

23 Business and Organization Comments

Part 3 of 4

hapter 6: Program Risk

Future Litigation

It is likely that similar litigation on other project sections or new litigation may arise in the future. As the program advances, the Authority will work closely with affected stakeholders to address issues before they become formal lawsuits. In addition, the agency will continue its practice of using alternative dispute resolution processes, such as mediation or arbitration, where possible.

Stakeholder Support

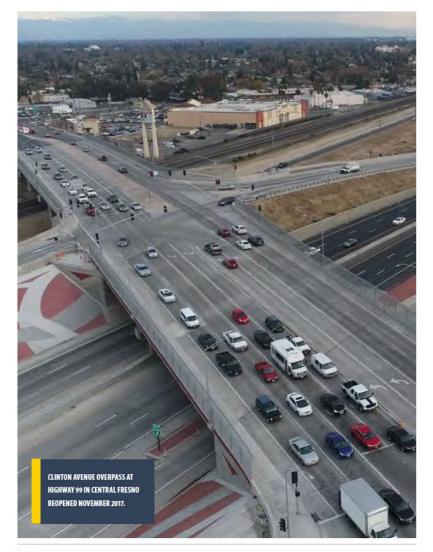
The high-speed rail program could experience adverse effects if public support declined at either the local or statewide level. Local or regional stakeholders or community interest groups could attempt to prevent or delay advancement of the system by hampering the environmental process, local authorization and permitting processes, or inhibiting local collaboration. At the state level, a decline in public support could translate into reduced political support for the program or and/or funding support and oversight functions. Maintaining strong public support at all levels through education and outreach, while clearly vital, also poses its own risks to the system if expectations are not prudently managed and mitigated.

If the Authority does not clearly articulate both the program's impacts, costs and benefits, support could weaken. As well, if the Authority agrees to mitigations without first determining their cost implications for the overall program, there is a risk that public support will erode and/or the program's overall costs could exceed current estimates.

Mitigation

Mitigation of this risk is managed at all levels within the organization, both statewide and at the regional level. At the state level, ongoing communication with legislators and state agencies ensures that current and factual information is shared at multiple levels. Similarly, at the federal level, Authority staff maintain an ongoing line of communication with members of Congress and their staff and with federal agencies.

At the regional/project section level, outreach activities include open house community meetings, community and technical working groups, as well as community and stakeholder outreach specific to each project section's needs. The Regional Directors and local section outreach teams act as a point of contact for local and regional stakeholders to address community needs and concerns related to potential project effects in their regions. Regular stakeholder and/or public meetings are held to facilitate communication opportunities and relationships between the high-speed rail program and its myriad publics.





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CHAP-TER 7:
PROGRAM AND
REGIONAL SUMMA-RIES

Legislative Requirement: This section covers statutory requirement (f) A summary of milestones achieved during the prior two-year period and milestones expected to be reached in the coming two-year period.

While the Authority plans for future operations, staff continue to make progress every day on the delivery of the federal grant scope of work. Staff remains focused on meeting this first milestone. This chapter summarizes the program milestones achieved and those that are planned for the next two years. In addition, separate sections provide an overview for Northern, Central Valley and Southern California regions.

Chapter 7: Program and Regional Summaries



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Chapter 7: Program and Regional Summaries

Program Milestones Achieved

The following summarizes several significant milestones that have been achieved at the program level. Evidence of this progress includes, but is not limited to, the following high-level achievements:

- The three Construction Packages (CP 1, CP 2-3 and CP 4) advanced on final design, construction continues in the Central Valley over a 119-mile stretch at more than 24 active sites.
- The direct impact of the Authority's investment between July 2017 and June 2018 is equivalent to about 18 percent of the 14,000 jobs that the Central Valley economy added over the same period.
- Three major structures were completed in the Central Valley—the Cottonwood Creek Bridge, the Fresno River Bridge and the Tuolumne Street Bridge, which opened to traffic in August 2017.
- In May 2018, the Authority achieved a major milestone—the creation of more than 2,000 construction jobs since the start of the highspeed rail project. As of January 2019, 2,573 construction jobs have been created in the Central Valley.
- The Authority reached fundamental agreements with Union Pacific Railroad (UPRR) and BNSF Railway Company (BNSF) that are necessary for construction. The Authority continues to work with the railroad companies to address issues including

- operational planning, safety and security assessments, and other coordination needed for high-speed rail implementation.
- In partnership with Caltrans, the Authority achieved the realignment of State Route 99 (SR 99) in Fresno, completed February 2019.
- The Authority has produced a monthly Program Delivery and Status Report (PDSR), a detailed report measuring status of statewide environmental clearance and Central Valley design and construction. This document is used to actively measure progress and trend for the program so that risks can be managed.
- The Authority met the September 2017 deadline for expending the federal American Recovery and Reinvestment Act (ARRA) grant funding awarded in 2010. In so doing, the Authority worked closely with the Federal Railroad Administration (FRA) to ensure that grant obligations were being met and that ARRA funds were successfully managed to meet the deadline.
- As of December 2018, the high-speed rail project hit a significant milestone with 500 small businesses now working on the project.

Chapter 7: Program and Regional Summaries

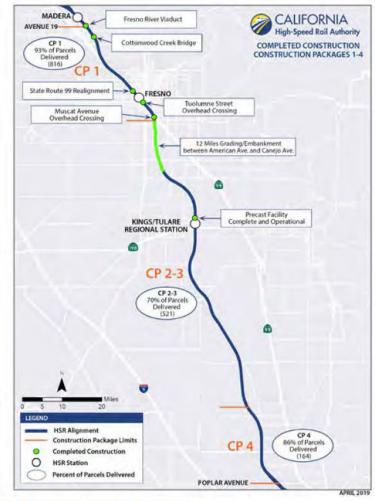


EXHIBIT 7.0: CP1-4 AREAS OF CONSTRUCTION COMPLETED

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Avenue 15 Grade Separation MADERA CALIFORNIA **AVENUE 19** High-Speed Rail Authority **CONSTRUCTION UNDERWAY CONSTRUCTION PACKAGES 1-4** Fresno Trench and State Route 180 Passageway FRESNO Cedar Viaduct Flint Avenue Grade Separation KINGS/TULARE Fargo Avenue Grade Separation **REGIONAL STATION** Grading and Embankment Work Between Houston Ave and Kansas Ave Grade Separation Kansas Avenue Grade Separation **CP 2-3** Grading and Embankment Work Between Nevada Ave and Ave 156 0 Pond Road Viaduct **Graces Highway Viaduct Pond Road Viaduct HSR Alignment** 11 Miles of Grading and CP 4 **Construction Package Limits** Wasco Viaduct Construction Underway **HSR Station** POPLAR AVENUE

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Chapter 7: Program and Regional Summaries

Areas of Construction Completed

The Authority has made significant progress on the ground, as illustrated in **Exhibit 7.0** on page 108, with all three construction packages showing marked improvements.

CP 1 work substantially completed:

- Muscat Ave overhead crossing;
- Tuolumne St overhead crossing;
- Cottonwood Creek Bridge;
- Fresno River viaduct;
- 90 percent of the design work is complete;
 and
- 93 percent of the right-of-way parcels delivered (816 parcels).

CP 2-3 work substantially completed:

- 12 miles of grading/guideway embankment work substantially complete between
 American and Canejo avenues;
- Precast facility complete and operational;
- 90 percent of the design work is complete;
- 69 percent of the right-of-way parcels delivered (521 parcels).

CP 4 work substantially completed:

- 90 percent of the design work completed;
 and
- 86 percent of the right-of-way parcels delivered (164 parcels).

Areas of Construction Underway

Each construction package also demonstrates noteworthy increases in work in progress, as illustrated in **Exhibit 7.1** on page 109. The examples below represent only a sample of the magnitude of work currently underway in each construction area.

CP 1 work in progress:

- Avenue 15—west side abutment wall and center pier construction is ongoing;
- Avenue 12—concrete deck completed and are now setting concrete forms for barrier walls along the sides of the Avenue 12;
- Avenue 11—mostly complete, but final paving for the approaches waits for better weather;
- Golden State Blvd.—realignment of Herndon Canal to Herndon;
- Fresno Trench—finishing the retaining walls and excavation works ongoing; and
- Cedar Viaduct—continuing extending the structure across State Route 99 south of Fresno. Pier construction on both side of SR99 is ongoing.

CP 2-3 work in progress:

- 21 miles of grading and embankment work is in progress between Nevada Avenue and Avenue 156, and Houstan Avenue to Kansas Avenue;
- AT&T utility relocation works are ongoing at various locations in segment 1;

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EXHIBIT 7.1: CP1-4 AREAS OF CONSTRUCTION UNDERWAY

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- Geotechnical investigation works are ongoing at various locations in segments 1 and 3;
- Kansas Avenue—abutments for the bridge structure have already been completed and excavation works are ongoing;
- Kent Avenue—abutments and pier construction nearly completed and bridge girder erection in progress;
- Fargo Ave—embankment construction is ongoing; and
- Flint—embankment works are ongoing.

CP 4 work in progress:

- 11 miles of grading and embankment work is in progress;
- Wasco Viaduct—installation of the cast-indrilled-hole (CIDH) piling;
- Pond Road—abutment 2 construction; and
- Garces Highway—installation of the CIDH piling.

Jobs Created

Designing, planning and building the nation's first high-speed rail system has stimulated job growth across the state. From July 2006 through June 2018, the Authority invested more than \$4.8 billion in planning and constructing the high-speed rail system. This investment created jobs and generated economic activity in numerous ways. High-speed rail contractors hire workers throughout the state and pay other businesses for goods and services. Workers spend their earnings throughout the economy. Together, these direct and indirect effects induced statewide economic activity by pumping money back into regional and local economies.

The Authority and its contractors have adopted and implemented programs designed to promote and advance construction employment and training opportunities for all individuals, especially those residing in extremely economically disadvantaged areas and for veterans returning from military service.

Number of jobs, per construction package, as of March 31, 2019:

- CP 1: 1.878:
- CP 2-3: 762; and
- CP 4: 300.

Chapter 7: Program and Regional Summaries

Overall, the Authority's investment supported 37,600 to 42,600 job-years of employment and generated \$6.8 to \$7.6 billion in total economic activity, as shown in **Exhibit 7.2**. The investment also created \$2.6 to \$3 billion in labor income, which is all forms of employment income associated with the activity, including employee compensation (wages and benefits) and business owner income.







EXHIBIT 7.2: STATEWIDE ECONOMIC BENEFITS FROM INVESTMENTS THROUGH JUNE 2018

In time, permanent jobs will be created for train operators, maintenance yard workers, station managers and others to operate and maintain the system. However, there will be additional benefits beyond just building the system and operating trains.



Increased Small Business Participation

The Authority is fully committed to small businesses playing a major role in building high-speed rail.

The small business participation goal for the high-speed rail project is a combined goal of 30 percent for all small businesses, including Small Businesses (SB), Disadvantaged Business Enterprises (DBE) and Disabled Veteran Business Enterprises (DVBE).

In its 2017 Project Update Report, the Authority reported that professional services contractors collectively met the 30 percent small business goal for the high-speed rail project, although the design-build contractors were working to meet their targets. It's important to note that construction activities in 2017 had not significantly ramped up.

In this 2019 Project Update Report, the Authority is pleased to announce that professional services contractors and design-build contractors collectively met the 30-percent small business participation goal for the high-speed rail project.

In its 2017 Project Update Report, the Authority reported that 334 small businesses were working on the project statewide, which included 102 DBE and 39 DVBE. Those numbers have increased. The Authority hit a milestone at the end of 2018, with 500 small businesses working on the high-speed rail project statewide, including 164 DBE and 53 DVBE.

Small business revenue, by construction package, as of March 28, 2019:

- CP 1: \$210.8 million;
- CP 2-3: \$26.2 million; and
- CP 4: \$13.8 million.

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In our 2018 Business Plan, we clearly identified areas where our organizational capabilities were not fully developed, and we put plans in motion to address these areas. Later in 2018, the California State Auditor's report highlighted additional areas that deserved our focus. When we started construction, we struggled with making the transition from strategic planning to project delivery. We were transparent about these challenges in the 2018 Business Plan and presented our strategies to create a mature organization; one with sufficient delivery capacity and capabilities.

Organizational Readiness

We have added construction management expertise and expanded project controls expertise in the field and at the program level. We expanded our reporting tools to provide project managers with real-time performance information. These actions have allowed us to gather more precise details, which then inform more exact reporting on scope, schedule and cost risks.

We have also hired specialized expertise to assist with complicated utility agreements and relocation coordination. We instituted "get-to-work" schedule reviews to ensure agreements are completed and that we achieve the various stages of review and approval. We hired a risk manager with experience in public-sector and international projects to add specialized knowledge on qualitative and quantitative risk analysis, commercial risk-register development, advanced Monte Carlo-based cost and schedule analytics, and project auditing.

We want to "move the dial" on construction in the Central Valley. Our Chief Operating Officer (COO) set out a construction expenditure plan required to meet the December 31, 2022, federal grant deadline. In addition, the COO created cross-functional "Strike

Teams" to clear project work sites and resolve commercial contractor charges and claims to increase construction productivity.

Program Delivery Status Report

We also began producing a monthly Program Delivery Status Report (PDSR) in the fall of 2018. The PDSR includes comprehensive status information within the Authority's three main areas of project delivery:

- Right-of-way procurement, third party agreements and environmental clearance;
- Engineering/design and construction; and
- Rail infrastructure.

The PDSR provides detailed information on the progress of the three Central Valley construction projects, including cost variance and a schedule performance index (SPI).

Confidence Meetings

The Confidence Meetings provide a venue for the project teams to present the status of their projects to Authority senior management, the COO and all functional leads. The main intent of these meetings is to provide the senior management the confidence that the projects are being managed to meet the required objectives and to highlight any issues that may need senior management intervention. The presentations by the project teams involve the status of safety, quality, cost, schedules, critical issues impacting the project and what the project team is doing to resolve them. These meetings facilitate transparency across the organization and awareness of the issues that are affecting the project teams so those issues can be resolved to make progress.

Chapter 7: Program and Regional Summaries

Supporting Project Delivery

We are ensuring that headquarters and field resources are closely aligned by clarifying roles, responsibilities and accountability across the program. We identified internal subject-matter experts-including engineering, legal, administration, real estate and environmental—to directly support project delivery in the field. We established a Quality Management team to focus on driving standardization across the organization, setting a foundation for eventual ISO certification.

The goal is to finish the first order of work, especially utility relocations, at relevant worksites in the construction packages.

Improved Program Controls

The Authority developed a standardized set of program controls processes, procedures and systems that have been implemented across the program and projects to eliminate duplication and making it easier to function as an integrated team. We have developed an agile and lean organization that adapts to evolving requirements and is responsive to new challenges. The matrix organization developed within program controls aligns a variety of critical program requirements that are commonplace on mega-projects worldwide. The services now provided include: aligned resource balancing and streamlined reporting through more organized data structures (work breakdown structures), creating a structured, repeatable monthly work cycle. This work includes the following improvements.

Established partnership with finance and all functional and delivery groups: To develop a bottoms-up estimate and risk profile, partnerships

are required between all departments on mega infrastructure programs. To obtain transparent, repeatable inputs based on an established criterion and methodology, the partnerships facilitate simplified data management processes to maximize repeatability and ensure higher quality reporting standards.

Restructured project controls processes and procedures consistent with industry best

practices: We conducted a gap analysis of all processes and procedures associated with existing Program Controls Service Center. We identified areas of inconsistency and redundancy between scope and cost estimation, scheduling and risk analytics and developed actionable plans for increased integration and aligned with Project Management Body of Knowledge Guide & Standards.

Developed program baseline refinement cycle:

We established an integration of scope, cost, schedule and risk. The Program Controls team takes a proactive role in monitoring the cost and schedule performance against the program baseline and takes responsibility for addressing cost/schedule-related issues as they

Robust platform of program control tools and systems: Developed and implemented a single, integrated platform comprised of estimate, schedule and current cost management system data. This enabled the rapid development of baseline scope, cost and time forecast scenarios and produced an integrated baseline file for implementation into all program controls applications. Additionally, the implementation of best in class business intelligence and data visualization tools greatly facilitated the speed and accuracy of scenario analysis and refinement.

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Cost management: Improved cost and budget management procedures for efficient management of the approved baseline. The improved procedures allowed to efficiently monitor and control the program cost to be managed within the approved baseline. Improved forecasting procedures to obtain more accurate spend projections at contract levels and at the end of the fiscal year. Developed cost management system for data management, monitoring, controlling and reporting.

Schedule management: Prepared Standard
Operation Procedure as part of the manual for
Schedule Oversight and Analysis. Developed a
revised Schedule Management Plan to identify
roles, responsibilities and reporting relative to the
Work Breakdown Structure (WBS). Put together a
training program and defined a process for Schedule
Oversight for implementation by the Project Controls
Coordinators (PCC). This will be used by the Project
Construction Management (PCM) teams in the field.

Change management: The Authority developed a standardized program change control process to ensure consistent and robust analysis on proposed changes. Any change to the program baseline will go through a robust process subject to a structured evaluation, review and approval process prior to implementation

Risk management: Developed a robust bottomup, risk-informed baseline that considers not only the cost for identified scope but also risks associated with delivering the program. The risk management team developed quantitative risk models cost and schedule (Monte Carlo simulation) at project levels and roll-up of the models to determine risk exposure at the program level which highlights the probability of success and hotspots that can be controlled to improve program's success. With the establishment of the risk-informed baseline, the risk management team has now transitioned focus from early phase Identification, Assessment and Analysis to Mitigation of risks to control the risk profile and reduce the amount of contingency needed. The team is regularly facilitating regular risk workshops at project and regional levels to emphasize importance of risk management on the program and help manage risks at the project/regional/program level.

Streamlined reporting: Improved the current reporting process for program, delivery and functional reports and dashboards as part of the Program Delivery Status Report that are produced and published monthly:

- Developed templates for easy, consistent, and timely reporting on the overall program;
- Increased visibility and gave full insight into the program and project; and
- Increase transparency and confidence in figures to make informed decision both at program and project levels.

