



JPB Board of Directors Meeting
Meeting of June 5, 2025

Supplemental Reading File

Subject

1. Receive Quarterly Fuel Hedge Report Quarter 3 Fiscal Year 2025
2. Receive Update on Rail Operations and Maintenance Successor Contract
3. Receive Update on Apprenticeship Program
4. Receive Update on San Francisco Station Boarding Process Improvements
5. Receive Update on Next Generation Clipper Implementation, Challenges, and Mitigation Strategies
6. Memo JPB Board of Directors - 2025 RFP 24-J-C-107 CMGC - Notice of Award (NOA)
7. Receive Update on Battery Electric Multiple Unit (BEMU) Project – April 2025
8. Receive Update on Electric Multiple Unit Option Cars (EMU Option 1 & 2) Projects – April 2025

9. Caltrain Board Budget Workshop - Survey Results

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: Kate Jordan Steiner, Chief Financial Officer
For: June 2025 JPB Board of Directors Meeting
Subject: **Receive Quarterly Fuel Hedge Report Quarter 3 Fiscal Year 2025**



Finance Committee
Recommendation



Technology, Operations, Planning,
and Safety Committee
Recommendation



Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

Staff proposes that the Board review and receive into the record the presentation providing an update on the implementation of a fuel hedging strategy for Caltrain.

Discussion

The purpose of this presentation is to provide an update on the performance of the Diesel fuel Hedging Program (Program) established for Caltrain. Caltrain launched fully electric service between San Francisco and San Jose in September 2024, however, Caltrain still provides diesel service between San Jose and Gilroy.

Caltrain's diesel fuel hedging program, implemented in partnership with Linwood Capital, LLC was designed to reduce expense volatility caused by fluctuations in diesel fuel prices, thereby supporting financial stability in operations.

Following the electrification of Caltrain services in October 2024, diesel fuel consumption declined sharply. However, fuel hedging remains in place as Caltrain continues to consume an average of 31,267 gallons of fuel per month (based on fuel delivery data from October 2024 to April 2025) to provide service between Tamien and Gilroy, and support activities in the yard.

Overview of Diesel Fuel Hedge and Update on Hedging Electricity

Caltrain's diesel fuel hedging program, managed in partnership with Linwood Capital, LLC, was initiated in May 2020. The primary objective of this program has been to mitigate budget volatility stemming from fluctuations in diesel fuel prices, thereby enhancing financial stability and predictability for Caltrain's operations.

At present, there is no viable mechanism for Caltrain to hedge electricity costs as a retail customer. Effective hedging would require access to the wholesale energy market through long-term power purchase agreements (PPAs), which is not currently available to Caltrain. However, since retail electricity rates are already partially insulated from market volatility through utility-level PPAs and other instruments, they inherently function as a hedged cost.

Staff will continue to explore long-term strategies and opportunities to hedge electricity costs, with a note that access to the wholesale market is essential for any meaningful hedging program.

Fiscal Year 2025 (FY25) Performance

- There was no hedging activity in Quarter 2 (Q2) and Quarter 3 (Q3) of FY25. Fuel consumption volumes were low enough that staff did not consider hedging was warranted (estimated 6,300 gallons monthly volume at the time).
- Although there was no activity through Q2 and Q3, as of March 31, 2025, the fuel hedging program realized a net loss of -\$59,748 for the time period July 2024 through March 2025 (first three quarters of FY25). Losses were incurred during Q1.

FY25 Prospective

Following the electrification of Caltrain services in October 2024, diesel fuel consumption has declined sharply. Staff will continue monitoring the Program's cost-effectiveness and operational need. In the next quarterly fuel hedge report (August 2025), we will provide an analysis on hedge performance and present a formal recommendation on whether to continue or terminate the hedge program.

Fuel Hedge Asset Information as of 3/31/2025

Currently, \$4,242,807 of the value of the account is in the form of Treasury securities with maturities of 90 days or less with the remaining account value of \$96,364 in cash.

Budget Impact

This is an informational item. There is no budget impact.

Prepared By:	Adela Alicic	Senior Financial Analyst	5/01/2025
	Julijana Taskovic	Director, Treasury	5/06/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: John Hogan, Chief Operating Officer
For: June 2025 JPB Board of Directors Meeting
Subject: **Receive Update on Rail Operations and Maintenance Successor Contract**



Finance Committee
Recommendation



Technology, Operations, Planning,
and Safety Committee
Recommendation



Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

Caltrain's current Operations and Maintenance (O&M) Agreement with TransitAmerica Services, Inc. (TASI) expires June 30, 2027. Staff are currently developing the scope of services for a new procurement to be issued later this year, allowing for the transition to a new O&M Agreement by July 1, 2027.

At the March 2025 Board meeting, Caltrain staff received approval of guiding principles and goals for the development of the successor contract. Caltrain subsequently issued a Request for Expressions of Interest (RFEI) to gauge potential proposer interest and seek input on key topics to determine the best strategy to procure a new O&M Agreement. The purpose of this month's presentation to the TOPS Committee is to provide a summary of feedback received from RFEI respondents and share next steps for the solicitation.

Caltrain staff will return to the Board this summer to provide additional information on the commercial arrangement of the successor contract and (2) the evaluation criteria for scoring proposals.

Discussion

The Peninsula Corridor Joint Powers Board (JPB) assumed responsibility for the operation of Caltrain service from Caltrans in 1992. Amtrak served as the JPB's contracted rail operator until May 2012. The JPB, at its September 2011 meeting, authorized the award of a new operating contract to TASI. The contract carried a 5-year base term with the ability to execute 5 additional one-year options. In February 2017, the JPB exercised all 5 of the option years, extending the contract with TASI to June 2022.

At a 2019 Board Workshop, Caltrain staff obtained direction to explore a basis upon which the JPB could extend the TASI contract through successful completion of the Peninsula Corridor Electrification Project (PCEP) and transition to electrified service. This direction was based on the determination that it would be in the public interest of the JPB to eliminate the risks

associated with the potential transfer of responsibilities carried out by TASI to a new operator until after PCEP had been completed and operated in revenue service for a reasonable period of time.

In a letter received in November 2019, the Federal Transit Administration provided its consent of the JPB pursuing an extension to the TASI agreement. In January 2021, the JPB extended TASI's contract for an additional 5 years through June 2027 to enable completion of PCEP construction and subsequent start-up of service in an electrified environment.

During the term of the current O&M Agreement, TASI has been responsible for all rail operations and maintenance of Caltrain's fleet and infrastructure to keep the system in a state of good repair. In addition, TASI has provided construction support for the capital program.

Budget Impact

There is no budget impact associated with this initial update regarding a future O&M Agreement. Pricing considerations, including tradeoffs associated with different potential commercial arrangements for the successor contract, will be the subject of a future presentation to the TOPS Committee. The project team will develop an independent cost estimate for the successor contract as part of the procurement development process.

Prepared By: Graham Rogers

Project Manager

5/15/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: John Hogan, Chief Operating Officer
For: June 2025 JPB Board of Directors Meeting
Subject: **Receive Update on Apprenticeship Program**



Finance Committee
Recommendation



Technology, Operations, Planning,
and Safety Committee
Recommendation



Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

This report includes an informational update that requires no action by the Board of Directors (Board) of the Peninsula Corridor Joint Powers Board (JPB).

