



CALIFORNIA
High-Speed Rail Authority

Project Update Report to the California State Legislature

March 1, 2013

STATE OF CALIFORNIA

EDMUND G. BROWN JR.
Governor

Department of Alcoholic Beverage Control
Department of Corporations
Department of Financial Institutions
California Highway Patrol
California Housing Finance Agency
Department of Housing & Community Development
Department of Motor Vehicles
Department of Real Estate
Department of Transportation



BRIAN P. KELLY
Acting Secretary

Office of Real Estate Appraisers
Office of Traffic Safety
New Motor Vehicle Board
Board of Pilot Commissioners
California Film Commission
California Office of Tourism
Infrastructure and Economic Development Bank
Small Business Loan Guarantee Program
Public Infrastructure Advisory Commission

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

March 1, 2013

The Honorable Mark DeSaulnier, Chair
Senate Transportation and Housing Committee
State Capitol, Room 2209
Sacramento, CA 95814

The Honorable Bonnie Lowenthal, Chair
Assembly Transportation Committee
1020 N Street, Room 112
Sacramento, CA 95814

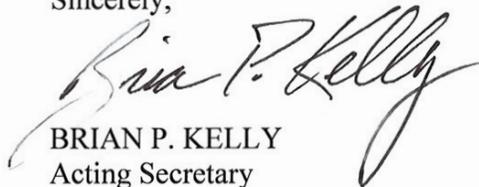
The Honorable Mark Leno, Chair
Senate Committee on Budget and Fiscal Review
State Capitol, Room 5019
Sacramento, CA 95814

The Honorable Bob Blumenfield, Chair
Assembly Committee on the Budget
State Capitol, Room 6026
Sacramento, CA 95814

Dear Senator DeSaulnier, Assembly Member Lowenthal, Senator Leno and
Assembly Member Blumenfield:

This letter is to indicate that I have reviewed and approve the California High-Speed Rail Authority's (Authority) Project Update Report as consistent with Provision 4 of Items 2665-104-6043, 2665-306-0890 and 2665-306-6043 of the Budget Act of 2012 (SB 1029, Chapter 152, Statutes of 2012),

Sincerely,


BRIAN P. KELLY
Acting Secretary

Attachment

cc list: See next page

cc: The Honorable Darrell Steinberg, President pro Tem, California Senate
The Honorable John Pérez, Speaker, California Assembly
The Honorable Ted Gaines, Vice Chair, Senate Transportation and Housing Committee
Members of the Senate Transportation and Housing Committee
The Honorable Bill Emmerson, Vice Chair, Senate Budget and Fiscal Review Committee
Members of the Senate Budget and Fiscal Review Committee
The Honorable Eric Linder, Vice Chair, Assembly Transportation Committee
Members of the Assembly Transportation Committee
The Honorable Jeff Gorell, Vice Chair, Assembly Budget Committee
Members of the Assembly Budget Committee
Ms. Carrie Cornwell, Chief Consultant, Senate Transportation and Housing Committee
Ms. Janet Dawson, Chief Consultant, Assembly Transportation Committee
Ms. Keely Bosler, Staff Director, Senate Budget and Fiscal Review Committee
Mr. Christian Griffith, Chief Consultant, Assembly Committee on the Budget
Ms. Diane Boyer-Vine, Legislative Counsel, State Capitol
Mr. Gregory Schmidt, Secretary of the Senate, State Capitol
Mr. E. Dotson Wilson, Chief Clerk of the Assembly, State Capitol



March 1, 2013

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State Capitol, Room 2209
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The Honorable Mark Leno, Chair
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State Capitol, Room 5019
Sacramento, CA 95814

Board Members:

Dan Richard
Chairperson

Lynn Schenk
Vice-Chairperson

Thomas Richards
Vice-Chairperson

Jim Hartnett

Michael Rossi

Thomas J. Umberg

Jeff Morales
Chief Executive Officer

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1020 N Street, Room 112
Sacramento, CA 95814

The Honorable Bob Blumenfield, Chair
Assembly Budget Committee
State Capitol, Room 6026
Sacramento, CA 95814

Dear Senator DeSaulnier, Assembly Member Lowenthal, Senator Leno and Assembly Member Blumenfield:

The California High-Speed Rail Authority (Authority) is pleased to submit the enclosed Project Update Report, required under Provision 4 of Items 2665-104-6043, 2665-306-0890 and 2665-306-6043 of the Budget Act of 2012 (Senate Bill 1029, Chapter 152, Statutes of 2012), to be submitted biannually on March 1 and November 15.

Since the approval of the Safe, Reliable, High-Speed Passenger Train Bond Act for the 21st Century (Proposition 1A) by California voters, the Authority has been moving forward in its mission to plan, design, build and operate the high-speed rail system as part of a statewide rail modernization program. As construction is scheduled to begin in the Central Valley this summer, the Authority welcomes this opportunity to provide an overview of the high-speed rail project and its integral role in this modernization program.

The Authority, State of California, U.S Department of Transportation and Federal Railroad Administration are committed to the Blended System envisioned in the 2012 Business Plan (Business Plan). The Blended System will benefit the overall passenger rail system by simultaneously beginning construction on the high-speed rail system, while investing in regional rail systems throughout the state. These early investments, made in collaboration with state and regional transportation partners, lay the foundation for the high-speed rail system as it expands to connect the state, while providing immediate benefits to millions of Californians utilizing urban, commuter, and intercity rail systems daily.

The phased implementation strategy, combined with the blended approach mapped out in the Business Plan, is designed to maximize the value of the investments made at each phase while building toward the future. For example, electrifying Caltrain service in the Bay Area will provide taxpayers with early, tangible benefits while complementing the long-range vision for the high-speed rail system that will ultimately connect the state.

In concert with the initial high-speed rail system investments, a portion of the Proposition 1A connectivity funds appropriated in Senate Bill 1029 have already been allocated by the California Transportation Commission (CTC) for work on several important rail projects throughout California. These projects include Caltrain's advanced signaling system (Positive Train Control) in the Bay Area, San Francisco MUNI's Central Subway project, Los Angeles Metrolink's locomotive upgrade, Altamont Corridor Express' Stockton passenger track extension, and San Diego Trolley's Blue Line light rail improvements. As part of the statewide

JERRY BROWN
GOVERNOR



rail modernization program designed to supplement the high-speed rail system, these early investments will improve urban, commuter, and intercity rail systems, enhancing the state's mobility and economic competitiveness while reducing greenhouse gas emissions.

In addition to improving mobility throughout the state, the construction and operation of the high-speed rail system is expected to generate hundreds of thousands of jobs -- starting with the Central Valley, currently experiencing some of the nation's highest unemployment rates. It is estimated that 20,000 jobs will be created in the Central Valley during the first five years of the project. High-speed rail will not only put people in the Valley back to work, but will have the potential to spur development of a high-speed rail technology, manufacturing, and academic sector.

Beyond these immediate economic benefits, the Authority and local governments alike see high-speed rail as part of an integrated strategy to help cities throughout the state revitalize their downtown cores. High-speed rail will link the mega-regions of California in ways never before imaginable. By bringing more people to the downtown centers of cities along the proposed alignment, high-speed rail will directly contribute to economic development, increased livability, and preservation of agriculture lands threatened by urban sprawl.

The Authority maintains its commitment to working closely with our state, local, and federal partners to ensure the success of the California's high-speed rail system. As the project continues to advance, we look forward to continuing an open and frequent dialogue with the Legislature and the public.

Sincerely,



Jeff Morales
Chief Executive Officer

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CALIFORNIA
High-Speed Rail Authority

*Project Update Report to
the California State Legislature*

March 1, 2013



Board of Directors

Dan Richard
Chairperson

Lynn Schenk
Vice Chairperson

Thomas Richards
Vice Chairperson

Jim Hartnett

Michael Rossi

Thomas J. Umberg

Jeff Morales
Chief Executive Officer

**California High-Speed
Rail Authority**

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The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building and operating the first high-speed rail system in the nation. California's high-speed rail system will connect the mega-regions of the state, contribute to economic development and a cleaner environment, create jobs and preserve agricultural and protected lands. By 2029, the system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of over 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with state and regional partners to implement a statewide rail modernization program that will invest billions of dollars in urban, commuter, and intercity rail systems to meet the state's 21st century transportation needs.



