

# California State Rail Plan 2013



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# CALIFORNIA STATE RAIL PLAN

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Prepared for

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## Executive Summary

In 2008, the United States Congress enacted the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), which aimed to strengthen the national rail network by developing a long-term vision of the rail system. PRIIA underscored the benefits of integrating rail into the statewide transportation planning process. The federal law required states to develop state rail plans, no less frequently than every five years, that meet federal requirements, in order to be eligible for federal funding for high-speed rail (HSR) and intercity passenger rail programs. The law also encourages states to develop strategies and policies for enhanced passenger and freight rail services that benefit the public. State Government Code 14036 requires the California Department of Transportation (Caltrans) to produce a State Rail Plan every two years that includes a passenger and freight rail component.

The 2013 *California State Rail Plan* (CSRP) meets both federal and state requirements. CSRP completion will make the State compliant with 49 United States Code Section 22102 concerning state rail plans and state rail administration. The CSRP establishes a statewide vision and objectives, sets priorities, and develops policies and implementation strategies to enhance passenger and freight rail service in the public interest. The CSRP details a long-range investment program for California's passenger and freight infrastructure. It supports the State's goal to develop an integrated, multimodal transportation network. Finally, the CSRP will guide federal and state rail investments that will improve the movement of people and goods while enhancing economic growth and quality of life.

The CSRP has 10 chapters, as follows:

1. Introduction.
2. California Rail Transportation Context and Challenges.
3. Rail Vision Statement.
4. Public Outreach and Approval Process.
5. Existing Passenger Rail System.
6. Existing Freight Rail System.
7. Passenger and Freight Rail Integration.
8. Passenger Rail Improvements.
9. Freight Rail Improvements.
10. Rail Benefits and Next Steps.

## Introduction

California's rail system performance over the past decade underscores the system's importance to the State. Intercity and commuter passenger rail ridership has been robust and increased during that period. At the same time, the freight rail network has become increasingly important for international, domestic, and intrastate trade.

Passenger and freight rail are positioned to help address environmental, economic development, and population growth challenges such as increased travel demand, traffic congestion, and greenhouse gas (GHG) emissions. The advent of a statewide HSR system that will be integrated into the existing passenger rail network provides opportunities to address these challenges.

Meeting these challenges will be complex. Additional funding for capital investments, ongoing operations, and maintenance is needed. Plans for HSR development and integration with intercity and commuter rail

systems—which leverage state and federal HSR investments—will require well-coordinated and integrated planning, programming, and execution by multiple agencies. Rail networks face increasing freight and passenger demand, often on freight-owned rail infrastructure. Additionally, multiple passenger rail operators (HSR, intercity, and commuter) must respond to traveler expectations of coordinated rail service operations, safety, ticketing, and traveler information.

The 2013 CSRP provides a planning framework for improving California’s rail system. It notes improvements made over the past decade, addresses future needs, and details plans for expansion and integration of rail services.

## CSRP Highlights

The major findings and results of the CSRP are as follows:

- The 2013 CSRP is more comprehensive and wide-reaching than previous state rail plans because of new federal rail law, and includes changes to rail policy and funding programs.
- The CSRP establishes the following rail vision statement for the future:  
*California has a premier, customer-focused rail system that successfully moves people and products while enhancing economic growth and quality of life.*
- The CSRP plans for an integrated HSR, intercity and commuter rail network that is consistent with the California High-Speed Rail Authority’s (Authority) California High-Speed Rail Program Revised 2012 Business Plan (2012 Business Plan). The plans for this network anticipate the travel needs of future population and employment growth.
- For years, California has invested in expanding high-capacity and high-performance intercity and commuter passenger rail services. These services attract high passenger volumes; the three state-supported services are the second, third, and fifth busiest routes in the country.
- Intercity passenger rail institutional roles may change in the future as the result of 2012 legislation that authorized the creation of two new joint powers authorities (JPA) to administer the Pacific Surfliner and San Joaquin routes.
- In 2013, Caltrans and the Authority will become part of a new State Transportation Agency. This agency’s actions may have a major impact on rail planning and service delivery.
- The CSRP summarizes plans for expanding state-supported intercity passenger rail routes by 2020 to support blended service on the first construction section of the Initial Operating Section (IOS) planned for 2018. The proposed expansion of services listed below and the anticipated associated passenger rail improvements described in the CSRP are the subject of on-going Class I railroad operations analysis and related studies. Project scope and costs will be refined as the result of this analysis.
  - *Pacific Surfliner:* One more daily roundtrip from San Diego to Los Angeles for a total of twelve; one more daily roundtrip from Los Angeles to Goleta for a total of six, with two of those trips continuing from Goleta to San Luis Obispo.
  - *San Joaquin:* As many as seven to eleven daily roundtrips on the first construction section of the IOS and as many as three to six daily roundtrips on the BNSF Railway line.
  - *Capitol Corridor:* One additional weekday roundtrip from Sacramento to Oakland for a total of sixteen, and four additional weekday roundtrips from San Jose to Oakland for a total of eleven.