Discussion

Caltrain, in partnership with Mission College and the International Brotherhood of Electrical Workers (IBEW), is developing a registered TES (Traction Electrification System) Apprenticeship Program to support long-term workforce sustainability.

The 2.5-year apprenticeship program is designed for high school graduates and individuals of any age or experience level, incorporating time-based and competency-based learning.

Apprentices will receive college credit, have their education costs fully covered, and graduate as multi-disciplined professionals in both Overhead Contact Systems (OCS) and Traction Power (TP) systems. The program is fully registered with both the California Department of Industrial Relations and the U.S. Department of Labor.

Curriculum development is underway through Mission College and industry experts, with finalization expected by December 2025. The first cohort of apprentices is projected to begin in Fall 2026. This initiative ensures that Caltrain will have a well-trained, diverse pipeline of skilled staff to maintain its electrified infrastructure.

Budget Impact

There is no impact on the budget.

Prepared By: John Hogan Chief Operating Officer

5/22/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: John Hogan, Chief Operating Officer
For: June 2025 JPB Board of Directors Meeting
Subject: **Receive Update on San Francisco Station Boarding Process Improvements**

☐ Finance Committee Recommendation ☒ Technology, Operations, Planning, and Safety Committee Recommendation ☐ Advocacy and Major Projects Committee Recommendation

Purpose and Recommended Action

This report includes an informational update that requires no action by the Board of Directors (Board) of the Peninsula Corridor Joint Powers Board (JPB).

Discussion

In response to feedback from community members and the Board, Caltrain has implemented a series of improvements to better manage large crowds at San Francisco Station following high-attendance events, such as Giants and Warriors games. The changes aim to enhance safety, reduce boarding delays, and improve the overall customer experience during high-ridership evenings.

The new operational approach includes the use of a barricaded “snake line” in the plaza to guide boarding passengers in an orderly manner. This reduces congestion within the station and speeds up boarding. Real-time adjustments to the barricade layout help ensure smooth flow for both arriving and departing passengers.

Initial results have been positive. Passenger flow was more controlled, voluntary fare compliance remained high, and trains departed on time. No security issues were reported. Caltrain will continue refining this approach by expanding the snake line, increasing fare enforcement staff, and testing full pre-boarding and front-of-line fare check protocols during future large events.

Budget Impact

There is no impact on the budget.

Prepared By: John Hogan Chief Operating Officer 5/19/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: Kate Jordan Steiner, Chief Financial Officer
For: June 2025 JPB Board of Directors Meeting
Subject: **Receive Update on Next Generation Clipper Implementation, Challenges, and Mitigation Strategies**



Finance Committee
Recommendation



Technology, Operations, Planning,
and Safety Committee
Recommendation



Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

This report provides an update on the Next Generation Clipper implementation, highlights key challenges, and outlines mitigating strategies. This item is for informational purposes only.

Discussion

Next Generation Clipper is a regional upgrade that is moving Clipper from a card-based system to an account-based platform. The upgrade includes replacing the existing Clipper hardware with new devices that support account-based functionality. It also involves transitioning from Crystal Reports to a modern datastore, with reporting done through Systems Analysis Program Development (SAP) and Power Business Intelligence (BI), and migrating the backend to fully support the new account-based system.

The customer transition is scheduled to begin in late July 2025 and continue for approximately three months, ending around October 2025 (firm timeline is to be decided). The transition will prioritize discount fare groups (Youth, Seniors, Regional Transit Connection (RTC)/Clipper Access, and Clipper START) and new features that could lower their travel costs. After that, Adult full-fare users will be transitioned to the new system at a pace of roughly 150,000 users per day.

New Regional Features

Open Payment: Allows customers to pay by tapping contactless bank cards or bank cards in mobile wallets (e.g., Apple Pay or Google Pay) directly on Clipper validators. This feature applies to Adult full fares only and will launch with the start of the customer transition.

Inter-agency Transfer Discounts: Riders will pay the full fare for their first ride with one agency, and any transfers to a different agency within two hours will qualify for a discount—up to \$2.85 per transfer. During the transition period, this feature will only be available to riders using account-based Clipper cards or Open Payment methods.

New Caltrain Features

New Monthly Pass: Caltrain will introduce an updated monthly pass that replaces the current version. The new pass will be based on the total number of zones traveled, rather than the origin and destination zones. Riders will be required to tap on and off for each ride. This new pass was approved by the Caltrain Board in August 2024. The table below summarizes the key differences between the current and the new Caltrain monthly pass:

Feature	Current Caltrain Monthly Pass	Next Generation Clipper Caltrain Monthly Pass
Pricing Rule	Based on origin and destination zones.	Based on the total number of zones traveled.
Tapping Rule	Tap once at the beginning of the month; no need to tap for the rest of the month. No minimum fare requirement for riding with a monthly pass.	Must tap on and off each trip. Missed tap-offs trigger a max zone charge billed on top of the pass. Riders with a negative balance can't board, even with a valid pass. Missed tap-ons may show as invalid and result in citations.
Zone Upgrade	Zone upgrade tickets are available via Ticket Vending Machines (TVMs) or Caltrain mobile app.	Zone upgrades will be automatically calculated and applied within the Clipper system upon tapping.
Youth Monthly Pass	Varies by zone, ranging from \$38.40 to \$158.40	Flat fare of \$24 for all zones.

Clipper START Monthly Pass Discount: Caltrain will expand its means-based fare discounts by offering a discounted Clipper START monthly pass, in addition to the existing one-way fare discount. This new discount was approved by the Caltrain Board in August 2024.

Transition Challenges

Dual System Complexity: During the transition, both systems (old and new) will run in parallel. Each rider can only be active in one system at a time and must follow the rules and access the features specific to that system. Although all users will be migrated to the new system on the backend, physical Clipper card holders must tap their card on a Clipper validator to complete the transition. Given the size of the Bay Area Clipper users, the transition is expected to take approximately three months. During this period, riders may be uncertain which system they are using or what fare rules apply. Customers should contact Clipper Customer Service at 877-878-8883 for assistance with any questions or issues. Communications team is updating the website to inform riders about the upcoming changes and provide guidance for a smooth transition to the Next Generation Clipper system.

New Monthly Pass Tapping Rules: The switch to mandatory tap-on and tap-off for every ride is a significant change for monthly pass users. If a rider misses a tap-off, they'll be charged the maximum zone upgrade. If a rider misses a tap-on, their pass will appear invalid on fare

enforcement devices which may result in citations unless conductors manually verify the pass, which could lead to delays and confusion during operations.

Temporary Pricing Issues: Because of pricing differences between the two systems, Youth Monthly Pass users may be overcharged until the transition is complete.

Fare Enforcement Device Limitation: The fare enforcement device designated for use with the Next Generation Clipper system has raised two significant concerns during Caltrain's testing. First, the device's battery does not sustain power for the duration of a full shift, requiring conductors to recharge mid-shift — a solution that is operationally impractical. Second, the device requires conductors to manually select "Scan Another" after processing each customer, introducing inefficiencies that are especially problematic during periods of high ridership or large-scale events. Caltrain has confirmed with Cubic that this functionality cannot be disabled. Due to these limitations, Caltrain is actively engaged with the Metropolitan Transportation Commission (MTC) to seek an alternative. Discussions are ongoing, and no resolution has been finalized at this time.