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CALIFORNIA HIGH-SPEED RAIL STATEWIDE RAIL MODERNIZATION



Project Update By Section

SB 1029 PROJECT UPDATE REPORT SECTION (A)

*A summary describing the overall
progress of the report*

PHASE I

SAN FRANCISCO TO SAN JOSE

The focus for the San Francisco to San Jose section continues to be obtaining concurrence with the Authority, Federal Railroad Administration (FRA) and the Peninsula Corridor Joint Powers Board (Caltrain) on an approach to environmentally clear the corridor electrification project. Additional work includes public outreach supporting Caltrain and the Blended System, engineering studies for a joint high-speed rail/Caltrain maintenance facility and environmental support for the Diridon Station in conjunction with the San Jose to Merced section.

Next Steps: Beginning the California Environmental Quality Act (CEQA) process on the Caltrain electrification under the leadership of Caltrain. Caltrain recently released a Notice of Preparation to prepare an Environmental Impact Report (EIR) for the Caltrain Electrification Project, from its current northern terminus at Fourth and King Streets in the City of San Francisco to approximately two miles south of the Tamien Station in San Jose, a total distance of approximately 51 miles. Caltrain will serve as the lead agency under CEQA, the FRA will be lead on the Environmental Assessment and the Authority will serve as a Responsible Agency under CEQA.

SAN JOSE TO MERCED

The priority of the San Jose to Merced section is to establish an approach for environmental clearance of the Central Valley Wye (the alignment options proposed in the Chowchilla area for the connection between Merced and San Jose) and progress through the concurrence process for the Supplemental Alternatives Analysis (SAA) to confirm which Wye alternatives will be carried forward for evaluation in the Draft EIR/Environmental Impact Statement (EIS). This team is also coordinating with the Merced to Fresno team in preparing for additional outreach activities in the Central Valley and for SAA public information meetings in Chowchilla and Fairmead in March.

Next Steps: Include the identification of the range of alternatives to be further studied under the National Environmental Policy Act (NEPA).

MERCED TO FRESNO

The Authority and the City of Chowchilla (City) reached an agreement ending the lawsuit that the City had filed under CEQA on the Merced to Fresno Final EIR/EIS. Under the terms of the settlement, the City and the Authority agree to continue working together to address concerns and potential issues over the Central Valley

Wye area, proposed alternatives involving Avenue 24, and the Union Pacific Railroad (UPRR)/State Route 99 corridor within the City limits.

On November 16, 2012, Sacramento County Superior Court Judge Timothy Frawley ruled the Authority, "acted reasonably and in good faith," under state environmental law in denying a request for a preliminary injunction under CEQA for the Merced to Fresno section.

The Merced to Fresno team is working on permit applications and mitigation strategies for the Central Valley from partner agencies, including the preparation of the permittee-responsible mitigation plan, the regulatory framework for storm water management, geotechnical reports and hydraulic studies.

Next Steps: Continuing the permitting process, securing off-site mitigation parcels and working with state and federal agencies to secure the permits required to allow construction to begin.

FRESNO TO BAKERSFIELD

The Revised Draft EIR/Supplemental EIS Public Review Period ended on October 19, 2012 and the environmental team is now focused on reviewing and preparing responses for the Final EIR/EIS. Consultations with stakeholders to address comments and meetings with local government have been held with the Cities of Bakersfield, Hanford, Wasco and Shafter to assist the Authority in defining the Preferred Alternative. Ongoing work continues on evaluating methods to minimize the alignment's impacts, resolving issues related to safety and security at the Fresno Station (e.g., intrusion barrier, emergency access) and continued coordination with the U.S. Fish and Wildlife Services (USFWS) on the publication of the Biological Opinion.

Next Steps: Selection of a Preferred Alternative by the Authority Board of Directors and coordination with the U. S. Army Corps of Engineers (USACE). The release of the Final EIR/Supplemental EIS and presentation to the Board of Directors for adoption is anticipated in Fall 2013.

BAKERSFIELD TO PALMDALE

In preparation for the Draft EIR/EIS, the team is collecting engineering and environmental data needed to define and analyze project operations, station details, tunnel information construction information and design features. Development of proposed site options continues for a Terminal Storage and Maintenance Facility. The Authority's Regional team has facilitated stakeholder meetings with the Department of Defense, Bureau of Land Management, and the Cities of Rosamond, Lancaster and Palmdale.

Work is progressing on targeting energy needs and assessments through this area. Locations for the systems sites were identified based on the latest alignments and profiles. The team is developing multiple options for traction power supply systems and collaborating to develop proposed corridors for connections between Southern California Edison transmission lines and high-speed rail sites.

Next Steps: Completion of SAA and preparation of the Draft EIR/EIS. This includes the identification of the range of alternatives to be further studied in the Draft EIR/EIS under CEQA/NEPA, and requires concurrence from the U.S. Environmental Protection Agency (USEPA) and USACE.

PALMDALE TO LOS ANGELES

In preparation for the Draft EIR/EIS, the team is collecting engineering and environmental data needed to define and analyze project operations, station location and details, tunnel information, maintenance requirements, construction information and design features. The Authority's Regional team has facilitated stakeholder meetings with Los Angeles County Metropolitan Transportation Authority, (LA Metro), Metrolink, Union Pacific Railroad (UPRR),

Bureau of Land Management, Walt Disney Studios, Los Angeles River Urban Waters Partnership, and the Cities of Palmdale, Acton/Aqua Dulce, Santa Clarita, Burbank, Glendale, and Los Angeles.

Next Steps: Completion of the SAA and preparation of the Draft EIR/EIS. This includes the identification of the range of alternatives to be further studied in the Draft EIR/EIS under CEQA/NEPA and requires concurrence from the USEPA and USACE with the Authority and FRA's Alternatives Analysis.

LOS ANGELES TO ANAHEIM

The Authority recently signed on to participate as an ex-officio member of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor Agency Joint Powers Authority (JPA) and is actively engaged with the JPA and its member agencies in ongoing discussions related to the future development of this corridor. Current work in this section is focused on preparing the Revised SAA, proposing the Revised Shared Track Alternative that adopts revised criteria and standards appropriate for operating intercity high-speed rail in an urban rail corridor, thus achieving FRA standards for high-speed rail. The current shared corridor approach for Los Angeles to Anaheim incorporates the blended approach described in the 2012 Business Plan. Efforts are continuing with the Burlington Northern and Santa Fe (BNSF) railroad to review and discuss the impacts the high-speed rail alignment might have on BNSF's existing operations.

Coordination with all agencies continues related to implementation of the Southern California Memorandum of Understanding (MOU) for early implementation of bookend investments. The City of Anaheim has signed on to the Southern California MOU, taking the lead in Orange County on local rail improvements related to high-speed rail. Authority and city coordination meetings, including LA Metro, Gateway Cities Council of Governments, Orange County Transportation Authority and the cities of Anaheim, Fullerton, Buena Park, Vernon and Los Angeles, are ongoing and provide an opportunity for key stakeholders to provide feedback on corridor and station design, environmental and other issues for consideration and incorporation. Parking and traffic are still major issues at the station locations, as is the final location of the stations. Staff has continued to work with those cities to determine where off-site parking is available to fulfill the dispersed parking approach. Areas have been identified and are being incorporated into the station designs. These plans are being modified to reflect those concerns and will be presented to the impacted cities when station workshops take place.

Next Steps: The Los Angeles to Anaheim team is focusing on preparing a Revised SAA which will be completed and presented to the Authority Board of Directors later this year. This document will provide an update on the alternatives that are practical and feasible and reflect the shared corridor approach that greatly reduces the impacts of high-speed rail to local communities along the alignment.