Mitigating Construction Impacts

Our goal is to create the greenest infrastructure project in the nation, both in its operations and its construction, and we are already putting sustainability into action.

We use innovative methods to achieve net-zero emissions from construction. One way we achieve this is through requiring our contractors to use equipment that avoids or significantly eliminates air pollution during construction. Our construction sites are 50- to 60 percent cleaner than typical California construction sites.

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We have already offset both air pollution and direct greenhouse gas emissions from construction through local programs, including tree planting and replacing tractors, with special focus on priority communities. Our progress has been marked by several achievements, including:

- For the second year in a row, named as the top sustainable infrastructure project in North America by the GRESB Infrastructure Assessment, which benchmarks our environmental, social and governance policies, practices and performance;
- Preserving and restoring more than 2,500 acres of natural habitat;
- Obtaining approval of 1,200 acres of agricultural land for conservation;
- Working with the California Farmland
 Conservancy Program to secure 273 deeded
 acres of agricultural land for conservation;
- Partnering with Tree Fresno to plant 2,400 trees in schools and parks in the Fresno area;
- Avoiding more than 50,000 pounds of criteria air pollutants;
- Putting 2,600 people to work across 17 construction sites and generating economic opportunity for hundreds of businesses including small and disadvantaged businesses; and
- Launching a process to update our Sustainability Implementation Plan.

Going forward, we intend to take a holistic approach to our sustainability commitments. This includes

greater integration of sustainability into all aspects of how we conduct business and developing a sustainability dashboard to provide ongoing and timely monitoring of our performance to our Board of Directors and our stakeholders.

Program Milestones to Follow

Over the next two years, the Authority will continue to advance construction in the Central Valley to lay the foundation for the Merced-Fresno-Bakersfield line, move important environmental documents through the approval process and release critical procurements.

Construction

The Authority is working with a variety of third parties, such as the Fresno Metropolitan Flood Control District and the Madera Irrigation District, on upcoming construction activities tied to Construction Package 1 (CP 1). Upcoming construction activities include various avenue overpasses, several utility relocations as well as hazmat abatement and demolition of structures.

For Construction Package 2 and 3 (CP 2-3), the Authority is working with third parties, including the California Department of Fish and Wildlife and Fresno County, on upcoming construction activities. Upcoming construction activities include various avenue overpasses and the Kings River Structure.

The Authority is also working third parties, such as Southern California Gas Company and the City of Wasco, on upcoming construction activities tied to Construction Package 4 (CP 4). Upcoming

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construction activities include clearing the northern and southern sections of the CP 4 alignment as well as the Wasco Viaduct. For more information on construction underway see the Central Valley regional summary.

Environmental Documents

The Authority intends to continue using a two-step environmental clearance process pending resolving issues with the FRA on federal NEPA assignment for environmental approvals. In April, the Authority plans to release for public review the Central Valley Wye Draft Supplemental Environmental Impact Report/Environmental Impact Statement (Draft Supplemental EIR/EIS), which is a supplement to the Merced to Fresno Section Final Environmental Impact Report/Environmental Impact Statement.

Procurements

As funding decisions are made and further discussions take place, the Authority will consider the timing of procurements for long lead items, such as track and systems and trains, to prepare for test operations.

Regional Milestones

Work on the high-speed rail system is well underway in Northern California, the Central Valley and Southern California. This includes the Caltrain electrification project, the 25th Avenue Grade Separation Project and completion of the Salesforce Transit Center in Northern California; the construction that is happening in the Central Valley; and the completion of the Anaheim Regional Transit Intermodal Center in Southern California.

In addition, significant project-development work is underway to set the stage for moving forward on future construction:

- Northern California: planning for the Diridon Integrated Station Concept;
- Central Valley: environmental clearances for extensions to Bakersfield and Merced; and in
- Southern California: the Rosecrans/ Marquardt Grade Separation Project and advancing environmental documentation for the Link US project.

The focus in Northern and Southern California is on advancing planning for the system, obtaining environmental approvals and making key investments in crucial bookend and connectivity projects as part of California's Statewide Rail Modernization Plan. A well-developed community outreach and stakeholder engagement program support these activities.

A fundamental objective of the high-speed rail program is to make strategic investments throughout California that will deliver early benefits to local and regional future and existing rail systems, which will, in turn, lay the foundation for high-speed rail service. The Authority is currently working with state, regional and local partners to advance significant concurrent investments to existing regional rail systems that will serve as the building blocks for high-speed rail.

This chapter discusses the progress made in each region since the 2017 Project Update Report.



PHOTO: CONSTRUCTION CONTINUES IN THE CENTRAL VALLEY, LAYING THE FOUNDATION FOR THE SYSTEM.

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Expenditures To-Date by Region (Summary)

Table 7.0 presents a summary of program expenditures summarized by Pre-Construction Phase 1 (completion of environmental documents); Construction; Pre-Construction Phase 2 (planning) and Program-Wide (agency and program-management costs in the pre-construction and construction phases).

The Authority prepares comprehensive updates on all pre-construction contracts and presents the information to the Board of Directors' Finance and Audit Committee for review on a monthly basis. Table 7.0 summarizes information from the Finance and Audit Committee Contracts and Expenditures and Capital Outlay and Expenditure reports. These reports can be found on the Authority's website at: www.hsr. ca.gov/Board/monthly_fa_committee_meeting.html

TABLE 7.0: REGIONAL EXPENDITURES AS OF 1/31/19 (DOLLARS IN MILLIONS)

A STREET OF THE PROPERTY OF TH	Expenditures
Pre-Construction Phase 1 (by region)	29
Northern	\$91
Central	\$26
Southern California	\$286
Pre-Construction Phase 1 Total:	\$640
Construction (Central Valley)	
Central Valley	\$1,90
Pre-Construction Phase 2 (by region)	
Northern	\$27
Southern	\$10
Pre-Construction Phase 2 Total:	\$4
Program-wide	
Agency Costs and other ¹	\$19
Program Management	\$250
Rail Delivery Partner ²	\$368
Program-wide Total	\$815
Grand Total	\$3,40





EXHIBIT 7.3: STATEWIDE RAIL MODERNIZATION MAP



Chapter 7: Program and Regional Summaries

CalSTA Statewide Rail Modernization Program

The California State Transportation Agency's (CalSTA) 2018 State Rail Plan lays out the blueprint for the cost-effective expansion of transit service across the state and describes the role high-speed rail plays in the vision to provide better service to customers and, thus, to attract riders to these systems.

This integrated, phased approach brings incremental benefits over time and is made possible through new funding sources and stronger partnerships. Significant operational analysis supports this effort, which brought together multi-jurisdictional and multi-agency working groups to identify and analyze operational issues and conflicts. This ensured that the most cost-effective improvements were identified that met the needs of various service providers – including requirements from passenger as well as freight service providers.

The State Rail Plan addresses some of the most heavily congested urban rail corridors in Northern and Southern California, as shown in Exhibit 7.3. The Authority remains committed to advancing the high-speed rail program in these regions with specific investments in high-demand travel corridors, such as San Francisco to San José and Gilroy, and Burbank to Anaheim. For example, Caltrain is developing a service vision and business plan to help shape the future growth of the system. This effort has expanded the planning horizon for investment in the corridor beyond the introduction of high-speed rail and toward a high-performance modern rail system.

Each region will see significant near-term benefits from these investments to increase capacity and frequency, air-quality improvements, enhanced safety, increased mobility and other community benefits. The Authority coordinates extensively with CalSTA and other regional partners on planning and implementing the overall Statewide Rail Modernization Program. The goal is to incorporate high-speed rail into a single, integrated state rail improvement strategy.

The high-speed rail system provides much greater benefit to the state when planned and implemented in a manner that complements connecting transit and rail services. Ridership and revenue for all services are enhanced if connecting services are integrated with high-speed rail services through timed connections and an integrated ticketing system, as discussed in the 2018 State Rail Plan.

The Authority's regional investments will provide a solid foundation for future high-speed rail service, and work is ongoing with regional, state, and federal partners to get the system shovel-ready in Northern and Southern California while we pursue additional funds that will help pay for the system's construction.

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EXHIBIT 7.4: HIGH-SPEED RAIL PROJECT SECTION MAP - NORTHERN CALIFORNIA

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Northern California

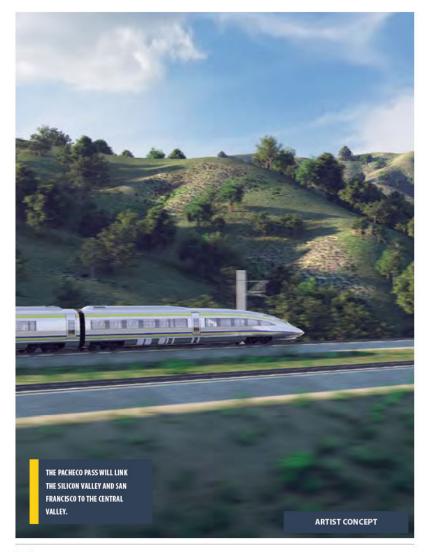
Working with partners to accelerate regionally significant connectivity projects

The last year marked substantial progress in bringing high-speed rail to Northern California. With the completion and opening of the Salesforce Transit Center and the continued progress on the electrification of the Caltrain Corridor, elements of what will become the high-speed rail system can already be seen today.

The Authority has also made significant progress toward completing the environmental analysis of the two Northern California project sections (San Francisco to San José and San José to Merced).









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Each of these pieces are important components of the state rail network that will make it easier to travel within Northern California and between the Bay Area and the rest of the state. The introduction of high-speed rail service will be just one part of this effort, but, taken together, these investments will propel and sustain the California and Bay Area economies while contributing to the reductions in greenhouse gas emissions that will be necessary to meet California's aggressive climate goals.

Northern California Regional Overview

Northern California is home to the high-speed rail system's northern terminus in San Francisco.

Project Sections

This corridor contains two project sections summarized below.

San Francisco to San José

High-speed rail will operate on this 51-mile route between San Francisco and San José, using the upgraded Caltrain corridor. Working together, Caltrain and the Authority are in the process of electrifying the corridor, which will allow for both operators to share tracks in a blended system. Passenger service will ultimately run to the Salesforce Transit Center once a connection is made to the existing rail corridor, replacing Caltrain's 4th and King Station as the ultimate northern terminus for high-speed rail trains.

San José to Merced

This 84-mile route will travel from Diridon Station in downtown San José, through the Pacheco Pass, to the

western limits of the Central Valley Wye, approximately nine miles northeast of Los Banos in Merced County.

Stations

The Northern California region includes four highspeed rail stations.

Salesforce Transit Center

The Salesforce Transit Center will ultimately serve as the Northern California hub for future high-speed rail service from Los Angeles to San Francisco. Including high-speed rail, the transit center will serve 11 transportation systems:

- BART;
- SamTrans;
- Muni;
- AC Transit
- Grevhound:
- Caltrain
- WestCAT Lynx;
- Amtrak (bus connection);
- Golden Gate Transit; and
- Paratransit.

Millbrae Intermodal Station

Located in the San Francisco to San José project segment, the Millbrae Intermodal Station will provide key connections north and east via BART, to the north and south via Caltrain, and globally with connections at San Francisco International Airport (SFO).

Opportunities around the station include:

 Maximizing economic development potential at and near the station; Chapter 7: Program and Regional Summaries - Northern California

- Encouraging transit-oriented development and higher density development in the area immediately surrounding the station; and
- Recognizing the regional scale and function of the station as the nation's first, world-class integrated airport/high-speed rail station serving as an engine to elevate the status and economic drive of the Bay Area.

In addition to the economic and housing opportunities available at and around the station, the linkage with SFO provides an important connection for the statewide high-speed rail system. SFO currently serves approximately 58 million passengers annually which will grow in the future. SFO is also a major regional employer with approximately 44,000 employees, and some of these employees travel to the airport from as far away as the Central Valley.

The linkage between the Millbrae Intermodal Station and SFO will allow travelers to access the airport from all over the state using the high-speed rail system while reducing some of the intra-state short-haul flights that limit the airport's capacity. It will also provide an opportunity to create a regional multimodal hub with statewide, national and international connections.

Diridon Station

The Authority, VTA, Caltrain and the City of San José entered into a cooperative agreement to develop and implement a shared vision/strategy for the design, environmental clearance, construction and operation of a future Diridon Station. The goal is to move a shared approach forward at the station, acknowledging Google's role as a Master Developer around the station.

The Diridon Station Integrated Concept Plan (DISC) creates an integrated plan for the station and the area surrounding the station. The agency partners engaged the consulting firm of Arcadis and Benthem Crouwel Architects (ABC) to develop a concept plan for the Diridon Station.

Gilroy

Positioned in a key location to become a central transportation hub, the City of Gilroy lies approximately 32 miles south of the City of San José. At the southern tip of Santa Clara County, Gilroy is not only the first Bay Area stop on the Silicon Valley to Central Valley Line, it is also a gateway north to Silicon Valley and the greater San Francisco Bay Area and provides access to future rail service south into the Central Coast.

High-speed rail development in Gilroy is expected to spur increases in transit, additional rail service, and local and regional development. With continued growth in the Silicon Valley, including the new Google facility in downtown San José, Gilroy is ideally situated to take advantage of the potential for economic growth. High-speed rail will provide all-day service between Gilroy and the rest of the Bay Area, with trip times as low as 25 minutes from Gilroy to San José. The blended service to Gilroy is also expected to provide opportunities for the expansion of Caltrain service in this corridor.

Several proposed regional rail expansion projects are under discussion or in planning south of Gilroy and would expand future service to Santa Cruz, Hollister, Salinas and Monterey. These projects include:

 Electrified blended service to Gilroy (highspeed rail/Caltrain);

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- Salinas Rail (TAMC), Salinas Rail Kick Start Project;
- Monterey Branch light rail line, Monterey to Castroville; and
- Santa Cruz passenger rail to Pajaro.

Major Accomplishments

Legislative Requirements: This section covers statutory requirement (d) Expenditures to date, by segment or contract, for all project phase costs.

Over the last year, the Authority and its partners have had numerous accomplishments that will be essential toward creating a world-class rail system in Northern California and the rest of the state.

These accomplishments include:

- Execution of the Project Management and Funding Agreement (PMFA) with Caltrain for the Electrification Project—The PMFA governs the Authority's \$600 million contribution of Proposition 1A funds toward the Caltrain Electrification Project, while ensuring the Authority's ability to use the corridor for blended service in the future.
- Establishing a Range of Alternatives—With the introduction of the concept of blended electrified service between San José and Gilroy in the 2018 Business Plan, the Authority expanded the range of alternatives under study for introducing high-speed rail to Northern California. Four alternatives are now under study for the San José to Merced

section and two alternatives for the San Francisco to San José section.

- Achieving Project Definition—As part of the environmental analysis for the high-speed rail system between San Francisco and Merced, the Authority finalized the project definition for both sections; an essential step in advancing the project into CEQA and NEPA evaluation. The Authority completed the initial environmental evaluation for both Northern California project sections and started the environmental evaluation for the new at-grade, blended alternative for the San José to Merced section.
- Wildlife Corridor Assessment—In collaboration with a team of varied partners, the Authority conducted assessments of sensitive wildlife-movement corridors in both the Coyote Valley and Pacheco Pass in the San José to Merced project section. The assessment results led to design changes that will minimize the rail corridor's impediment to animal movement.
- Cooperative Agreement with Caltrain, VTA and the City of San José—The Authority is working collaboratively with Diridon Station stakeholders on the DISC Plan. This agreement marks the first time that the four parties joined together to develop a vision for the intermodal station and set the organizational structure to deliver this vision.



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Table 7.1 summarizes the costs by major contract for Northern California. Two contracts related to earlier environmental work are complete and closed out. The remaining contract with HNTB is for both project sections within the Northern region and will conclude with the completion of the environmental Record of Decision for each segment.

TABLE 7.1: PRE-CONSTRUCTION PHASE BUDGETS BY CONTRACT AS OF 01/31/19 (DOLLARS IN MILLIONS)

Section	Contract Start Date	Board Authorization for Amendment	Current Contract Completion	Current Contract Value	Projected Cost at Complete	Expenditures
San Francisco – San José (HNTB)	February 2007	N/A	Completed	7	\$45	\$45
San Francisco – San José; and San José – Merced (HNTB)	November 2015	May 2018	September 2021	\$76	\$76	\$47
San José – Merced (Parsons Transportation Group)	December 2008	N/A	Completed	-	\$45	\$45

Refinement of San Francisco
to San José and San José to
Merced Alternatives

2005

2016

2017

2018

Program
Environmental Analysis for San
Francisco to San José and San José
to Merced project sections

Caltrain
ElR/EIS Adopted

Environmental Analysis for San
Francisco to San José
to Merced project sections

Caltrain
Electrification
Project begins

Milestones Achieved

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Legislative Requirement: This section covers statutory requirement (f) A summary of milestones achieved during the prior two-year period and milestones expected to be reached in the coming two-year period.

We continue to work with regional rail providers to build projects that will provide early benefits while laying the foundation for future high-speed rail operations. This approach is integral to the strategy for delivering the Phase 1 System. Over the last several years, the Authority, working with partner agencies, allocated and received authorization from the Department of Finance to invest nearly \$700 million in Proposition 1A bond funds for improvements in the blended sections. Additional bookend investments that are still being finalized will bring this total to \$1.2 billion in the next few years.

Bookends and Other Investments

Bookend projects will lay the foundation for future high-speed rail operations. In Northern California, these investments occur along the San Francisco to San José corridor.

