

Highlights of [GAO-13-163T](#), a testimony before the Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

The California high-speed rail project is the single largest recipient of federal funding from the Federal Railroad Administration's (FRA) High Speed Intercity Passenger Rail (HSIPR) grant program. The 520-mile project (see map) would link San Francisco to Los Angeles at an estimated cost of \$68.4 billion. Thus far, FRA has awarded \$3.5 billion to the California project. The Authority has to continue to rely on significant public-sector funding, in addition to private funding, through the project's anticipated completion date in 2028. This testimony is based primarily on GAO's ongoing review of the California high-speed rail project and discusses GAO's preliminary assessment of (1) the reliability of the project's cost estimates developed by the Authority and (2) key challenges facing the project.

As part of this review, we obtained documents from and conducted interviews with Authority officials, its contractors, and other state officials. GAO analyzed the extent to which project cost estimates adhered to best practices contained in GAO's *Cost Estimating and Assessment Guide (Cost Guide)*, which identifies industry best practices to ensure cost estimates are comprehensive, accurate, well documented, and credible—the four principal characteristics of a reliable cost estimate. GAO also reviewed project finance plans as outlined in the Authority's April 2012 revised business plan. To identify key challenges, GAO reviewed pertinent legislation, federal guidelines and best practices related to ridership and revenue forecasting, and interviewed, among others, federal, state, and local officials associated with the project.

View [GAO-13-163T](#). For more information, contact Susan A. Fleming at (202) 512-2834 or flemings@gao.gov.

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HIGH-SPEED PASSENGER RAIL

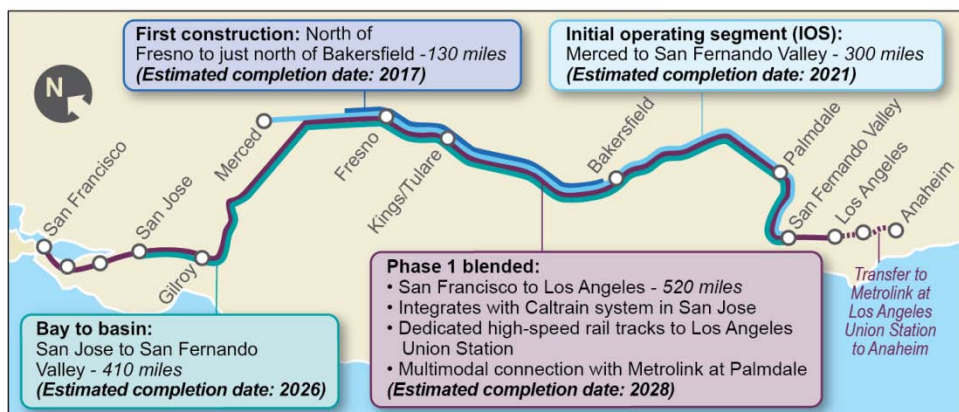
Preliminary Assessment of California's Cost Estimates and Other Challenges

What GAO Found

Based on an initial evaluation of the California High Speed Rail Authority's (Authority) cost estimates, GAO found that they exhibit certain strengths and weaknesses when compared to best practices in GAO's *Cost Guide*. Adherence with the *Cost Guide* reduces the risk of cost overruns and missed deadlines. GAO's preliminary evaluation indicates that the cost estimates are comprehensive in that they include major components of construction and operating costs. However, they are not based on a complete set of assumptions, such as how the Authority expects to adapt existing high-speed rail technology to the project in California. The cost estimates are accurate in that they are based on the most recent project scope, include an inflation adjustment, and contain few mathematical errors. And while the cost estimates' methodologies are generally documented, in some cases GAO was unable to trace the final cost estimate back to its source documentation and could not verify how certain cost components, such as stations and trains, were calculated. Finally, the Authority evaluated the credibility of its estimates by performing both a sensitivity analysis (assessing changes in key cost inputs) and an independent cost estimate, but these tests did not encompass the entire cost estimate for the project. For example, the sensitivity analysis of the construction cost estimate was limited to 30 miles of the first construction segment. The Authority also did not conduct a risk and uncertainty analysis to determine the likelihood that the estimates would be met. The Authority is currently taking some steps to improve its cost estimates.

The California high-speed rail project faces many challenges. Chief among these is obtaining project funding beyond the first 130-mile construction segment. While the Authority has secured \$11.5 billion from federal and state sources, it needs almost \$57 billion more. Moreover, the HSIPR grant program has not received federal funding for the last 2 fiscal years, and future federal funding is uncertain. The Authority is also challenged to improve its ridership and revenue forecasts. Factors, such as limited data and information, make developing such forecasts difficult. Finally, the environmental review process and acquisition of necessary rights-of-way for construction could increase the risk of the project's falling behind schedule and increasing costs.

Map of Planned California High-Speed Rail System and Construction Timeline



Sources: California High Speed Rail Authority and GAO.