PHASE II

LOS ANGELES TO SAN DIEGO (VIA THE INLAND EMPIRE)

Engineering and environmental review and analysis are progressing to augment existing information on the current set of alternatives shown in the March 2011 Preliminary Alternatives Analysis (PAA) Report. Refinement of 18 focused areas within the alternatives shown in the PAA is ongoing. The Authority continues to meet with Regional Transportation Planning Agencies and Metropolitan Planning Organizations (MPOs) as part of the four-county Southern California Inland Corridor Group (ICG) to coordinate the high-speed rail project with regional plans. The ICG has been integral in engaging in regional planning in order to promote synergy among the many systems and agencies along the 170-mile alignment.

Next Steps: The Los Angeles to San Diego team is focusing on developing the Purpose and Need statement for this Section. The objectives of the Purpose and Need statement are not limited to transportation needs, such as a reduction in congestion, but may include non-transportation objectives, such as economic development. As part of developing the next step in this section, the Authority will continue to meet with regional and local agencies and with the LOSSAN member agencies.

SACRAMENTO TO MERCED

The team is continuing project management coordination, key stakeholder outreach, updates to the public participation and agency coordination plans, development of engineering in support of project definition, coordination on interim phased approaches and development of the Purpose and Need report.

Next Steps: As part of the Northern California Unified Rail Service, the team is exploring upgrades to the San Joaquin and Capitol Corridor intercity rail lines to improve service and provide connectivity to the future high-speed rail system.

ALTAMONT CORRIDOR

The team is focusing on the completion of the Purpose and Need and Alternatives Assessment (AA) processes in advance of completion of the SAA report.

Next Steps: Discussions are underway with the San Joaquin Regional Rail Commission regarding coordination on the environmental process and planned service.



Financials

SB 1029 PROJECT UPDATE REPORT SECTION (B)

The baseline budget for all project phase costs, by segment or contract, beginning with the California High-Speed Rail Program 2012 Business Plan.

SECTION (C)

The current and projected budget, by segment or contract, for all project phase costs.

SECTION (D)

Expenditures to date, by segment or contract, for all project phase costs.

BASELINES, CURRENT AND PROJECTED BUDGETS AND EXPENDITURES TO DATE

This section addresses provisions (b), (c), and (d) of Senate Bill 1029 (Chapter 152, Statutes of 2012), which includes the baseline budget as outlined in the 2012 Business Plan, the current and projected budget, and the expenditures to date for all project phase costs, by segment or contract.

The 2012 Business Plan included a cost estimate for the Phase 1 Blended System by implementation phase: Initial Operating Section, Bay to Basin and Phase 1 Blended. Costs for these implementation phases are shown in 2011 and year of expenditure dollars in the 2012 Business Plan.

PRE-CONSTRUCTION PHASE

Pre-construction expenditures are defined in California Streets and Highways Code Section 2704.08(g), as, “environmental studies, planning, and preliminary engineering activities, and for (1) acquisition of interests in real property and right-of-way and improvement thereof (A) for preservation for high-speed rail uses, (B) to add to third-party improvements to make them compatible with high-speed rail uses, or (C) to avoid or to mitigate incompatible improvements or uses; (2) mitigation of any direct or indirect environmental impacts resulting from the foregoing; and (3) relocation assistance for property owners and occupants who are displaced as a result of the foregoing.”

Table 1 shows the current contract amount (baseline) for the Program Management and the Regional Consultant contracts, and current projected contract costs for the Program Management contract and for each of the Regional Consultant contracts issued for the pre-construction phase of the high-speed rail project. These contracts were awarded between 2006 and 2008; during that timeframe it was assumed that the environmental reviews for all of the Phase 1 sections would be complete by 2014 and Phase 1 of the high-speed rail implemented and operating in 2020.

As shown on the table, two contracts were originally issued as single contracts for larger environmental segments but were subsequently divided:

- Subsequent to issuing the contract for the Sacramento to Fresno section, it was divided into the Merced to Fresno and Sacramento to Merced sections with both remaining under contract to AECOM.
- Subsequent to issuing the contract for the Fresno to Palmdale section, it was divided into the Fresno to Bakersfield and Bakersfield to Palmdale sections with both remaining under contract to the URS-HMM-Arup/JV.

The projected budget by contract amounts reflect the current projected budget to complete the pre-construction phase for each segment, including an additional \$29 million for other agency costs for agreements with partner agencies such as Department of Fish and Wildlife, USACE, and the USFWS and \$10 million in contingency to cover potential future changes to scope.

The amounts in Table 1 reflect federal and state dollars and pre-date Proposition 1A when this work was funded using a mix of Public Transportation Account and Reimbursement funding.

Table 2 shows the current contract costs (expenditures to date) for the Program Management Team contract and for each of the Regional Consultant contracts for work performed during the pre-construction phase of the program from inception of the contracts through December 2012.

Segment	Current	Projected
Program Management (Parsons Brinkerhoff)	\$199	\$188
San Francisco - San Jose (HNTB)	\$55	\$77
San Jose - Merced (Parsons Transportation Group)	\$55	\$77
Merced - Fresno (AECOM)	\$83	\$49
Fresno - Bakersfield (URS-HMM-Arup/JV)	\$120	\$102
Bakersfield - Palmdale (URS-HMM-Arup/JV)	--	\$45
Palmdale - Los Angeles (HMM-URS-Arup/JV)	\$74	\$74
Los Angeles - Anaheim (STV)	\$50	\$50
Los Angeles - San Diego (wHNTB)	\$95	\$95
Sacramento - Merced (AECOM)	--	\$41
Altamont (AECOM)	\$55	\$41
Agency Costs (Estimate)	--	\$29
Contingency	--	\$10
TOTAL	\$786	\$878

(Dollars in millions)

Segment	Expenditures
Program Management (Parsons Brinkerhoff)	\$ 147
San Francisco - San Jose (HNTB)	\$ 45
San Jose - Merced (Parsons Transportation Group)	\$ 50
Merced - Fresno (AECOM)	\$ 52
Fresno Bakersfield (URS-HMM-Arup/JV)	\$ 84
Bakersfield - Palmdale (URS-HMM-Arup/JV)	\$ 21
Palmdale - Los Angeles (HMM-URS-Arup/JV)	\$ 51
Los Angeles - Anaheim (STV)	\$ 34
Los Angeles - San Diego (HNTB)	\$ 11
Sacramento - Merced (AECOM)	\$ 6
Altamont (AECOM)	\$ 7
TOTAL	\$508

(Dollars in millions)

CONSTRUCTION PHASE

The 2012 Business Plan presents the capital cost estimates as a range (low and high) pending completion of final environmental review and approval of all alignments, stations and maintenance facilities.

Table 3 shows both the low and high construction cost estimates in year of expenditure (YOE) dollars from the 2012 Business Plan by segment. Approximately \$8.1 to \$8.2 billion dollars in program wide costs, which were identified in the 2012 Business Plan, have been prorated across the project segments. These costs include approximately \$4.4 billion for rolling stock, \$1.5 billion for program, project and construction management costs, and \$2.3 billion dollars in unallocated contingency funds (approximately 3 percent of the overall cost of the project).

TABLE 3: CONSTRUCTION PHASE BY SEGMENT		
Baseline Budgets by Segment	2012 Business Plan Low Cost Alignment Estimate (YOE)	2012 Business Plan High Cost Alignment Estimate (YOE)
San Francisco - San Jose	\$8,363	\$8,363
San Jose - Merced	\$19,757	\$24,221
Merced - Fresno	\$5,482	\$9,020
Fresno - Bakersfield	\$7,711	\$8,870
Bakersfield - Palmdale	\$9,533	\$9,712
Palmdale - Los Angeles	\$16,704	\$18,555
Los Angeles - Anaheim	\$815	\$815
TOTAL	\$68,365	\$79,556
(Dollars in millions)		

Schedule

Current and Projected

SB 1029 PROJECT UPDATE REPORT SECTION (E)

A comparison of the current and projected work schedule and the baseline schedule contained in the California High-Speed Rail Program 2012 Business Plan.