Card Balance Check: Card balances will no longer appear on Clipper validators. Riders can check balances via the Clipper app, the Clipper website, at Caltrain Ticket Vending Machines (TVMs), or by calling the Clipper customer service center.

Mitigation Plans

To minimize disruption during the transition, Caltrain has worked with MTC and Cubic to implement the following:

Early Transition for Monthly Pass Riders: Riders who have used a Caltrain monthly pass within the past 18 months will be prioritized for early transition during the second week of the regional customer transition. This gives them more time to access the new features and understand how the system works.

Continuation of Current Tapping Rules (Temporarily): Monthly pass riders will continue following the current tap-once-per-month rule during the transition period and for up to two months after the transition is fully complete. Riders will not be required to tap on and tap off for every trip during this time.

No Citations for Missed Taps (Temporarily): Conductors will be trained to manually verify monthly passes. No fare citations will be issued for missed taps—as long as a valid pass is shown—for up to two months after the transition ends.

Automatic Refunds for Mistaken Zone Charges (Temporarily): Caltrain will work with MTC and Cubic to proactively refund any incorrect zone upgrade charges caused by missed taps for up to the first two months after the transition is complete. MTC has agreed to issue such refunds once a month.

Refunds for Youth Overcharges: Eligible customers who overpay due to pricing differences between two systems will receive refunds (excluding Third Party Administrator/Clipper Direct sold passes). MTC has agreed to issue such refunds once a month.

A phased, comprehensive communications plan accompanies the transition to ensure minimal customer confusion and continued customer trust. The plan includes web and social messages during the pre-launch phase, ambassador support at key stations during the soft launch, and collateral showcasing the benefits of the new system once a hard launch date is determined.

Budget Impact

There is no direct budget impact associated with this project. The temporary suspension of fare enforcement does not affect revenue, as riders must still possess a valid monthly pass. Zone upgrade refunds are not tied to revenue currently collected by the Clipper system. Youth Monthly Pass refunds will correct overpayments caused by system limitations affecting customers who have not yet transitioned.

Prepared By: Bruce Thompson

Manager, Fare Program Operations

5/7/2025



Memorandum

TO: JPB Board of Directors

FROM: Michelle Bouchard, Executive Director

DATE: May 21, 2025

RE: RFP 24-J-C-107 Construction Manager General Contractor Services for the Middle Avenue Pedestrian and Bicycle Rail Undercrossing - Notice of Award

Introduction

This memo provides an informational update regarding funding for the Construction Manager General Contractor Services (CMGC) for the Middle Avenue Pedestrian and Bicycle Rail Undercrossing Project (Project). No action is required from the TOPS Committee at this time, and we will continue to apprise you as new developments arise.

Discussion

On April 3, 2025, the Board authorized the award of the pre-construction phase of the Project to Myers and Sons Construction, LLC for \$594,415.98. The pre-construction work is now underway and is fully funded by the City of Menlo Park (City). The Project will enhance pedestrian and bicycle connectivity across the Caltrain corridor in Menlo Park, improving safety and accessibility between key residential, commercial, and recreational areas. The project includes two phases: pre-construction and construction.

The funding provided by the City for the construction phase consists of two key sources: 1) the One Bay Area Grant Cycle 3 (OBAG-3), and 2) a federal omnibus budget bill appropriation, which is currently administered through the Federal Highway Administration (FHWA).

As part of aligning the project funding with the approved CMGC delivery method, it was confirmed that the City intends to use FHWA-administered funds for a portion of construction. Because FHWA imposes restrictions on the use of CMGC, and Caltrain projects are generally subject to Federal Transit Administration (FTA) oversight, the funds must be transferred to FTA to comply with Public Utilities Code Section 103395.

However, after the Peninsula Corridor Joint Powers Board (JPB) approved the use of CMGC project delivery and Caltrain issued a request for proposals, Caltrain staff learned that the City intended to fund a portion of the construction through FHWA funds, which imposes limitations on the use of the CMGC project delivery method. As a result, the FHWA funds must be

transferred to the FTA to allow project oversight consistent with Public Utilities Code Section 103395.

The City is leading the inter-agency coordination needed for this transfer. While the proposed funding swap raises no immediate concerns, staff notes that the federal funds transfer process has taken longer than anticipated. We remain in contact with the City and funding partners to support progress and minimize any downstream impacts on construction timelines. Construction is currently scheduled to begin in early 2027.

Importantly, this administrative step has no impact on:

- The current CMGC contract authorized by the Board
- Pre-construction activities
- The total committed funding to date, which remains \$21.79 million, supported by a mix of local, regional, federal, and private sources:

Table 1: Middle Undercrossing Funding Plan				
No.	Funding	Source	Amount	Phase
1	Measure A/W Pedestrian/Bicycle Program	San Mateo County Transportation Authority	\$1,130,000.00	Design
2	Middle Plaza development agreement contribution	Private, Stanford University	\$5,000,000.00	Construction
3	Transportation Impact fees	City of Menlo Park	\$5,658,334.00	Design, Construction, right-of-way
4	Stanford University recreational mitigation grant	Santa Clara County	\$1,000,000.00	Construction
5	One Bay Area Grant – Third Cycle (OBAG-3) Commission	Metropolitan Transportation Commission	\$5,000,000.00	Construction
6	Federal omnibus budget bill	United States Department of Transportation	\$4,000,000.00	Construction
Total			\$21,788,334.00	

Planned Actions

- The City of Menlo Park has recommended proceeding with the notice of award the pre-construction phase, rather than waiting for the completion of the federal fund transfer.
- To avoid delays, Caltrain issued the (Notice of Award) NOA to Myers and Sons Construction, LLC, on May 9, 2025.
- Staff will continue coordinating with the City of Menlo Park and Caltrans to facilitate the successful transfer of FHWA-administered funds to the FTA.
- A follow-up meeting with Caltrans will be scheduled, as needed, to clarify the process for transferring earmarked federal funds.
- Caltrain has prepared a memo to file documenting the rationale for proceeding with the CMGC delivery method under existing risk guidance, in the event of future federal review or audit.
- Updates will be provided as key milestones are reached or if any issues arise requiring Board attention or action.

Prepared By: Audrey Brook
Ehab Azab

Director, Capital Program Delivery
Procurement Administrator III

5/1/2025
5/1/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: Sherry Bullock, Director, CalMod Program
For: June 2025 Board of Directors Meeting
Subject: **Receive Update on Battery Electric Multiple Unit (BEMU) Project – April 2025**

☐ Finance Committee
Recommendation

☐ Technology, Operations, Planning,
and Safety Committee
Recommendation

☐ Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

This report includes an informational update that requires no action by the Board of Directors (“Board”) of the Peninsula Corridor Joint Powers Board (“JPB” or “Caltrain”).

Staff will provide monthly updates covering battery electric multiple unit (BEMU)-related activities during the reporting month and a preview of activities anticipated to take place during the current month.

Discussion

The battery electric multiple unit pilot project (BEMU Pilot) is a research and development project with the end goal of producing a BEMU qualified to run on the general railroad system, and on Caltrain’s right-of-way including the Gilroy Extension specifically under battery power.

