
- Project Safety and Security Certification

6. Agency Trends Ted Burgwyn

- Service Changes
- Ridership

7. Legal Issues Michelle Bouchard/Pranaya Shrestha

- Lawsuits, Civil Rights

AGENDA
FTA QUARTERLY PROGRESS REVIEW MEETING

- | | |
|--|---------------------------------------|
| 8. Organization | Michelle Bouchard/Pranaya Shrestha |
| • Caltrain Organization | |
| • PCEP Organization | |
| 9. Project Description, Management Plan and Sub-Plans | Pranaya Shrestha |
| 10. Key Project Issues | Pranaya Shrestha |
| • Schedule Recovery Considerations | |
| 11. Environmental Mitigation Status | Stacy Cocke |
| 12. CPUC Update | Stacy Cocke |
| 13. Real Estate Update | Brian Fitzpatrick |
| 14. Construction Update | Andy Mutz/Stacy Cocke |
| • OCS | |
| • TPS | |
| • CEMOF | |
| • Signals | |
| • TPF | |
| • PG&E Substations | |
| • DBE Update | |
| 15. Third Party Agreements and Utilities | Lin Guan |
| 16. Value Engineering and Constructability Reviews | Andy Mutz |
| 17. Vehicle Update | Greg Cameron |
| 18. Project Controls | Ira Ray |
| • Project Budget | |
| • Project Cost and Cash Flow | |
| 19. Project Schedule | Jeff Werner |
| 20. Procurement | Sherry Bullock |
| 21. Current/Future Projects | Rob Barnard |
| • Concurrent Non-Project Activities | |
| 22. Risk Update | Alan Brick-Turin |
| 23. Quality Assurance/Quality Control/Buy America | Jeff Werner/Greg Cameron/Stephen Chao |
| 24. Readiness for Electrified Operation | |
| • Testing and Commissioning | Russ Larson |
| • Systems Integration Testing | |

AGENDA
FTA QUARTERLY PROGRESS REVIEW MEETING

• Rail Activation	Clendennen, Mark
25. Before and After Study	Sherry Bullock
26. Public Outreach	Brent Tietjen
27. PMOC Observations	PMOC
28. Action Items	PMOC
29. Wrap Up Discussions	All
30. Next Meeting	FTA
PMOC Note: Follow-up Afternoon Meetings with PMOC to discuss Schedule, Schedule Recovery, Systems Integration/Testing and Commissioning/Rail Activation	

Appendix C: Attendees

PENINSULA JOINT POWERS BOARD (JPB)/CALTRAIN PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP) QUARTERLY PROGRESS REVIEW MEETING NO. 22