CONSTRUCTION/IMPLEMENTATION SCHEDULE

The release of Addendum 9 for Construction Package 1 on January 9, 2013, shifted the schedule for the Notice to Proceed and start of work on the first portion of the Initial Operating Section (IOS), from Madera to just north of Fresno, to Summer 2013. This is a change from early 2013 as was stated in the 2012 Business Plan. This change was made to accommodate requests received from design-build teams bidding on the project wanting more time to develop their proposals. Despite the adjustment to the schedule, the Authority remains intent on completing environmental review and design and construction of the IOS first construction section by 2018.

The table below shows the 2012 Business Plan phased implementation schedule. For more detail on these phases, please see Chapter 2 of the 2012 Business Plan.

IMPLEMENTATION SCHEDULE

Phase	2012 Business Plan	Description
INITIAL OPERATING SECTION 300 Miles Merced to the San Fernando Valley	2022	Begins with construction of up to 130 miles of track and structures in the Central Valley; supports speeds capable of over 200 mph high-speed rail service; includes trains and systems. Ridership and revenues sufficient to attract private participation. Connects with regional/local rail for blended operations.
BAY TO BASIN 410 Miles San Jose to Merced to the San Fernando Valley	2026	First high-speed rail service to connect the San Francisco Bay Area with the Los Angeles Basin.
PHASE 1 BLENDED 520 Miles San Francisco to Los Angeles/Anaheim	2028	Builds on Bay to Basin with blended operations with existing commuter/intercity rail, and additional improvements for a one-seat ride, connecting Downtown San Francisco and Los Angeles/Anaheim. Caltrain corridor electrified for high-speed rail and new dedicated lines into Los Angeles.

ENVIRONMENTAL SCHEDULE

The FRA's issuance of the Record of Decision (ROD) for the alignment from Merced to Fresno on September 18, 2012, is a change from the initial estimate of June 2012.

The Authority extended the comment period on the Fresno to Bakersfield Draft EIR/EIS from 60 to 90 days, allowing more time for public comment and stakeholder involvement. The public comment period for this section concluded on October 19, 2012, which shifted the anticipated date for the ROD out from January 2013 (as projected in the 2012 Business Plan) to Fall 2013.

The implementation of the Blended System and integration of the state rail modernization program has resulted in some changes in the environmental schedule in order to accommodate work with strategic stakeholders on Bookend (the San Francisco Bay Area and Los Angeles Basin) and on connectivity projects. These extended timelines will allow additional time for community outreach plans and stakeholder input.

PROJECTED MILESTONES FOR ENVIRONMENTAL REVIEW PROCESS/POTENTIAL CONSTRUCTION COMPLETION			
Section		Receive Record of Decision	Complete Construction
Merced - Fresno	BASELINE	June 2012	2022
	REVISED	COMPLETED	
Fresno - Bakersfield	BASELINE	December 2012	2018
	REVISED	Fall 2013	
San Francisco - San Jose	BASELINE	December 2014	2028
	REVISED	Summer 2017	
San Jose - Merced	BASELINE	December 2013	2026
	REVISED	Fall 2016	
Bakersfield - Palmdale	BASELINE	February 2014	2021
	REVISED	Summer 2015	
Palmdale - Los Angeles	BASELINE	October 2013	2028
	REVISED	Spring 2015	
Los Angeles - Anaheim	BASELINE	December 2014	TBD
	REVISED	Spring 2016	
Merced - Sacramento (Phase 2)	BASELINE	TBD	TBD
	REVISED	Spring 2017	
Los Angeles - San Diego (Phase 2)	BASELINE	TBD	TBD
	REVISED	Spring 2017	

Milestones Achieved

Since November 2012

SB 1029 PROJECT UPDATE REPORT SECTION (F)

A summary of milestones achieved during the prior year and milestones expected to be reached in the coming year.

COMMUNITY BENEFITS POLICY ADOPTED

In December 2012, the Authority Board of Directors adopted a Community Benefits Policy that promotes the hiring of California community businesses and residents during construction of high-speed rail. The Policy supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It also helps remove potential barriers to Small Businesses, Disadvantaged Business Enterprises, Disabled Veteran Business Enterprises, Women-Owned Businesses and microbusinesses that want to participate in building the high-speed rail system.

CHIEF PROGRAM MANAGER JOINS AUTHORITY

On December 3, 2012, Frank Vacca joined the Authority as its Chief Program Manager. Mr. Vacca has over 35 years of experience in commuter, inter-city and high-speed passenger rail systems. Mr. Vacca has a long and varied background in rail management, most recently as the chief engineer of Amtrak – a position he held since 2006; and was formerly the Deputy General Manager for infrastructure engineering at New Jersey Transit. In his role as Chief Program Manager, Mr. Vacca leads the technical and engineering teams in the delivery of the high-speed rail system.

RIGHT-OF-WAY SERVICES CONTRACTS AWARDED

On December 20, 2012, the Authority awarded contracts to four teams to provide Right-Of-Way (ROW) and real property acquisition services for approximately 1,100 properties in the Central Valley. The teams selected are Hamner Jewel Associates, Continental Field Services, Universal Field Services, Inc., and Golden State Right-of-Way Team. These four teams have demonstrated success in delivering acquisition services for large-scale, design-build transportation projects. All four teams have at least ten years' experience performing real property acquisition services for government agencies, demonstrated experience and familiarity with real estate transactions and issues in the Central Valley.

The ROW team has developed an acquisition plan for the design-build contractor for Construction Package 1 between Madera and Fresno that sets forth the parcels that must be acquired and the timeline for acquisition. The team has been working diligently with the Department of Finance (DOF), Department of General Services (DGS), the State Public Works Board (PWB), and the Department of Transportation (Caltrans), among others, to create a workflow under the Property Acquisition Law to ensure proper oversight of the process and smooth coordination between all responsible agencies and parties.

Direct efforts have been ongoing for boundary surveys, developing appraisal maps, reviewing title reports, conducting initial site assessments and completing appraisals. Development of the process to send Notice of Decision to Appraise letters to property owners and/or residents prior to the initiation of appraisal work included coordination with the City of Fresno, and the Authority is developing a cooperative agreement with the City and County of Fresno to ensure a strong working relationship.

STATE PUBLIC WORKS BOARD APPROVED SITE SELECTION FOR INITIAL ACQUISITIONS

On January 14, 2013, the PWB approved the site selection of 356 parcels to be acquired in order to commence construction. These parcels provide a corridor extending approximately 24 miles from Avenue 17 east of the City of Madera to Santa Clara Street in the City of Fresno. Prior to approval by the PWB, the Authority, in accordance with CEQA and the NEPA, had completed and certified both a Program level and Project level EIR/EIS. For the Merced to Fresno section that is the subject of this site selection, a CEQA Notice of Determination (NOD) was filed with the State Clearinghouse on May 3, 2012, and the 30-day statutes of limitations period expired on June 2, 2012 with no lawsuits filed. For NEPA, the FRA issued its ROD on September 18, 2012. These actions authorize the Authority to begin negotiations with the impacted land owners for property acquisition.

REQUEST FOR INFORMATION FOR HIGH-SPEED RAIL TRAINSETS RELEASED IN PARTNERSHIP WITH AMTRAK

Amtrak and the Authority have joined forces in the search for proven high-speed rail trainsets that are currently being manufactured and in commercial service that are capable of operating safely at speeds up to 220 mph on both Amtrak's Northeast Corridor and on California's high-speed rail corridor. On January 17, 2013, Amtrak, in conjunction with the Authority, formally issued a Request for Information (RFI) to start the process. The partnership advances both high-speed rail programs and could create efficiencies by ordering trains of similar specifications. This partnership could also lead to the development of a U.S. standard for high-speed rail train equipment that can be not only manufactured and supplied domestically, but also exported internationally.

