



November 15, 2014

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

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

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

The Honorable Nancy Skinner, Chair
Assembly Budget Committee
State Capitol, Room 6026
Sacramento, CA 95814

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

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), this report is required to be submitted biannually on March 1 and November 15.

Since the release of its March 1, 2014 Project Update Report, the Authority has made significant progress in its mission to plan, design, build and operate the nation's first high-speed rail system as part of California's statewide rail modernization program.

Working with the Legislature, federal agencies and others, the Authority has achieved a number of crucial project delivery milestones that could accelerate the program, bringing thousands of jobs to the Central Valley and other regions of the state sooner. These achievements include, but are not limited to: the appropriation of proceeds from the state's Cap and Trade program to the high-speed rail project in furtherance and accordance with the goals of AB 32, the Global Warming Solutions Act of 2006; major legal victories, which will allow the state to move forward with the issuance of Proposition 1A bonds, if necessary; and federal approval of the Fresno-to-Bakersfield alignment, which has allowed the Authority to begin construction of the high-speed rail system in that region. The Authority has also entered into an agreement with the San Joaquin Valley Air Pollution Control District to help ensure that, while thousands of Valley residents get to work on the project, their families and communities will not suffer negative impacts from construction-related emissions and pollutants.

The Authority also approved and submitted to the Legislature the 2014 Business Plan. The 2014 Business Plan summarizes the progress the Authority has made over the last two years and updates the 2012 Business Plan to include a more robust financial analysis, enhanced ridership and revenue forecasts, and refinements to underlying models and analysis, all of which were informed by rigorous scrutiny and review by a range of external experts and academics.

EDMUND G. BROWN JR.
GOVERNOR



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

For your review, attached is a copy of the Authority's November 15, 2014 Project Update Report. If you have any questions, please contact Michael Pimentel, Senior Legislative Analyst, at michael.pimentel@hsr.ca.gov or Kristine Schilpp, Legislative Analyst, at kristine.schilpp@hsr.ca.gov.

Sincerely,



Jeff Morales
Chief Executive Officer

Attachment: Project Update Report, dated November 15, 2014

cc: Honorable Kevin de León, President pro Tem, California State Senate
Honorable Toni Atkins, Speaker, California State Assembly
Honorable Ted Gaines, Vice Chair, Senate Transportation and Housing Committee
Members of the Senate Transportation and Housing Committee
Honorable Jim Nielsen, Vice Chair, Senate Committee on Budget and Fiscal Review
Members of the Senate Committee on Budget and Fiscal Review
Honorable Eric Linder, Vice Chair, Assembly Transportation Committee
Members of the Assembly Transportation Committee
Honorable Jeff Gorell, Vice Chair, Assembly Committee on the Budget
Members of the Assembly Committee on the Budget
Mr. Eric Thronson, Consultant, Senate Transportation and Housing Committee
Ms. Janet Dawson, Chief Consultant, Assembly Transportation Committee
Ms. Farra Bracht, Deputy 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, Room 3021
Mr. Daniel Alvarez, Secretary of the Senate, State Capitol, Room 3034
Mr. E. Dotson Wilson, Chief Clerk of the Assembly, State Capitol, Room 3196
Mr. Brian P. Kelly, Secretary, California Transportation Agency
Mr. Brian Annis, Undersecretary, California Transportation Agency
Mr. Brian Putler, Deputy Legislative Secretary, Office of Governor Edmund G. Brown Jr.



CALIFORNIA STATE TRANSPORTATION AGENCY

Edmund G. Brown Jr.
Governor

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Brian P. Kelly
Secretary

November 15, 2014

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

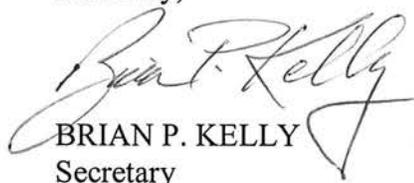
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Senate Committee on Budget and Fiscal Review
State Capitol, Room 5019
Sacramento, CA 95814

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

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

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
Secretary

Attachment

cc list: See next page

11/15/14

Page 2

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Mr. Brian Putler, Deputy Legislative Secretary, Office of Governor Edmund G.
Brown Jr.



CALIFORNIA
High-Speed Rail Authority

Project Update Report to the California State Legislature

November 15, 2014



Board of Directors

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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 and will be capable of speeds 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.



Statutory Requirements for the Project Update Report

In July 2012, the California Legislature approved – and Governor Brown signed into law – Senate Bill (SB) 1029 (Budget Act of 2012) which appropriated almost \$8 billion in federal and state funds to construct the first high-speed rail segments in the Central Valley and fund 15 bookend and connectivity projects throughout California. The bill also put into place extensive reporting requirements to ensure legislative oversight over the progress of the project. The requirements of this report, the Authority’s biannual Project Update Report, are as follows:

On or before March 1 and November 15 of each year for which funding appropriated in this item is encumbered, the High-Speed Rail Authority shall provide a Project Update Report approved, as consistent with the criteria in this provision, by the Secretary of Business, Transportation and Housing 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 of the Public Utilities Code. The report, at a minimum, shall include a programwide summary, as well as details by project segment, 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 year and milestones expected to be reached in the coming year.
- (g) Any issues identified during the prior year and actions taken to address those issues.
- (h) A thorough discussion of various risks to the project and steps taken to mitigate those risks.