Meeting Date/Time: Monday, December 5, 2022, 10:30 A.M. – 12:30 P.M. PST

Meeting Location: 1250 San Carlos Ave., San Carlos, CA 94070

Peninsula Joint Powers Board/Caltrain (JPB)		
Michelle Bouchard	bouchardm@samtrans.com	650-508-6420
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Andy Robbins		
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Sal Gilardi	gilardis@samtrans.com	650-722-2898
Jim Brown	brownja@samtrans.com	508-725-4900
Stacy Cocke	cocker@samtrans.com	650-508-6207
Brian Fitzpatrick	fitzpatrickb@samtrans.com	650-508-7781
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Andrew Mutz		
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Ira Ray	rayi@samtrans.com	
Sherry Bullock	bullocks@samtrans.com	510-301-8954
Ahmad Nasser		
Robert Barnard	barnardr@samtrans.com	
Stephen Chao	chaos@samtrans.com	650-508-6301
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David Santoro	santorod@samtrans.com	
Brandon Roby	RobyB@samtrans.com	559-441-3751
Marcel Thomas	ThomasM@caltrain.com	
Ted Burgwyn	BurgwynT@caltrain.com	
Federal Transit Administration (FTA) Region IX		
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Martia Fox	martia.fox@dot.gov	415-734-9490
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Federal Railroad Administration (FRA) Region 7		
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Mark Gallegos	mark.gallegos@dot.gov	
Michael Lange	Michael.lange@dot.gov	909-224-7726
California Public Utilities Commission (CPUC)		
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Steven Espinal	steven.espinal@cpuc.ca.gov	
KKCS PMOC Team		
Mike Eidlin	mike.eidlin@kkcsworld.com	503-679-0602
Brett Rekola	brett.rekola@kkcsworld.com	774-312-3834
San Mateo County Transportation Authority		
Suha Rabah		
City and County of San Francisco, San Francisco County Transportation Authority		
Luis Zurinaga	luis@sfcta.org	415-716-6956
Gillian Gillett	gillian.gillett@sfgov.org	415-554-4192
Metropolitan Transportation Commission (MTC)		
Trish Stoops	tstoops@bayareametro.gov	
Craig Bosman	cbosman@bayareametro.gov	
Kenneth Folan	kfolan@bayareametro.gov	415-778-6722
Glen Tepke	gtepke@mtc.ca.gov	415-778-6781
California High Speed Rail Authority (CHSRA)		
Sharath Murthy	sharath.murthy@hsr.ca.gov	
Ian Ferrier		916-869-2461
Boris Lipkin	boris.lipkin@hsr.ca.gov	916-669-6629
Russel Fong	russel.fong@hsr.ca.gov	
Simon Whitehorn	Simon.whitehorn@hsr.ca.gov	916-297-0900
Bruce Armistead	bruce.armistead@hsr.ca.gov	916-634-3170
Santa Clara Valley Transportation Authority (VTA)		
James Costantini;	James.Costantini@vta.org	408-321-5661
Franklin Wong	Franklin.Wong@VTA.org	