BIDS RECEIVED FOR CONSTRUCTION PACKAGE 1 FROM DESIGN-BUILD TEAMS

On January 18, 2013, five bids were received by the Authority for Construction Package 1. The evaluation process is underway; proposals will be scored on whether the proposals meet strict guidelines for technical competence, deadline schedules, methods of operation and costs. The value of the bid proposals is not revealed during the evaluation process to ensure the process is not influenced by cost. The Authority anticipates announcing the contract award in early Summer 2013.

PROJECT AND CONSTRUCTION MANAGEMENT CONTRACT AWARDED

On January 25, 2013, following a competitive bidding process, the Authority selected the joint venture of PGH Wong Engineering, Inc., and Harris & Associates (Wong-Harris) to provide oversight and management of the design-build contractor who will build the initial 30-mile stretch of high-speed rail from Madera to Fresno. Under the direction of state engineering staff, and along with state staff, Wong-Harris will oversee inspection and testing of the high-speed train infrastructure, technical and environmental compliance including hazmat oversight, utility relocation, procurement and risk management assistance, construction safety and security, document control, fraud and theft prevention and public outreach. The contract also includes the Authority's approved small business goals of 30 percent, with over 50 percent of those located in the Central Valley.

AUTHORITY PREVAILS IN CEQA LITIGATION

On February 25, 2013 the Sacramento County Superior Court rejected the Town of Atherton's lawsuit, finding that the Authority had complied with the environmental review requirements in the California Environmental Quality Act (CEQA). The court ruled that the project could proceed through a phased implementation approach or through a blended system in the Caltrain corridor and that the Authority did an adequate job of engaging the public in the environmental review process. Since the beginning of the year, two other CEQA lawsuits brought against the Authority have been settled.

NEXT MILESTONES

CONTINUE THE ACQUISITION PROCESS

The Authority developed an acquisition plan for targeting priority areas and delineated construction groupings, including but not limited to the San Joaquin River Viaduct, Roeding Trench, North of Jensen Trench, Jensen Trench, Fresno Viaduct, and the South of Fresno Viaduct. The plan has been shared with other appropriate agencies, including the PWB and DGS, to facilitate timely receipt of funding and completion of the relevant government review and approval processes. Having obtained approval of the site selection from the PWB, the Authority will move forward with the appraisal process, the first step in acquiring the required property.

RELEASE OF REQUEST FOR QUALIFICATIONS FOR CONSTRUCTION PACKAGES #2, #3 AND #4

This Request for Qualifications (RFQ) is the first phase of a two-phase, best-value procurement process towards construction contracts. The Authority will be seeking qualified firms or teams interested in providing design-build services for Construction Package 2, Construction Package 3, and/or Construction Package 4 of the first construction section. These packages encompass the infrastructure works within the Fresno to Bakersfield Revised EIR/ Supplemental EIS section. The purpose of the RFQ is for the Authority to establish a shortlist of highly qualified contractors to provide design-build services for each of the construction packages. The procurement will be conducted in accordance with the Authority's contracting powers described in Section 185036(a) of the California Public Utilities Code. The second phase of the procurement will commence with the distribution of a Request For Proposal (RFP) to the shortlisted contractors in Fall 2013.

AWARD OF CONTRACT FOR CONSTRUCTION PACKAGE 1

In the summer of 2013, the Authority anticipates awarding a contract to a design-build team for Construction Package 1, the first segment of the initial construction section, which will extend from Madera County to the City of Fresno. The start of high-speed rail in the Central Valley will generate approximately 20,000 jobs annually over five years. The contractor selected by the Authority will design and construct civil infrastructure necessary to support high-speed rail track.

GREENHOUSE GAS EMISSIONS REPORT TO THE LEGISLATURE

The Authority will submit a report to the Legislature that analyzes the net impact of the high-speed rail program on the state's greenhouse gas emissions, as required by SB 1029, by June 30, 2013.

BOARD TO ADOPT FINAL REVISED EIR/SUPPLEMENTAL EIS FOR FRESNO TO BAKERSFIELD

The Authority is responding to comments from the public and engaging stakeholders in the preparation of the Final Revised EIR/Supplemental EIS for the Fresno to Bakersfield section. The Authority anticipates action by the Authority Board of Directors in Fall 2013.

Issues

SB 1029 PROJECT UPDATE REPORT SECTION (G)

Any issues identified during the prior year and actions taken to address those issues.

CENTRAL VALLEY WYE

On May 3, 2012, the Authority Board certified the Merced to Fresno EIR/EIS, which identified the Hybrid Alternative (following both BNSF and UPRR rail lines) as the preferred north-south alignment alternative between Merced and Fresno. The FRA issued its ROD for the document on September 18, 2012. Neither the Authority nor the FRA identified a preferred alternative for the Central Valley Wye connection to the west as part of the Merced to Fresno decision, acknowledging that this evaluation would occur as part of the San Jose to Merced Section EIR/EIS.

In the summer of 2013, the Authority intends to begin construction of the first section of the IOS which ultimately will extend approximately 130 miles between Madera and the northern outskirts of Bakersfield. Given the favorable economic climate and the potential for receiving construction bids below the engineers' estimate, the Authority has been considering options for extending the first construction section limits to Merced in the north. To incorporate this into future construction plans, the Authority would need to accelerate the identification of a preferred Central Valley Wye alternative in the vicinity of Chowchilla. Building further north towards Merced would require a new construction package to be put out to bid.

Actions Taken: The Board of Directors directed staff to return with an additional update prior to presenting the SAA. The staff has developed an approach for achieving this goal, including the steps necessary for preparing a Merced to Fresno Subsequent EIR/Supplemental EIS (SEIR/SEIS). This document would evaluate a set of Central Valley Wye alternatives located in a geographic area that extends from Carlucci Road to the west, Ranch Road to the north and Avenue 17 to the south (the connection point to Construction Package 1. Beginning Spring 2013, the schedule calls for:

- Convening a set of stakeholder meetings and consultations with the USACE and the USEPA to obtain feedback on the six best performing Wye alternatives.
- Based on the feedback obtained from stakeholders and resource agencies, presenting a SAA and formally recommending to the Board of Directors detailed study of the six Central Valley Wye alternatives as part of a Merced to Fresno SEIR/SEIS.
- Presenting a staff recommendation to the Board of Directors on the identification of a single Central Valley Wye alternative to be identified as a "proposed action" in the Draft EIR/EIS.

→ Distributing the Draft SEIR/SEIS.

→ Completing the Final SEIR/SEIS and obtaining FRA's issuance of a ROD.

MEMORANDUM OF UNDERSTANDING WITH CALTRAIN

Caltrain and the Authority are in a partnership to share the peninsula rail corridor to provide commuter and high-speed rail services. The existing 2004 MOU and 2009 Agreement and Amendment to the Agreement are outdated. An updated agreement is needed to reflect current policies defined in the 2012 Business Plan, the 2012 nine-party MOU for the High-Speed Rail Early Investment Strategy for a Blended System in the Peninsula Corridor, and the terms of SB 1029. The purpose of the updated agreement is to define a new partnership for planning, environmental review, design and construction of the Blended System in the peninsula rail corridor.

Actions Taken: Staff has identified the following principles, consistent with implementing the Blended System to be considered for inclusion in the updated Authority and Caltrain agreement: the Blended System will primarily utilize existing tracks, remain substantially within the existing Caltrain right-of-way, be used by Caltrain, the Authority, and other passenger and freight services, and meet both Authority and Caltrain operational requirements. An updated and proposed MOU was presented as an information item to the Authority Board of Directors at the February 14, 2013, meeting.

Next steps include seeking input from the city and county partners in the corridor, as well as the nine-party MOU signatories on the update of the existing Caltrain/ Authority MOU and Agreement. The Board of Directors is expected to take action on the MOU in March of 2013.



Risk Mitigation

SB 1029 PROJECT UPDATE REPORT SECTION (H)

A thorough discussion of various risks to the project and steps taken to mitigate those risks.