Caltrain

The Authority committed \$713 million to the Caltrain Electrification Project, which is scheduled to be completed in 2022. The project will electrify and upgrade Caltrain's commuter rail service, which will result in improved performance, operating efficiency, capacity, safety and reliability of the service between the Caltrain Station at 4th and King in San Francisco and Tamien Station in San José. The project will also allow high-speed rail to use the corridor in the future as part of blended operations with Caltrain. Over the last year, this project continued to advance; poles for the overhead catenary system were erected and

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Francisco to San José starts

Preferred alternatives and San Francisco to San José Final San José to Merced Draft EIR/EIS EIR/EIS and Record of Decision 2019 2021 San Francisco to San José Draft Caltrain electrified service San EIR/EIS: San José to Merced Final

crews began stringing the wires that will ultimately power the trains.

EIR/EIS and Record of Decision

Salesforce Transit Center/Downtown Extension

The Authority, along with its many partners, celebrated the grand opening of the Salesforce Transit Center in San Francisco on August 10, 2018. The Salesforce Transit Center will serve as the northern terminus for high-speed rail service. The Center has been closed since September 2018 due to the discovery of cracked steel beams and remains closed for repairs expecting to last through June 2019.

The Salesforce Transit Center received \$400 million from the American Recovery and Reinvestment Act (ARRA), which paid for the trainbox that will house the platforms and tracks for high-speed rail and Caltrain located in the basement of the Transit Center.

25th Avenue Grade Separation Project

The Authority, in partnership with the City of San Mateo is helping to grade separate E. 25th Avenue in San Mateo from the rail corridor. In addition, the project will provide an opportunity to complete east-west street connections at 28th and 31st avenues. The Authority is contributing \$84 million in funding to this important project that is constructing grade separations today, with the potential for also accommodating a future overtake track for trains to pass as the blended system expands service in the future.

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TABLE 7.2: NORTHERN CALIFORNIA BOOKEND PROJECTS' FUNDING STATUS AS OF 1/31/19 (DOLLARS IN MILLIONS)

Project Name	Owner and Location	Status	Total Project Amount	Expenditures
Caltrain Electrification	Caltrain; San Francisco to San José	Under construction	\$713	\$105
25th Avenue Grade Separation	Caltrain; City of San Mateo; 25th, 28th and 31st Avenues	Under construction	\$84	\$26

Table 7.2 summarizes the current status of these projects and the funds expended as of January 31, 2019.



PHOTO: CALTRAIN ELECTRIFICATION GROUNDBREAKING - JULY 2017

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Milestones to Follow

The next two years will be critical in the planning and development of high-speed rail in Northern California. By the end of 2019, the Authority will identify the preferred alternatives for both project sections and complete the environmental documents by spring 2021. This work will define more precise construction and implementation plans; advance service planning between San Francisco, San José, Gilroy and the Central Valley; and progress station development with partners at each station location.

Schedule for Environmental **Documents**

The Authority continues to make progress in the environmental clearance of the Northern California project sections. Over the last year, the Authority identified the range of alternatives under study, established project definitions for environmental analysis and began the technical evaluation of the range of alternatives. These efforts are the necessary prerequisites for achieving key milestones over the next two years, as detailed in Table 7.3 on page 135.



In the summer of 2017, Google announced its intent to purchase property and develop a major campus near the Diridon Station in Downtown San José. At that time, the City of San José estimated that the addition of Google as an employer in downtown San José could add as many as 20,000 jobs in the area. Following this announcement, the city and Google began discussions regarding the acquisition of land formerly held by the City's Redevelopment Agency. In December 2018, the City of San José approved the sale of the former redevelopment lands around the Diridon Station for more than \$100 million.

Google is currently planning on developing 50 acres of land west of Highway 87 into offices, retail and housing, but this could expand if additional parcels are purchased from the City and other land holders.

Benefits of Google locating in the station area include:

- Jobs closer to the Diridon Station
- Support of higher ridership
- Potential for significant private partnership for development around station area



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PHOTO: PUBLIC OUTREACH MEETING IN NORTHERN CALIFORNIA

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TABLE 7.3: ENVIRONMENTAL MILESTONES

Project Section	Preferred Alternative Selected	Draft EIR/EIS	Final EIR/EIS and Receive Record of Decision
San Francisco to San José	September 2019	March 2020	March 2021
San José to Merced	September 2019	December 2019	November 2020

EXHIBIT 7.5: ESTIMATED RECORD OF DECISION (ROD) COMPLETION TIMELINE





Exhibit 7.5 shows the changes in the estimates for completing Records of Decision for the relevant project sections. Each estimate was discussed in the corresponding report identified in the legend.

The selection of a preferred alternative in September 2019 for each project section will mark a substantial milestone for the high-speed rail program, as this will complete the selection of the state's preferred route for the entire Phase 1 system. The Authority has been conducting technical analyses and engaging the public to complete a thorough assessment of the various routes under study. Ahead of the Board's action on selecting preferred alternatives, the Authority will release a staff recommendation to gather additional feedback from stakeholders and the

public to provide important feedback to the Board before it makes its decision.

The preferred alternatives are not final route selections but are meant to inform the public of the alternative that best balances the benefits and impacts of high-speed rail construction and operation. All alternatives will be studied equally in the Draft and Final EIR/EIS.

Stations

The Authority continues to work with local station communities on planning for the stations along the Phase 1 high-speed rail route. Station area planning efforts engaged local jurisdictions/joint powers, local governments, regional and local transit providers,

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and other interested parties that have responsibility for providing transportation and mobility in the region.

Planning efforts have focused on station functionality; intermodal planning; station place-making; streetscapes that promote walking, biking and transit use; finance plans; zoning for residential and commercial activities; and parking strategies. Through collaborative planning, every station will reflect the unique character of each city or region, aligning community and high-speed operational needs to the relevant goals for each station.

The Authority executed agreements with governmental jurisdictions and transit providers to facilitate coordinated planning and project development to achieve successful city-regeneration opportunities and enable more sustainable station area development and access to and from the station.

Table 7.4 summarizes the key milestones for completing existing agreements, and notes key partners involved in providing the necessary input.



PHOTO: SAN JOSÉ PUBLIC OUTREACH IS AN IMPORTANT PART OF THE DESIGN AND CONSTRUCTION PROCESS.

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TABLE 7.4: STATION AREA PLANNING DELIVERABLES - NORTHERN CALIFORNIA REGION

Station Area Jurisdiction	Description	Partners	Completion Date
City of Millbrae	Station access plan	City of Millbrae, Caltrain, BART, SFO	2020
City of San José (Diridon Integrated Station Concept)	Station plan	Santa Clara Valley Transportation Author- ity, City of San José, Caltrain	2020
City of Gilroy	Station area plan	City of Gilroy, Santa Clara Valley Transportation Authority	2019

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Connectivity Projects

As the Authority takes important steps in planning and developing high-speed rail in Northern California, it will continue to work with state and regional partners to accelerate regionally significant connectivity projects. These connectivity projects can provide significant, near-term benefits to regional and urban passenger rail systems, such as Caltrain, BART, the San Joaquins and ACE, while helping to improve air quality.

As part of this effort, the Authority worked to achieve early approval and release of Proposition 1A connectivity dollars for construction on several regionally significant projects, most notably in the heavily congested urban rail corridors in the San Francisco Peninsula. By the end of 2018, the connectivity dollars appropriated by SB 1029 were all directed to significant safety, network integration, and key mobility building block projects.

Table 7.5 shows project sponsors and Proposition 1A funding for the connectivity projects in Northern California.



PHOTO: SAN JOSÉ COMMUNITY MEETINGS INFORM THE PUBLIC AND SEEK INPUT.







VISUAL: CALIFORNIA HIGH-SPEED RAIL STATIONS ARE PLANNED FOR NET-ZERO ENERGY CONSUMPTION.

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TABLE 7.5: NORTHERN CALIFORNIA CONNECTIVITY PROJECTS' STATUS (FUNDING IN MILLIONS)

Sponsor	Name	Funding	Project Completion Date
San Joaquin Corridor	Positive Train Control	\$9.8	Completed
Capitol Corridor and Altamont Corridor Express	Travel Time Reduction	\$10.2	June 2019
San Joaquin Corridor	Merced to Le Grand Double Track	\$40.8	October 2020
Capitol Corridor	Sacramento to Roseville 3rd Main Track Project	\$5.7	September 2022
Sacramento Regional Transit	Intermodal Facility Improvements	\$1.2	June 2022
Peninsula Corridor Joint Pow- ers Board (PCJPB)	Caltrain Advanced Signal System/Positive Train Control	\$105.5	October 2020
San Francisco Municipal Transportation Agency	Central Subway	\$61.4	December 2020
San Francisco Bay Area Rapid Transit (BART)	Millbrae Station Track Improvement and Car Purchase	\$140.0	May 2026
San Joaquin Regional Rail Commission (SJRRC)	Stockton Passenger Track Extension	\$5.7	June 2022
San Francisco Bay Area Rapid Transit (BART)	Maintenance Shop and Yard Improvements	\$78.6	January 2024

O Sacramento Highlight: Progress is visible on Stockton O San Francisco high-speed rail with the O Modesto completion of the SR 99 realignment project and San José Merced the San Joaquin River Crossing through Fresno. Madera Gilroy Fresno Kings/Tulare Bakersfield **Palmdale** San Bernardino 144 Riverside Anaheim **Central Valley Certified Small Businesses** San Diego EXHIBIT 7.6: HIGH-SPEED RAIL PROJECT SECTION MAP - CENTRAL VALLEY

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Central Valley

\$3.4 billion invested on construction related activities in the Central Valley

Work intensified in the Central Valley after the 2017 Project Update Report was published. The three Construction Packages (CP 1, CP 2-3 and CP 4) advanced on final design, and the Authority made an overall investment of \$3.4 billion through January 31, 2019, on construction related activities in the Central Valley, per March 2019 Capital Outlay report.

Bridges, viaducts and grade separations are now visible at multiple locations, with three major structures completed—the Cottonwood Creek Bridge, the Fresno River Bridge and the Tuolumne Street Bridge, which opened to traffic in August 2017.

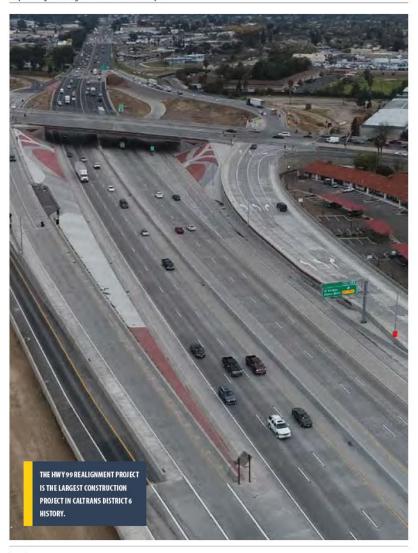
The Authority also worked with local governments to prepare for future high-speed rail stations. Several cities in the Central Valley finished Station Area Plans that support local and regional planning efforts required by the state's Sustainable Communities and Climate Protection Act (SB 375).



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Central Valley Regional Overview

The Central Valley is home to the Merced-Fresno-Bakersfield line and contains the first construction on the initial 119 miles.

Project Sections

The Central Valley contains two project sections. These both have cleared initial state and federal environmental approvals for initial construction currently underway.

Merced to Fresno

The Merced to Fresno Project Section, where the Central Valley Wye is located, generally parallels State Route 99 through the northern stretch of the San Joaquin Valley from the city of Merced to the city of Fresno. At the City of Chowchilla, the Central Valley Wye will serve as the junction for the high-speed rail system connecting San José to Fresno, San José to Merced, and Merced to Fresno. These connections allow travelers to reach destinations in the direction of San Francisco, Sacramento, and Los Angeles.

Fresno to Bakersfield

The Fresno to Bakersfield project section is a critical link connecting to the Merced to Fresno and Bay Area project sections to the north and the Bakersfield to Palmdale and Los Angeles project sections to the south. The Locally Generated Alternative is a 23-mile section of this segment located between the cities of Shafter and Bakersfield that defined an alternative alignment in cooperation with the City of Bakersfield, the City of Shafter, and Kern County.

Stations

The Central Valley includes four high-speed rail stations for the interim service.

Merced

The Merced station is located adjacent to State Route 99 and the Union Pacific Railroad line on Martin Luther King Jr. Way/Highway 59 and the State Route 99 interchange. The station serves downtown Merced, UC Merced, Merced County and the upper Central Valley.

Fresno

The City of Fresno completed the Station District Master Plan. The Master Plan is for the 200-acre area within an approximately five-minute walk from the future high-speed rail station. The city's goal for the Master Plan is to provide an implementable vision for downtown revitalization that capitalizes on the high-speed rail system investment.

Kings/Tulare

The Tulare County Association of Governments' (TCAG) Board of Directors approved the Cross Valley Corridor Plan in June 2018 that will serve as a vision plan to improve transportation connections and guide future development of the Central San Joaquin Valley. The plan focuses on an existing rail corridor between the cities of Huron and Porterville, with direct and convenient access to the Kings/Tulare high-speed rail station.

Bakersfield

The Bakersfield City Council approved in May 2018 the "Making Downtown Bakersfield" Station Area Vision Plan and Environmental Impact Report that will serve as a plan to continue revitalization efforts and guide future development of downtown Bakersfield.

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Major Accomplishments

Work intensified in the Central Valley after the 2017 Project Update Report was published. The three Construction Packages (CP 1, CP 2-3 and CP 4) advanced on final design, and the Authority made an overall investment of \$3.4 billion through January 31, 2019, on construction related activities in the Central Valley.

Bridges, viaducts and grade separations are now visible at multiple locations, with three major structures completed—the Cottonwood Creek Bridge, the Fresno River Bridge and the Tuolumne Street Bridge, which opened to traffic in August 2017.

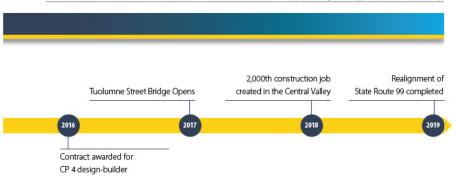
The Authority also worked with local governments to prepare for future high-speed rail stations. Several cities in the Central Valley finished Station Area Plans that support local and regional planning efforts required by the state's Sustainable Communities and Climate Protection Act (SB 375).

Construction is advancing on over 119 miles in the Central Valley, from Madera to north of Bakersfield, with more than a dozen active construction sites in the construction packages:

 Under Caltrans' oversight, the realignment of State Route 99 (SR 99) in Fresno to make room for high-speed rail was completed February 2019;

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- In May 2018, the Authority achieved a major milestone - the creation of more than 2.000 construction jobs since the start of the high-speed rail project. Fast forward to the beginning of 2019, and 2,573 construction jobs have been created in the Central Valley;
- The first significant construction activity in CP 4 started at the Garces Highway Viaduct in early 2018.



PHOTO: GARCES HIGHWAY VIADUCT (KERN COUNTY) CON-STRUCTION UNDERWAY

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TABLE 7.6: PRE-CONSTRUCTION PHASE BUDGETS CONTRACT AS OF 1/31/2019 (DOLLARS IN MILLIONS)

Project Section	Contract Start Date	Board Authorization for Amendment	Current Contract Completion	Current Contract Value	Projected Cost at Completion	Expenditures
Merced – Fresno Central Valley Wye (Parsons Transportation Group)	December 2008	May 2018	June 2019	\$80	\$80	\$78
Merced – Fresno (AE- COM)	February 2007	May 2013	Completed	\$50	\$50	\$50
Fresno Bakersfield (URS- HMM-Arup/JV)	February 2007	April 2013	Completed	\$118	\$118	\$118
Fresno – Bakersfield Lo- cally Generated Alterna- tive (T.Y.Lin)	February 2014	May 2018	January 2021	\$19	\$19	\$17

Milestones Achieved

Legislative Requirements: This section covers statutory requirement (d) Expenditures to date, by segment or contract, for all project phase costs.

Over the last year, construction on CP 1 continued to increase as design progressed for major structures, and right-of-way, utility and other agreements were completed. Over the next year, CP 2-3 and CP 4 will also expand construction activities and break ground on several overcrossings and viaducts between Fresno and Kern counties.

Table 7.6 summarizes the costs by major contract for the Central Valley. Two contracts related to earlier environmental work are complete and closed out. The remaining contracts relate to project sections within the Central Valley and will conclude with the completion of the environmental record of decision for each segment.

Bakersfield Supplemental Environmental Document

The Authority's Board of Directors certified the CEQA Final Supplemental Environmental Impact Report (Final Supplemental EIR) for the Fresno to Bakersfield Project Section in October 2018 and approved a highspeed rail alignment between Poplar Avenue in Kern County and the F Street station location in downtown Bakersfield. This allows the Authority to take additional steps toward advancing major work on the project.

The Final Supplemental EIR evaluates what is known as the Locally Generated Alternative, which extends from Shafter east toward State Route 99. then southward into Bakersfield, ending at a station location on F Street in downtown Bakersfield. The document compares the Locally Generated Alternative to the alignment in the area previously studied in 2014.

TABLE 7.7: CENTRAL VALLEY CONSTRUCTION COST BREAKDOWN AS OF 1/31/20193 (DOLLARS IN MILLIONS)

Contract	Original Contract Value	Original Contract Value + Provisional Sums	Approved Change Orders	Current Contract Value	Board of Directors Approved Contingency	Current Contingency Balance	Expenditures
DB Services for CP 1 (Tutor Perini/ Zachry/ Parsons) Executed 8/16/2013	\$970	\$1,023	\$526 ¹	\$1,549	\$160	\$36	\$912
Construction Services for SR99 (Caltrans) Executed 2/19/2013	\$226	\$226	\$64	\$290 ²	\$9	\$1	\$259
DB Services for CP 2-3 (Dragados/Flatiron) Executed 6/10/2015	\$1,205	\$1,365	\$80	\$1,445	\$261	\$172	\$637
DB Services for CP 4 (California Rail Builders) Executed 2/29/2016	\$337	\$444	\$4	\$448	\$62	\$55	\$119

- 1 The executed change order amount of \$526 million includes \$153 million for the Madera Extension, \$159 million for excluded third party budget (\$112 million for future costs and \$47 million for executed change orders), and \$214 million for various change orders from
- 2 March 2018 Board action increased SR99 contract by \$29.2 million. The total amount for the inter-agency agreement with the California Department of Transportation (Caltrans) HSR12-06 is in the amount of \$290,100,000"
- 3 Source of data: March 2019 Monthly Status Reports: www.hsr.ca.gov/Board/monthly fa committee meeting.html Expenditures to date are based on approved invoices.