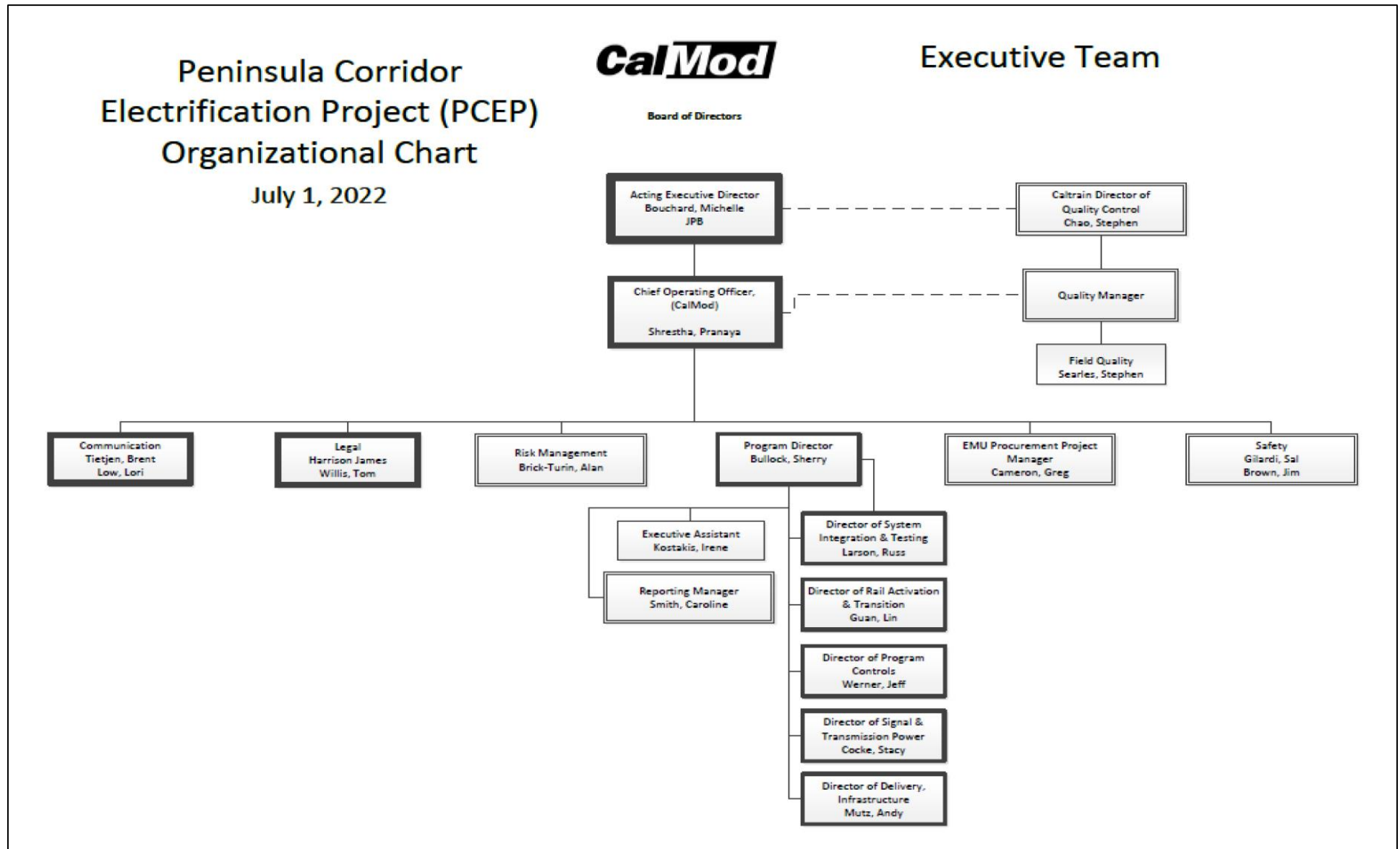
Appendix D: Action Items

The following action items were identified during the meeting; the list also includes the status of unresolved or recently resolved Action Items from past Quarterly Progress Review Meetings and from the PMOC's monitoring activities. New items are indicated by the colored text, items whose status has changed from the prior listing are italicized and completed items have been shaded.

