



SFMTA

A photograph of a modern light rail train (LRV) on tracks in an urban setting. The train is white with a red stripe and has the number '2021A' on its side. It is connected to overhead power lines. The background shows city buildings, palm trees, and a cloudy sky. A sign on the left reads 'NO HOV 2+ ENTER EXCEPT TAXICABS'. A sign on the right says 'PORT The City's Commitment to the Bay'.

LRV4 Procurement

Project Status + Contract Option Decision Point

August 2021

Siemens Deliveries

Calendar Years	2017	2018	2019	2020	2021	2022	2023	2024	2025
Expansion #1	68								
Replacement					151				

New SFMTA Light Rail Vehicles (LRV4) replacing the Breda vehicles will be delivered through 2025

- These vehicles provide:
 - Major maintenance savings
 - Improved reliability
 - Comfortable, spacious interior
 - New onboard technology for passenger communications
 - Automated passenger counters



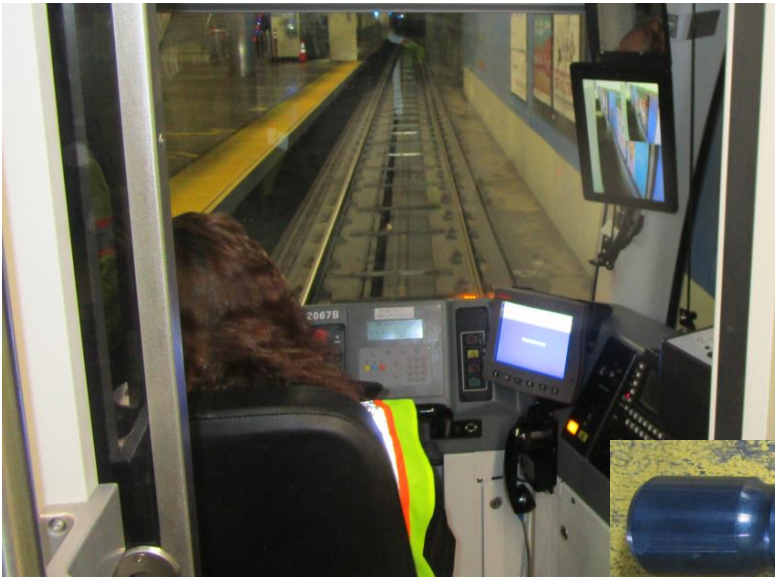
Performance To Date

- The first 68 expansion vehicles have been accepted and are in service
- The first installation of the updated interior has been installed and will be in service later this summer
- First Phase 2 vehicle is in testing in Siemens Sacramento facility and will be delivered in the fall
- Issues to date, such as doors and couplers have been resolved
- LRV4 fleet is performing at a high level



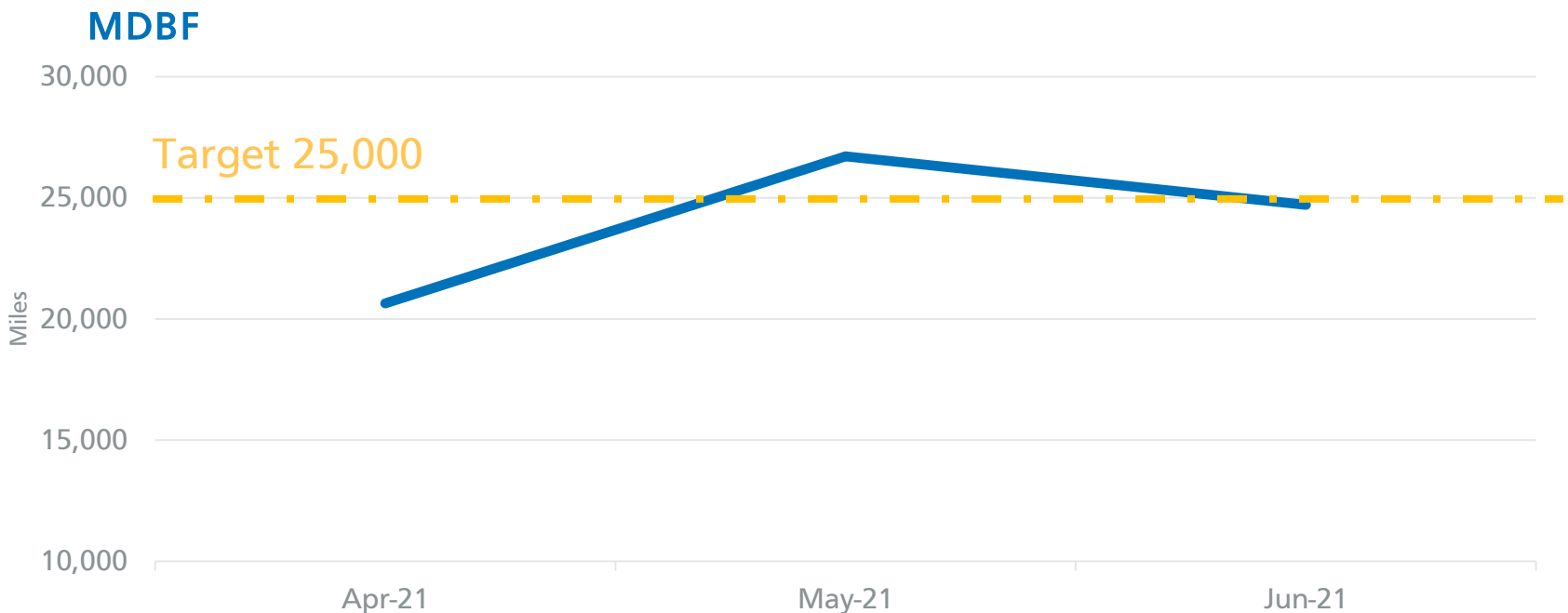
Recent Design Improvements

- Larger Monitors for rear view visibility
- Additional Sensitive edges on doors
- Coupler shear pin redesigned and installed