Table 7.7 shows the current breakdown of costs for the four Central Valley construction contracts that have been executed to date; the three design-build construction packages and the State Route 99 (SR 99) Realignment Project inter-agency agreement executed with the California Department of Transportation (Caltrans). The information provided shows the original contract execution date and values and the status of each contract as of January 31, 2019.

Construction Package Milestones

The next two pages present a graphical look at some of the work that is being done in the three Construction Packages. The Authority's efforts to date have focused on Construction Package 1, but work in Construction Package 2-3 will ramp up in 2019.



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California High-Speed Rail Authority



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California High-Speed Rail Authority

August 2020

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Construction Package 1

The CP 1 construction area extends approximately 32 miles between Avenue 19 in Madera County to East American Avenue in Fresno County. CP 1 includes 12 grade separations, four viaducts, a trench that will take trains under State Route 180, a major river crossing over the San Joaquin River and a pergola structure spanning the Union Pacific Railroad in north Fresno.

Exhibit 7.7 illustrates the current work in CP 1, highlighting some key activities.







Active Construction Sites

- Avenue 19 Overpass
- Road 27 Overpass
- Avenues 7,8,11,12, and 15 Overpasses
- San Joaquin River Viaduct/Pergola
- Golden State Boulevard Realignment
- Fresno Trench
- Tulare Street Underpass
- Cedar Viaduct
- American Avenue Overpass



San Joaquin River Viaduct

Construction of this massive viaduct began in the summer of 2016, as joint venture design-builder Tutor Perini Zachry Parsons began work on what will be the largest structure on CP 1. Rising up alongside State Route 99 in northern Fresno County, the San Joaquin River Viaduct currently has an estimated completion date of May 2019.

A total of 198 girders, each 121 feet long and weighing approximately 156,000 lbs. were placed to create the pergola section of the viaduct, that will bridge an existing Union Pacific Railroad freight track, crossing highspeed trains from one side of the tracks to the other, and then back to grade.

When complete, the San Joaquin River Viaduct will be approximately 4,800 feet in length, crossing more than 100 feet above the river, and act as the high-speed rail project's arched gateway into the City of Fresno.

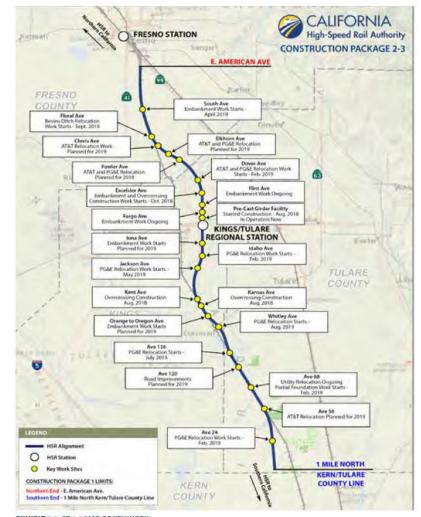


EXHIBIT 7.8: CP 2-3 MAP OF KEY WORK

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Construction Package 2-3

The CP 2-3 construction area extends approximately 65 miles from the terminus of CP 1 at East American Avenue in Fresno to one-mile north of the Tulare-Kern County line. CP 2-3 will include approximately 36 grade separations in the counties of Fresno, Tulare, and Kings, including viaducts underpasses and overpasses.

Exhibit 7.8 illustrates the current work in CP 2-3, highlighting some key activities.







Active Construction Sites

- Iona Avenue Embankment Construction
- Kent Avenue Overpass
- Kansas Avenue Overpass
- Orange to Oregon Embankment Construction
- Avenue 120 Road Overlay
- Avenue 88 Embankment Construction



Pre-Cast Manufacturing

In August, the Authority and design-builder Dragados-Flatiron Joint Venture (DFJV) opened a new pre-cast girder manufacturing facility near Grangeville Avenue and State Route 43 in Kings County. The facility will produce as many as 1,350 girders needed for 36 bridges in CP 2-3.

DFJV is launching in-house girder production to meet the project's schedule and to have direct control of the quality and production schedule of girders and their shipment to various construction sites along CP 2-3.

Casting is 600 feet long and will produce up to eight girders per day. Two types of girders are being manufactured: California Wide Flange and High-Speed Rail Tub Girders. While in operation, 30-50 workers from local union halls will be employed full time. The precast plant is made so that it can be dismantled once this phase of work is completed so DFJV can reuse the components for other purposes.



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Construction Package 4

CP 4 comprises a 22-mile stretch between one-mile north of the Tulare-Kern County Line at the terminus of CP 2-3 and Poplar Avenue just north of Shafter. CP 4 includes construction of at-grade, retained fill and aerial sections of the alignment and the relocation of four miles of existing Burlington Northern Santa Fe

Exhibit 7.9 shows the current work sites in CP 4, highlighting some key activities.







Active Construction Sites

- Garces Highway Structure
- Pond Road Viaduct



Garces Avenue Construction

In March, the first structure for Construction Package 4 broke ground in Kern County. Design-builder California Rail Builders began foundation work for a bridge that will carry high-speed trains over Garces Highway.

Drill rigs and heavy machinery were mobilized to the site at Garces Highway near Scofield Avenue where workers drilled shafts 80-feet into the ground. Rebar cages were also lowered into the shafts and covered with

When complete, the Garces Bridge will be approximately 102-feet in length, 52-feet wide, with abutments at each end of the structure, and vertical clearance of just over 15 feet. Garces Highway will remain atgrade, and Scofield Avenue will be realigned to become parallel to the high-speed rail alignment.

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Stations

Station area planning involves local jurisdictions/ joint powers, local governments, regional and local transit providers, and other interested parties that establish, relocate and provide transportation in their region. Planning elements include parking strategies, streetscapes that promote walking, biking and transit use, finance plans, zoning for residential and commercial activities, and station place-making. Every station will be unique for each region; therefore, aligning community and high-speed operational needs to the goals for each station is a major collaborative effort.

The Authority worked with local governments over the last two years to prepare for future high-speed rail stations. In partnership with the Federal Railroad Administration, we dedicated funding to support station cities in completing Station Area Plans (SAP) that are consistent with and support local and regional planning efforts required by SB 375 and our Station Area Development Policies.

These SAP agreements support working with station jurisdictions and other service providers to promote station access improvements, economic development opportunities and sustainable, districtscale development. These efforts include working with regional and local transit providers to enhance multi-modal connectivity to high-speed rail stations and surrounding transportation improvements.

Table 7.8 summarizes the key milestones for completing existing agreements, and notes key partners involved in providing the necessary input.

TABLE 7.8: STATION AREA PLANNING DELIVERABLES - CENTRAL VALLEY REGION

Station Area Jurisdiction	Description	Partners	Completion Date
City of Bakersfield	Station Area Vision Plan	Kern Council of Govern- ments	Complete
City of Merced	Station area vision plan	Merced County, MCAG	TBD
City of Fresno	Station area master plan	Fresno COG	Complete
Hanford, Visalia, Porterville and others	Transportation connectivity and implementation plan	Tulare Council of Govern- ments (Kings/Tulare Station)	Complete

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City of Fresno

The City of Fresno's plans, polices and environmental documents that inform station area planning work include the 2035 General Plan and Master Environmental Impact Report, the Downtown Development Code (DDC), the Downtown Neighborhood Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP) and an Environmental Impact Report.

The City of Fresno's revitalization goals in the approved plans include:

- Re-establishing downtown as the heart of Fresno by attracting investment, businesses and entrepreneurship, creating and retaining jobs, and revitalizing neighborhoods;
- Increasing provision of housing and related amenities in downtown; and
- Creating a safe, bikeable, walkable and pedestrian-friendly downtown.

City of Merced

Station area planning work has been on hold pending state rail plan coordination. Future station coordination and collaboration will focus on the integration of high-speed rail with other rail providers in Merced in keeping with the state rail plan objectives. This work is expected to resume in 2019.

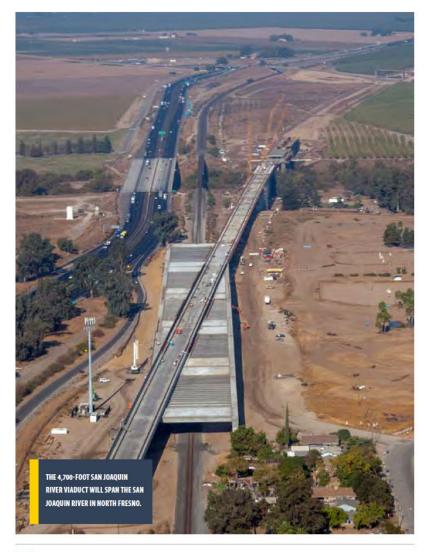
City of Bakersfield

The Station Area Vision Plan was created to "illustrate the Community's vision for revitalization of Downtown Bakersfield and provide a blueprint for future decisions." The Vision Plan's research shows that community building, accessibility and sustainability planning can lead to economic development, while making Bakersfield high-speed rail ready. The Vision Plan includes a list of 11 implementation goals to be advanced in the future and illustrates that Bakersfield has accomplished a critical first step toward achieving station area planning goals.

Tulare County Association of Governments

The TCAG completed plans related to station access in 2018. The corridor planning work and coordination with the high-speed rail station resulted in the completion of the Cross-Valley Corridor Plan. Implementation of the plan is anticipated to occur in three phases and be coordinated with the Authority's station plans as the program advances.

The Authority will continue to coordinate with the agencies involved in the planning work, and implementation of the Cross-Valley Corridor rail plan is anticipated to occur in three phases.





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Chapter 7: Program and Regional Summaries - Central Valley

Milestones to Follow

Over the next two years, the Authority will oversee significant expansion of construction in all construction packages and will continue planning coordination to relocate utilities and complete right of way acquisition.

Construction Packages 1, 2-3 and 4

From 2016-2018, 48 percent of the right of way needed through the Central Valley was acquired. By the end of 2019, the Authority will complete acquisition of all parcels identified by the contractors as needed for construction packages 1 through 4. To date, a total of 1,501 parcels have been acquired by the Authority, with 315 parcels remaining.

In addition, several third-party agreements are in place to relocate third party utility owners' facilities including water and sewer systems, gas and electric lines, irrigation casings and communication lines



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throughout the Central Valley. The Authority and its contractors are coordinating with numerous third parties to complete relocations.

Environmental Schedule

The Authority will publish in April the CEQA Central Valley Wye Draft Supplemental Environmental Impact Report/Environmental Impact Statement (Draft Supplemental EIR/EIS), which is a supplement to the Merced to Fresno Section Final Environmental Impact Report/Environmental Impact Statement.

The Draft Supplemental EIR/EIS evaluates the impacts and benefits of implementing a Central Valley Wye connection between the cities of Merced and Madera and is based on additional project planning and engineering that has occurred over the last several years. The four alternatives shown in Exhibit 7.10 were developed through extensive local and agency involvement, stakeholder meetings, and public and agency comments, and were subjected to a thorough screening process that considered the alternatives' impacts on the sodal, natural and built environment.

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The four alternatives studied and evaluated in the Draft Supplemental EIR/EIS are:

- State Route 152 (North) to Road 13 Wye Alternative:
- State Route 152 (North) to Road 19 Wye Alternative:
- Avenue 21 to Road 13 Wye Alternative; and
- State Route 152 (North) to Road 11 Wye Alternative.

These Central Valley Wye alternatives would create the high-speed rail connection between the San José to Merced Section to the west and the north-south Merced to Fresno Section to the east. The alternatives were developed through extensive local and agency involvement, stakeholder meetings, and public and agency comments, and were subjected to a thorough screening process which considered the alternatives' impacts on the social, natural, and built environment.

The Draft Supplemental EIR/EIS will be made available to the public for a 45-day review and comment period in accordance with the California Environmental Quality Act and the National Environmental Policy Act.

Exhibit 7.11 shows the changes in the estimates for completing Records of Decision for the relevant project sections. Each estimate was discussed in the corresponding report identified in the legend.

EXHIBIT 7.11: ESTIMATED RECORD OF DECISION (ROD) COMPLETION TIMELINE



The environmental approvals for both documents will require federal approval. This would involve issuing these documents under the National Environmental Policy Act (NEPA) and ultimate project approval and issuing a Record of Decision under NEPA. This is pending NEPA assignment or federal re-engagement action.

Stations

The Authority has worked with local governments over the last several years to prepare for future high-speed rail stations. The Authority, in partnership with the FRA, dedicated funding to support station cities in completing station area plans that are consistent with and support local and regional planning efforts required by SB 375 and the Authority's Station Area Development Policies.

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City of Bakersfield

In the next fiscal year, the Authority will continue to coordinate and collaborate with Bakersfield to advance the city's top-priority implementation strategies.

Tulare County Association of Governments

Planning work will continue around the Kings/Tulare Station in the future. The planning work includes regional/corridor planning and a community engagement to understand how the project would potentially link to public transit in the nearby cities, as shown in Figure 7.12 below.

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 A revised work plan describing outstanding implementation planning work;

Remaining deliverables from the TCAG include:

- Technical Advisory Committee meetings, including materials, agendas, exhibits and presentations, on the Implementation Plan;
- A Draft Implementation Plan and detailed project list (toolkit matrix);
- A funding analysis update;
- Responses to comments regarding site selection for Farmersville and Lindsay; and
- A Final Draft Implementation Plan (information gathering chapter/report, and technical chapters, conceptual design, implementation and funding plan)

EXHIBIT 7.12: CROSS VALLEY CORRIDOR PLAN STUDY AREA



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EXHIBIT 7.13: HIGH-SPEED RAIL PROJECT SECTION MAP - SOUTHERN CALIFORNIA

Planning

for network

sustainable

at stations

development

integration and

Submission 241 (Michael Claiborne, Leadership Counsel for Justice and Accountability (For Fairmead Community & Friends), June 21, 2019) - Continued

Chapter 7: Program and Regional Summaries - Southern California

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project sections.

The Authority also made important progress on bookend and connectivity projects. In early 2018, the joint funding agreement for the Rosecrans/Marquardt Grade Separation Project was approved. The Authority also made significant contributions to regional connectivity projects that will improve regional





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LOS ANGELES

Chapter 7: Program and Regional Summaries - Southern California Southern California **Regional Overview**

Southern California is home to the high-speed rail system's southern terminus in Los Angeles/Anaheim.

Project Sections

The Southern California region contains four project

Bakersfield to Palmdale

The Bakersfield to Palmdale Project Section connects the Central Valley to the Antelope Valley, closing the existing passenger rail gap over the Tehachapi Mountains. The approximately 80-mile corridor travels through or near the cities of Edison, Tehachapi, Rosamond, Lancaster and Palmdale with proposed stations in Bakersfield and at the Palmdale Transportation Center.

Palmdale to Burbank

The Palmdale to Burbank Project Section connects the Antelope Valley to the San Fernando Valley and will bring high-speed rail service to the urban Los Angeles area. This project section will connect two key population centers in Los Angeles County with multimodal transportation hubs at the Palmdale Transportation Center and at the Hollywood Burbank Airport

Burbank to Los Angeles

The Burbank to Los Angeles Project Section connects two key multimodal transportation hubs, the Hollywood Burbank Airport and Los Angeles Union Station (LAUS), providing an additional link between

Downtown Los Angeles, the San Fernando Valley and the rest of the state. The approximately 14-mile project section proposes to utilize the existing railroad right-of-way to the greatest extent possible, as it travels through the cities of Burbank, Glendale and Los Angeles.

Los Angeles to Anaheim

The Los Angeles to Anaheim Project Section connects Los Angeles and Orange counties by traveling from Los Angeles Union Station (LAUS) to the Anaheim Regional Transportation Intermodal Center (ARTIC) using the existing Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. The approximately 30-mile corridor travels through the cities of Los Angeles, Vernon, Commerce, Bell, Montebello, Pico Rivera, Norwalk, Santa Fe Springs, La Mirada, Buena Park, Fullerton and Anaheim as well as portions of unincorporated Los Angeles County. It also supports the national and regional economy by facilitating cargo movements in and out of the two busiest Ports in the country-Los Angeles and Long Beach.

Stations

The Southern California region includes five highspeed rail stations.

Palmdale Multimodal Station

The Palmdale Transportation Center (PTC) is a multimodal transportation center featuring a Metrolink rail station, a local bus hub and commuter buses. The Palmdale location is predicted to be the hub of future north-south and east-west travel with planned connections to Northern and Southern California and possible future connection to Las Vegas via the High Desert Corridor. Virgin Trains USA is



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currently pursuing construction and future operations between Victorville and Las Vegas. Future high-speed services between Victorville and Palmdale would be made possible by the construction of the High Desert Corridor Joint Powers Authority's proposed rail corridor.

Burbank Multimodal Station

The Burbank Multimodal station will be located adjacent to the Hollywood Burbank Airport and between two Metrolink stations; the Metrolink Hollywood Way Station to the north and the Burbank Airport Station to the south, which also serves as a LOSSAN/Surfliner station. The Burbank location is predicted to be a key transportation hub for the San Fernando Valley with national reach through connections with the Hollywood Burbank Airport and major inland and coastal north-south connections across the state.

Norwalk/Santa Fe Springs and Fullerton Multimodal Stations

Norwalk/Santa Fe Springs and Fullerton Metrolink and/or Metrolink Amtrak stations provide key connectivity points for Southern California. The stations will be preserved and enhanced as part of the high-speed rail project to include the ability for high-speed rail stops, as identified in the State Rail Plan.

Los Angeles Union Station

LAUS serves as a major regional transit hub for Southern California, supporting Amtrak, LOSSAN, Metrolink, subway, light rail, multiple bus services and a regional bike hub. High-speed rail will integrate services into this station, and it is predicted that LAUS will become one of the most frequently used high-speed rail stations in the Phase 1 system.