- The CSRP describes the planned passenger rail system in 2025 when initial HSR operations are anticipated to be in effect. At that time, 34 round trips on the initial HSR segment from Merced to the San Fernando Valley are planned. Additional expansions to intercity and commuter routes are planned to integrate with the HSR operations and meet demand from population growth; they are subject to additional service planning and operations modeling.
- The CSRP describes plans for expansion of existing commuter rail services and new commuter and intercity rail services. Execution of these plans is contingent upon funding and agreement of the railroad that owns the right-of way.
- California is a major origin and destination for freight rail traffic, given its market size and position in international trade flows. The expansion of the Panama Canal and other Pacific Coast port expansions are unlikely to change Pacific Rim trade that moves on California freight railroads. Regional planning studies have identified a series of projects that can resolve freight chokepoints and bottlenecks.
- The CSRP emphasizes the critical role Class I freight railroads play in international trade to California shippers and to the national rail network.
- The CSRP stresses the importance of large annual expenditures by Class I freight railroads in maintenance, capacity expansion, locomotives, and rolling stock. The plan identifies currently planned projects among 4 types of freight improvements totaling \$15 billion.
- Many of the intercity and commuter rail services run on private Class I freight railroad right-of-way, which provides challenges and opportunities for both systems.
- Major conflicts in rail corridors will require careful coordination between multiple passenger and freight users. Some of these corridors include Oakland to Sacramento, Los Angeles to Colton, Los Angeles to Riverside, and Los Angeles to Burbank.
- The CSRP describes the following public benefits of the HSR and intercity passenger rail improvements:
  - Statewide carbon dioxide emission reduction of 37,000 tons per year in 2020, 573,000 tons per year in 2025, and almost 1.9 million tons per year by 2040 from the expanded HSR and intercity passenger rail system.
  - Annual user and non-user economic benefits increasing from \$164 million in 2020 to \$2.5 billion in 2025 to nearly \$7.4 billion in 2040. .
- Outreach was conducted to state, regional and local agencies to receive their input and feedback. A variety of methods and channels will be employed to receive public input. The California Transportation Commission (CTC) and the Federal Railroad Administration (FRA) are offering comments and suggestions in an ongoing process aimed to lead to approval of the CSRP by both entities.
- Dynamic changes have caused funding and planning for California’s passenger and freight rail system to evolve quickly. Class I Railroads are conducting operations analysis; Caltrans and the Authority will be updating planning documents; and environmental work at the program and project level is proceeding. This work will be reflected in future documents, including the 2014 CSRP and the 2014 High-Speed Rail Program Business Plan.

## CSRP Chapter Summaries

**Chapter 1: Introduction.** Chapter 1 explains what the 2013 CSRP will accomplish and why the plan is more comprehensive and wide reaching than previous state rail plans. It details how the CSRP meets federal and state legal requirements for state rail plans, and describes the contents of each chapter in the CSRP. The chapter also explains how the 2013 CSRP responds to changes in federal rail policy, funding, and requirements, new California climate change legislation that ties transportation to emission reduction goals, and integration with the Authority’s 2012 Business Plan.

**Chapter 2: California Rail Transportation Context and Challenges.** Chapter 2 describes the policy, planning and legislative context for the CSRP as well as the socioeconomic and environmental background and rail transportation system challenges. The CSRP supports and is an element of the multimodal California Interregional Blueprint (CIB) and California Transportation Plan (CTP). Additionally, it supports and is consistent with the Authority’s 2012 Business Plan. This chapter describes rail transportation’s environmental benefits and notes environmental review processes for rail projects. The chapter also details the following rail system issues: demand factors for growth in passenger and freight traffic, needs for seamless passenger transportation connections, necessity of integrated planning for HSR, and intercity and commuter rail operations. Chapter 2 also reiterates the importance of integrated planning between HSR, intercity and commuter rail operations, both from a legal standpoint and out of necessity for operations and customer satisfaction.