RISK MANAGEMENT PLAN

A revised Risk Management Plan (RMP) was approved November 28, 2012. This RMP updated and formalized procedures for identifying, assessing, evaluating, documenting and managing risks that could jeopardize the success of the project. These include specific engineering, environmental, planning, ROW, procurement, construction, organizational, stakeholder, budget and schedule risk, or any other potential inabilities to deliver the required results.

The Risk Management Program's objectives are to:

- Systematize the process by which the Authority responds to circumstances that could significantly delay or halt the Program.
- Increase transparency regarding challenges to project plans and objectives.
- Capture project opportunities.
- Satisfy legal and regulatory requirements and meet the needs and expectations of other stakeholders.
- Rationalize allocation of resources.

In furtherance of the above objectives and in accordance with SB 1029, the RMP provides the following:

- A comprehensive risk management plan that defines roles and responsibilities for risk management and addresses the process by which the Authority will identify and quantify project risks, implement and track risk response activities and monitor and control risks throughout the duration of each project.
- Quantification of the effect of identified risks in financial terms.
- Development documents to track identified risks and related mitigation steps.
- Plans for regularly updating its estimates of capital and support costs.
- Plans for regularly reassessing its reserves for potential claims and unknown risks, incorporating information related to risks identified and quantified through its risk assessment processes.
- Plans for integrating estimates for capital, support costs and contingency reserves.

The RMP also defines standards for risk management deliverables that the program as a whole has adopted as part of its approval:

- Deliverables are presented within a substantively complete and appropriate engineering or project management context.
- Deliverables are appropriately quantified, fully integrated, traceable and consistent and compatible with findings or stated facts.
- Where risk management deliverables are qualitative in nature, they are properly structured and clearly identified with respect to authorship.
- Material analytic results of risk analysis are capable of independent analysis or reproduction using disclosed methods and assumptions generating similar analytic results within an acceptable degree of imprecision or error.
- Funding agencies are able to assess whether it is appropriate to question the adequacy, accuracy and completeness of the third party data, information, modeling or analysis.

In short, the RMP defines the Authority’s risk management policy, the processes to be used to execute the RMP effectively and the means to judge the quality of its deliverables.

The RMP will identify key risks and respective mitigation plans and prioritize actions. These items are documented in the Program Risk Register, which will be periodically updated, reviewed with management at stipulated intervals and used as the basis of reporting.

The risk register is an iterative and dynamic document, continually updated as the program and project advances and new information about risks is developed and refined. In addition, a risk register is an input to and aids in the estimate of contingency levels and quantitative risk analysis (Monte Carlo simulations of cost and schedule). It is comprised of the following:

- Sectional Identification: identifies the risk as primarily programmatic (0) or regional (1-7 for Phase 1).
- Risk Breakdown Structure: identifies the primary risk area (e.g. Environmental, ROW, Engineering/Technical, Commercial).
- Description: brief description of the risk with separate background/further detail, as necessary.
- Ownership: identifies the group and individual with primary responsibility for managing identified risk.
- Assessment: qualitative assessment of importance of the identified risk to the program.
- Management: strategy and specific actions to be taken by risk owner or personnel reporting to them to manage the risk as well as due dates for these response actions.

The next section presents a high-level overview of the principal risk areas together with the Program’s approach to management and mitigation of these risks. As with the risk register, this is a ‘living’ overview and these principal risk areas, their description and the Program’s approach to managing them will change and adapt as appropriate to describe the current status of risk management and advance the Program.

RISK MANAGEMENT INITIATIVES

In addition to the revised and approved risk management plan, the Program has undertaken a number of initiatives to further develop and support risk management efforts. As opposed to the specific mitigations in the KEY RISK AREAS section that follows, these initiatives are being undertaken to address ‘macro-level’ risks, i.e., to enhance and promote the Program’s risk management processes and culture and identify approaches that limit the Program’s risk exposure while promoting competition as it enters procurement.

Staffing: The Authority has hired a dedicated risk manager, Jon Tapping, who reports to the Chief Executive Officer and Authority Board of Directors and oversees and directs risk management efforts for the High-Speed Rail program. The Authority is also expanding staffing in a number of other key areas to further expand its capabilities and enhance its ability to anticipate risks and respond to changed conditions – see STAFFING AND ORGANIZATIONAL STRUCTURE in KEY RISK AREAS below for further details.

Authority Risk Management System (RMS): A RMS has been developed to support implementation and monitoring of the RMP and specifically, the risk register component. The RMS is a web-based system that provides a centralized store of risk management information and user interface to facilitate monitoring and control of risks across the program. For individual team members, it provides a convenient way to quickly identify which risks and response actions they are responsible for. For team leads and senior management, the RMS facilitates oversight, performance tracking and trend analysis. A beta version of the RMS is currently under review by the Authority.

Procurement Screening: During the course of a two-day workshop held at the Authority's offices in September 2012, six procurement options¹ were analyzed based on a set of procurement and project development criteria provided by Authority management. The procurement options were screened against the Authority's strategic objectives for delivering high-speed rail in California, as well as the Authority's policy and market considerations. The procurement options that most align with these criteria were then recommended for further, more detailed analysis as part of the 2014 Business Plan process. As part of this analysis, the program is determining the allocation of risk, both desirable and practicable, for each of procurement options and seeking to quantify this allocation for comparison against anticipated pricing of these contracts under the given procurement structure. The objective of this analysis is to determine, among the feasible options, which procurement option will best serve to limit the program's risk exposure while still being desirable enough to the market to promote competition.

OVERVIEW OF KEY RISK AREAS

CATEGORIES OF PROJECT RISK

1. BUSINESS RISK

1.1. Variability in the ridership and revenues

1.2. Costs of the project – largely operations and maintenance at this stage, but other costs both fixed and variable.

2. INVESTMENT RISK – Change or variation in factors affecting the initial capital expenditure to deliver the project.

3. FINANCING AND FUNDING RISK – Variation in factors that affect the financing of the project and, in this case, funding, e.g. changes in interest rates, withdrawal, or failure to get necessary funding at the requisite time.

4. LITIGATION RISK

¹ These options represent a range of possible delivery structures available to the Authority in procuring and operating the Initial Operating Section (IOS) from Merced to the San Fernando Valley. The range of options that were evaluated varies from a disaggregated set of individual contracts managed by the Authority to a highly consolidated structure managed by a single concessionaire. The goal of the screening process was to identify in an efficient and documented fashion those procurement options that appear to warrant further detailed analysis and those that do not align with the Authority's goals and criteria.

BUSINESS RISK

RIDERSHIP AND REVENUE

The financial viability of the program is dependent on public funding for early construction, and then on ridership revenues to support access to private capital as the program matures. Given that the program is entirely new, and no high-speed rail currently operates in the U.S., a risk exists that the actual ridership demand and revenue will differ from the projections currently being used. The impact to the program could be wide ranging and include the following:

- Decreased commercial and financial viability.
- Lower-than-expected project revenue.
- Increase in the public funding required.
- Loss of stakeholder support.

MANAGEMENT/MITIGATIONS

Demand and ridership estimates have been reduced and peer reviewed and a range of revenue scenarios have been evaluated for sensitivity. High, Medium, and Low revenue estimates all illustrate that the project will generate a positive operating cash flow.

OPERATIONS AND MAINTENANCE COSTS

Without a directly comparable system operating in the U.S., there is a risk that current estimates for operations and maintenance (O&M) costs are different than eventual actual costs. Currently, development of pre-revenue O&M costs are captured as part of the testing and start-up costs in the capital cost estimate under and are estimated as percentages of the system elements that are subject to the testing and startup operations.

MANAGEMENT/MITIGATIONS

As a partial mitigation to the risk that O&M costs would be underestimated, and to test the impact on the system profitability in the early years of operations (when the operating margins are lowest) in developing its O&M cost estimates, the Authority consistently selected the highest cost inputs to examine downside potential and its effect on revenue surplus. The costs were reviewed by the Peer Review Group and additional sensitivity analyses were performed under their guidance.