Anaheim Multimodal Station

The Anaheim Regional Transportation Intermodal Center (ARTIC) was opened in 2014 and designed to accommodate high-speed rail services. ARTIC is a multimodal transportation center featuring a Metrolink/LOSSAN rail station, a local bus hub and commuter buses. It is the first contemporary and fully operational station in the state to serve such a purpose. High-speed rail will integrate services into this station, and it will become the southern terminus of the Phase 1 system.

Major Accomplishments

Legislative Requirements: This section covers statutory requirement (d) Expenditures to date, by segment or contract, for all project phase costs.

The Authority continues to work with regional rail providers to identify, plan and construct projects that will provide early benefits while laying the foundation for future high-speed rail operations. Over the past two years, these efforts resulted in:

- Completion of the SB 1029 bookend project agreement (May 2018) for the Rosecrans Marquardt Grade Separation Project;
- Investment of 80 percent of the connectivity dollars in regionally significant connectivity, mobility, and safety projects; and
- Identification of a state's preferred alternative for each of the four Phase 1 project sections.
- Commitment of \$423 million in bookend funds to the Link US project.

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PHOTO: STATION AREA PLANNING PUBLIC OUTREACH MEETING IN SOUTHERN CALIFORNIA.

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To date, our efforts in supporting Statewide Rail Modernization have also resulted in increased service, and a more robust timetable in the short-term while preserving future high-speed rail service with fewer throw-away costs and right-of-way impacts. Other activities underway include continuing work with the cities of Palmdale, Burbank, Los Angeles, Santa Fe Springs/Norwalk, Fullerton and Anaheim to plan for

network integration and sustainable development at stations and throughout surrounding areas.

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Table 7.9 summarizes the costs by major contract for Southern California. Three contracts related to earlier environmental work are complete and closed out. The remaining contracts relate to project sections within the Southern California region and will conclude with the completion of the environmental clearance for each section.

TABLE 7.9: PRE-CONSTRUCTION PHASE BUDGETS BY CONTRACT AS OF 01/31/19 (DOLLARS IN MILLIONS)

Section	Contract Start	Board Authorization for Amendment	Current Contract Completion	Current Contract Value	Projected Cost at Complete	Expenditures
Bakersfield – Palmdale (URS- HMM-Arup/JV)	February 2007	N/A	Completed	\$26	\$26	\$26
Bakersfield – Palmdale (T.Y. Lin)	February 2014	May 2018	January 2021	\$54	\$54	\$42
Palmdale – Los Angeles (HMM-URS-Arup/JV)	December 2006	June 2014	Completed	\$74	\$74	\$74
Palmdale – Burbank (Sener)	April 2015	May 2018	December 2021	\$65	\$65	\$51
Burbank – Los Angeles (STV)	February 2015	May 2018	January 2020	\$29	\$29	\$19
Los Angeles – Anaheim (STV)	December 2006	N/A	Completed	\$50	\$50	\$50
Los Angeles – Anaheim (STV)	February 2015	May 2018	January 2020	\$34	\$34	\$26

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Milestones Achieved

Legislative Requirement: This section covers statutory requirement (f) A summary of milestones achieved during the prior two-year period and milestones expected to be reached in the coming two-year period.

Southern California made significant strides in moving forward with environmental documents throughout the region. All four project sections have identified preferred alternatives which are now undergoing final review and community collaboration in the production of draft documents.

Preferred Alternatives Identified

In 2018, the Authority Board of Directors concurred with the Staff Recommended State's Preferred Alternative for each project section. These are the first Phase 1 project sections outside the Central Valley to reach this important milestone. Although identification of a preferred alternative does not represent final approval of alignments and/or station locations, the approval allows the Authority to prepare the administrative draft environmental documents and, thus, move closer to completion of this important milestone.

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Bakersfield to Palmdale

In October 2018, the Board of Directors concurred with the Staff Recommended State Preferred Alternative. The Draft Environmental Document for this project section is anticipated to be released in summer 2019 and will include a public hearing as well as agency and public comment opportunities.

Palmdale to Burbank

In November 2018, the Board of Directors concurred with the Staff Recommended State Preferred Alternative. The Draft Environmental Document for this project section is anticipated to be released in winter 2019/2020 and will include a public hearing as well as agency and public comment opportunities.

Burbank to Los Angeles

In November 2018, the Board of Directors concurred with the Staff Recommended State Preferred Alternative, known as the Project Alternative (or Build Alternative). The Draft Environmental Document for this project section is anticipated to be released in fall 2019 and will include a public hearing as well as agency and public comment opportunities.

Los Angeles to Anaheim

In November 2018, the Board of Directors concurred with the Staff Recommended State Preferred Alternative. The schedule for release of the Draft Environmental Document for this project section is being revised now to incorporate recent operations modeling results and with the support of local stakeholders.

Chapter 7: Program and Regional Summaries - Southern California

Bookend Projects Advanced

SB 1029 provides \$500 million for regional rail projects that improve local networks and facilitate high-speed rail travel to Southern California. Status of these two projects is provided in Table 7.10 on the following page. In May 2018, the Authority finalized a funding agreement for Southern California bookend funds with the Los Angeles County Metropolitan Transportation Authority (Metro) for the Rosecrans Marquardt Grade Separation Project Management and Funding Agreement.

Additional projects were identified at the time the Memorandum of Understanding (MOU) was signed in 2012. These projects have also moved forward initiating over \$1 billion in investment to support advancement of the projects identified in the original discussions in 2012.

Rosecrans/Marquardt Grade Separation Project

The Authority and Metro announced in May 2018 the approval of a joint funding agreement that allocates \$76.7 million in Proposition 1A bond funds toward the Rosecrans Avenue/Marquardt Avenue Grade Separation Project in the City of Santa Fe Springs. This contribution will be matched by other local funding sources to complete the \$155.3 million project.

This project will separate vehicle traffic from rail traffic by constructing an elevated overpass structure

which will greatly improve safety, eliminate delays and improve air quality. The crossing, traversed by about 110 freight and passenger trains and more than 52,000 vehicles per 24-hour period, has been rated by the California Public Utilities Commission as one of the most hazardous grade crossings in California.

Los Angeles Union Station

The Authority approved up to \$18 million to help fund engineering and technical studies and to environmentally clear improvements to Los Angeles Union Station that accommodate expanded regional and Inter-city rail service and high-speed rail trains. In January 2019, the Administrative Draft EIR was released, and a public hearing was held. The EIR approval process is expected to conclude in summer 2019.

The Authority will use the remaining bookend funds for Southern California—\$423 million—to fund construction of the first phase of improvements at LAUS that are described in the document mentioned above. These efforts will result in the development of a transportation facility that cost effectively meets the service needs of all operators, including Metro, Metrolink, LOSSAN, Amtrak, the Authority and other partners.

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TABLE 7.10: SOUTHERN CALIFORNIA BOOKEND PROJECTS' FUNDING STATUS AS OF 1/31/19 (DOLLARS IN MILLIONS)

Project Name	Owner/Location	Status	Total Allocation	Expenditures
Rosecrans Marquardt Grade Separation	LA Metro City of Santa Fe Springs/ Los Angeles	All agreements in place Right-of-way acquisition underway Construction anticipated 2021-2023	\$77	\$0
Link US (Phase A Run Through Tracks)	LA Metro/ Los Angeles	Project definition completed Preliminary Agreement Discussions Underway Right-of-way acquisition anticipated 2020 Construction anticipated 2021-2023	\$423	\$0



VISUAL: LINK US PROJECT EXPANDS CAPACITY AND TRANSFORMS LAUS INTO A "RUN-THROUGH" STATION.

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Milestones to Follow

Completing the environmental approvals for the Phase 1 system is important because it maximizes the state's ability to prepare accurate cost estimates for future work, identify phasing and funding plans for future work, and swiftly and efficiently advance any segment of the system when resources become available.

Environmental Approvals

The next milestone for Southern California project sections is the release of the Draft Environmental Documents for each of these four project sections as shown in Table 7.11 on the following page. It is currently anticipated that these documents will be released prior to the Authority submitting the final 2020 Business Plan to the Legislature. It is anticipated that the environmental documents will be completed before the Authority submits the 2021 Project Update Report to the Legislature.

The Authority will also continue to coordinate with infrastructure owners and operators to further develop the concept of blended service with other passenger and freight rail services.

The discussions will include:

- Analyzing ridership and revenue forecasts to ensure that operations will meet statutory requirements;
- Continually assessing the potential for publicprivate partnerships so private investment can be brought in at the right time to support the schedule and maximize the amount of the investment;

- Working with partners, above and beyond the MOU commitment mentioned above, to grow available funding by bringing together the widest variety of funding sources to complete projects that deliver operational benefits for passenger and freight services sooner;
- Extending concurrent construction south to the Burbank to Anaheim corridor, where investments in network elements such as junctions, storage and maintenance, signaling, and integrated services and ticketing create immediate benefits for freight and passenger service;
- Increasing engagement with agencies across the state to understand and articulate the benefits of investments and better describe how regional priorities contribute to improved air quality, service, safety, capacity, frequency and reliability, and help increase ridership; and
- Completing the station area plans for Palmdale and Burbank

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Project Section	Preferred Alternative Selected	Draft EIR/EIS	Final EIR/EIS and Receive Record of Decision
Bakersfield to Palmdale	October 2018	July 2019	June 2020
Palmdale to Burbank	November 2018	December 2019	January 2021
Burbank to Los Angeles	November 2018	September 2019	June 2021
Los Angeles to Anaheim	November 2018	Late 2019/Early 2020	March 2021

EXHIBIT 7.14: ESTIMATED RECORD OF DECISION (ROD) COMPLETION TIMELINE



Exhibit 7.14 shows the changes in the estimates for completing Records of Decision for the relevant project sections. Each estimate was discussed in the corresponding report identified in the legend.

Chapter 7: Program and Regional Summaries - Southern California

Bookend Projects

Construction on the Rosecrans/Marquardt project is anticipated to start as early as 2021, and the project is targeted for completion in 2023.

The Authority will complete and execute the Subpart (d) Funding Plan and Project Management and Funding Agreement for the Link US or Los Angeles Union Station Run Through Track project. The Authority anticipates that these agreements will be signed prior to the submittal of the 2020 Business Plan to the Legislature.

Construction on these projects will begin before the Authority submits the 2021 Project Update Report to the Legislature.

Stations

The Authority continues to work with station communities along the Phase 1 high-speed rail route to complete station area plans. Station area planning involves local jurisdictions/joint powers, local governments, regional and local transit providers, and other interested parties that establish, relocate and provide transportation in their region.

Planning elements include parking strategies, streetscapes that promote walking, biking and transit use, finance plans, zoning for residential and commercial activities, and station place-making. Every station will be unique for each region; aligning community and high-speed operational needs to the goals for each station is a major collaborative effort.

TABLE 7.12: STATION AREA PLANNING DELIVERABLES - SOUTHERN CALIFORNIA REGION

Station Area Jurisdiction	Description	Partners	Completion Date
City of Palmdale	Station area plan	LA County, Metrolink, XpressWest	2022
City of Burbank	Station area plan	LA County, Metrolink, Airport	2022

The Authority has entered into agreements with governmental jurisdictions and transit providers to facilitate coordinated efforts to achieve successful city-regeneration opportunities and enable more sustainable, district-scale development and area circulation.

Table 7.12 summarizes the key milestones for completing existing agreements, and notes key partners involved in providing the necessary input.

Palmdale Multimodal Station

The Authority has collaborated with Palmdale to establish a Regional Coordinating Body and to support advancing research and analysis into network integration, zoning, development potential/real estate assessments and other elements of sustainable planning efforts.

Next steps include finalizing a station access, parking, and circulation study, financing and fiscal impact plans, and the Draft Station Access Plan and related EIR/EIS documents.

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Burbank Multimodal Station

The Authority has collaborated with Burbank to establish a Regional Coordinating Body and to support advancing research and analysis into network integration, zoning, development potential/real estate assessments and other elements of sustainable planning efforts.

Next steps include finalizing a station access, parking, and circulation study, financing and fiscal impact plans, and the Draft Station Access Plan and related EIR/EIS documents.

Norwalk/Santa Fe Springs and Fullerton Multimodal Stations

The Authority is collaborating with Norwalk/Santa Fe Springs and Fullerton, along with Metrolink, LOSSAN and Amtrak, to protect these existing stations during the construction and operations of the high-speed rail system. The Authority is also focused on planning the infrastructure so that high-speed rail trains could also stop at these locations for additional connectivity to Los Angeles International Airport via Norwalk/Santa Fe Springs and to the Inland Empire via Fullerton.

The Authority plans to continue work with regional partners to advance the Southern California Association of Government's efforts on the Green Line Extension study, which was started recently.

Los Angeles Union Station

The Authority is working as a partner with Metro on the Link US project. Making use of the ARRA grant and its recognition of the importance of this facility to the future high-speed rail service, the Authority directed more than \$18 million to the planning and environmental clearance activities underway today. The Authority is part of the Regional Coordinating Body that Metro established for work on this important project. The Authority actively supports research and analysis into network integration and future operations, while participating in discussions on zoning, development potential/real estate assessments and other elements of sustainable planning.

Next steps include completion of the EIR/EIS documents for the Link US project and high-speed rail project sections and completion of the funding agreement to direct the remaining SB 1029 bookend funds to begin construction on run-through tracks.

Anaheim Regional Transportation Intermodal Center (ARTIC)

Throughout planning, design and construction, the Authority collaborated with the City of Anaheim to support advancement of research and analysis into network integration, zoning, development potential/real estate assessments and other elements of sustainable planning.

Next steps include finalizing high-speed rail's plan to integrate service into the station and incorporation of associated station access, parking, circulation and related plans in the Draft EIR/EIS documents, which are planned for release in 2019/2020.

Chapter 7: Program and Regional Summaries - Southern California

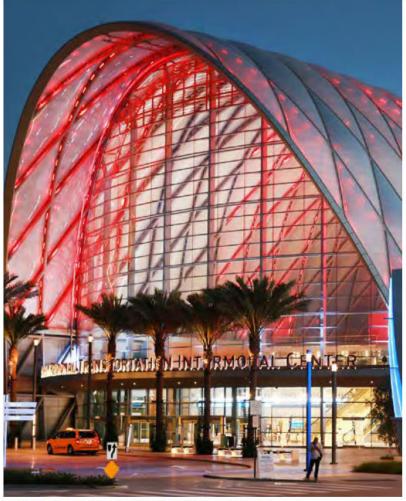


PHOTO: ANAHEIM REGIONAL TRANSPORTATION INTERMODAL CENTER (ARTIC)

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August 2020

California High-Speed Rail Authority



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Connectivity Projects

We continue to work with our state and regional partners to fulfill our commitment, as embodied in a 2012 MOU, to collaborate on and accelerate regionally significant concurrent investments in Southern California. These connectivity projects can be completed incrementally and provide significant near-term improvements that will benefit passenger, freight and auto traffic. They will also serve as building blocks for high-speed rail service in California.

Through this MOU, the Authority is working with its partners to leverage resources, secure new funding, identify and fund projects ready to move into construction (or advance others through

environmental clearance) and advance improvements as quickly as possible.

The Authority worked to achieve early approval and release of Proposition 1A connectivity dollars for construction of many regionally significant projects most notably in the heavily congested urban rail corridors in Southern California and is working to finalize the agreements required to achieve approval.

Progress on the investment of the connectivity funds is reported quarterly to the California Transportation Commission. Table 7.13 summarizes the connectivity dollars appropriated by SB 1029 directed to significant safety, network integration, and key mobility buildingblock projects.

TABLE 7.13: SOUTHERN CALIFORNIA CONNECTIVITY PROJECTS' STATUS (DOLLARS IN MILLIONS)

Sponsor	Name	Funding	Project Completion Date
Southern California Regional Rail Authority	Positive Train Control	\$47	Completed
North County Transit District (San Onofre to San Diego)	Positive Train Control	\$24	December 2018
Caltrans	Los Angeles to Fullerton Triple Track	\$3	Completed
Southern California Regional Rail Authority (SCRRA)	Metrolink Positive Train Control	\$35	December 2018
Los Angeles County Metropolitan Transportation Authority	Regional Connector Transit Corridor	\$115	October 2021
Southern California Regional Rail Authority (SCRRA)	Metrolink High-Speed Rail Readiness Program	\$89	December 2019
San Diego Association of Governments	Blue Line Light Rail Improvements	\$58	Completed
North County Transit District	Positive Train Control	\$18	December 2018

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Statutory Requirements

Project Update Report

On or before March 1, 2017 and every two years thereafter, the Authority shall provide a project update report, approved by the Secretary of Transportation and consistent with the criteria in this section, to the budget committees and the appropriate policy committees of both houses of the Legislature, on the development and implementation of intercity high-speed train service pursuant to Section 185030. The report, at a minimum, shall include a program wide summary, as well as details by project section, with all information necessary to clearly describe the status of the project, including, but not limited to, all of the following:

- (a) A summary describing the overall progress of the project.
- (b) The baseline budget for all project phase costs, by segment or contract, beginning with the California High-Speed Rail Program Revised 2012 Business Plan.
- (c) The current and projected budget, by segment or contract, for all project phase costs.
- (d) Expenditures to date, by segment or contract, for all project phase costs.
- (e) A comparison of the current and projected work schedule and the baseline schedule contained in the California High-Speed Rail Program Revised 2012 Business Plan.
- (f) A summary of milestones achieved during the prior two-year period and milestones

- expected to be reached in the coming twoyear period.
- (g) Any issues identified during the prior two-year period and actions taken to address those issues
- (h) A thorough discussion of risks to the project and steps taken to mitigate those risks.

Project update reports are required to be prepared biennially in odd-numbered years. The Authority is also required to prepare and submit business plans to the Legislature, also on a biennial basis, in even-numbered years. Together these fulfill the requirements of Government Code 16724.4 which relates to annual reporting requirements associated with voter approved bond measures.

