

***Receive Update on
Battery Electric
Multiple Unit
(BEMU) Project***

**JPB TOPS Committee
May 27, 2026**



Battery-Electric Multiple Unit (BEMU)

- First US Major Passenger Rail BEMU Deployment
- Achieving Zero Emission, Decarbonization Policy
- Extend Electric Service beyond Wired Territory using on-board Battery
- First of Kind Bi-level Battery KISS in the World
- It is a National Demonstration Project



BEMU Overview Continued

- Order is for one, four-car trainset
- Pilot program use case: Service from San Jose to Gilroy
- Demonstration program use case: San Jose to Salinas
- Initial Maximum Authorized Speed (MAS) will be 79 mph
- Designed/tested for up to 110 mph



Location

- Tamien to Gilroy (off wire): 28 miles
- San Jose to Salinas: 68 miles



BEMU: Trainset

Battery B
(BB)-car

C-car

D-car

A-car



Power Car

Restroom Car

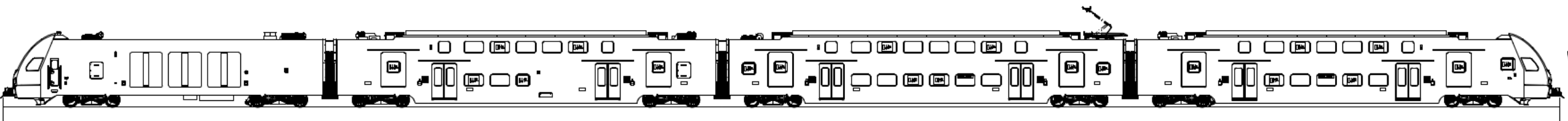
Bike Car

Cab Car

- BEMU Cars A, C, and D identical to EMU cars

BEMU: BB-Car Cab

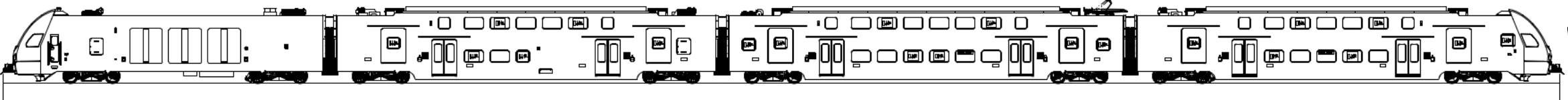
- Cab will be the same as EMU cab, except for:
 - Side doors for cab access
 - Console additions:
 1. Power source selector switch
 2. Battery cutoff pushbutton



BEMU: BB-Car Cab

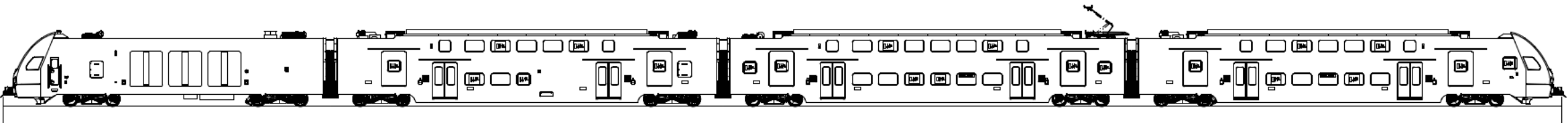


BB Car –Machine Room Hallway



BEMU

- Battery charging can be accomplished via:
 - OCS (~2 hours)
 - 480-volt wayside charging station (~5 hours)



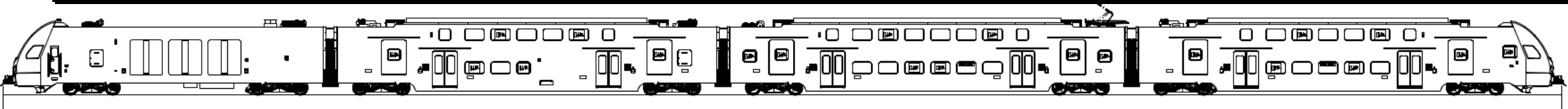
BEMU Project Schedule

Activity	Completion Date
Notice to Proceed	August 2025
Design (CDR/PDR/FDR)	September 2026
Production	August 2027
Qual Testing (TTCI)	February 2028
Delivery (On Site)	April 2028
Qual Testing (On Site)	August 2028
Training	October 2028
Certification and Acceptance	October 2028
Revenue In Service	December 2028

BEMU Project Budget and Funding

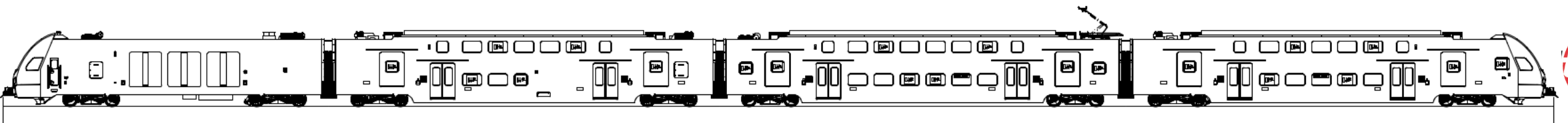
- \$80 million TIRCP Fund was awarded in 2023
- Exercised EMU Contract Option with Stadler for one BEMU

	(a)	(b)	(c)	(d) = (b) + (c)
Cost Category	Project Current Budget	Cost to Date thru' 4/30/26	Estimate to Complete	Estimated at Completion (EAC)
Contractor - STADLER	\$ 61,537,023	\$ 26,172,305	\$ 35,364,719	\$ 61,537,023
Other Contracts	\$ 1,378,706	\$ 64,706	\$ 1,850,000	\$ 1,914,706
Program Mngt. & Admin Costs	\$ 9,643,167	\$ 868,446	\$ 7,689,016	\$ 8,557,462
Project Contingency	\$ 6,842,800	\$ -	\$ 6,842,800	\$ 6,842,800
ICAP	\$ 598,304	\$ 64,025	\$ 1,083,984	\$ 1,148,008
Total BEMU Project	\$ 80,000,000	\$ 27,169,481	\$ 52,830,518	\$ 80,000,000



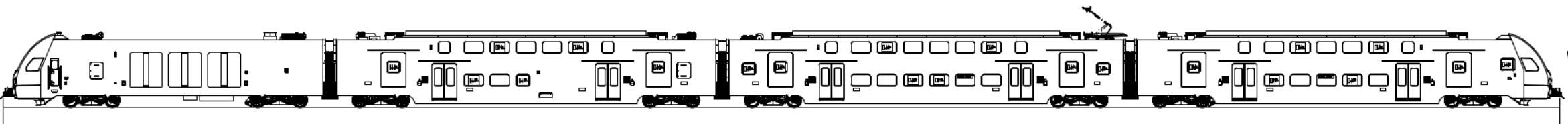
BEMU Project Key Risks

- Battery Technology - Propagation Test
- Supply Chain and Tariff Impact
- UPRR Corridor and TRA
- Infrastructure Scope
- EMU Storage Security Concern



What's Next

- Finalize Battery Option Path Forward
- Complete Final Design
- Battery Car Shell Production
- Finalize Wayside Charging Infrastructure Scope
- Finalize Concept of Operations
- Coordination with UPRR
- Continue FRA Compliance Review and Meetings



FOR MORE INFORMATION

WWW.CALTRAIN.COM

