San Francisco County Transportation Authority

1455 Market Street, 22nd Floor
San Francisco, California 94103
415.522.4800 FAX 415.522.4829
info@sfcta.org www.sfcta.org

Memorandum

Date: 04.04.14

RE: Plans And Programs Committee
April 15, 2014

To: Plans and Programs Committee: Commissioners Mar (Chair), Kim (Vice Chair), Breed, Campos, Yee and Avalos (Ex Officio)

From: Lee Saage – Deputy Director for Capital Projects

Through: Tilly Chang – Executive Director

Subject: **INFORMATION** – Major Capital Projects Update – Muni Radio Replacement Project

Summary

The San Francisco Municipal Transportation Agency (SFMTA) has embarked on a project to replace and modernize its radio communications system, some elements of which date back to the 1970s. In addition to providing voice communication, the Muni Radio Replacement Project will integrate Muni's communications with Intelligent Transportation Systems components. The project will incorporate up-to-date technological features such as expanded data transmission and simulcasting and will also integrate multiple vehicle information systems. With a contribution of $61,757,410, Prop K is the largest funding source for the project. The original schedule called for construction to be completed in June 2012 and had a budget of $73,040,980. SFMTA received only one bid for the design-build contract at a price some 40% over budget. Ensuing protracted contract negotiations contributed to project delay and a budget increase that has now reached $116,425,667. Final switchover to the new system is now scheduled for October 2015. Both SFMTA and Harris Corporation, the design-build contractor, have recently assigned more senior project managers who have been tasked with resolving issues and improving project delivery. Harris has also increased the number of its staff assigned to the project. The Final Design package has been completed and is currently under review by SFMTA. In December 2013, SFMTA completed the factory acceptance testing for the Land Radio Mobile Equipment and in January, SFMTA issued a limited Notice to Proceed to the contractor for construction of the tunnel radio infrastructure. **This is an information item.**

BACKGROUND

The San Francisco Municipal Transportation Agency (SFMTA) has embarked on a project to replace and modernize its radio communications system, some elements of which date back to the 1970s. The new communications system will be an Intelligent Transportation System and will incorporate up-to-date technological features such as expanded data transmission and simulcasting in addition to providing voice communication. It will integrate multiple vehicle information systems, including: the Vehicle Logic Unit, Automated Vehicle Location, Wireless Local Network, Digital Vehicle Announcement System, Automated Passenger Counting, Transit Signal Priority, Fare Collection, Vehicle Health Monitoring, Computer-Aided Dispatch, Mobile Dispatch, Reporting System, and Traveler Information. By replacing antiquated systems, some of which are forty years old, SFMTA will be able to improve transit operations across all modes of service.

The purpose of this memorandum is to update the Plans and Programs Committee on the status of the project.

DISCUSSION

Budget and Cost: The current project budget is $116.5 million in year-of-expenditure dollars. On April 17, 2012, the SFMTA board authorized the award of a Design-Build contract to Harris Corporation (Harris) in the amount of $109,220,519, which included $86,648,058 for base bid services and $22,572,461 for option services. Subsequently, SFMTA executed the options. As of January 31, 2014, the project has incurred $18,412,623 in costs. The Budget by Phase is shown in the adjacent Table 1.

Table 1 – Muni Radio Replacement Project Budget By Phase	
Conceptual Engineering	$4,380,347
Final Design	$6,892,977
Construction	$105,152,343
TOTAL	**$116,425,667**

Funding: With a contribution of $61,757,410, Prop K is the largest funding source of the project. Prop K allocations include $2,692,559 in November 2007 and $69,174,932 in September 2009 with the second allocation subsequently reduced by $10,000,000 as part of a revenue neutral funding swap with the Central Subway. To date, only $2,582,477 has been invoiced to the Transportation Authority. Delays in delivering the project have caused slow billing. SFMTA received only one bid for the design-build contract at a price some 40% over the budget. This was due to the limited number of vendors capable of performing the work, a condition that was exacerbated by the fact that there may properties across the country undertaking similar projects in order to meet a deadline imposed by the Federal Communications Commission (FCC). Ensuing protracted contract negotiations contributed to project delay. Prop K reimbursements are also slower than originally anticipated because the contract links payments to meeting certain project milestones so that payments to the contractor occur later than would be the case with the more typical monthly progress payments. For example, if a milestone is "complete 60% design", only when the work reaches 60% can the contractor bill for all the design to date. SFMTA has also been billing grants with the earliest expiration dates first, which has further delayed Prop K billing. The current funding plan is shown in the adjacent Table 2.

Table 2 – Muni Radio Replacement Project Funding By Source	
Federal	
FTA and FHWA	$19,593,854
State	
Prop 1B I-Bond	$26,000,268
Local	
Prop K	$61,757,410
AB664 Bridge Tolls	$554,878
SFMTA Revenue Bond FY13	$4,710,000
SFMTA Operating Fund	$3,809,257
TOTAL	**$116,425,667**

Schedule: Final switchover to the new system is now scheduled to conclude in October 2015. A revised list of major milestones for the project is shown below.

Table 3 – Muni Radio Replacement Project Major Milestones (Revised)	
Notice -to- Proceed to Design-Build Contractor	Jun 2012
Complete Design	Jun 2014
Complete Pilot Testing	Dec 2014
Construction/Installation Complete	Aug 2015
Final Switchover	Oct 2015

Design-Build Contract: Following extended negotiations, on June 20, 2012 the SFMTA issued notice-to-proceed to Harris, the design-build contractor for the project. Since then, the contractor has completed stakeholder and field surveys, as well as surveys at key fixed end infrastructure locations, such as Metro subway, radio sites, and maintenance facilities. The project team also executed contract line-item options for SFMTA radio system interface to the Traffic Signal Priority and Automatic Passenger Counting systems. The contractor has submitted the final design package, which is going through the review cycle. In parallel, the contractor started fabrication of approved equipment. In December 2013, SFMTA completed the factory acceptance testing for the Land Radio Mobile Equipment and in January, SFMTA issued a limited Notice to Proceed to the contractor for construction of the tunnel radio infrastructure. Construction/Installation is slated for completion in August 2015. After testing and commissioning, the final switchover to the new system is expected in October 2015.

DBE/SBE Program: The Radio Replacement project has a small business enterprise (SBE) goal of 15% of construction work. To date, there have been no payments to SBE contractors because their scope of work is slated for later in the project.

Challenges: The current in-service date of the project is October 2015, three years later than originally anticipated. As mentioned above, a major source of delay was the protracted negotiations with the single bidder. They were very difficult negotiations. It took over a year for SFMTA and the contractor to reach an agreement. Progress has also been delayed by Muni's mixed modes of operation and a unique fleet of revenue vehicles that include historic rail cars, cable cars, light rail, trolley buses, and diesel buses. The radio vendor has had to develop customized solutions for each, which has proven to be very challenging. Both SFMTA and Harris have recently assigned more senior project managers who have been tasked with resolving issues and improving project delivery. Harris has also increased the number of its staff assigned to the project.

It should be noted that the 2012 completion date anticipated in 2009, was arbitrarily mandated by the FCC, which wanted to vacate the frequency by the end of 2012. This deadline was later lifted when the FCC realized that most properties across the country were not going to be able to meet it.

This is an information item.

ALTERNATIVES

None. This is an information item.

CAC POSITION

None. This is an information item.

FINANCIAL IMPACTS

None. This is an information item.

RECOMMENDATION

None. This is an information item.