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tatutory Requirements	Location in 2019 Project Update Report	Checkmark
A summary describing the overall progress of the project.	Chapter 7: Program and Regional Summaries	\odot
he baseline budget for all project phase costs, by segment or contract, beginning with the California High-Speed Rail orgram Revised 2012 Business Plan.	Chapter 2: Capital Cost Review; Chapter 7: Program and Regional Summaries	\odot
he current and projected budget, by segment or contract, for Il project phase costs	Chapter 2: Capital Cost Review; Chapter 7: Program and Regional Summaries	\odot
xpenditures to date, by segment or contract, for all project hase costs.	Chapter 3: Funding and Affordability	\odot
comparison of the current and projected work schedule and the baseline schedule contained in the California High-Speed all Program Revised 2012 Business Plan.	Chapter 2: Capital Cost Review	\odot
summary of milestones achieved during the prior year and nilestones expected to be reached in the coming year.	Chapter 7: Program and Regional Summaries	\odot
any issues identified during the prior two-year period and ctions taken to address those issues	Chapter 5: Program Issues	\odot
t thorough discussion of risks to the project and steps taken o mitigate those risks.	Chapter 6: Program Risk	(V)

Correspondence

- Letter from the Secretary of California State Transportation Agency, April 22, 2019
- Letter to the Administrator, Federal Railroad Administration, March 4, 2019
- Letter to the Director of the Office of Program
 Delivery, Federal Railroad Administration,
 March 4, 2019

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April 22, 2019

Mr. Brian P. Kelly Chief Executive Officer California High-Speed Rail Authority (CHSRA) 770 L Street, Suite 620 Sacramento, CA 95814

Re: Early Interim Service on California High-Speed Rail Authority's Merced to Bakersfield Segment and Statewide Rail Modernization

Dear Mr. Kelly:

This letter regards the California High-Speed Rail Authority's (CHSRA) proposed Early Interim Service on the Merced to Bakersfield Section as described in the 2019 Project Update Report (PUR), and the consistency of that proposed service with the 2018 California State Rail Plan and investments the California State Transportation Agency (CalSTA) is making in intercity and commuter rail. CalSTA has reviewed the service plan developed by the Early Train Operator and finds that plan would be fully consistent with the State Rail Plan and would significantly increase frequencies, speeds, and ridership for rail in the Central Valley, and ultimately the state.

Since 2013, CalSTA has been in active conversations on the topic of early service with CHSRA and other rail stakeholders, including the Federal Railroad Administration (FRA). Both the 2018 High-Speed Rail Business Plan and the 2018 California State Rail Plan pointed to the opportunity to improve statewide mobility through integrated statewide services that made initial use of completed infrastructure in the Central Valley. With the analysis completed by the Early Train Operator and reflected in the most recent PUR, the benefits of such action are clear.

This Agency, and our transportation partners have made a multi-billion-dollar commitment to continued rail modernization in the state. This effort includes more than \$1.3 billion in capital investments for the Altamont

Corridor Express (ACE) and San Joaquin services, primarily through the Valley Rail program, and more than \$1 billion in investment by 2025 to extend ACE services to both Sacramento and Merced, as well as adding new Amtrak San Joaquin services to the Merced/Sacramento and Merced/Oakland corridors – funding for this effort comes primarily through the Transit and Intercity Rail Capital Program (TIRCP) administered by CalSTA. In addition, the state is making additional investments through the 2018 State Transportation Improvement Program (STIP) in better stations and platforms in the corridor (over \$50 million) and, through FRA and Prop 1B funds, in 8 Tier IV Siemens Charger locomotives and 49 Siemens rail cars that will operate in the Amtrak San Joaquin corridor (an investment exceeding \$250 million). These improvements will be implemented to take advantage of the opportunity to run services that will integrate with each other in Merced, leading to significant ridership and revenue gains within the Central Valley and between the Central Valley and the Bay Area.

We are also in the midst of implementing additional improvements in Southern California that will provide an integrated Metrolink, Coaster and Amtrak Pacific Surfliner network, with significantly greater frequencies and the opportunity to provide much shorter bus connections between the Bakersfield area and the Northern San Fernando Valley, where connections to trains would occur instead of requiring travelers to ride buses through Southern California highway congestion all the way into Los Angeles Union Station. We are increasing frequencies to Orange County, San Diego, and up the Central Coast to Santa Barbara and beyond, and also supporting the growth in Metrolink and Coaster services that provide access to many additional stations.

The result of these funded improvements, along with CHSRA's proposed Early Interim Service, will be a statewide rail network with better overall performance, generating higher ridership and revenue for the money the state invests.

I look forward to seeing the continued progress of the high-speed rail project, as we collectively work to meet the mobility and greenhouse reduction needs of the state.

Sincerely

BRIAN C. ANNIS Secretary

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San Francisco to Los Angeles/Anaheim. Laving this groundwork will enable us to ultimately connect a revitalized Central Valley to Silicon Valley and Southern California.

This approach ensures the assets we are constructing with federal funding have the maximum independent utility while we advance project development work elsewhere and pursue additional funding to complete the entire system. As the FRA has already agreed, this building-block approach is appropriate in a constrained funding scenario.

The Governor's proposal is wholly consistent with the concept for an early interim service that has been submitted to and reviewed by the FRA in 2013, 2014, and 2016. In fact, the Governor's approach would expand the initial construction segment selected by the FRA in 2010 to maximize interim ridership and regional connectivity. This is achieved by extending the route to connect urban centers (Merced-Fresno-Bakersfield) and to provide important transit connectivity to the Altamont Corridor Express (ACE) and Amtrak traveling to the Bay Area as well as Sacramento in the north and to bus services traveling from Bakersfield to Los Angeles in the south. A more detailed analysis and implementation plan is forthcoming in the Project Update Report we will submit to the California Legislature on May 1, 2019.

The Governor's proposal for high-speed rail's early operations in the Valley would be tangible and transformative for Californians. Importantly, it would not require any additional funding from the federal government. In other words, under our current funding plan, the State, not the federal government, will bear the cost of expansion to downtown Bakersfield and to Merced.

In support of this vision, the Authority is making measurable progress towards the objectives of the federal grant agreements. The history of our relationship is marked by effective collaboration between California and the FRA to advance the project. We have achieved progress by working together to constructively address challenges on the ground. Indeed, the funding agreements we have executed with you have been amended six times already to ensure we can achieve project objectives in the face of various challenges.

This kind of collaboration is valuable and must be maintained. Through this approach, we have:

- Advanced construction on the 119-mile segment selected for funding by the FRA in 2010 and 2011 so that:
- More than 2,600 workers in the Central Valley have gone to work constructing high-speed rail;
- 488 small businesses have worked on the project;



March 4, 2019

BOARD BIRRERS Lenny Mendonce

Thomas Richards Ernest M. Camacho

Rennie Lowentha Nancy Miller Lynn Scheek

DE CRECK

Dr. Juagain Arambula Honorable Jim Beal

Stine P. Kelly

Ronald L. Batory, Administrator Federal Railroad Administration. West Building 1200 New Jersey Avenue, SE Washington, DC 20590

Subject: Notice of Intent to Terminate Cooperative Agreement No. FR-HSR-0118-12-01-01

Dear Mr. Batory:

I write in response to your letter dated February 19, 2019, stating that the Federal Railroad Administration (FRA) intends to terminate Cooperative Agreement No. FR-HSR-0118-12-01-01 (FY10 Agreement or Agreement) and de-obligate the \$928,620,000 obligated under the Agreement. Per the direction in your letter, I have attached a comprehensive and formal response to the issues raised which, as requested, is directed to Ms. Jamie Rennert, FRA Director of Program Delivery.

There are two facts that should be emphasized at the outset. First, Governor Newsom is committed to building a transformative, visionary high-speed rail project in full compliance with federal grant requirements. Second, the California High Speed Rail Authority is making progress, and has met its commitments under its federal grant

Governor Newsom's recent public expression of support for delivering high-speed rail in California does not constitute a fundamental change in the purpose of the overall project for which federal funding was awarded. In fact, the Governor described a pragmatic approach to using the funding now committed to this project to get high-speed trains on the ground in California as soon as possible-by completing an early high-speed rail link operating in the Central Valley between Merced and Bakersfield; continuing our regional projects in the north and south; and finishing the required environmental clearances on all Phase 1 segments from

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- More than 20 construction sites are underway and 4 structures completed:
- State Route 99 realignment near Fresno has been built with over 1,750 craft laborers and 56 small businesses;
- Nearly \$6 billion in economic output has been achieved.
- Met the federal statutory deadline for the expenditure of more than \$2.5 billion in federal funds appropriated by Congress and directed to this project;
- Progressed the environmental documents for the entire Phase 1 project from San Francisco-Los Angeles/ Anaheim so that we are on schedule to complete this work consistent with our federal grant agreement; and
- Improved our project controls (working with the FRA) to identify project risks that require active mitigation and management to limit impacts on cost, scope and schedule.

In light of this progress, I feel it is imperative to communicate directly to you that termination of the FY10 Agreement would be unwarranted, unprecedented, and harmful to the Project and to the people of the Central Valley, the State of California, and the nation.

Moreover, any "clawback" of federal funds already expended on this project would be disastrous policy. It is hard to imagine how your agency-or the taxpayers-might benefit from partially constructed assets sitting stranded in the Central Valley of California. It is equally difficult to imagine the policy benefit of sending home the more than 2,600 craft workers, men and women who have been dispatched to work on the 119-mile segment now under construction in the Central Valley, one of the nation's most economically distressed regions. Similarly, there is no benefit to sending "stop work" notices to the 488 small businesses, 15 of which are from outside of California, contracted to work on this project. This infrastructure legacy would forever be a travesty.

There is a better way forward. Let's restore the functional relationship between our agencies so progress on this project and the related economic benefits can continue, and the important environmental and mobility benefits can be realized at the earliest possible time.

The challenges we confront today are not new, nor are they caused by unilateral decisions by the Authority. They are the product of joint decisions made by our agencies over many years. Where this project commenced construction was determined by the FRA through its grant awards in 2010 and 2011.

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The timing of executing construction contracts and even the groundbreaking for the project involved the full participation and approval of the FRA. The recent decision to hold back federal participation in our joint environmental review process-negatively affecting the project schedule-was made by the FRA.

While the challenges are not new, overcoming them does require doing business differently—here and at the FRA. Toward that end, Governor Newsom implemented governance changes and ordered enhanced transparency measures so taxpayers, policymakers and our partners (including the FRA) can easily see how public dollars are being spent and how the project is progressing. My board fully supports this direction, and we have started implementing enhanced transparency measures like new quarterly reporting to the Legislature and greater public access to project documents available online. We have also been working with FRA staff to improve project controls, so we can jointly measure, monitor and mitigate project risks. Continuing this work together is essential to avoid repeating mistakes of the past.

You and I, in our respective jobs for just over a year now, live with the implications of prior decisions. Nevertheless, we continue to make progress in the face of complex challenges. This Authority and your agency are closer than we ever have been on a shared perspective of the project risks that must be managed to be successful.

I am committed to successfully managing those risks, and I am requesting your partnership to do so. I respectfully ask that you do not terminate the Cooperative Agreement, but instead, as the attachment details, join me to lead our agencies in a structured process to share facts, clarify misunderstandings, and resolve disagreements.

Our goal here should be the successful delivery of America's first truly high-speed rail service. You have California's commitment to engage in good faith and get this important work done.

Thank you for your consideration.

Respectfully,

Brian P. Kelly

Chief Executive Officer

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APPENDICES





BOAKD NESSEERS

Thomas Richards

Ernest M. Camacho

Bennie Lowenthal

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Dr. Josephin Arzenbuli Honorable Jen Beal

Brine P. Kelly



March 4, 2019

Ms. Jamie Rennert Director, Office of Program Delivery Federal Railroad Administration 1200 New Jersey Avenue, SE Washington, DC 20590

Subject: Notice of Intent to Terminate Cooperative Agreement No. FR-HSR-0118-12-01-01

Dear Ms. Rennert:

I am responding on behalf of the California High-Speed Rail Authority ("CHSRA") to Ronald Batory's February 19, 2019 notification that the Federal Railroad Administration ("FRA") intends to terminate Cooperative Agreement No. FR-HSR-0118-12-01-01 ("FY10 Agreement" or "Agreement") and de-obligate the \$928,620,000 obligated under the Agreement effective March 5, 2019.

I urge the FRA to reconsider the precipitous and unjustified action it is contemplating. Termination of the FY10 Agreement would be unwarranted, unprecedented, and legally indefensible, and it would gravely harm a historic project on which the FRA and the CHSRA have collaborated productively for nearly a decade.

As detailed below, the CHSRA is meeting its commitments under the FY10 Agreement and Cooperative Agreement No. FR-HSR-0009-10-01-06 (the "ARRA Agreement"). The CHSRA is making reasonable progress on the Project. And, far from abandoning the ultimate vision of a California high-speed rail system running from northern to southern California, Governor Newsom is proposing billions of dollars in additional state funding to expand the initial construction project in the Central Valley required by the ARRA

Agreement. This expanded system will connect three of the largest cities in the

1 Unless otherwise indicated by context, "Project" refers to Tasks 1 through 10 listed in the FY10 Agreement and the ARRA Agreement.

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Central Valley (Merced, Fresno, and Bakersfield), providing service to millions of individuals and transforming the economy of one of the nation's most economically distressed regions, as well as providing important transit connectivity to Los Angeles, the Bay Area, and Sacramento. The threatened termination of funding, by contrast, would cause massive disruption, dislocation, and waste, damaging the region and endangering the future of highspeed rail in California and elsewhere in the nation.

Accordingly, the FRA should reconsider the rash and unlawful action it is contemplating and instead engage in reasoned and structured discussion with the CHSRA of its concerns. The FRA's threat to terminate funding under the FY10 Agreement on two weeks' notice is a sharp departure from the productive, collaborative relationship previously enjoyed by the FRA and the CHSRA. In light of that relationship, and the disruption and waste that abrupt termination of the

Agreement would cause, we owe it to the residents of the Central Valley, state and federal taxpayers, and the nation as a whole to continue cooperating on our historic and transformative high-speed rail project.

EXECUTIVE SUMMARY

The February 19, 2019 notification letter from Mr. Batory (the "Notice") asserts that the CHSRA has materially breached the FY10 Agreement based on four factors. But none of the conduct identified by the Notice constitutes a material breach of the Agreement, and the Notice's assertions of additional unidentified breaches are contradicted by the FRA's previous acknowledgements that the CHSRA has been complying with the essentially identical terms of the ARRA Agreement.

For example, although the Notice asserts that the CHSRA has failed to make required expenditures, the only shortfall that it identifies is the failure to meet projected design and construction expenditures in December 2018. Deviations from projected expenditures are, however, routine in any large construction project, and nothing in the FY10 Agreement makes such a deviation a breach, much less a material one.

Moreover, far from asserting any prior material breaches, the FRA repeatedly has acknowledged that the CHSRA was complying with its obligations. Under the ARRA Agreement, the FRA was permitted to release funds only if the CHSRA was complying with the Agreement. Nevertheless, the FRA released all the ARRA funds, making over 450 separate payments to the CHSRA from March 2011 to September 2017, when the account closed, thereby acknowledging the CHSRA's compliance with its spending (and other) obligations.

The Notice's other assertions of non-compliance are similarly unsupported. While the Notice concludes that the CHSRA will not complete the Project by the end of 2022, the only documents cited in support of this conclusion expressly state that the Project will be completed by then. Even more fundamentally, the Notice does not point to any "time is of the essence" clause or other provision in the Agreement making completion by 2022 material.

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The Notice similarly fails to identify any specific deliverables that the CHSRA has failed to satisfy, much less to explain why such failures would be material and cannot be cured. Finally, contrary to the Notice's assertion, the CHSRA has not failed to take any corrective action required by the FRA: indeed, the FRA has notified the CHSRA of only one corrective action, which the CHSRA completed.

The Notice also asserts that the CHSRA has failed to make reasonable progress on the Project. Here again, the Notice's assertion is belied by the FRA's prior conduct. In addition to prohibiting the release of funds absent compliance, the ARRA Agreement prohibited the release of funds unless the CHSRA was making adequate and timely progress. As a consequence, when FRA released funds under that Agreement from March 2011 through September 2017, it necessarily acknowledged that the CHSRA was making reasonable progress. Moreover, nothing in the Notice suggests that the CHSRA has stopped doing so. To the contrary, in the last year the CHSRA has made important progress in completing the Project. Indeed, there are now 24 active or completed construction sites in the Central Valley, employing more than 2,600 workers, who are realigning roads and utilities, building bridges, viaducts, and crossings, as well as grading roads and constructing embankments.

California has not changed the overall purpose of its High-Speed Rail Plan, nor has it frustrated the purpose of the Agreement. To the contrary, Governor Newsom has reiterated his support for the vision of his predecessors. He is, however, focused on completing the current project in the Central Valley and maximizing the benefits of that project. Far from frustrating the purpose of the Agreement, he is proposing to expand the construction contemplated by the Agreement so that the first building block of the high-speed rail program will bring the benefits of high-speed rail to three of the largest cities in the Central Valley and three of the fastest growing counties in California.

The threatened termination of the FY10 Agreement on two weeks' notice is a sharp and wasteful departure from the FRA's fruitful collaboration with the CHSRA, which is necessary to complete any large infrastructure project. If this abrupt termination occurs, the FRA will not only endanger the historic project on which it has collaborated for nearly a decade; it also will set a troubling precedent that may undermine future infrastructure projects funded through state-federal partnerships. Accordingly, the CHSRA urges the FRA to reconsider its contemplated action or, at a minimum, to engage in structured discussions to share facts, clarify misunderstandings, and resolve disagreements.

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DISCUSSION

I. THE CSHRA HAS NOT MATERIALLY BREACHED THE FY10 AGREEMENT

The Notice asserts that the CHSRA has materially breached the terms of the FY10 Agreement based on four specified factors². The Notice, however, fails to identify any material breaches and thus fails to provide any legitimate ground for terminating the Agreement for non-compliance.

