

Caltrain: Working Toward Safer Travel with Positive Train Control



Caltrain, the commuter-rail system that operates along the San Francisco Peninsula into the Silicon Valley, is constantly working to improve the efficiency and the safety of its system.

Caltrain is currently working on developing specifications for a new signaling system overlay that will:

- Increase the safety and operating performance of the current signal system, enabling more frequent and dependable passenger service
- Improve grade crossing warning functions (Caltrain currently crosses dozens of at-grade streets along its 77-mile route) Improve overall fuel efficiency of the system.
- Improves overall fuel efficiency.

Before the Railroad Safety Enhancement Act of 2008 was adopted to mandate the installation of Positive Train Control on all commuter railroads and some freight railroads by 2015, Caltrain was in the planning process for PTC as a component of its Communications Based Overlay Signal System, commonly referred to as CBOSS.

PTC systems help to eliminate train-to-train collisions and over-speed mishaps (trains exceeding their authorized speed limit) by automatically stopping the train when there is a violation of speed or route.

Electrification & High Speed Rail Benefits

PTC is an essential component of future plans to electrify the Caltrain system and bring statewide high-speed rail service to the Bay Area incorporating Positive Train Control and will allow Caltrain to fully utilize the high-performance capabilities of its future electric-powered fleet and provide enhancements that improve the performance and safety of commuter rail operations. PTC is also specified to be compatible with high-speed rail, which will operate in the Caltrain corridor in the future. California voters approved the high-speed rail bond proposition on Nov. 4, 2008.

Side Benefit: Fuel Savings and Security

Increased safety is a compelling reason to implement a PTC system. However, a side benefit to this safety enhancement is that it also will improve operational efficiency, thus reducing the amount of fuel the rail system uses. Also, integrating the CBOSS and highway crossing warning system will eliminate extended warning system actuation, reducing automobile idling at the crossing, conserving even more fuel. According to the Federal Railroad Administration, PTC technology also has the potential to limit adverse consequences of events such as hijackings and runaways that are of concern in an era of heightened security, especially in metropolitan areas such as San Francisco and San Jose.

Next Steps

Caltrain has made great progress in working on the design for this safer signal system. However, to keep this vital project moving forward, funding is needed.

- Preliminary design: 12/09
- Final design/construction: 2010 - 2011
- Installation/testing/system integration: 2011 - 2013

Estimated cost: \$231 million



Caltrain by the Numbers

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| Passengers: | 11.9 million annually |
| Trains: | 98 weekday, 32 Saturday, 28 Sunday |
| Stations: | 32 |
| Track miles: | 50 mainline and an additional 27 commute-hour only |
| Terminals: | San Francisco, San Jose, Gilroy |