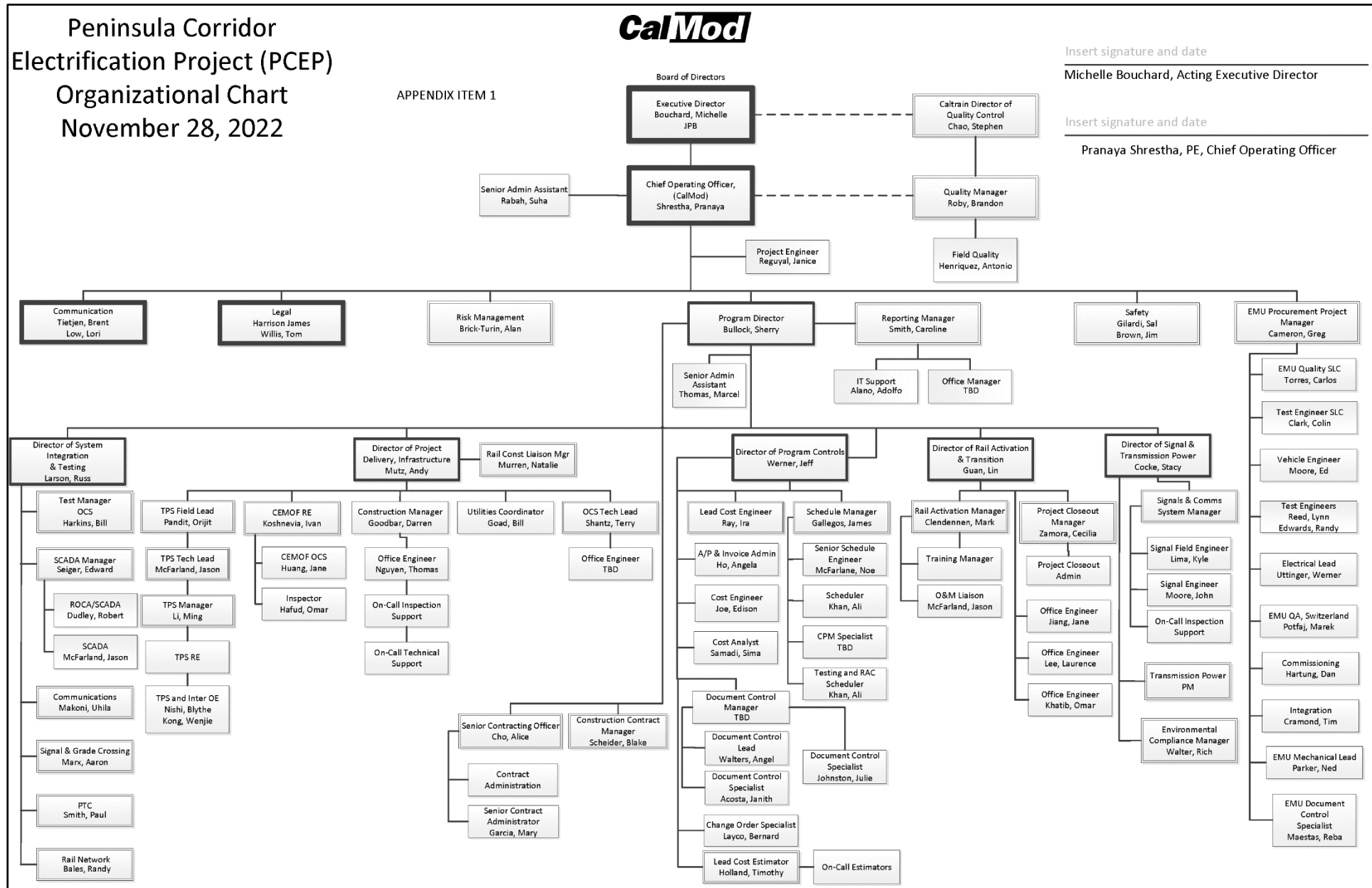
No.	Action Item	Discussion	Agreed Due Date	Responsibility Agency/Name	Status
13.02	JPB to submit a Request for Amendment (RFA) to Caltrain's Positive Train Control Safety Plan (PTCSP) under 49 CFR Sec. 236, Subpart I; the RFA will document the design and performance of its 2SC grade crossing warning system.	FRA is considering a combined RFA for both the 2SC solution and the Crossing Optimization Process. Because both 2SC and Crossing Optimization Projects have FRA approved Test Plans, completion of the RFA(s) is not and will not impact work for either project.	TBD. Awaiting direction from FRA.	Cocke	A draft of the 2SC RFA has been submitted to FRA. However, FRA must now determine if there will be two separate RFAs or one combined RFA.

Legend: Colored italics indicate a new entry from the previous version. Shaded cells indicate a completed item.