A. The CHSRA has Committed and Spent More Than Sufficient State Funds for the Project

The first factor specified in the Notice is the failure to make required State expenditures. The Notice, however, identifies only one specific shortfall: the CHSRA's expenditure of \$47.9 million rather than the \$141.8 projected on final design and construction in December 2018. It is true that the last quarterly Funding Contribution Plan projected design and construction expenditures of \$141.8 million in December 2018, and that only \$47.9 million was actually spent. But nothing in the FY10 Agreement required a \$141.8 million expenditure in December 2018 or that the CHSRA meet its expenditure projections each month.

Projections are just estimates for a given period. A deviation from such estimates is not a material breach. In any civil infrastructure project, the exact pace of the final design and construction activities varies over the duration of the project. If the projected progress in one month does not match the actual progress, the pace of the progress in subsequent months can be accelerated. This is especially true with delays early in a project when critical path items are being constructed because such delays may delay the commencement of others. But later noncritical path items can be accelerated to make up for the lost time and bring the project back on schedule.

The Notice's assertion that the current pace of state expenditures breaches the FY10 Agreement is also puzzling because CHSRA is not yet making expenditures under the FY10 Agreement. The FY10 Agreement funds the final set of tasks needed to complete the Project. The rest of the funding for the Project is being provided by the State and by the ARRA Agreement. Although the federal money granted under the ARRA Agreement was exhausted in September 2017, when the ARRA appropriation account closed, the CHSRA is still in the process of spending \$2.5 billion in matching state funds under the ARRA Agreement.

Far from finding that the State materially breached the terms of the ARRA Agreement, the FRA repeatedly has recognized the CHSRA's compliance with that agreement. Under Section 7(b) of the General Provisions in Attachment 2 of the ARRA Agreement, the FRA may authorize release of funds only if it receives adequate documentation of a cost and the CHSRA is "complying with its obligations" under the ARRA Agreement.

² The Notice states that the FRA's assertion of material breach is based on "many" factors, but only identifies four areas of noncompliance. The CHSRA cannot respond to allegations concerning factors that have not been identified, and it would be fundamentally unfair for the FRA to terminate the Agreement based on factors that it has not given the CHSRA a chance either to contest or to cure.



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Pursuant to this provision, the FRA made over 450 separate payments to CHSRA from March 2011 through September 2017, thereby acknowledging that the CHSRA has been complying with its obligations.

Moreover, California is well ahead of schedule in meeting its matching obligation under the ARRA Agreement. As of December 2018, the CHSRA has submitted for FRA approval \$970 million in state matching funds, which is 39% of California's \$2.5 billion match requirement. As only 26% of the period for achieving this match has expired, California is plainly on track to meet its state match funding obligation under the ARRA Agreement. Furthermore, in 2018 the CHSRA committed an additional \$3.1 billion in state funding toward the Project, which would result in a total State contribution of 71% of the Project's cost. Thus, the State has committed to more than its fair share of the Project, and there has been no breach of the State's spending obligations.

B. The CHSRA Remains Committed to Completing the Project by December 31, 2022

The second factor identified by the Notice is that the CHSRA will not complete the Project by December 31, 2022. Here again, the facts identified by the Notice fall short.

The Notice asserts that the FRA's evaluation of various documents shows that the CHSRA cannot complete the Project by the end of 2022. But the only documents that the Notice identifies are CHSRA's Fourth Quarter 2018 Summary Schedule and its February 2019 Finance and Audit Committee reports. Far from showing that the Project will not be completed by 2022, the Fourth Quarter 2018 Summary Schedule shows that most work on the Project will be completed by March 2022 and the four final tasks by the end of that year. The Notice's reliance on the 2019 Finance and Audit Committee Reports is equally misplaced. According to the monthly report that the committee received this February, the construction packages in the Central Valley will be completed by December 31, 2020, August 31, 2021, March 31, 2022, and December 31, 2022.

Completing these packages on this schedule will be challenging. But as most recently outlined at the February 19, 2019 Finance and Audit Committee meeting with the public in attendance, the CHSRA acknowledges the risks to the project schedule that must be monitored and mitigated to keep the Project on track. The Authority is therefore implementing strategies to meet those challenges, and its Chief Operating Officer has set out the construction expenditure plan required to meet the December 31, 2022 deadline as well as creating crossfunctional Strike Teams to clear project work sites, establishing teams to resolve commercial contractor charges and claims, and appointing an Executive COO and a Deputy COO focused solely on increasing construction productivity. The Notice does not—and cannot—explain why despite these actions the CHSRA cannot complete the Project by the end of 2022.

The FRA also notes one report submitted to the CHSRA's Finance and Audit Committee shows that a contractor has expended only 25.1% of a contract price even though 86.5% of the contract period has elapsed. But this report concerns "Construction Package 4," which is just one of four contract packages. The Notice

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offers no reason to believe that a delay in the completion of this one aspect of the Project will prevent completion of the overall Project by December 31, 2022, which is still more than three years away. Indeed, as the FRA knows, the CHSRA has been in active negotiations to correct the completion date for that contract package consistent with completion of the overall Project by the end of 2022.

Even more fundamentally, the Notice does not explain why a delay in completion of the overall Project would constitute a material breach of the FY10 Agreement. The Agreement contains no "time is of the essence" provision. Nor does the Agreement's termination provision state that failure to achieve 100% completion by the end of 2022 constitutes grounds for termination. To the contrary, Section 23.c of the General Provisions in Attachment 2 of the Agreement states that "[e]xpiration of any Project time period established for this Project does not, by itself, constitute an expiration or termination of this Agreement."

It is also surprising to us that the FRA is now finding the Project hopelessly and fatally delayed, because the agency has refused for nearly a year to take simple actions that would accelerate the Project. In June 2018, the CHSRA applied to conduct environmental reviews under the National Environment Policy Act concurrent with our robust state environmental review process. As staff at the United States Department of Transportation as well as the FRA have acknowledged, this simple measure would save months in project review (as well as millions of dollars in redundant expenses). Nevertheless, the FRA has not acted on our application, and, to make matters worse, since last August it has failed to conduct even the most routine review and approval of documents necessary to advance the environmental clearance process. The FRA should not point to delays, assert that future deadlines will be missed, and abandon the Project when it has failed to take simple steps to reduce delays.

The need to amend an interim schedule does not suggest or establish that a project cannot be completed or that its ultimate value will be diminished, and it certainly provides no reason to terminate the FRA's participation in a multi-billion-dollar project. The FRA should be working with the CHSRA on ways to limit those delays and expedite completion of the Project. Large design-build public transportation projects encounter scores of challenges and therefore require persistence, creativity, and inter-agency cooperation.

C. The CHSRA Is Meeting Its Obligations to Submit Deliverables

The Notice asserts that the CHSRA has failed to submit "critical grant deliverables," including Funding Contribution Plans. In particular, it asserts that the FRA has found over 40 reports and deliverables either delinquent or lacking sufficient information. This is the first time that the FRA has identified deliverables as an issue so major that it might justify termination of the FY10 Agreement, and because the Notice fails to identify any particular report or deliverable, much less the deficiency in it, the CHSRA is not in a position to respond fully to this concern at this time. Nonetheless, it is clear that these asserted deficiencies do not justify termination of the Agreement.

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> First, a lack of sufficient information in deliverables is no basis for declaring a material breach, much less termination, because such deficiencies are obviously curable.

Second, while the Notice asserts that the FRA has found 40 reports and deliverables deficient since 2016, the FRA previously recognized that there were no material deficiencies before September 2017. As noted above, until the ARRA Agreement funds were exhausted in September 2017, the FRA approved payments under that agreement, thereby acknowledging that CHSRA was in compliance with the agreement. As the deliverables under the ARRA Agreement overlap with those under the FY10 Agreement, there could not have been any material breach of the latter concerning deliverables prior to September 2017. Moreover, nothing in the Notice suggests that any deficiencies since that time are any different in kind or number than those before.

Third, the CHSRA has made substantial submissions to the FRA. In total, it has delivered to the FRA 121 documents and plans specifically identified in the Agreements, including detailed reports, environmental documents, design plans, and other plans. The CHSRA is unaware of any deliverables that have not been submitted other than four that were due at the end of last year, which the CHSRA has been unable to deliver because of the government shutdown and the FRA's subsequent delay in providing routine guidance concerning the content of those documents requested by the CHSRA.

While some other deliverables have been delayed, many of the delays were also attributable to the FRA. For example, environmental deliverables were delayed when the FRA ceased all work on environmental approvals pending resolution to the CHSRA's NEPA Assignment request. Other deliverables, such as the Interim Service Development Plan, were delayed while the CHSRA awaited guidance on the content of those documents, and still others such as the Program Management Plan were delayed because the FRA changed the guidance it provided or requested additional information. Because the Notice fails to identify the deliverables it contends were deficient, it is impossible to say how many of the deficiencies asserted by the FRA are attributable to its own action or inaction.

D. The CHSRA Has Not Failed to Take Corrective Actions or Respond to The FRA's Monitoring

Finally, the Notice asserts that the CHSRA has consistently failed to take appropriate corrective action. That is simply false. Under the procedures established by the FRA, if the FRA determines that a corrective action is required, it is supposed to issue a finding and a notice of the corrective actions required, usually in its monitoring reports. The FRA has issued only one such finding and notice under the ARRA and FY10 Agreements. That was in a 2014 review related to the CHSRA's oversight of a contractor's compliance with permit requirements, and the CHSRA promptly implemented a corrective action plan, which resolved the

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The FRA's own reports confirm that, contrary to the Notice's suggestion, the CHSRA has not failed to take corrective actions. The last monitoring report CHSRA received from the FRA was dated February 12, 2018, and the summary table of items requiring corrective action in the report is empty.

The Notice asserts that the FRA identified areas of interest in the 2017 annual monitoring review, which the CHSRA failed to satisfactorily address. This does not support the Notice's assertion that the CHSRA has failed to take corrective actions because the FRA never notified the CHSRA that corrective action was required.

Moreover, contrary to the Notice's suggestion, the CHSRA has spent considerable time and effort responding to issues raised in the FRA's annual monitoring reviews. Indeed, every year the FRA and the CHSRA conduct a Site Monitoring Review, which includes a one-day site review at the CHSRA's Sacramento headquarters office and three days in the Central Valley reviewing each construction package (this includes a one-day site tour of the construction packages). This week-long review covers multiple topics and involves every aspect of the program from grant management to construction oversight, providing the CHSRA and the FRA an opportunity to review issues that have arisen over the year and ongoing future needs and concerns. There has never been a suggestion before that the CHSRA fails to address the issues raised by the FRA or has failed to satisfactorily address them.

The Notice offers only one example of a supposed failure to respond to its monitoring: the CHSRA, it asserts, has not developed "realistic Project Schedules and budgets based on past performance and trends." In fact, however, the CHSRA has made extensive efforts to update and improve its scheduling and budgeting process. For example, in June 2018, as part of its business plan process, the CHSRA completed an updated baseline cost estimate and budget to complete the work underway, an updated schedule for completion, and an implementation plan for passenger service and completion of the federal grant agreement.

In addition, numerous examples of the CHSRA responding to the FRA concerns can be cited. For example:

- · Staff Capability and Capacity-In response to the FRA's suggestion that the CHSRA reorganize staff to facilitate project delivery and fill key positions with project delivery experts, in August 2017, the CHSRA created a new Program Delivery Office, restructured to focus on program delivery and made improvements in its governance and decision-making structure to improve internal communications.
- Internal Processes—In response to the FRA's suggestion to implement a control system addressing Program Management Plan requirements, the CHSRA established a Program Management and Oversight branch and implemented a more formalized process of configuration management and change control.

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California High-Speed Rail Authority



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- · Service Development Planning—In response to the FRA's suggestion that the CHSRA explain the independent utility of the Central Valley portion of the high-speed rail program, the CHSRA contracted with an Early Train Operator consultant, which evaluated different service options, including a Merced to Bakersfield approach, that were discussed in the CHSRA's 2018 Business Plan and will be discussed further in a report to the Legislature in May 2019.
- · Right-of-Way Acquisitions-In response to the FRA's suggestion to increase the pace of right-of-way acquisitions, the CHSRA stepped up its acquisitions so, for example, acquisitions for Construction Package 4, increased from 39% complete in 2017 to 80% by December 2018. For all Construction Packages, 74% of the property needed has been delivered to the design-build contractors.

Here again, the Notice has failed to show any material breach of the terms of the FY10 Agreement that could justify termination of the Project.

II. THE CHSRA IS MAKING REASONABLE PROGRESS ON THE PROJECT

In addition to asserting that the CHSRA materially breached its commitments and obligations under the Agreement, the Notice contends that the CHSRA is not making reasonable progress on the Project. That is also wrong

Since the CHSRA has not yet accessed FY10 Agreement funding as it spends down the required State matching dollars, progress must be measured against the ARRA Agreement. In releasing funds under the ARRA Agreement, however, the FRA has acknowledged that the CHSRA has been making reasonable progress. In addition to prohibiting payments absent compliance, the ARRA Agreement prohibited payments unless the CHSRA was "making adequate and timely progress toward Project completion." As the FRA made over 450 payments under the ARRA Agreement from March 2011 through September 2017, the CHSRA must have been making adequate progress into at least the third quarter of 2017.

Nothing in the Notice shows that progress has materially stalled since then. To the contrary, CHSRA has continued to make substantial progress. Indeed, at this point:

- 90% of the design work on the Project has been completed, and 74% of the rights of way have been delivered to the CHSRA's contractors;
- There are more than 24 active or completed construction sites in the Central Valley;
- · State Route 99 has been realigned, and the realignment of other roads as well as utilities is in progress;

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- Two overhead crossings, a bridge, and a viaduct have been completed; two other viaducts as well as a trench in Fresno are in progress; and abutments for bridges and ponds are being constructed;
- Over 44 miles of grading and embankment work is either finished or in progress; and
- In total, the Project has employed more than 2,600 workers in the Central Valley, involved 488 small businesses, and achieved nearly \$6 billion in economic output.

Overall, the CHSRA has made significant progress on multiple sections in the Central Valley portion of the high-speed rail program concurrently to more quickly deliver statewide mobility and environmental benefits. In light of these significant and visible achievements, it is critical for both the FRA and the CHSRA, as stewards of the significant taxpayer funds invested so far, to complete the Project. Otherwise, we risk both failure and the unthinkable abandonment of a partially completed Project that would not be fit for the purpose for which the taxpayers have made this investment.

III. CALIFORNIA HAS NOT CHANGED THE OVERALL PURPOSE OF THE HIGH-SPEED RAIL SYSTEM

The Notice's final objection is that Governor Newsom, in his recent State of the State Address, changed the overall goal for High-Speed Rail in California and made a proposal that frustrates the purpose for which federal funding was awarded. Nothing could be further from the truth.

In his State of the State Address, Governor Newsom expressly confirmed that he shares that ambitious vision for high-speed rail of his predecessors Governors Brown and Schwarzenegger. Moreover, as I made clear in a recent memorandum to the chairman of the High-Speed Rail Authority, the Authority's ultimate goal remains a highspeed rail system that connects San Francisco to Los Angeles/Anaheim and that eventually will reach north to Sacramento and south to San Diego. The Governor merely identified a pragmatic, near-term focus, which is to "get trains on the ground" in the Central Valley and to lay the foundation for the San Francisco to Los Angeles/ Anaheim service. Like all mega-infrastructure projects, the California high-speed rail system will be completed in building blocks with each block placed in service upon completion with future funding and construction eventually expanding the system to its ultimate extent.

Far from frustrating the purpose of the FY10 and ARRA grants, the Governor's focus expands that purpose and maximizes the utility of the first building block in the high-speed rail program. These grants are for construction of the initial portion of the high-speed rail system, and they require the CHSRA to construct a 119-mile segment from Poplar Avenue, approximately 15 miles north of Bakersfield, to Madera. Governor Newsom is proposing to expand this project by 50 miles-with California bearing the expense of doing so-to reach south into downtown

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Bakersfield and north to Merced, so that this initial segment will connect three of the largest cities in the Central Valley (Merced, Fresno, and Bakersfield), three major universities and three of the fastest growing California counties, as well as providing important transit connectivity to the Altamont Corridor Express (ACE) and Amtrak traveling to the Bay Area and Sacramento and to bus services traveling from Bakersfield to Los Angeles.

This expansion will make the initial building block of the high-speed rail program more immediately productive, which furthers, rather than frustrates, the purpose of the federal grants. The expanded Central Valley project also furthers the ultimate goal of a statewide high-speed rail system by ensuring that the first step in California's high-speed rail system brings tangible benefits that will encourage extension to the San Francisco Bay area and then to the Los Angeles basin.

IV. THE THREATENED TERMINATION OF THE FYIO AGREEMENT IS A SHARP AND INFORTUNATE DEPARTURE FROM PRIOR PRACTICE.

In addition to being unjustified, the FRA's sudden threat to end the Project on two weeks' notice is a sharp—and wasteful—departure from its fruitful collaboration until now with the CHSRA.

For nearly a decade, the CHSRA and the FRA have been working together toward our common goal of achieving the first true high-speed rail system in the United States. A project of this magnitude faces challenges at every stage, from planning, funding, environmental review, and acquisition of private property to the physical challenges of construction that cannot be fully predicted or addressed until dirt is actually moved. Consequently, the cooperation and, at times, patience of numerous agencies and municipalities is required. Until now, the CHSRA and the FRA have enjoyed such cooperation including, among other things, amending the ARRA Agreement six times to accommodate various changes.

Together, the agencies have overcome numerous hurdles since the original execution of the grant agreements in 2010 and 2011. For example, in 2012, after litigation challenging the Project was filed, the FRA and the CHSRA renegotiated the ARRA grant terms to allow a tapered match payment arrangement whereby the federal ARRA funds would be used first to pay for capital costs until fully expended, which occurred in September 2017, followed by state match until the full match amount is spent. Similarly, in late 2013, as the same litigation was on appeal, the FRA and the CHSRA mutually agreed to slow down the project construction, pending the results of the appeal or access to alternative state matching funds. And the FRA and the CHSRA continued to cooperate under a tapered match arrangement to assure the full use of the federal ARRA funds prior to the September 2017 statutory deadline.