- A 30 percent higher O&M cost sensitivity test was performed on the IOS Medium case in 2026 combined with a 30 percent decrease in revenues. A second sensitivity test was performed in the breakeven analysis. In this analysis, a 35 percent sensitivity was applied to the IOS Medium case (-35 percent on revenue and +35 percent on O&M costs). The results are documented in a memo for the Peer Review Group on April 20 entitled, “Models sensitivities and extreme downside scenario.”
- A 10 percent contingency factor specified for unallocated contingency against all O&M costs, as well as allocated contingency within each category.
- For the 2012 Business Plan, the \$8.17 per trainset mile, which was already higher than other overseas costs, was increased another 5 percent to add a measure of conservatism.
- Lacking insurance rates for high-speed rail operations in the U.S., conservative assumptions are used. The insurance costs are based on the best information available and provide an order of magnitude input into the model. The highest cost assumption was used for this and other inputs to increase the conservatism in testing the ability of each phase of the project to meet the requirements of Proposition 1A compliant service.

During November and December of 2012, a thorough reassessment of appropriate contingency was also undertaken to develop risk-based contingencies based on number of applicable reference projects (for a particular O&M cost category), guidance contingency percentages defining limits and a group of expert's judgment regarding the uncertainty or risk surrounding a particular O&M category's cost. In order to ensure judgments were as objective as possible, each assessor made their own assessment regarding their confidence in a particular category's base cost individually (assigning it a score on a scale of 1-5). These assessments were then averaged and combined with the guidance contingency percentages to determine a recommended contingency percentage for the particular O&M cost element.

In September 2012, the Authority commissioned the Union Internationale des Chemins de Fer (UIC), the International Union of Railways, to conduct a review on the operations and maintenance estimates that were developed to support the 2012 Business Plan as required by SB 1029. The UIC formed a group of international high-speed rail experts from France, Spain and Italy to conduct this analysis. The experts reviewed the methodology and the procedures developed by the Authority and assessed the resulting O&M cost estimates for reasonableness. The independent experts' role was not to produce another O&M cost estimate; instead their review was conducted for the sole purpose of evaluating the soundness, validity and reasonableness of the process, approach, assumptions and variables used in the O&M cost study.

The review also provided best practice guidelines and some European benchmark values, based on the experts' experience in building, operating and maintaining European high-speed rail systems, in order to improve the O&M cost modeling process developed by the Authority. This effort was conducted between September 2012 and January 2013 in collaboration with the Authority staff. The UIC report is at its final stage of review and is expected to be issued to the Authority in March 2013.

INVESTMENT RISK

STAFFING AND ORGANIZATIONAL STRUCTURE

During the peak construction years, the annual construction outlay will be several billion dollars. The Authority faces the risk that it will not have the number of experienced staff necessary to meet the demands of the program from an internal management perspective. If this risk is not mitigated by enhancing in-house capabilities, engaging supplemental resources, and considering appropriate business and commercial structures to transfer or share risk, then staffing and organizational structure may prove to be inadequate to the demands of the high-speed rail program, and the Central Valley project in particular. Without adequate staffing and expertise necessary to make timely, informed decisions necessary to advance the program, delays and increased costs are likely.

MANAGEMENT/MITIGATIONS

The risk(s) associated with staffing and organizational structure are being addressed with key hires on the Authority side at all different levels and disciplines, including the recent hiring of a Risk Manager by the Authority who oversees and directs all risk management activities for the Program.

1. Risk Manager
2. Chief Program Manager
3. Assistant Chief Counsel
4. Northern California Regional Director
5. Central California Regional Director

6. Southern California Regional Director
7. Chief Administrative Officer
8. Chief Deputy, External Affairs
9. Deputy Director, Communications
10. Deputy Director, Legislation

ENVIRONMENTAL APPROVALS

The risk associated with environmental approvals may be broadly separated into risk of obtaining approvals in the requisite time necessary to avoid delays to construction, and risk associated with conditions of the approval (e.g. work windows). While the working relationship between our staff and the staff at these agencies is good, we do continue to experience delays at least partially and perhaps largely due to review periods that are extending longer than anticipated. Due to the interdependencies between various approvals/permits granted by different agencies, it may take delays of only one or two permits at one or two agencies to delay the entire process. The conditions and restrictions associated with these permits or approvals are another area of uncertainty. Per terms of the contract with the eventual design-build contractor, meeting these conditions will be the responsibility of the design-build contractor, but they will not be fully known until the permit is in hand.

MANAGEMENT/MITIGATIONS

We continue to manage this risk by increasing staff levels and maintaining intergovernmental collaboration while complying with all approval processes in addition to the risk transfer alluded to above. Specifically:

- Obtain written commitments for accelerated review periods (Authority to get funding agreements).
- Establish close working relationships with state and federal agencies to expedite permits whenever feasible and continue to keep agencies informed of the schedule requirements and how they impact the schedule.
- Establish MOU/MOAs with the required agencies.
- Authority to pay for third party resources dedicated to support high-speed rail environmental reviews now in place.
- Continue to work with the FRA to prioritize resource allocation.
- Authority to develop Right to Entry agreement with private land owners.
- Regional Coordinators to develop a work plan for coordination with property owners (environmental and engineering staff to coordinate to minimize the impacts on the community).
- Early and informal consultation of the materials required for the development of alternatives for formal submittal.
- Develop strategy anticipating alignment changes.
- Obtain process concurrence from lead and permitting agencies.
- Integrate environmental considerations earlier into the Alternative Analysis process.
- Pursue early funding of survey work whenever feasible.
- Preliminary design schedule and deliverables to be carefully aligned with environmental permitting process in order to allow sufficient time for review by the environmental team.
- Targeted environmental permitting/process analysis to be performed.
- Regional consultants to define the impacted areas and include standard mitigation measures in EIS/EIR.

STAKEHOLDER SUPPORT

The program faces a number of potential adverse effects due to a decline or loss of public support. Local community associations and interest groups (primarily agricultural in the Central Valley) can prevent or delay the authorization process and local permitting or cooperation necessary for work to advance. Ultimately, a widespread decline in public support across the state may fuel efforts to repeal or otherwise delay release of state funds from Proposition 1A. Maintaining public support at the local (city or county) level poses its own risks to the project budget if expectations are not clearly managed and mitigation costs associated with maintaining popular support are not budgeted for in the cost estimates. If the Authority does not clearly present both the program's cost and benefits or agrees to mitigations (and their associated costs) in an incremental manner, without first determining the cost implications for the overall program, there is a significant risk that public support will erode and/or that the program's overall costs will significantly exceed current cost estimates.

MANAGEMENT/MITIGATIONS

Mitigation of this risk overlaps to some extent with staffing risk discussed previously in this document. Regional directors have been appointed to act as a point of contact for local and regional stakeholders to implement the program with a program-level understanding of the cost implications of decisions while addressing stakeholder needs and concerns. Regular outreach meetings are held by all regional directors to facilitate communication between the program and stakeholders. A Small Business Advocate has also been appointed to serve as an additional point of contact between the Authority and small businesses.

RIGHT-OF-WAY

Before construction can begin on a given parcel of land, the parcel must be acquired by the Authority. Thus, the acquisition of ROW is directly linked to the ability to meet project deadlines. This ability may be affected by timing of achievement of environmental milestones, receipt of funding, and completion of governmental review and approval processes. Delays in the acquisition process could affect contractor ability to meet deadlines or costs.

MANAGEMENT/MITIGATION

The Authority is mitigating and managing the risk associated with ROW in a variety of ways, including development of a highly detailed ROW acquisition plan, vetting the ROW acquisition plan with contractors and prioritizing ROW acquisition to meet initial contractor work-zone requirements and securing technical expertise and additional capacity.