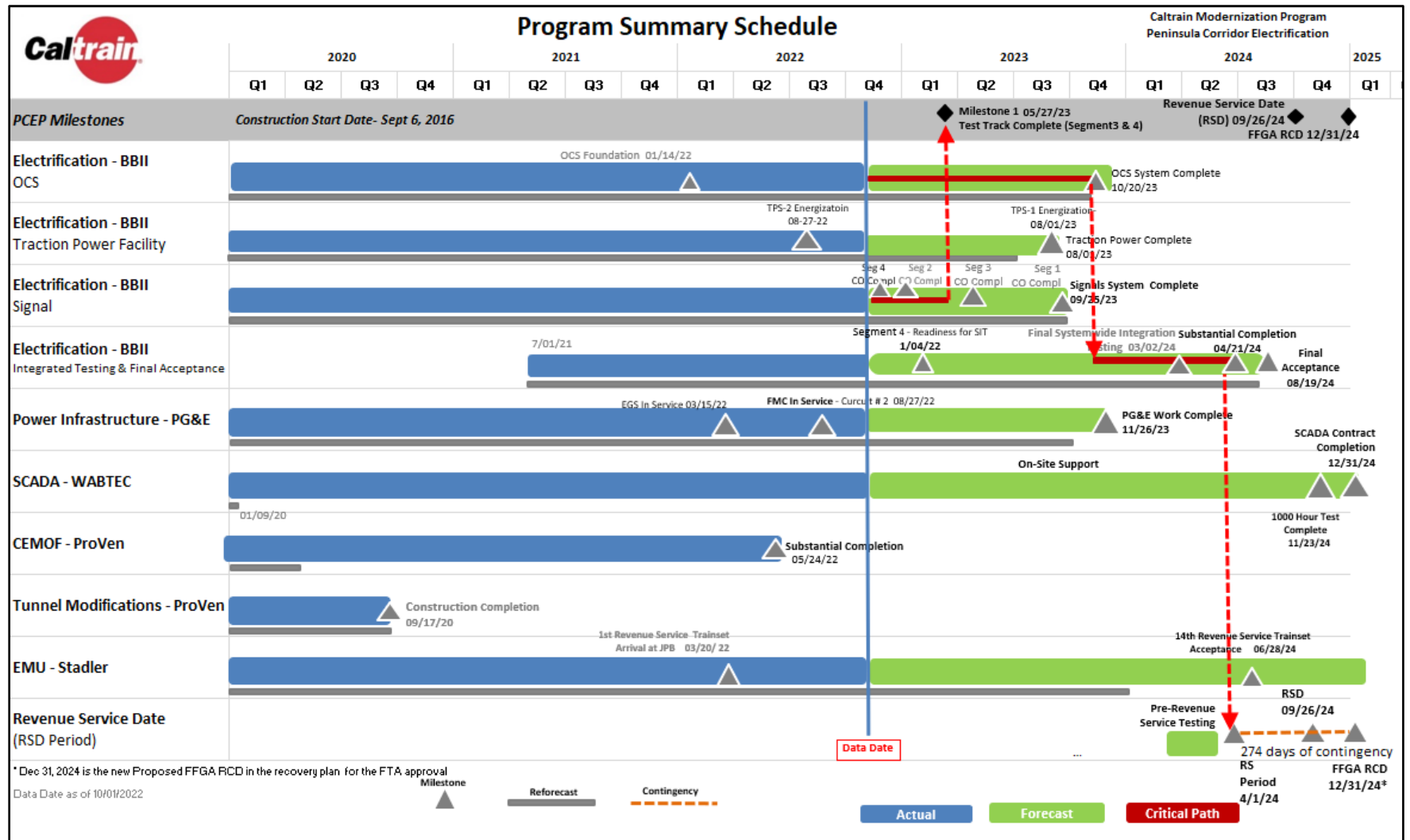
Appendix E: JPB CalMod Chart



Appendix F: PCEP Organization Chart



Appendix G: Program Schedule




















Appendix G: Testing and Commissioning Schedule

Peninsula Corridor Electrification Projects

October 2022 Update

Traction Power Substation #2 Energization	8/28/2022A
Start Segment 2 Signal Cutover	10/19/2022A
Complete OCS Pole Installation	11/10/2022
Start Integrated Testing - Segment 4	11/24/2022
Complete Ductbanks	11/29/2022
Complete Traction Power Facilities (Civil Work)	12/8/2022
Complete Segment 2 Signal Cutover	12/21/2022
Start Segment 3 Signal Cutover	12/21/2022
Complete Integrated Testing - Segment 4	1/4/2023
Complete Segment 4	1/4/2023
Complete Segment 3 Signal Cutover	4/21/2023
Start Segment 1 Signal Cutover	4/21/2023
Start Integrated Testing - Segment 3	4/26/2023
Complete Integrated Testing - Segment 3	5/27/2023
Complete Milestone #1 (Segment 3 and 4)	5/27/2023
Traction Power Substation #1 Energization	8/1/2023
Complete Segment 1 Signal Cutover	9/25/2023
Complete Signal Cutovers	9/25/2023
Complete OCS Construction	10/20/2023
Start Integrated Testing - Segment 2	10/25/2023
Complete Integrated Testing - Segment 2	12/23/2023
Start Integrated Testing - Segment 1	12/24/2023
Complete Integrated Testing - Segment 1	1/22/2024
Start Final Systemwide Integrated Testing	1/23/2024
Complete Final Systemwide Integrated Testing	3/2/2024
BBII Substantial Completion	4/21/2024
Revenue Service Date (RSD)	9/26/2024
FFGA Required Completion Date	12/31/2024

