



**May 5, 2014**

**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: Agreement for Advanced Train Control System for SFMTA Central Subway  
Project between the City and County of San Francisco and Thales Transport &  
Security, Inc.***

**Honorable Members of the Board of Supervisors:**

The San Francisco Municipal Transportation Agency (SFMTA or “Agency”) requests that the San Francisco Board of Supervisors authorize the SFMTA to enter into an agreement with Thales Transport & Security, Inc. for design and implementation of the Advanced Train Control System (ATCS).

The proposed Agreement for ATCS on the SFMTA Central Subway Project (the “Agreement”) is to design and implement an ATCS that will be interoperable with the existing ATCS that controls trains in the Muni Metro Subway. The SFMTA Board of Directors and Parking Authority Commission approved Resolution 13-260 on December 3, 2013 recommending this matter to the Board of Supervisors for approval.

**Background**

The SFMTA’s Third Street Light Rail Transit Project is the most significant capital investment in generations for the seventh largest transit system in the nation. Phase 1 of the 6.9-mile, two-phase project began revenue service in April 2007, restoring light rail service to the heavily transit-dependent Third Street corridor in eastern San Francisco for the first time in 50 years.

The Central Subway Project, Phase 2 of the Third Street Light Rail Transit Project, will provide rail service to the Financial District and Chinatown, the most densely developed area of San Francisco. The new light rail line will serve regional destinations, such as Union Square, Moscone Convention Center, Yerba Buena and AT&T Park, as well as connecting directly to BART and Caltrain, the Bay Area’s two largest regional commuter rail services.

The twin bore tunnels for the Central Subway are being constructed by Barnard Impregilo Healey, a joint venture, under Contract 1252, which was awarded by the SFMTA Board of Directors on June 28, 2011. The stations, trackway and control systems to be constructed by Tutor Perini under Contract 1300, was awarded by the SFMTA Board of Directors on May 21, 2013.

Thales will provide ATCS design and design review, software configuration, installation inspection, safety certification and system testing services, as well as ATCS on-board and wayside equipment and software. Both contracts will be assigned to Tutor Perini Corp. (Tutor), the contractor for construction of the Central Subway stations, trackway and control systems (under SFMTA Contract 1300). Tutor will construct the ATCS infrastructure and install the ATCS equipment. Thales will inspect that work, configure and test the ATCS, and assist the SFMTA in obtaining ATCS safety certification from the California Public Utilities Commission. Contract Nos. 1266-1 and 1266-2 will be assigned to Tutor through a modification to Contract 1300, so that Tutor will be responsible for the final operation of installed equipment and software, and for the integration of the new ATCS with other control and switching systems. The budget for Contract 1300 includes an allowance in the amount of \$25 million to procure, install, test and implement the ATCS. The funds for that allowance will pay for the equipment and services to be obtained under Contract Nos. 1266-1 and 1266-2.

### **Agreement**

Negotiations with Thales have been completed and the SFMTA Board of Directors and Parking Authority Commission approved a resolution on December 3, 2013 recommending this matter to the Board of Supervisors for approval. The major provisions and scope of services of the proposed Agreement, which is attached, follow.

### **Purpose and Scope of Contract**

The scope of work of SFMTA Contract Nos. 1266-1 and 1266-2, Third Street Light Rail Program, Phase 2 Central Subway – Advanced Train Control System includes:

#### **Contract 1266-1**

1. Review of Existing ATCS designs and specifications; confer with Project design and engineering consultants and recommend any necessary changes to the existing ATCS designs; review and approve final ATCS designs;
2. Supply of Proprietary Equipment.;
3. Equipment and system warranty and related services for three years following Substantial Completion

#### **Contract 1266-2**

1. Review ATCS design, incorporate and verify of all CSP provided design input data;
2. Prepare ATCS infrastructure build specifications, and ATCS functional and performance requirements;
3. Prepare all Interface Requirements Specifications involving the ATCS;
4. Prepare the ATCS build designs;
5. Prepare all documentation needed to support the continuing operation and maintenance of the ATCS, including training SFMTA operators in its use;

6. Perform hazard analyses and provide mitigation measures and corrective actions;
7. Perform all necessary Reliability, Availability, Maintainability and Safety (RAMS) analyses and provide compliance reports with supporting data;
8. Identify spare and replacement parts and develop maintenance schedules;
9. Prepare the Systems Integration and ATCS Test Plans and all verification and validation procedures;
10. Submit Pre-Revenue Testing and Turn Over Plan to SFMTA;
11. Coordinate with SFMTA, City and Oversight groups (including the California PUC) for system implementation, roll-out, testing, training and safety certification;
12. Provide management, design review, and construction testing and oversight of:
  - a. ATCS Design;
  - b. Subcontractors, suppliers, vendors, installers;
  - c. ATCS physical and operational interfaces;
  - d. Procurement, transport and storage of Proprietary Equipment;
  - e. Installation, configuration, integration, testing, commissioning, and user training of the ATCS and its Proprietary Equipment and Software;
  - f. Documentation (i.e., as-built engineering documents, configuration and testing records) of the ATCS as finally tested and approved;
  - g. Training and maintainer qualification evaluation (new design plus any changes);
  - h. Provide necessary oversight, inspection and assistance to Construction Contractor to confirm that the installation of the ATCS meets system specifications and requirements, including continuing warranty and other support as required during revenue operations.

The total price of \$24,788,716 was negotiated based on adjustment of the scope of services.

### **Term**

The Agreement duration is not to exceed 1700 days which is the same as the duration for Contract 1300.

### **Small Business Enterprise and Workforce Development Opportunities**

The Contract Compliance Office did not establish a small business enterprise (SBE) participation goal for this work. There are no subcontracting opportunities in Thales' work, as that work is proprietary and can only be performed by Thales. Tutor Perini is subject to a 20 percent SBE goal under Contract 1300.

### **Alternatives Considered**

The only alternative to this sole source contract would be to install a different ATCS in the Central Subway, which would not be interoperable with the existing ATCS in the Muni Metro System. That would require either segregation of the light rail vehicles (LRVs) used on the Central Subway or installation of two different ATCS systems on the entire fleet of LRVs. Installation of dual systems on all LRVs would be extremely costly, require cross training operators and maintenance staff, and complicate operations (with potential service reductions) significantly increasing maintenance and operating costs.

### **Funding Impact**

The \$1.58 billion Federal Transportation Agency New Starts Project funding for the Central Subway Project includes this contract amount, and is funded by a combination of federal, state and local monies. The cost of this contract award is within the Central Subway Program budget and available funding.

### **Other Approvals**

Civil Service Commission approved both contracts on December 2, 2013 under Civil Service Approval No. 4053-13/14.

SFMTA Board of Directors and Parking Authority Commission approved Resolution No. 13-260 on December 3, 2013 and recommended this matter to the Board of Supervisors for approval.

The Director of Transportation will be authorized to make any necessary modifications, changes or additions to these documents as long as they are within the parameters of the attached resolution.

### **Recommendation**

The SFMTA requests that the San Francisco Board of Supervisors authorize SFMTA to enter into an agreement with Thales Transport & Security, Inc. for design and implementation of the ATCS for the SFMTA Central Subway Project.

Thank you for your consideration of this proposed agreement and for your continued support of the SFMTA. Should you have any questions or require more information, please do not hesitate to contact me.

Sincerely,



**Edward D. Reiskin**  
**Director of Transportation**