The BEMU is a change order option train ordered from Caltrain’s EMU (electric multiple unit) contract and is a shorter version of a fully capable EMU paired to a battery cab car designed to run in daily round-trip service from Gilroy to San Jose. The BEMU has four cars, three of which accommodate passengers with a total of 280 seats. The BEMU will be charged under the overhead catenary system (OCS) either stationary or in service, travel to Gilroy and have its charge “topped off” during overnight layover in Gilroy at the standard 480-volt train plug before returning north.

Stadler is responsible for design, procurement, manufacturing, installation, testing and commissioning of the BEMU. The BEMU will be equipped with Positive Train Control (PTC) and qualified on both the non-electrified portion of Caltrain service on Union Pacific Railroad territory as well as the Caltrain right-of-way electrified portion. BEMU PTC will require detailed documentation and approval by the Federal Railroad Administration (FRA).

Monthly Update

- 1. Project Schedule – Battery Electric Multiple Unit (BEMU) project baseline schedule was established on April 22, 2024. The following are the status of major Milestones as of April 30, 2025:**

<u>Key Project Activity</u>	<u>NTP + months estimated in Change Order</u>	<u>Planned Completion (Baseline)</u>	<u>Progress as of 04/30/2025</u>	<u>Progress On Track?</u>	<u>Notes</u>
Stadler Notice to Proceed	0	08/25/23	Completed	Completed	
Approval of Master Program schedule	3	04/22/24	Completed	Completed	
Conceptual Design Review (CDR)	12	04/18/25	Completed	Completed	
Preliminary Design Review (PDR)	16	08/15/25	In Planning	Delayed to 12/2025 Completion	Delay due to carbody redesign
Final Design Review (FDR)	20	12/12/25	In Planning	Delayed (date TBD)	Delay due to carbody redesign
Battery First Article Inspection	30	04/10/26	In Planning	Delayed (date TBD)	Delay due to carbody redesign
Completed Carshells	40	05/01/26	In Planning	Delayed (date TBD)	Delay due to carbody redesign
Authorization to Ship to Transportation Test Center (TTC)	45	06/25/27	In Planning	On Track	
Completion of Testing at TTC	50	12/10/27	In Planning	On Track	
Conditional Acceptance – BEMU Ready for Revenue Service	55	10/23/28	In Planning	On Track	
Final Acceptance	60	11/20/28	In Planning	On Track	

2. Cost – Spend vs Budget with Actuals and Accruals through April 30, 2025

Project 100782 BEMU - Budget and Cost (As of April 30, 2025)

	(A)	(B)	(C)	(D)		(E)	(F) = (C - E)	(G) = (D / E)
Project Cost Analysis	Original Budget (US\$MM)	Approved Changes (Contractor) (US\$MM)	Project Current Budget (US\$MM)	Expended and Accruals To-Date (US\$MM)	To-Go (US\$MM)	Estimated at Completion (EAC) (US\$MM)	Variance at Completion (US\$MM)	% Expended of EAC
Contractor - STADLER	\$ 60.98	\$ 0.56	\$ 61.54	\$ 18.24	\$ 43.30	\$ 61.54	\$ -	29.64%
Other Contracts	\$ 1.31		\$ 1.31	\$ -	\$ 1.31	\$ 1.31	\$ -	0.00%
Program Mngt. & Admin Costs	\$ 9.64		\$ 9.64	\$ 0.20	\$ 9.33	\$ 9.52	\$ 0.12	2.07%
Project Contingency	\$ 7.47	\$ (0.56)	\$ 6.91		\$ 6.83	\$ 6.83	\$ 0.08	0.00%
ICAP	\$ 0.60		\$ 0.60	\$ 0.01	\$ 0.79	\$ 0.80	\$ (0.20)	0.72%
Total BEMU Project	\$ 80.00	\$ -	\$ 80.00	\$ 18.44	\$ 61.56	\$ 80.00	\$ 0.00	23.05%

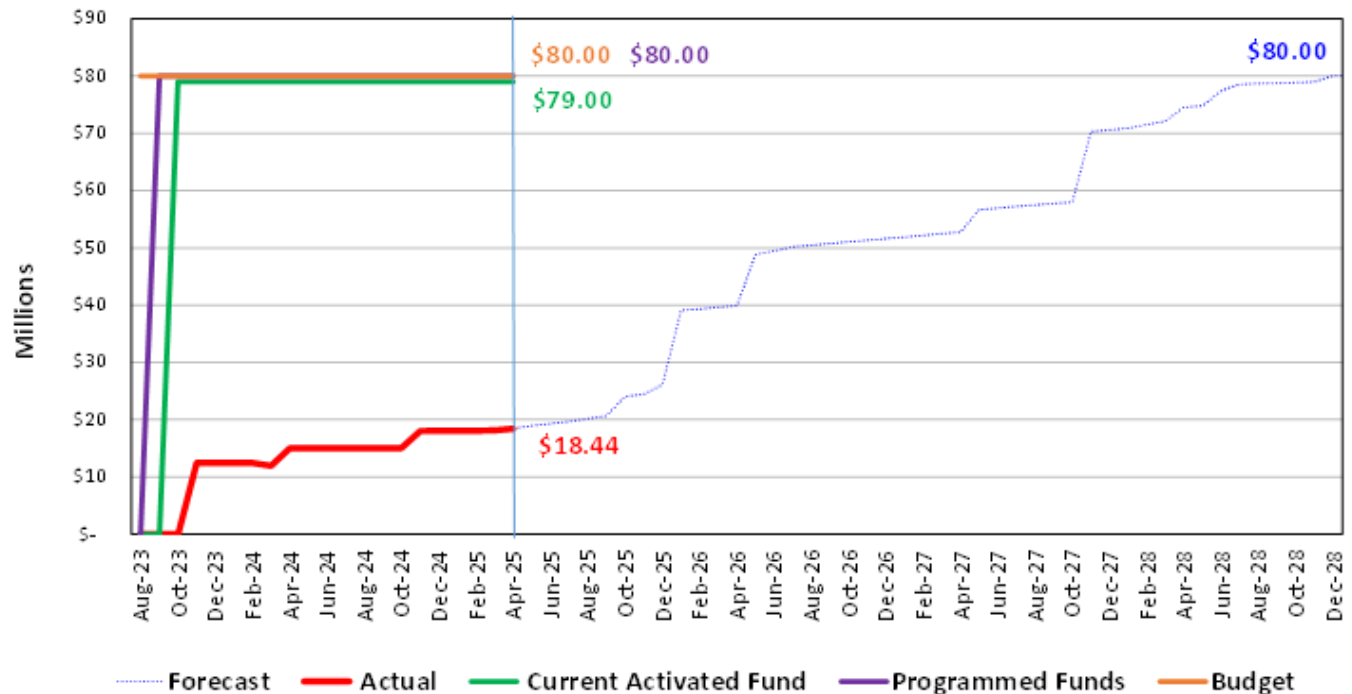
Note:

- 1). Expended and Accruals To-Date is through April 30, 2025;
- 2). Program Mngt. & Admin Costs includes JPB project oversight costs, TASI support and Other Direct Costs for BEMU trainset;
- 3). Other Contracts includes \$1M for Wayside Upgrades;

3. Cost Curve:

APRIL 2025

BEMU | Expenditure - Planned vs. Actual



4. Major Activities for April 2025:

- Held monthly progress meetings. At the April meeting, Stadler announced a delay in the schedule due to issues with the carbody structure that required redesign. Preliminary Design Review will be delayed by 3-4 months. Final Design Review, battery FAI (first article inspection), and carshell completion will also be delayed, but the period of delay is still under review/discussion.
- Held on-going technical coordination meetings (biweekly).
- Held on-going safety coordination meetings (biweekly).
- Reviewed the truck stress analysis report, the vehicle dynamics report, and the isolation transformer submittal.