Appendix H: Key Indicators (November 2022)

KEY INDICATORS DASHBOARD (POST-GRANT STATUS)					
Project Sponsor:		Peninsula Corridor Joint Powers Board (JPB)			
Project Name:		Peninsula Corridor Electrification Project (PCEP)			
Date:		November 30, 2022			
Project Detail					
Oversight Frequency:		Monthly			
Element	Status			Prior Status (G/Y/R)	Issue or Concern
					
	G	Y	R		
PMP					The PMP requires updating to address testing and commissioning. An updated PMP has been received and is under review.
MCC					New resources are being deployed but the reconfiguration of the PCEP team is not complete, however, improvements are noted.
Cost					The JPB has refined its financial plan to support the new \$2.44 billion budget. The refined plan is presented in Section 7 of the Recovery Plan submitted to the FTA on September 30, 2022. The financial plan relies on several confirmed sources as well as other sources which are actively being pursued. The PMOC is currently reviewing the Recovery Plan. The recent announcement that Stadler may seek relief for COVID or other impacts adds uncertainty to the project’s financial situation.
Schedule					<i>The JPB is considering a plan proposed by BBII which is intended to reach substantial completion of the contract by the end of the calendar year 2023. This plan is intended to address the lower than anticipated OCS productivity. The plan will require significant changes in Caltrain operations.</i>
Quality					Some uncertainty related to the Electrification contractor’s Buy America compliance. Additional documentation is being provided.
Safety					<i>Several recordable incidents have occurred recently, including one serious injury. BBII’s Recordable Incident Rate is now above the national average for 2022. The March 10, 2022 incident remains under investigation by the NTSB.</i>
Risk					The Energization of TPSS-2 has resolved a significant risk.
Key Indicators Legend					
Green	Satisfactory: No Corrective Action is necessary.				
Yellow	Caution: Risk/Issues exist. Corrective Action may be necessary.				
Red	Elevated for immediate Corrective Action: Significant risk to the health of the project.				

Appendix I: Core Accountability Items through June 30, 2022

Project Status: In Construction		Original (FFGA)	Current Forecast ^[1]	PMOC Assessment of Current Forecast
Cost	Cost Estimate	\$1,930,670,934	\$2,393,109,097	Forecast based on JPB’s approved budget, adjusted to remove pre-PD costs.
Contingency	Allocated Contingency	\$152,913,317	\$59,409,324	Current contingency usage is being tracked closely and has been modest since the global settlement.
	Unallocated Contingency	\$162,620,294	\$24,132,020	
	Total Contingency	\$315,533,611	\$83,541,344	
Schedule	Required Completion Date	August 22, 2022	December 31, 2024	Current forecast is based on the JPB’s Recovery Plan submitted to the FTA on September 30, 2022.
Project Progress			Amount (\$)	Percent of Total
Total Expenditures ^[4]	Actual cost of all eligible expenditures completed to date ^[5]		\$1,866,857,061	78.01%
Planned Value to Date ^[2]	Estimated value of work planned to date ^[3]		\$1,925,397,857	80.46%
Actual Value to Date	Actual value of work completed to date ^[3]		\$1,866,857,061	78.01%
Contracts Status			Amount (\$)	Percent
Total Contracts Awarded	Value of all contracts (design, support, construction, equipment) awarded; % of total value to be awarded ^[6]		\$2,217,814,275	96.03%
Construction Contracts Awarded	Value of construction contracts awarded; % of total construction value to be awarded ^[5]		\$1,844,666,389	100.00%
Physical Construction Completed	Value of physical construction (infrastructure) completed; % of total construction value completed		\$1,351,783,990	73.28%
Rolling Stock Vehicle Status		Date Awarded	No. Ordered	No. Delivered
Electric Multiple Unit (EMU) commuter rail vehicles		08/2016 (A)	133	28
Next Monthly Meeting Date:			TBD January 2023	
Next Quarterly Review Meeting Date:			TBD March 2023	