

**SFMTA**

Transit & Intercity Rail Capital Program (TIRCP)

Train Control Upgrade Program

Why is it important?

The SFMTA is working to grow light rail ridership and expand service frequency. Our outdated centralized train control system is under constant pressure and is increasingly operating beyond the capacity for which it was designed nearly three decades ago.

To increase rail network capacity, the SFMTA proposes implementing a new Communications-Based Train Control (CBTC) system. A CBTC system possesses the greatest potential of any single investment to effectively and significantly bolster system sufficiency. The SFMTA must grow rail network capacity to retain current ridership as well as serve and attract future ridership.

What are the environmental benefits?

The CBTC will expand system capacity and improve the ridership experience. The SFMTA believes that

great service is what gets people out of their cars and onto environmentally sustainable public transit. These new riders will be served by our light rail vehicle fleet that runs on 100% greenhouse gas-free Hetch Hetchy hydroelectric power. By providing safe, reliable, rapid, and environmentally sustainable transit service, this project will support our city's economic and population growth while reducing greenhouse gas emissions and resource consumption.

Project Schedule

- Initial Capability (Phase 1) 24 months after NTP
- Replacement of existing ATCS (Phase 2) within 5 years of NTP
- Full buildout 2027

Project Cost

\$200M over 8 years



What are the benefits?

The train control upgrade system would greatly reduce or eliminate several sources of LRV delays which affect on-time performance. These include:

NETWORK-WIDE COVERAGE

Today, only the Market Street Subway has centralized train control which was installed 30 years ago. Most of the 74-mile LRV network is governed by line-of-sight rules and signals working in isolation. The proposed program will not only install CBTC in the subway, but also on the surface, covering the entire LRV network. In the subway, the train control system will use automatic headway management to adjust the speed and dwell time of the trains. On the surface, CBTC will communicate adjustments to operators and interface with traffic signals.

INCREASED NETWORK CAPACITY

On the surface, CBTC ensures trains receive priority over other traffic, reducing the amount of time riders spend stuck in traffic. In the subway, CBTC permits tighter vehicle spacing which reduces headways and increases service frequency. Additionally, CBTC enables the operation of three-car trains in the subway which is necessary to meeting peak demand and alleviating on-board crowding. Throughout the entire LRV network, CBTC will efficiently coordinate vehicles and prevent bunching and gaps. The greater LRV network capacity the train control upgrade program affords means faster, dependable, and comfortable transit service for current and future riders.