**Chapter 3: State Rail Plan Vision Statement.** Chapter 3 presents California’s unified rail vision: *California has a premier, customer-focused rail system that successfully moves people and products while enhancing economic growth and quality of life.* The passenger rail system creates an integrated network with state-of-the-art, customer-focused services that enhance quality of life. The freight rail system connects industries and shippers to national and international markets, co-exists with growing passenger rail services, and also improves quality of life. Chapter 3 also describes how the CSRP vision fits into the CTP vision, goals and objectives, the CIB, and other modal plans.

**Chapter 4: Public Outreach and Approval Process.** This chapter details the public outreach goals and objectives, and support tasks such as stakeholder databases, website development, branding, and creation of collateral materials. The public outreach plan establishes a series of meetings and coordination with the CSRP Advisory Committee, other state agencies, and public meetings associated with the February 2013 Draft CSRP release. The chapter outlines this activity, summarizes comments received and their incorporation into the CSRP, and explains the approval process by the CTC and FRA. It details how state, regional, and local agencies are providing their input and feedback on the CSRP. Finally, it explains the review and approval process for the CSRP by the CTC and FRA.

**Chapter 5: Existing Passenger Rail System.** Chapter 5 includes a detailed description of California’s state-supported intercity routes: *Pacific Surfliner*, *San Joaquin* and *Capitol Corridor*, including the connecting Amtrak Thruway bus service. It also describes the Amtrak long-distance trains that operate in California. The chapter discusses commuter rail services in the State, and explains the State’s urban rail systems and their connectivity to intercity and commuter rail. Exhibit ES.1 shows the state-supported and Amtrak long distance intercity passenger rail routes in California. The chapter discusses passenger rail connectivity, rail station configurations, and operational aspects, and includes performance data for the state-supported and long-distance routes. Additionally, Chapter 5 explains current and emerging institutional roles and relationships among owners/operators of passenger rail and other regulatory agencies, and details safety and security agencies, programs and issues.



**Exhibit ES.1: California Existing Intercity Passenger Rail Routes**

Source: Caltrans, 2013.

**Chapter 6: Existing Freight Rail System.** This chapter describes and inventories California’s freight railroad system, which is shown in Exhibit ES.2. For Class I and short lines, this information includes system characteristics, capabilities, and functions. The chapter offers details on types of commodities moved along the current and future freight rail network. The chapter describes freight rail trends emphasizing the unique function of California’s freight rail network, international trade flows, logistics change, and upcoming Positive Train Control requirements. The chapter also discusses freight rail system bottlenecks and capacity issues, institutional structure of freight rail programs, statutes affecting freight rail, public initiatives for rail freight, and freight rail safety and security.

**Chapter 7: Passenger and Freight Rail Integration.** This chapter discusses current and future issues in California regarding passenger and freight trains sharing the same tracks. The chapter identifies corridors with high train volumes, challenges for ongoing shared conditions, and strategies and mitigation measures for corridors experiencing increased demand by multiple users. Major conflicts in several rail corridors will require careful coordination among multiple passenger and freight users. The chapter also discusses passenger and freight rail connectivity.

**Chapter 8: Passenger Rail Improvements.** This chapter discusses HSR phased implementation and modernization; the process for developing and prioritizing improvements to the three existing state-supported intercity rail routes and a list of potential improvements (subject to additional studies currently underway); proposed extensions to intercity rail routes and proposed new routes; a program of improvements for existing commuter rail services and proposed new commuter rail services; and the proposed X Train and XpressWest HSR services. Exhibit ES.3 shows a map of the planned California HSR system, and Exhibit ES.4 shows the integrated statewide passenger system map with conventional intercity and high-speed rail networks along with related blended systems and long-distance Amtrak routes. Finally, the chapter addresses station planning to enhance connectivity to transportation systems.

**Chapter 9: Freight Rail Improvements.** Chapter 9 outlines 4 kinds of freight rail issues and improvements: trade corridors, local rail, community impact mitigation, and economic development. The chapter describes new projects and programs for freight investments, policy issues, and best practices for consideration, and lists freight rail-related highway-rail grade separations. It also stresses the importance of large annual expenditures by Class I freight railroads in maintenance, capacity expansion, locomotives, and rolling stock. Chapter 9 identifies currently planned projects totaling \$15 billion.