Steps being taken include:

- Survey all single alignments prior to selection of preferred alternative.
- Consult with DOF and the PWB to allow site selection after NOD, but prior to ROD.
- Prior to ROD/after Preferred Alternative identification – survey and appraise all parcels.
- Ensure adequate resources to avoid staffing constraints – subsequent to conclusion of pending contracts (four) with full-service ROW firms, resource constraints are not anticipated; however, considering the anticipated rate of condemnation and other unknown variables, the support budget for these activities may need augmentation.
- Keep involved review agencies (e.g. DOF, DGS, and Caltrans) informed regarding the project, status, and expected workload.
- Work through the court system to ensure potential caseloads can be handled on a timely basis.

- Assess advisability, practicality of having design-builders perform some of the acquisition (except condemnation), including but not limited to temporary construction easements.
- Improve cross functional communications - discussions revolving around design refinements, noting that the current design is very preliminary.
- Indicate a need for early review of parcel impacts similar to Caltrans' condemnation review meetings, as well as need for more comprehensive understanding of the Authority's condemnation process in relation to environmental and construction. Caltrans' legal division, DGS, DOF and the Authority have met to review Caltrans' current condemnation processes as an initial step in finalizing the Authority's process.

THIRD-PARTY AGREEMENTS

The program faces a number of challenges, both general and location specific, associated with third-party agreements. There are a significant number of project dependencies that are introduced to a longitudinal project. Simply put, key activities necessary to construct the project are not under the direct control of the project team (Authority, Project Management Team or contractor). For example, construction of a section of high-speed rail or overcrossing may be dependent on the relocation of a section of existing rail which may in turn depend on the relocation of a fiber-optic cable or major utility. The relocation of fiber-optic cable or major utility in many locations will be done by third-party(s) operating under their own business constraints and according to their own schedule.

UTILITIES

Prior to selecting a preferred alternative, the program faces information limitations regarding the physical location of many utilities (both major and minor), ownership of utilities, and, generally, a limited understanding of how this and other third-party work is best integrated with construction of high-speed rail infrastructure and systems to provide a schedule and cost estimates with a high degree of confidence. While the Authority is currently in negotiations with the utility owners who will be impacted by and anticipates securing all master utility agreements prior to receiving proposals to construction, there may be some utilities for which the Authority does not have enough information in order for design-build contractors to price the cost of the relocation or removal. There is also a risk that such relocation or removal may require additional ROW.

Minor to significant delays and additional costs to the overall program may also arise from lengthy regulatory process for signing utility agreements and requisite assumptions that must be made to advance the work at the regional level. Regions are required to carry multiple alternatives owing to uncertainty surrounding utility plans and certain elements of the power system must be "over provisioned" and regional teams must make assumptions regarding power supply by utilities - If these assumptions are not ratified by subsequent studies by the utility company, significant rework on engineering and environmental sides together with potential delays are likely as review and permitting process, for these locations must be restarted.

Cooperation agreements must be followed up with sufficient technical and operations detail, without which there will be no effective way to establish a realistic scope and schedule, which must precede financial detail and subsequent financial agreements. Who is doing "what" and "when" needs to be reflected in contract documents. As noted above, the "what" can be difficult to determine given the level of planning and design, which can make it difficult to determine the appropriate "when" with a high level of confidence.

MANAGEMENT/MITIGATIONS

The Authority is working toward mitigating and managing the risk associated with utilities in a variety of ways, including working closely with the affected utility companies in managing utility design and construction require-

ments, and in finalizing all master utility agreements prior to the receipt of proposals to construct. The Authority is also seeking amendments to the state utility process, which will provide the Authority with rights and responsibilities related to utilities within the high-speed right-of-way that are similar to those that Caltrans has in the state highway right-of-way, and transferring most of the risk related to delay in relocating utilities to the design-build contractor.

RAILROAD AGREEMENTS

Given the interface with existing railroad ROW, there is a need to come to agreement with the railroad companies. At this time, there is not a Master Agreement (Agreement) in place between the Authority and BNSF or between the Authority and UPRR to inform design and construction of modifications to UPRR or BNSF facilities and each railroad's ROW and operational requirements. There is also risk related to fulfilling the obligations of the agreements once they are in place. In addition, there may be significant additional costs to the program associated with any disruptions to service experienced by BNSF and UPRR during construction. If agreements cannot be reached with the railroad companies, then design work in progress or already completed may be affected, leading to cost increases or schedule delays that could become significant if the delay in reaching agreements persists. In addition, the terms of these agreements and constraints imposed by railroad normal operations may negatively impact (implicit) productivity assumptions made during the development of the program's schedule and cost estimate, as well as the eventual contractor's possible means and methods.

MANAGEMENT/MITIGATIONS

While the Authority is responsible for securing the agreements with the railroad companies, the Authority intends to transfer much of the risk related to performance under the agreements to the design-build contractors. The design-build contract will mandate that the contractor will be responsible for fulfilling the Authority's obligations under the agreements with continued participation by the Authority.

The Authority has executed reimbursement agreements with the following railroads/operating agencies: Orange County Transportation Authority, Southern California Regional Rail Authority, Capitol Corridor Joint Power Authority, San Joaquin Regional Rail Commission and UPRR. In addition, the Authority has executed MOUs with both BNSF and UPRR. Currently, the Authority is negotiating a reimbursement agreement and an overpass agreement with the BNSF. Additionally, the Authority has made substantial progress in negotiating a master Engineering, Construction and Maintenance Agreement and an Indemnification/Insurance Agreement with the UPRR. Finally, the Authority has begun negotiations with UPRR on a purchase and sale agreement, which will include all the parcels required from the UPRR for Construction Package 1.

FINANCING AND FUNDING RISK

A number of risks exist for the overall program related to funding. Failure to receive the anticipated amount of public funding at the requisite time could threaten the pace of development and ultimately the viability of the full program as noted in ROW discussion above. Additionally, failure to manage the timing of committed funds against the cash flow requirements of the construction program presents another risk. In the case of the Central Valley Project, the primary funding risks relate to meeting the administrative requirements for full and timely receipt of the state and federal funding already identified for the Central Valley project.

MANAGEMENT/MITIGATIONS

The near-term funding risk is mitigated by the identification of all necessary sources for the \$6 billion cost. The ultimate scope of the Central Valley project will be adjusted up or down over the course of the multiple phases of

construction procurement, such that the total miles to be constructed will fit within the available funding. Steps to address uncertainties in future federal funding include:

- Phased implementation to align construction costs with funding.
- Utilize an American Recovery and Reinvestment Act reserves to preserve funding for the minimum systems and track connections.
- Continue to work with legislators, the FRA, the Federal Transit Administration, the private sector and other stakeholders to maintain support for funding the programs, such as High-Speed Intercity Passenger Rail (HSPIR) Program; Passenger Rail Investment and Improvement Act of 2008 (PRIIA); FTA New Starts Program; Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program; Passenger Rail Investment and Improvement Act reauthorization, etc. and investigate other future funding sources.
- Engage private sector entities to discuss the ability of private finance to complement or supplement public sector funding.
- Develop budget commitment requirements to quantify funding requirements.
- Continue to work with federal partners to establish funding sources.
- Performing scenario and sensitivity analysis to test the project's financial performance under different ranges of inputs (see Ridership).
- Financing strategies aligned with successful high-speed rail projects in other parts of the world, including the Channel Tunnel Rail Link (HS1) in the United Kingdom. Financing is timed to align with project cash flows to enhance project value.

LITIGATION RISK

Litigation can affect schedule, costs and financing. Several environmental lawsuits have been filed challenging the compliance with provisions of CEQA and one lawsuit has been filed challenging compliance with the High Speed Rail Bond Act, Proposition 1A. The latter case is set for hearing on May 31, 2013, in Sacramento County Superior Court.

MANAGEMENT/MITIGATIONS

The Authority continues to work closely with affected stakeholders to address legal issues raised in the CEQA lawsuits. The Authority has been able to settle two of these CEQA lawsuits challenging CEQA compliance in the Central Valley where the project construction will commence. Represented by the State's Attorney General Office, the Authority has also prevailed in several key court rulings, one denying a preliminary injunction attempting to stop construction in the Central Valley and another rejecting a Bay Area CEQA challenge by the Town of Atherton, clearing the way for the Caltrain electrification.



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