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While much remains to be done, we are proud of the progress we have made. Terminating the FY10 Agreement now, especially without providing the CHSRA a fair and reasonable opportunity to be heard, would have grave consequences. Especially if paired with the clawback that the Notice threatens, termination would create uncertainty over the future of a project that has created 2,600 jobs in the Central Valley, a region that has struggled economically, and ultimately may leave that area strewn with unfinished bridges, overpasses, and viaducts

This termination, should it go forward, also would set a troubling precedent that would undermine future infrastructure projects nationwide. Especially given the precipitous manner in which termination and withdrawal of funds has been threatened, the termination would cast doubt on the reliability of the federal government as a partner in delivering on its funding commitments. As a result, states may be unwilling to join the federal government in investing billions of dollars on future infrastructure projects, leaving the federal government with the unenviable choice of funding those projects itself or leaving them undone.

I urge the FRA and the Federal Government to focus on the important goal we have set together for California and the rest of the nation: to complete the first building block of a statewide high-speed rail system. That goal was established in partnership with the FRA in 2010 and 2011 when the ARRA and FY10 grant funds were awarded. Since that time, California has appropriated matching state funds, including Proposition 1A and Greenhouse Gas Reduction funds. Thus, based on the best available estimates the state and federal funds needed to satisfy capital costs to complete Central Valley construction, including right of way acquisition, construction management, environmental mitigation, final design, construction, and interim service, have all been committed or identified. Moreover, extensive construction is already underway. The FRA should not step away and waste all of these efforts.

At a minimum, in light of the massive disruption and waste that an abrupt termination would cause, I ask the FRA to agree to engage in a sincere effort to work through the issues raised in the Notice and save the nearly decade of collaboration on our historic high-speed rail project. Before any precipitous and potentially irreparable action is taken, the FRA should specify the deficiencies that the Notice only vaguely references and give the CHSRA an opportunity to respond to them individually and, where justified and still live, to discuss ways in which to cure or mitigate them. We also should engage in a meaningful discussion of how such issues may be cured in a more prompt and productive fashion without endangering a multibillion dollar project employing thousands of workers. And, finally, before concluding that the Project cannot be completed and abandoning it, the FRA officials should come to California and inspect the Project so that they can see for themselves both the great progress that has been made and the devastating harm that abandoning the Project at this stage would cause.

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Please contact us so that we can begin to make these arrangements as soon as possible and remove any cloud over the Project. We owe it to taxpayers to continue our cooperation on this historic endeavor and to act in good faith as stewards of the funds spent and to be spent in the Agreement.

CONCLUSION

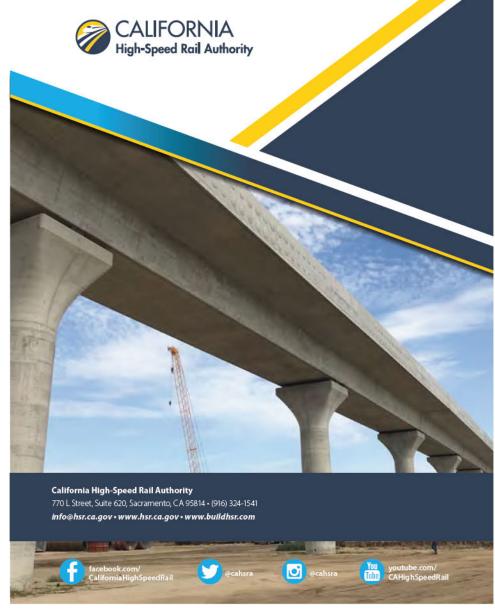
Based on the above, I urge the FRA to decide that the FY10 Agreement should not be terminated or, at a minimum, that it defer any final termination decision and meet constructively with the CHSRA to resolve any and all issues of concern and preserve the historic Project on which we have cooperated for so long.

Thank you for your consideration.

Respectfully,

Brian P Kelly

Chief Executive Officer

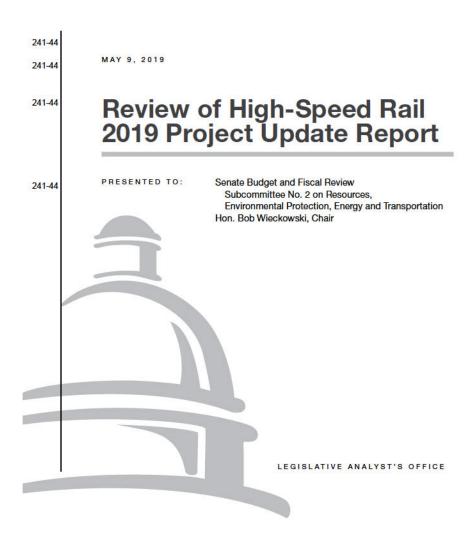


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EXHIBIT B



August 2020

California High-Speed Rail Authority

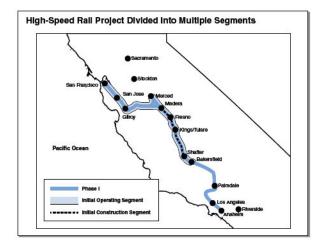


Introduction

- Statutory Reporting Requirements. State law requires the High-Speed Rail Authority (HSRA) to prepare a business plan every even year that provides certain key information about the planned high-speed rail system. State law also requires HSRA to prepare a project update report (PUR) every odd year that provides certain updated information, such as on costs and schedule. HSRA released its most recent PUR on May 1, 2019.
- Overview of Handout. This handout (1) provides background information on the planned high-speed rail system, (2) describes the major features of the 2019 PUR, and (3) identifies some preliminary issues for legislative consideration.

Project Delivery Plan

Project Divided Into Multiple Segments. Phase I would provide service for about 500 miles from San Francisco to Anaheim. Phase II would connect the system to Sacramento in the north and San Diego in the south. As shown in the figure, delivery of Phase 1 is divided into segments, including an initial operating segment (IOS) — commonly referred to as the Valley-to-Valley line. The IOS is itself divided into multiple segments, beginning with the initial construction segment (ICS), which extends for 119 miles through the Central Valley from Madera (about 25 miles north of Fresno) to Poplar Avenue in Shafter (about 20 miles north of Bakersfield).





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Project Delivery Plan

(Continued)

Bookend and Connectivity Projects. HSRA has partnered with local authorities to initiate a variety of bookend and connectivity projects on commuter rail lines in the Bay Area and Southern California that will facilitate high-speed rail, as well as provide benefits to existing rail and transit systems.

Project Funding and Expenditures

Proposition 1A Bonds

- Proposition 1A (2008) authorized the state to sell about \$10 billion in general obligation bonds—\$9 billion for the high-speed rail system itself, with the remainder to support the connectivity projects. (Of this \$9 billion, HSRA has set aside \$1.1 billion as contributions to locally administered bookend projects.) Proposition 1A specified certain conditions that the system must ultimately achieve, including that the train service provided by HSRA or pursuant to its authority not require an operating subsidy.
- The Legislature has appropriated \$5.5 billion from Proposition 1A, and about \$2.8 billion has been spent—\$2.1 billion on the high-speed rail project and about \$700 million on connectivity projects.

Federal Funds

- The federal government has awarded HSRA a total of \$3.5 billion. First, the state received \$2.6 billion in American Recovery and Reinvestment Act (ARRA) funds in 2009. HSRA fully expended the ARRA funds and expects to complete a required state match requirement sometime before December 2022.
- Second, the state received a \$929 million grant from the federal High-Speed Intercity Passenger Rail program in 2010 (FY10 Federal Grant), which expires at the end of 2022. The state must meet certain conditions under this grant agreement, including (1) completing its match to the ARRA grant before spending these funds, (2) using the funds to support intercity passenger rail infrastructure, and (3) completing all environmental reviews for Phase I by 2022. The agreement allows the federal government to terminate the grant under certain conditions, such as if the state fails to make reasonable progress on the project. On February 19, 2019, the federal government notified the state of its intention to terminate the FY10 Federal Grant under this provision. HSRA responded to the federal government on March 4, 2019. To date, HSRA has not received a response from the federal government.

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Project Funding and Expenditures

(Continued)

- Cap-and-Trade Auction Revenues
 - In 2014, the state began providing cap-and-trade auction proceeds for the high-speed rail project. This includes \$650 million in one-time cap-and-trade revenues, as well as the continuous appropriation of 25 percent of cap-and-trade revenues, beginning in 2015-16.
 - To date, the project has received about \$2.4 billion in cap-and-trade revenues and spent about \$600 million of these funds.

Project Status

■ Environmental Reviews. The California Environmental Quality Act and the National Environmental Policy Act require HSRA to assess the extent to which the project could cause significant environmental impacts. As shown in the figure, HSRA has completed the environmental reviews for the Merced-to-Fresno and Fresno-to-Bakersfield sections and is in the process of completing the remaining reviews for Phase I.



- Right-of-Way Acquisition. HSRA has identified 1,796 parcels of land necessary for construction of the ICS and has acquired 1,471 of them.
- Project Construction. In 2015, HSRA initiated construction on the ICS. To date, HSRA has spent about \$3.9 billion on construction of the ICS. This includes the completion of major structures, such as the construction of the Fresno River Bridge and Tuolumne Street Bridge, and the realignment of a portion of State Route 99. HSRA currently estimates it will complete the ICS by 2022.

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Major Features Of The 2019 PUR

- Changes Focus of Project to Merced-to-Bakersfield Segment
 - The 2019 PUR proposes to focus the state's efforts on constructing the segment between Merced and Bakersfield, rather than the ICS (as was proposed in the 2018 business plan). The HSRA proposes to launch interim services on the Merced-to-Bakersfield segment by 2028. (Previously, HSRA proposed operating early, interim services on the ICS and San Francisco-to-Gilroy segment by 2027.)
 - HSRA expects this service to require an operational subsidy, and be provided by an interim passenger train operator in order to facilitate compliance with the requirements under Proposition 1A.
- Incorporates Feedback From Early Train Operator (ETO)
 - The proposal to focus on the segment from Merced to Bakersfield is informed by the results of a study by an ETO. HSRA retained this ETO to evaluate options for providing interim passenger rail service, focusing on the San Francisco-to-Gilroy and the Merced-to-Bakersfield segments.
 - The ETO made various assumptions, such as the completion of certain other transportation-related capital projects, the establishment of highly integrated rail and bus service connections to the interim high-speed rail service, and the termination of existing San Joaquin service south of Merced. Given these assumptions, the ETO concluded that the Merced-to-Bakersfield segment is the preferred option for launching early interim high-speed rail service.
- Reflects Higher Cost Estimates for Constructing ICS
 - The HSRA's proposed approach is also informed by its revised cost estimates. Specifically, the 2019 PUR estimates the baseline cost of constructing the ICS at \$12.4 billion, which is \$1.8 billion higher than the 2018 business plan estimate. HSRA indicates that this difference primarily reflects the inclusion of a larger contingency as part of its baseline budget for the ICS. (The

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Major Features Of The 2019 PUR

(Continued)

baseline budget includes a contingency amount to account for unanticipated costs that may arise.)

- Specifically, HSRA is now setting its contingency such that it estimates there is a 70 percent chance that the segment will stay within its baseline budget, consistent with industry best practices. Previously, HSRA had set its contingency such that, based on its models, there was only a 10 percent chance costs would stay within the baseline budget. According to HSRA, cost increases due to delays and other factors as well as scope changes account for the remainder of the increased ICS cost.
- Does Not Revise Cost Estimates for Constructing Remainder of Project
 - The 2019 PUR does not reevaluate the cost estimates for the full Phase I of the project to reflect its revised approach to setting contingencies or other factors such as potential escalation costs due to possible schedule changes.
- Identifies Funding From Various Sources
 - As shown in the figure on the next page, HSRA identifies funding from various sources —including Proposition 1A bond funds, federal grants, and cap-and-trade revenues through 2030—will generate a total of between \$20.5 billion and \$23.5 billion.
 - HSRA estimates this funding will be sufficient to cover the estimated \$20.4 billion costs to (1) construct the Merced-to-Bakersfield segment (\$16.3 billion) and (2) purchase trains, conduct environmental work for the balance of Phase I, fund bookend projects, and complete other associated work (\$4.1 billion).





Major Features Of The 2019 PUR

(Continued)

Funding	Amount
Federal Funds	
ARRA	\$2.6
FY10	0.9
Subtotal	(\$3.5)
State Funds	
Proposition 1A (non-bookends)	\$7.5
Proposition 1A (bookends)	1.1
Cap-and-trade received through December 2018	2.4
Future cap-and-trade ^a	6.0 - 9.0
Subtotal	(\$17.0 - \$20.0)
Total Funding Available	\$20.5 - \$23.5
Costs	Amount
Merced to Bakersfield construction	
Initial Construction Segment	\$12.4
Merced extension	2.5
Bakerfield extension	1.4
Subtotal, Merced to Bakersfield construction	(\$16.3)
Bookends	1.3
Phase 1 environmental balance	8.0
Trains	0.7
Other costs	1.3
Total Cost	\$20.4
Assumes between \$500 and \$750 million in annual cap-and-trade revenues HSRA = High-Speed Rail Authority; ARRA = American Recovery and Reinve Intercity Passenger Rail grant.	

- Assumes Availability of Additional Funding for Remainder of Phase I
 - The 2019 PUR continues to suggest that the state's goal is to complete Phase I. However, the 2019 PUR does not identify funding sources to construct the rest of Phase I (beyond the Merced-to-Bakersfield segment).

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Key Issues For Legislative Consideration

- Success of Interim Service Depends on Various Factors. As previously indicated, the ETO's analysis was based on various assumptions about the completion of other transportation capital projects and the operation of other rail and bus services. Should these assumptions not materialize, interim high-speed rail service likely would not be able to generate the ridership benefits, and associated operational revenues, estimated by the ETO.
- Actual Project Costs Could Be Even Higher. The cost estimates reflected in the 2019 PUR are subject to substantial uncertainty, and there is significant risk that the cost estimates for the project—particularly the portions beyond the ICS—could continue to grow. This is in part because there is inherent uncertainty regarding the cost of a project of this scale and complexity, particularly for portions of the project in the early planning stages. Additionally, the 2019 PUR only applies the revised, less aggressive approach to setting a contingency level to a portion of the project. If HSRA applied this revised approach to the full Phase I of the project, we would expect that the estimated baseline budget would be higher than \$79.1 billion.
- Unclear if Funding Sufficient to Complete Merced to Bakersfield. While HSRA estimates it will have sufficient funding to construct the Merced-to-Bakersfield segment and other work required to launch interim service and meet commitments to local and federal partners, its funding plan relies on funding sources that are subject to substantial uncertainty. For example, it assumes that the state will retain the \$3.5 billion of federal grants that the federal government has threatened to rescind. Additionally, the funding plan relies on estimates of cap-and-trade revenues, which, while reasonable, are subject to uncertainty. To the extent that the state has to return some or all of the federal grant awards, the level of auction revenues assumed in the plan do not materialize, or the project's costs are significantly higher than estimated, the state would need to identify other funds sources to help pay for the Merced-to-Bakersfield segment and other related state funding commitments - likely the General Fund.



Key Issues For Legislative Consideration

(Continued)

- No Funding Plan Beyond Merced to Bakersfield. At this time, HSRA has not specifically identified how the over \$60 billion in estimated construction costs for the portions of Phase I beyond the Merced-to-Bakersfield segment would be funded. Thus, there is significant risk that the state would have to cover the large majority of any funding gap. Additionally, if project costs are ultimately higher than anticipated, this funding gap would be even greater.
- Legislature Has Other Options for Moving Forward. Given the shift in the focus of the project reflected in the 2019 PUR and the significant funding gap for the completion of Phase I, it is a good opportunity for the Legislature to evaluate how it would like to move forward. Completing the Merced-to-Bakersfield segment, as proposed, is one option available to the Legislature. However, it is not the only viable option. For example, the Legislature could fund a shorter or longer segment than is currently proposed. Additionally, the Legislature could consider whether to pursue electrified non-high speed service or conventional diesel service rather than the electrified high-speed service that is proposed. The 2019 PUR does not identify or evaluate this full range of options. Accordingly, the Legislature may wish to seek additional information on possible options from HSRA.

Key Issues For Legislative Consideration

(Continued)

- Some Key Considerations for Evaluating Options. Once the full range of options has been identified, there are a variety of considerations that the Legislature may wish to weigh as it evaluates them, including:
 - Costs. What are the costs associated with the options? For example, based on information in the 2019 PUR, the construction of the ICS is anticipated to cost \$12.4 billion. The addition of the Merced and Bakersfield extensions are estimated to add \$2.5 billion and \$1.4 billion to the costs, respectively.
 - Transportation Benefits. What are the accessibility and mobility benefits of the options? How do they compare to the accessibility and mobility benefits of other possible uses of capital and operating funds? For example, the ETO finds that the Merced-to-Bakersfield segment should improve travel times and increase ridership compared to shorter segments terminating at Madera or Poplar Avenue. However, the Legislature will want to weigh whether these benefits outweigh the expenditure of nearly \$4 billon combined on these extensions.
 - Effects on Local Communities. What are the effects of the options on local communities and how do they compare to other possible uses of the funds? For example, depending on where construction activities take place, the options may result in different levels and distributions of economic benefits to various local communities.
 - Major Risks and Uncertainties. What are the major risks and uncertainties associated with various options and what is the Legislature's tolerance for these risks? For example, some risks include those related to possible construction cost increases, coordination with other rail and transit providers, and potential lack of compliance with Proposition 1A or federal funding requirements.



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241-43

The exhibits included as part of submission MF2-241 relate to submission MF2-242. Therefore, no separate responses to submission MF2-241, comments 43 and 44, are warranted.

241-44

The exhibits included as part of submission MF2-241 relate to submission MF2-242. Therefore, no separate responses to submission MF2-241, comments 43 and 44, are warranted.