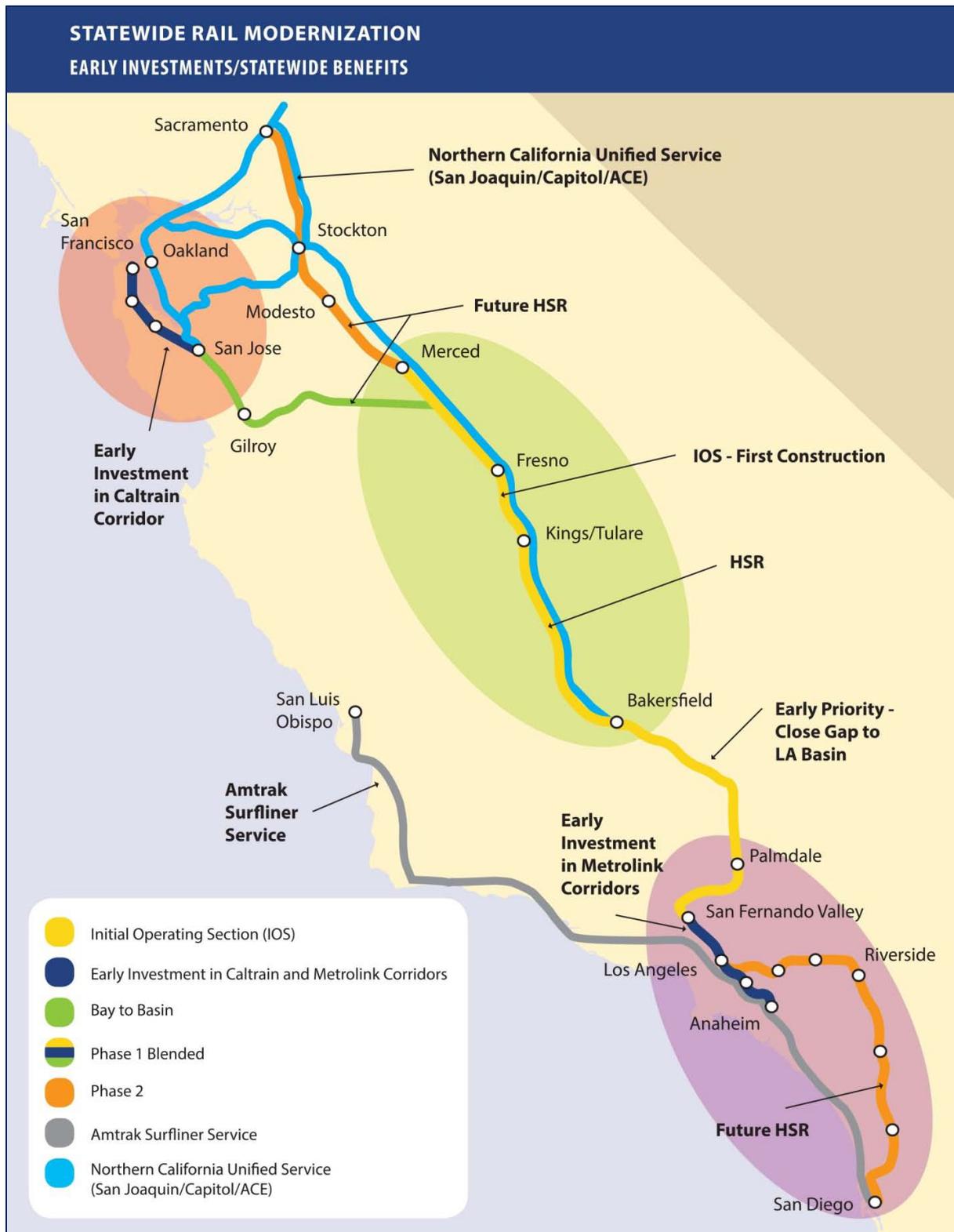
**Chapter 10: Rail Benefits and Next Steps.** Chapter 10 summarizes the rail service planning assumptions for 2020, 2025, and 2040 for frequencies on the integrated HSR, intercity and commuter rail networks. Ridership and revenue projections for these planning scenarios are then presented. Projected GHG and air quality emission reductions and economic effects resulting from HSR and intercity rail improvements are quantified. Other environmental and land use and community benefits of planned rail are discussed. The chapter explains past and current rail funding programs at the federal and state level. Finally, the chapter suggests important next steps presented in the following categories: institutional changes, planning activities, and project execution. The next steps are:

- **Institutional Changes:** Relationships among organizations engaged in passenger rail planning and service delivery could change in the near future. In order to deliver the HSR Blended System, new institutional structures may evolve.
  - Effective July 1, 2013, a new State Transportation Agency will be created in California state government that will have jurisdiction over the Authority, Caltrans, the CTC and other transportation related state departments. The proposed 2013-14 Governor’s Budget states: “The Transportation Agency develops and coordinates the policies and programs of the state’s transportation entities to achieve the state’s mobility, safety, and air quality objectives from its transportation system.” This agency’s actions may have a major impact on rail planning and delivery.