5. Upcoming Key Activities:

- Continue Conceptual Design Review (CDR) items resolution as part of design process.
- Prepare for Preliminary Design Review.
- Continue reviewing safety submittals (and other submittals as needed).

6. Change Management:

- In August 2023, the JPB approved a change order for not to exceed \$60,976,504 to Stadler US Inc., Contract No. 14-PCJPB-P-056 for an option of one four-car BEMU trainset.
- A change order was fully executed for BEMU convenience outlets, which were not included in the BEMU train order. The change order amount is \$40,019.18. This change will be covered by the contingency and there is no change to the project budget.
- A change order in the amount \$520,500 to increase the traction battery capacity from the baseline 1.9 megawatt hour (MWh) requirement to the 2.3 MWh was fully executed. This change will be covered by the contingency and there is no change to the project budget.

7. Risk Management:

The following are top risks for implementation of BEMU project:

Risk Descriptions	Mitigation Actions
1. Redesign of the battery car body will cause schedule delays	Review schedule with Stadler and find ways to pull the schedule back in
2. Potential supply chain issue down the road	Tracking procurement lead time and monitoring closely

8. FRA Coordination Status:

- FRA issued a letter to the industry regarding alternative fuel vehicles. That letter is under review as to its applicability to the BEMU project.
- The project team reached out to the FRA and began establishing points of contact for BEMU design review. A kickoff meeting will be arranged in the June/July timeframe (delayed due to carbody redesign delay).

Budget Impact

There is no impact on the budget.

Prepared By: Sherry Bullock	Director, CalMod Program	05/29/2025
Greg Cameron	BEMU Commercial Project Manager	05/10/2025

**Peninsula Corridor Joint Powers Board
Staff Report**

To: JPB Board of Directors
Through: Michelle Bouchard, Executive Director
From: Sherry Bullock, Director, CalMod Program
For: June 2025 Board of Directors Meeting
Subject: **Receive Update on Electric Multiple Unit Option Cars (EMU Option 1 & 2) Projects – April 2025**



Finance Committee
Recommendation



Technology, Operations, Planning,
and Safety Committee
Recommendation



Advocacy and Major Projects
Committee Recommendation

Purpose and Recommended Action

This report includes an informational update that requires no action by the Board of Directors (“Board”) of the Peninsula Corridor Joint Powers Board (“JPB” or “Caltrain”).

Staff will provide monthly updates covering Electric Multiple Unit Option Cars (EMU Option 1 & 2)-related activities during the reporting month and a preview of activities anticipated to take place during the current month.

Discussion

In 2016, Caltrain executed a contract with Stadler USA, Inc., to procure electric multiple unit (EMU) trains to serve Caltrain passengers upon completion of the Peninsula Corridor Electrification Project (PCEP), which will electrify the corridor from San Francisco to San Jose. The Stadler contract included two option periods. The option offers Caltrain the opportunity to purchase additional EMU trainsets at a substantially lower cost than would be available if Caltrain were to undertake a new procurement. In addition to costs savings, the option allows Caltrain to move closer to the goal of a zero-emission corridor while improving service and reliability for Caltrain passengers.

- The EMU Option 1 is a change order option train ordered from Caltrain’s EMU contract that adds 37 Option cars to the contract. This comprises of (a): 16 additional cars to be inserted into the Base contract 16, six-car trainsets to provide fully integrated and tested seven-car trainsets and (b): three additional seven-car trainsets. In December 2018, the JPB approved change order for not to exceed \$172,800,047 to Stadler US Inc., contract No. 14-PCJPB-P-056 for an option that adds 37 Option cars to the contract.

- The EMU Option 2 is a change order option train ordered from Caltrain's EMU contract that adds 28 Option cars to the contract. In August 2023, the JPB approved change order for not to exceed \$183,217,581 to Stadler US Inc., contract No. 14-PCJPB-P-056 for an option that adds 28 Option cars to the contract. This comprises of four seven-car trainsets.

Stadler is responsible for design, procurement, manufacturing, installation, testing and commissioning of the EMU Option cars as well as mock-ups, spare parts, special tools, test equipment, manuals, training, and related parts and services. Purchasing additional Option Cars will support the Caltrain Business Plan, reduce diesel trips on the JPB's corridor, and enhance seating capacity on the JPB's commuter rail service, all in furtherance of helping the State achieve transportation, safety and climate goals.

Caltrain has commenced fully electrified EMU service since September 2024, currently total of 16 seven-car EMU trainsets have been final accepted and in service. This monthly report will provide status of trainsets 17 through 19 as the remaining Option 1 scope and trainsets 20 through 23 as the remaining Option 2 scope.

Monthly Update

1. Project Schedule – Major Milestones for EMU Option 1 project as of April 30, 2025:

<u>Key Project Activity</u>	<u>Planned Completion (Baseline)</u>	<u>Progress as of 04/30/2025</u>	<u>Progress On Track?</u>	<u>Notes</u>
Return of the Executed Change Order	12/22/18	Completed	Completed	
Approval of Master Program schedule		Completed	Completed	
Submission of Major Systems Purchase Orders		Completed	Completed	
Completion of Carbody – Trainsets 1 thru’ 19	11/20/22	Completed	Completed	
Authorization to Ship from Contractor’s Facility - Trainsets 1 thru’ 17	08/20/24	Completed	Completed	
Authorization to Ship from Contractor’s Facility - Trainset 18	04/23/25	Completed	Completed	
Authorization to Ship from Contractor’s Facility - Trainset 19	06/22/25	08/06/25	Delayed	Delay is acceptable to accommodate OCS (Overhead Contact System) Monitoring System Change Order
Notice of Conditional Acceptance - Trainsets 1 thru’ 17	01/07/25	Completed	Completed	
Notice of Conditional Acceptance – Trainset 18	05/23/25	In Planning	On Track	
Notice of Conditional Acceptance – Trainset 19	07/21/25	09/15/25	Delayed	Delay is acceptable to accommodate OCS Monitoring System Change Order
Notice of Final Acceptance - Trainset 17	03/24/25	05/25/25	Delayed	Late due to open items
Notice of Final Acceptance - Trainset 18	07/04/25	In Planning	On Track	
Notice of Final Acceptance - Trainset 19	09/21/25	In Planning	On Track	Delay is acceptable to accommodate OCS Monitoring System Change Order
Final Milestone: Conditional Acceptance of 19 trainsets	07/21/25	09/15/25	On Track	Delay is acceptable to accommodate OCS Monitoring System Change Order