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CALIFORNIA HIGH-SPEED RAIL



Project Update By Section

PHASE I

SAN FRANCISCO TO SAN JOSE

Construction of one of the most significant infrastructure projects in California history, the Transbay Terminal Center (TTC) in downtown San Francisco, is well underway. As a first step towards high-speed rail service in the San Francisco Bay Area, the TTC has completed construction of the train box, the underground portion of the TTC that will house the Caltrain and high-speed rail station. Development of the Terminal building has begun along with construction of the Salesforce Tower. At 1,070 feet, the Salesforce Tower will be the tallest office structure in San Francisco – rising 80 stories above the TTC’s multimodal facility – and the seventh-tallest building in the country. The TTC will eventually connect eight counties of the San Francisco Bay Area through 11 transit systems including: AC Transit, Amtrak, BART, Caltrain, Golden Gate Transit, Greyhound, MUNI, SamTrans, WestCAT Lynx, and Paratransit. It will ultimately be the final northern Bay Area station stop of the future high-speed rail system from Los Angeles to San Francisco. Construction of the TTC is expected to be completed by late 2018.

Electrification of the Caltrain corridor, made possible in part by \$600 million from Senate Bill (SB) 1029 (Budget Act of 2012), is proceeding along a path that will provide electrified commuter service as soon as 2020. This electrification project is an integral component of the joint rail operations required to improve the Caltrain system and accommodate future high-speed rail service. Electrification will also result in near-term greenhouse gas (GHG) emissions reductions of approximately 68,000 tons of carbon dioxide (CO₂) per year.

As full electrification of the corridor requires environmental approval, Caltrain released a Draft Environmental Impact Report (EIR) on February 28, 2014 and completed the 60-day public comment period on April 29, 2014. Throughout this process, Authority staff partnered with the Peninsula Corridor Joint Powers Board staff to ensure that the Draft EIR aligned with shared future operations with high-speed rail. Caltrain is now preparing the Final EIR for release in late 2014 and certification in early 2015. Following the approval of the Final EIR, Caltrain will issue a Request for Proposal (RFP) for design-build (DB) services for the electrification of the corridor.

SB 1029 also appropriated \$42 million, which is combined with contributions from BART and the Santa Clara Valley Transportation Authority, for the design, installation, testing, training and warranty for an intelligent network of signals, sensors, train-tracking technology and computer systems on the Caltrain Corridor as part of Caltrain’s advanced signaling systems. Construction of this system, more commonly referred to as Positive Train Control (PTC), is underway as required by federal regulation and will allow trains to travel safely at higher speeds and with greater frequency. Completion of the PTC system is expected in 2015.

SB 1029 PROJECT UPDATE REPORT

Section (a)

A summary describing the overall progress of the project.

Next Steps: Planning and supplemental environmental clearance of the Downtown Extension Project (DTX), which will extend the Caltrain corridor 1.3 miles underground from its current terminus at 4th and King streets into the TTC in downtown San Francisco, will continue to advance. Environmental review for integrated rail service in the San Francisco to Gilroy corridor is expected to begin in mid-2015.

SAN JOSE TO MERCED

In July 2014, the Authority and the City of Gilroy entered into a station-area funding agreement that will allow the city and the Authority to initiate the planning process for a potential high-speed rail station in downtown Gilroy. The Authority and the City of Gilroy will engage in public outreach meetings to seek input on various options for the planned station. The Authority is expected to enter into a similar agreement with the City of San Jose in 2015.

The Authority continues to work with the cities of San Jose, Morgan Hill and Gilroy to address questions and concerns related to high-speed rail alignments along the Union Pacific Railroad (UPRR) corridor. The cities of Morgan Hill and Gilroy are in the midst of updating their respective General Plans and are working to include the proposed options for alignments and station locations into those plans. The Authority is also working with UPRR to address potential impacts on freight operations in this corridor.

Next Steps: We will continue to work with local communities and UPRR on proposed service, alignment and station options. Analysis and environmental approval of the Central Valley Wye project has been incorporated into the Merced to Fresno project section.



The Authority is working with Workforce Investment

Boards in Fresno, Stanislaus, Kern, Inyo and Mono counties to connect potential high-speed rail workers with jobs and training opportunities. Pre-apprentice training courses, seen here in August allow potential workers to learn about construction trades and select potential apprenticeship programs to join upon completion of the program. The initial focus for training is for operators, engineers and laborers, who are currently in demand for the program. These training programs are being funded through a \$1.5 million state grant.