**Exhibit ES.2: California Class I Rail System, 2012**

Source: Caltrans, 2013.



**Exhibit ES.3: California High-Speed Rail Initial Operating Section and Phased Implementation**

Source: California High-Speed Rail Authority, 2013.



**Exhibit ES.4: California Intercity and High-Speed Rail Network**

Source: Caltrans, 2013.

- In 2012, the California State Legislature authorized the creation of two new JPAs to administer the *Pacific Surfliner* and *San Joaquin* routes (described in more detail in Section 5.3.1 in Chapter 5). If JPAs are created under the requirements of state law, the JPAs can enter into interagency transfer agreements with Caltrans between June 30, 2014 and June 30, 2015. The legislation specifies several requirements that must be reached before the internal transfer agreements can be executed. Under the terms of the legislation, Caltrans would continue to administer the two routes through Fiscal Year 2013-14. The process of establishing JPAs has started. This process provides a forum for re-examination of the appropriate institutional structures to administer intercity rail in California.
- With the release of the 2012 Business Plan, the Authority, Caltrans, Capitol Corridor Joint Powers Authority, commuter rail agencies and other regional transportation and urban transit agencies realized new cooperative structures would need to be formed to plan and deliver the HSR Blended System. As discussed in Section 2.1.3 of Chapter 2 the Northern and Southern California Rail Partners Working Groups were formed to plan and deliver the HSR Blended System. These planning and delivery structures are still evolving.
- The Authority expects to enter into partnerships with private firms and/or consortia for funding, construction and/or operations of HSR services.
- Congressional deliberations on reauthorization of PRIIA and of MAP-21 may expand or alter federal programs for passenger and freight rail that could change responsibilities of federal and state agencies.
- **Planning Activities:** Entities engaged in rail planning and delivery will continue to plan a wide range of passenger and freight rail projects and services in California. These activities include developing plans for the HSR Blended System, planning for existing system expansion, and planning and delivering new rail systems: As noted above, the institutional structure to plan and operate the HSR Blended System is evolving, and it has not been fully determined what entities will be involved in the following planning activities:
  - Plans for integrating HSR and conventional passenger rail into a blended system will need to be developed, including: prioritization and delivery of capital projects for the 2018 and 2022 Blended System: administration and funding of operations and maintenance, including revenue and cost sharing; fleet delivery, utilization and maintenance; schedule integration and fare policy and systems; transit and other transportation connectivity; and integrated marketing and branding.
  - Detailed capital and service planning is necessary for some specific locations where the existing rail systems will need to be expanded to meet the needs of the statewide blended system, including; Stockton, the HSR San Fernando Valley terminus, and Los Angeles Union Station.
  - Railroads will be conducting ongoing and new rail operations simulation modeling to determine the effects of planned HSR, intercity, and commuter passenger rail operations in freight and publicly-owned rail corridors, and the necessary capital projects to allow delivery of the planned service.
  - Environmental clearance for HSR projects in the 2012 Business Plan and for necessary intercity and commuter rail projects on existing and the planned HSR Blended System will continue through the completion of program and project environmental documents.

- Service Development plans, which are the rail corridor-level companion documents to environmental documents, will be completed and possibly updated, particularly in relationship to planning the HSR Blended System.
- Station area planning activities for stations on the HSR network will be conducted.
- Detailed plans, including engineering and environmental, will be prepared for passenger and freight rail projects listed in Chapters 8 and 9.
- The CSRP and the Authority’s 2012 Business Plan will be updated in 2014 in accordance with state law. These updates will include the latest information on future passenger rail operations and ongoing planning activities.
- Future passenger rail services or extensions of services described in Sections 8.3 and 8.4 of Chapter 8 will require future operational modeling and operational agreements with the applicable freight railroads.
- Planning for freight rail projects in the upcoming *California Freight Mobility Plan* will proceed.
- **Project Execution:** Even as public agencies complete detailed passenger and freight rail plans, many funded freight and passenger rail projects will move into procurement, construction, and/or manufacturing. These steps include the following:
  - Passenger rail locomotives and coaches for intercity service meeting new national equipment specifications will be manufactured domestically and will be tested and put into operating service.
  - New mainline track, sidings, switches and turnouts, and train signal and control systems will be constructed on rail lines throughout the State for freight rail operations and for passenger rail services.
  - New maintenance and layover facilities will be constructed to accommodate blended HSR service.

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