Reliability

LRV4 Contract reliability program paused in April 2020 due to low monthly mileage. The program will restart in the fall



These figures are *not* part of the formal contractual reliability program but demonstrate that fleet performance remains high

Summary of Action today

Today we are asking you to approve two Contract Modifications

- Contract Modification No. 9 which includes design enhancements and finalizes escalation for Phase 2 vehicles
- Contract Modification No. 10 which exercises Option 2 for additional 30 vehicles

The Contracts Modifications are concurrent and separate to allow Modification 9 work to continue while Modification 10 proceeds to the Board of Supervisors for approval

Contract Modification No. 9

Contract Modification No. 9 includes the following

- Additional design enhancements for the operator's cab and the center doors
- Reduction of scope for the Clipper equipment, for which Gen 2, the new equipment, will be provided through the MTC Contract
- Finalization of the escalation amount due for the Phase 2 vehicles, described more on the following page



Contract Contradiction

Escalation clause in 2014 Siemens LRV4 contract sets a formula and economic indices to increase future price items, including Phase 2 vehicles.

Contradiction in Contract:

Contract formula requires input of a monthly labor index, but identifies a specific index only published annually

After discussion and analysis, reached mutual agreement to:

1. Use Annual Index named in the contract
(rather than switch to alternative monthly index)
2. Derive Monthly Value based on the annual index
(divide year into 12 equal months)

The calculated escalation percentage for Phase 2 is 14.7%

Modification 9 Cost

The cost of Contract Modification 9 is \$ 80,085,460 including

- Negotiated Design enhancement totaling \$4,707,921
- Escalation applied to the Phase 2 cost is \$75,377,539
- The escalation applied is 2.44% per year compounded and is below the 4% escalation allowance in the original Contract
- With design changes and applied escalation the per vehicle cost is just under \$4M (\$3.98M)

Contract Modification No. 10

Option Opportunity

- Have option to procure *up to* 45 more LRV4s
- Must execute by September 2021 or *opportunity is lost entirely*
- Anticipate the need for 30 additional vehicles, but COVID recovery makes timing uncertain
- Have negotiated Option for 30 vehicles, with no-cost cancellation up to June 2025 to address uncertainty



Additional Vehicles address Service Plan Needs

The addition of 30 option vehicles is the best compromise

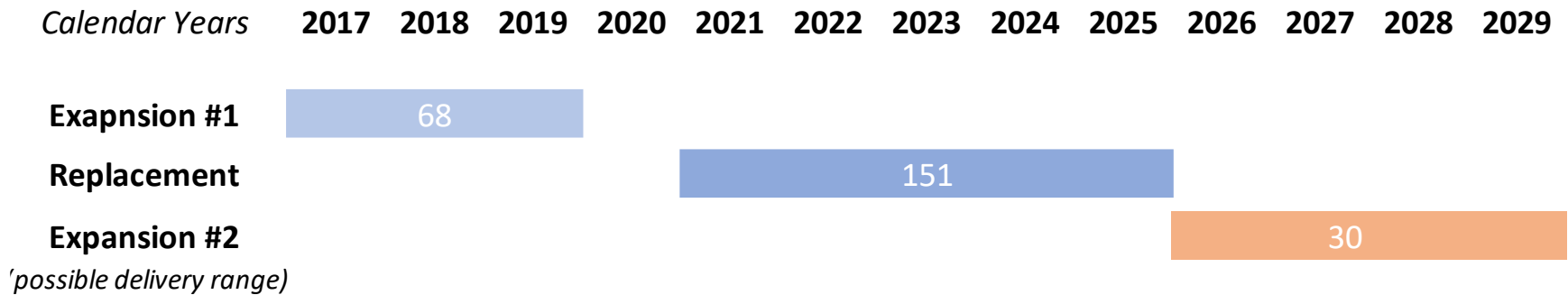
- Addresses anticipated increase in fleet demand
 - Three car N Judah vehicles
 - Longer subway trains
 - Increased frequency citywide
- Provides most cost-effective solution, making best use of limited funding
- Allows time to plan and better understand the post COVID recovery
 - Confirm fleet needs
 - Determine additional storage for larger fleet
 - Assure adequate power supply



LRV4 Option Benefits

- Provides 3-4 years of recovery data to re-baseline service planning projections
- Provides for a road-tested, fully-refined, proven LRV4 design
- Avoids time, expense, effort of a new procurement
- Avoids small separate expansion fleet for only 30 vehicles
- Preserves a uniform fleet with uniform maintenance and training practices
- Per vehicle cost dramatically lower than a new procurement (no new design, engineering, production set-up)

Light Rail Vehicle Fleet Deliveries



Exercising this option now maintains a uniform fleet and provides delivery ahead of the anticipated need in 2030

Contract Modification 10 Cost

- Contract Modification 10 cost of \$130,409,780 includes :
 - 30 option vehicles, the per vehicle cost has been re-baselined to include Phase 2 escalation and design enhancements to date (\$119,345,580)
 - an allowance for a production restart fee if Phase 2 production is complete (\$11,064,200)
- The final cost will be determined once the delivery dates have been determined and SFMTA issues the Release for Production Notice
- At that time additional escalation will be applied using the same escalation formula agreed to in modification 9

Action Required

Today we are asking you to approve two Contract Modifications

- Contract Modification No. 9 for design enhancements and escalation for Phase 2 vehicles for \$ 80,085,460
- Contract Modification No. 10 exercising Option 2 for additional 30 vehicles for \$130,409,780 plus additional escalation
- These Modifications do not increase the total Contract Price or the term of the Contract.