



EXECUTIVE DECISION DOCUMENT

GENERAL MANAGER APPROVAL:		DocuSigned by: <i>Michael Jones</i> 47000790F2D7463...	GENERAL MANAGER ACTION REQ'D: Approve and Forward to Board of Directors		
DATE: 2/27/2024		3/6/2024	BOARD INITIATED ITEM: No		
Originator/Prepared by: Ana Maria Maxey	General Counsel	Controller/Treasurer	District Secretary	BARC	
Dept: New Car Procurement					
DocuSigned by: <i>Ana Maria Maxey</i> 24DE449C8B16463...	DocuSigned by: <i>Amelia Sandoval</i> 2528C067C44147D...	DocuSigned by: <i>Shirley Gan</i> EE11C8CEEEA04FD...		DocuSigned by: <i>Shane Edwards</i> 8128A2EB2F014F3...	
Signature/Date: 3/6/2024	3/6/2024 []	3/6/2024 []	[]	3/6/2024 []	[]

Change Order No. 062 to Contract No. 40FA - Train to Wayside and WiFi System

PURPOSE: To obtain Board authorization for the execution of Change Order No. 062 (Train to Wayside and WiFi System), in the amount of \$3,543,716.70, to Contract No. 40FA-110, Procurement of Transit Vehicles ("the Contract").

DISCUSSION:

On May 10, 2012, the Board authorized the award of the Contract to then-Bombardier Transit Corporation (now Alstom) for the procurement of Fleet of the Future transit vehicles.

The San Francisco Bay Area Rapid Transit (BART) District (the District) intends to implement a Digital Railway Communications Subsystem for use with the BART Fleet of the Future (FOTF). Digital Railway equipment will connect to BART's wireless wayside infrastructure and offer in-car wireless services. Through extensive research, and discussions with other train operators two vendors were identified with proven track records of delivering Digital Railway solutions capable of the performance sought by BART. Those vendors are RADWIN and Fluidmesh.

The Digital Railway will provide wireless bi-directional IP connectivity between the Wayside subsystem and the on-board subsystem and passengers electronic devices. The WiFi network shall have a throughput rate of 250-300 Mbps for each train or isolated car when uncoupled. The network supports a standalone car to a maximum train length of ten (10) cars with any possible combination of "D" and "E" car. The WiFi network provides

WiFi access that spans all cars through the train. The Transportation Mobile Unit (TMU) radio installed in each end car in a coupled consist or in a single decoupled car is set in transmitting mode while the radios in non-end car are muted. In case of train length of two (2) cars or more, the two (2) TMU radios communicate to choose the best wayside access point where the TMU radio with the best connectivity is active at all times. When the vehicle is turned off, the vehicle battery is able to power up the Wi-Fi system for at least 30 minutes.

The Digital Railway is made up of two (2) main subsystems, the wayside subsystem and the on-board subsystem. The two (2) subsystems are integrated to perform the functions required by BART. The wayside subsystem is composed of Transportation Base Station (TBS). The TBS units are installed at fixed locations along the wayside. The on-board subsystem is composed of Transportation Mobile Unit (TMU), Passenger Internet Access Switch (PIAS), two (2) Passenger Internet Access Points (PIAP), two (2) AP Antennas and four Wireless Inter Car Links (WICL). Alstom will be providing the above equipment and all associated engineering work for this portion of the WiFi. Alstom experienced an 8-month project delay, which will not affect the current end of the project.

Pursuant to Board Rule 5-2.3, for construction and procurement contracts greater than \$200 million, any Change Order involving an expenditure greater than \$500,000 requires Board approval.

The Office of the General Counsel will approve this Change Order as to form prior to execution.

The Procurement Department will review this Change Order for conformance with its Procedures prior to execution.

FISCAL IMPACT:

Funding in the amount of \$3,543,716.70 for Change Order No. 62 is included in the total Project budget for FMS #40FA001 - Rail Car Procurement.

The table below lists funding assigned to the referenced project and is included to track funding history against spending authority. As of March 1, 2024, the following fund sources have been secured out of the total project budget of \$2.045B

BART	\$ 306,088,625
Federal	\$ 1,089,154,858
State	\$ 222,079,697
Regional	\$ 269,049,860
VTA	\$ 158,297,038
Total	\$ 2,044,670,078

The following is the project expenditures summary as of March 1, 2024, for the Rail Car Procurement project:

Total Project Estimate	\$ 2,044,670,078
Expense to Date	\$1,527,359,421
Encumbrances	\$448,898,863
Reserved	\$319,284
This Action	\$ 3,543,717
Remaining Balance	64,548,792

The Office of the Controller/Treasurer certifies that funds are currently available to meet this obligation.

This action is not anticipated to have any Fiscal Impact on unprogrammed District Reserves.

ALTERNATIVES:

Decline to approve this Change Order. No wireless services will be provided to patrons.

RECOMMENDATION:

It is recommended that the Board adopt the following motion.

MOTION:

The General Manager is authorized to execute Change Order No. 062 for changes to the Technical Specification 15.10- Train to Wayside and Wifi System under Contract No. 40FA-110 Procurement of Transit Vehicles.