2. Project Schedule – Major Milestones for EMU Option 2 project as of April 30, 2025:

<u>Key Project Activity</u>	<u>Planned Completion (Baseline)</u>	<u>Progress as of 04/30/2025</u>	<u>Progress On Track?</u>	<u>Notes</u>
Return of the Executed Change Order	08/14/23	Completed	Completed	
Approval of Master Program Schedule	11/08/23	Completed	Completed	
Submission of Major Systems Purchase Orders	05/09/24	Completed	Completed	
Completion of EMU Carshells – Trainset 20	05/15/25	06/17/25	Delayed	Delay due to Force Majeure (flooding at aluminum extrusion factory)
Completion of EMU Carshells – Trainset 21	7/16/25	08/12/25	Delayed	Delay due to Force Majeure (flooding at aluminum extrusion factory)
Completion of EMU Carshells – Trainset 22	09/12/25	10/7/25	Delayed	Delay due to Force Majeure (flooding at aluminum extrusion factory)
Completion of EMU Carshells – Trainset 23	11/30/25	In Planning	On Track	
Authorization to Ship from Contractor's Facility - Trainset 20	06/15/26	In Planning	On Track	
Authorization to Ship from Contractor's Facility - Trainset 21	09/06/26	In Planning	On Track	
Authorization to Ship from Contractor's Facility - Trainset 22	12/24/26	In Planning	On Track	
Authorization to Ship from Contractor's Facility - Trainset 23	04/15/27	In Planning	On Track	
Notice of Conditional Acceptance - Trainset 20	07/15/26	In Planning	On Track	
Notice of Conditional Acceptance - Trainset 21	10/24/26	In Planning	On Track	
Notice of Conditional Acceptance - Trainset 22	01/20/27	In Planning	On Track	
Notice of Conditional Acceptance - Trainset 23	05/12/27	In Planning	On Track	
Notice of Final Acceptance - Trainset 20	08/20/26	In Planning	On Track	
Notice of Final Acceptance - Trainset 21	11/22/26	In Planning	On Track	
Notice of Final Acceptance - Trainset 22	02/11/27	In Planning	On Track	
Notice of Final Acceptance - Trainset 23	06/12/27	In Planning	On Track	

3. Cost – Spend vs Budget with Actuals and Accruals through April 30, 2025

Project 100400 EMU Option Car 1 - Budget and Cost (As of April 30, 2024)

	(A)	(B)	(C)	(D)	(E) = (G) - (D)	(F)	(G) = (C) - (F)	(H) = (D) / (F)
Project Cost Analysis	Original Budget (US\$MM)	Approved Changes (Contractor) (US\$MM)	Project Current Budget (US\$MM)	Expended and Accruals To-Date (US\$MM)	To-Go (US\$MM)	Estimated at Completion (EAC) (US\$MM)	Variance at Completion (US\$MM)	% Expended of EAC
Contractor - STADLER	\$ 172.80	\$ 6.25	\$ 179.05	\$ 140.00	\$ 39.05	\$ 179.05	\$ 0.00	78.19%
Program Mngt. & Admin Costs	\$ 2.00		\$ 2.00	\$ 0.68	\$ 0.91	\$ 1.58	\$ 0.42	42.66%
Project Contingency	\$ 7.84	\$ (6.66)	\$ 1.18		\$ 1.60	\$ 1.60	\$ (0.42)	0.00%
ICAP	\$ -	\$ 0.41	\$ 0.41	\$ 0.36	\$ 0.05	\$ 0.41	\$ -	88.33%
Potential Changes			\$ -		\$ -	\$ -	\$ -	
Total EMU Option Car 1 Project	\$ 182.64	\$ (0.00)	\$ 182.64	\$ 141.03	\$ 41.60	\$ 182.64	\$ (0.00)	77.22%

Note:

- 1). Expended and Accruals To-Date is through April 30, 2025;
- 2). Program Mngt. & Admin Costs includes JPB project oversight costs, TASI support and Other Direct Costs for EMU Option Car 1 trainsets;

Project 100778 - EMU Option 2 - Budget and Cost (As of April 30, 2025)

	(A)	(B)	(C)	(D)	(E) = (F) - (D)	(F)	(G) = (C) - (F)	(G) = (D) / (F)
Project Cost Analysis	Original Budget (US\$MM)	Approved Changes (Contractor) (US\$MM)	Project Current Budget (US\$MM)	Expended and Accruals To-Date (US\$MM)	To-Go (US\$MM)	Estimated at Completion (EAC) (US\$MM)	Variance at Completion (US\$MM)	% Expended of EAC
Contractor - STADLER	\$ 183.22	\$ -	\$ 183.22	\$ 53.27	\$ 129.94	\$ 183.22	\$ -	29.08%
Program Mngt. & Admin Costs	\$ 9.67		\$ 9.67	\$ 2.03	\$ 7.64	\$ 9.67	\$ 0.00	20.97%
Project Contingency	\$ 26.43		\$ 26.43		\$ 26.43	\$ 26.43	\$ (0.00)	0.00%
ICAP	\$ 0.68		\$ 0.68	\$ 0.11	\$ 0.57	\$ 0.68	\$ 0.00	15.74%
Potential Changes			\$ -		\$ -	\$ -	\$ -	
Total EMU Option Car 2 Project	\$ 220.00	\$ -	\$ 220.00	\$ 55.41	\$ 164.59	\$ 220.00	\$ 0.00	25.18%

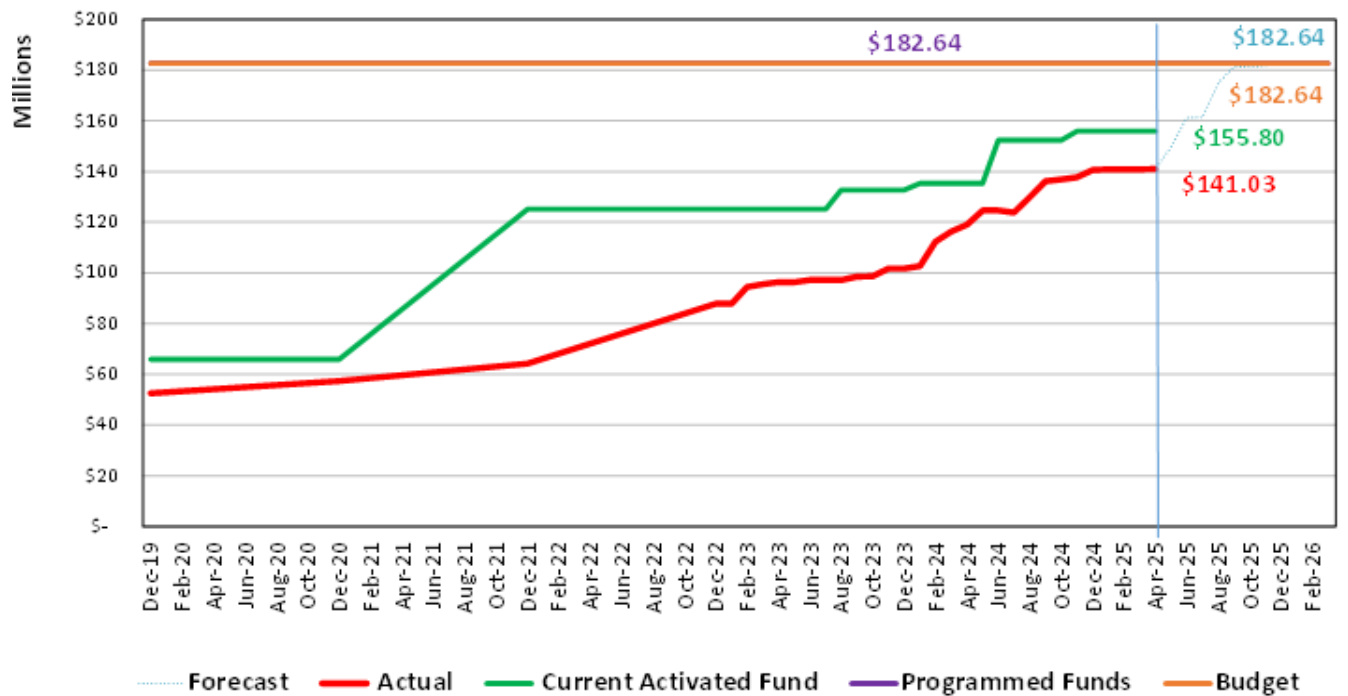
Note:

- 1). Expended and Accruals To-Date is through April 30, 2025;
- 2). Program Mngt. & Admin Costs includes JPB project oversight costs, TASI support and Other Direct Costs for EMU Option Car 2 trainsets;

4. Cost Curve:

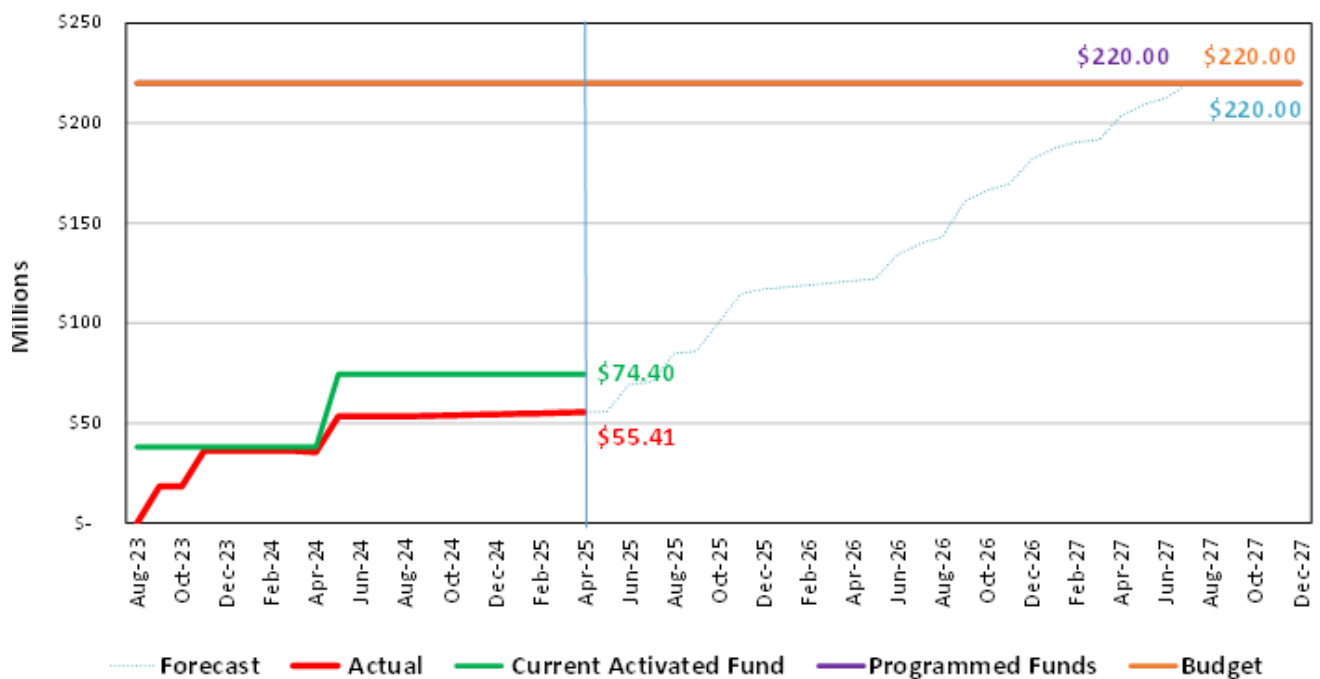
APRIL 2025

EMU Option Cars 1 | Expenditure - Planned vs. Actual



APRIL 2025

EMU Option Cars 2 | Expenditure - Planned vs. Actual



5. Major Activities for April 2025:

- Trainset (TS) 18 shipped from Stadler Salt Lake City to Caltrain
- Final assembly continued for TS 19
- Carshell production continued for TS 20 and 21

6. Upcoming Key Activities:

- Commissioning and burn-in testing of TS 18 (at Caltrain)
- Continuing production of TS 20-21 Carshells

7. Change Management:

- A total of \$6.25 million in change orders have been issued under EMU Option 1 project.
 - Performance Bond - \$920,000
 - CCO 022 - Add Flip-up seats into bike cars - \$1.96 million
 - CCO 026 - Update Virtual Reality Experience - \$43,000
 - CCO 040 - Special Tools - \$110,000
 - CCO 042 - Project Time Extension Milestone 1 - \$2.67 million
 - CCO 044 - Passenger Convenience Outlet Current Limit - \$239,000
 - CCO 049 - Pre-Revenue Services – SRS (Service Reliability System) EMU Maintenance - \$201,000
 - CCO 054 - Bridge Plate Changes – TS 1-19 - \$99,000
 - CCO 056 - OCS (Overhead Contact System) Monitoring System - \$725,700

Above changes were covered by the project contingency and there is no change to the project budget. Change Order 056 - OCS Monitoring System is funded by Rail Operations and Maintenance.

- A change notice was issued for Payment Milestone modifications for EMUs under Option 1 project. The potential change order amount is \$0. There will be no change to the project budget.

8. Risk Management:

The following are top risks for implementation of EMU Option projects:

Risk Descriptions	Mitigation Actions
1. In July 2024, the aluminum extrusion supplier claimed force majeure due to flooding. This is delaying the start of some carshell production for Option 2.	Make up the lost time during final assembly.
2. Potential supply chain issue down the road	Tracking procurement lead time and monitoring closely.

9. FRA (Federal Railroad Administration) Coordination Status:

- None required at this time (option car designs are the same as base EMUs, which is already FRA approved).

Budget Impact

There is no impact on the budget.

