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Jeffrey Tumlin, Director of Transportation

September 24, 2020

The Honorable Members of the Board of Supervisors
City and County of San Francisco
1 Dr. Carlton Goodlett Place, Room 244
San Francisco, CA 94102

Subject: Request for Approval – SFMTA 2020-20 Advanced Train Control System Equipment, Software and Professional Services Task Order Agreement

Honorable Members of the Board of Supervisors:

The San Francisco Municipal Transportation Agency (SFMTA) requests that the San Francisco Board of Supervisors approve SFMTA 2020-20 Advanced Train Control System Equipment, Software and Professional Services Task Order Agreement. The purpose of this Agreement is to obtain proprietary system engineering and design support equipment and professional services for the Advanced Train Control System from Thales Transport & Security, Inc. for an amount not to exceed \$30,000,000, and an initial seven-year term, with an option to extend for two years, to a maximum of nine years.

Background

In August 1992, the City, through its Public Utilities Commission, awarded Contract No. MR-1034R with Alcatel (now Thales Transport and Security), to provide a communications-based train control system (also known as "ATCS") to the Municipal Railway. The system has been in revenue service since 1998.

The train control system controls light rail vehicles operating within the Metro subway. It enhances light rail system performance and safety by controlling train speed, braking, routing and headways (the time between trains) more efficiently and accurately than can be accomplished by manual operator control.

The train control system transmits train status information to passengers through the SFMTA's subway station sign and public address systems. The train control also provides real-time train location data to the NextMuni arrival prediction system (supplied by NextBus) for those trains which are in the subway and outside the range of Global Positioning Satellite ("GPS") vehicle tracking devices.

The system has 30-year design life, and will be in service through at least 2028, and potentially longer. This lifecycle is consistent with other train-control systems worldwide. If the SFMTA appropriately maintains and upgrades the system, it should meet the SFMTA's operational requirements for the next 8 years.



The ATCS software and equipment are proprietary to Thales, so any required system updates and development of additional ATCS features and functions, and integration with new planned systems to meet SFMTA evolving business needs can only be obtained from Thales. It is necessary periodically to upgrade system hardware and software from Thales to maintain the Muni Metro subway train control system functional, to keep it out of obsolescence and in a configuration supported by the supplier, and to adapt to changes in the SFMTA's rail operating environment.

The SFMTA is planning additional upgrades to the Muni Metro subway train control system. Therefore, the SFMTA seeks to execute a new task order agreement, Contract No. SFMTA-2020-20, to procure necessary equipment, services, and system upgrades from Thales, for an amount not to exceed \$30,000,000, and an initial seven-year term, with an option to extend for two years, to a maximum of nine years.

Staff have identified over \$29,000,000 in subway train control infrastructure investment which could be undertaken as funding and agency resources allow. Staff anticipates that the following equipment and software and associated services would be procured:

- a. Software functionality upgrades
- b. Integration of subway train control with surface interlocks
- c. Upgrade trains and main computers to allow tracking and management of surface operations
- d. Equipment and software to maintain a state-of-good repair
- e. Analysis of system operations and recommendations for improvement
- f. Hardware/software design, implementation, and test resources to support this scope

This Contract was procured in accordance with federal requirements for sole source contracts. There is no Small Business Entity (SBE) subcontracting participation requirement for this Contract.

Charter Section 9.118 and Approval of SFMTA 2020-2020

Board of Supervisors' approval is required for SFMTA 2020-20 under Charter section 9.118(b), because the value of the Contract exceeds \$10,000,000.

Alternatives Considered

The Muni Metro subway train control and its components, including software, are a proprietary technology of Thales Transport & Security, Inc. Compatible equipment, software, and specialized technical service can be procured only from Thales; there is no other supplier.

The alternative to issuing is to not implement any enhancements or continue with state of good repair projects for the subway train control system. The impact is increased disruption to



passenger service due to failures of equipment approaching obsolescence and the inability to address changes to transit service that impact subway operations.

Funding Sources

This task order agreement does not authorize the expenditure of any funds. A funding plan will be developed specific to each task order. It is anticipated these task orders will be funded through the Fixed Guideway Capital Program. The FY21-FY25 CIP was approved with over \$50M of funding dedicated to programmatic categories eligible for this type of work.

Funding Impact/Budget

A funding plan will be developed specific to each purchase order.

SFMTA Board Action

On September 15, 2020, the SFMTA Board of Directors approved Resolution No. 200915-080 approving and authorizing the Director of Transportation to execute Contract SFMTA-2020-20, subject to approval by the Board of Supervisors (see attached).

Recommendation

The SFMTA recommends that the San Francisco Board of Supervisors adopt the Resolution executing Contract SFMTA-2020-20 with Thales Transport & Security, Inc.

Thank you for your consideration of this proposal. Should you have any questions or require more information, please do not hesitate to contact me at any time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jeff Tumlin', with a long horizontal flourish extending to the right.

Jeff Tumlin for
Director of Transportation