Prepared By: Sherry Bullock	Director, CalMod Program	05/29/2025
Greg Cameron	EMU Commercial Project Manager	05/07/2025

Caltrain Board Budget Workshop

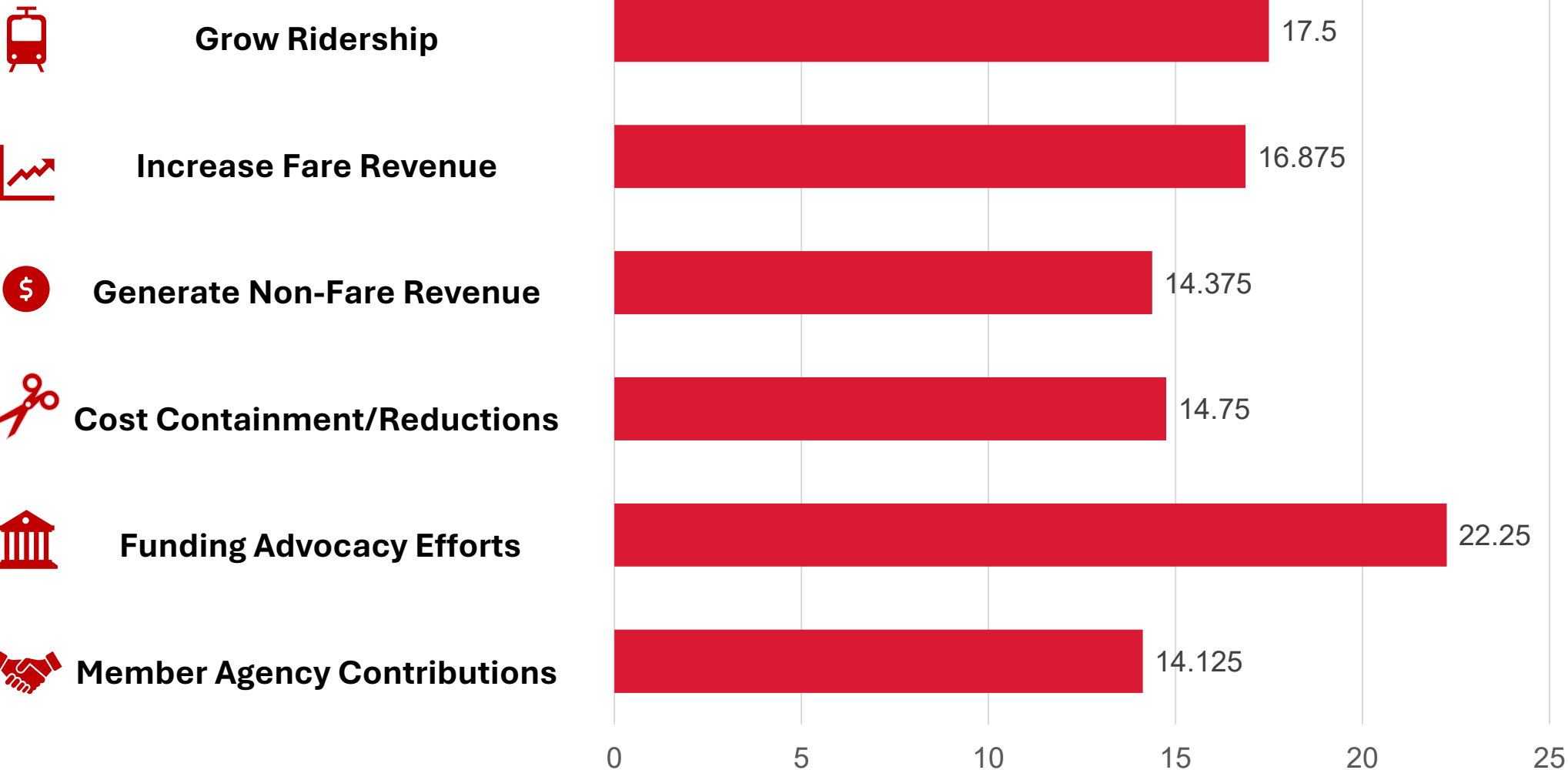
May 29, 2025



Survey Results

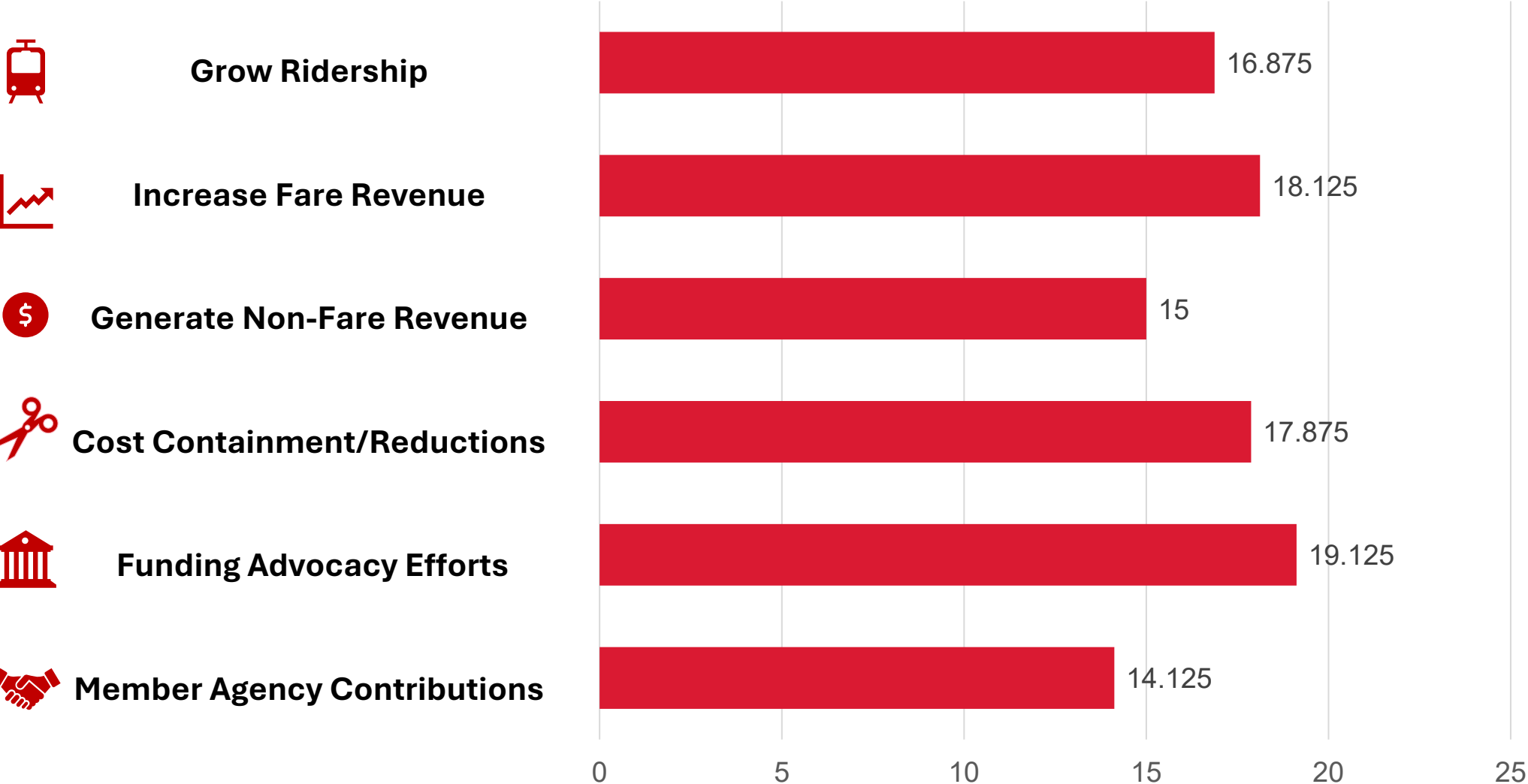
Where Should Staff & Funding Resources Go?

Quick Board Survey



Where Should Staff & Funding Resources Go?

Quick Board Survey - Retake



Where Should Staff & Funding Resources Go?

Quick Board Survey - Comparison