MERCED TO FRESNO

Work on Construction Package 1 (CP 1) - a 29-mile stretch of the high-speed rail system from Avenue 17 in Madera to East American Avenue in Fresno - has increased significantly in the last few months. This work includes geo-technical testing to identify soil types - a necessary step for completing design work - and demolition of existing structures in preparation for construction of dedicated high-speed rail roadways and bridges. In June 2014, the Authority's DB contractor, Tutor-Perini/Zachry/Parsons (TPZP), conducted a series of tests in Madera near the Fresno River to finalize bridge design. The Authority continues to acquire right-of-way in this section. In July 2014, demolition of existing buildings started in downtown Fresno, and to date, approximately 13 buildings have been demolished.

TPZP continues to make progress on finalizing these roadway and bridge designs and has been holding a series of workshops and task force meetings throughout the region to ensure stakeholder input throughout the process. TPZP is also progressing

on third-party designs with input from local irrigation, public works departments and other utility providers to relocate utilities.

TPZP and the Authority continue to implement the provisions of a Community Benefits Agreement (CBA), including National Targeted Hiring goals and Small Business participation goals. Key goals of the CBA are to create jobs and business opportunities in California and specifically in the Central Valley, which continues to have high unemployment rates. Of the over 3,000 hours of craft construction labor carried out to date, 73 percent of the workers involved are Targeted Workers and 15 percent are Disadvantaged Workers. Within CP 1, there are currently 33 certified small businesses with active contracts valued at \$288 million, with many of these firms based in the Central Valley.

The Authority also continues to partner with local stakeholders to direct potential job seekers to existing job training opportunities for high-speed rail construction work. In June 2014, 22 people completed the first six-week training session of the Building Trades Pre-Apprenticeship Training Program, with 11 of them becoming apprentices. The initial focus of the program is on training operating engineers and laborers, who are in demand for rail construction. The ultimate goal of the program is to train 325 workers in preparation for the first phase of high-speed rail construction. In total, the program will include 13 cohorts – both for pre-apprenticeship and journeyman upgrade – and involve seven trade affiliates. The program is funded with a \$1.5 million state grant awarded to Workforce Investment Boards in Fresno, Stanislaus, Kern, Inyo and Mono counties.

In June 2014, the Authority released a short video animation that provided an overview of how high-speed rail construction activities in downtown Fresno will result in the demolition of old, blighted buildings and lead to new growth and economic opportunity. This six-minute video provided one of the most up-to-date visualizations of the many benefits high-speed rail will bring to the region and helped demonstrate how the project will connect the downtown Fresno area with the rest of the state. The link to the video can be found at <http://www.youtube.com/watch?v=usu1w3V78uw&list=UUm37ESFs9ZKyPK4ge4LW6xg>.

The Authority continues to make headway on the acquisition of right-of-way in this project section. First written offers have now been made for 372 of the 384 parcels needed for CP 1 A and B, the first 24 miles of CP 1. To date, the Authority has acquired 93 parcels. To avoid



As part of the test work needed to complete the design for a bridge that will run high-speed trains across the Fresno River in Madera County, the Authority's design-build contractor Tutor-Perini/Zachry/Parsons constructed a rebar cage that was then lowered into a pre-drilled hole that was approximately 80 feet deep. Once the cage was inserted, the hole was filled with concrete and allowed to cure for about 10 days as part of a series of tests that were conducted to finalize the bridge design. Martinez Steel, a certified small business based in Fontana, fabricated the rebar used for the cage.



Starting in late September, the Authority's design-build contractor Tutor-Perini/Zachry/Parsons began demolition of the abandoned Del Monte plant in downtown Fresno. This building, originally built in the 1950s, had been blighted and partially damaged by fire in early 2014. Demolition activities were done by J. Kroeker, Inc., a woman-owned, certified small business based in Fresno.

delays in construction, the Authority has continued to work with TPZP to identify critical parcels for priority acquisition. Work also continues on parcels where an impasse exists or the project schedule dictates that the Authority obtain Resolutions of Necessity (RONs) to initiate the eminent domain process. The California State Public Works Board (SPWB) has adopted 46 RONs on behalf of the Authority, of which 13 have been settled by agreements with property owners. The Authority cannot begin any eminent domain proceeding until the SPWB adopts a resolution of necessity that complies with state law. In addition, the Authority has begun the process of acquiring the 141 parcels needed for CP 1C. As of November 2014, appraisals have been completed for 140 parcels and 96 first written offers have been submitted to impacted property owners.

Portions of State Route (SR) 99 located within the CP 1 project area will need to be realigned to accommodate the high-speed rail system between the existing SR-99 and UPRR corridors. The Authority has contracted this work to the California Department of Transportation (Caltrans) and work is underway for property acquisition, with major construction anticipated to begin in spring 2016.

Work also continues to finalize permit applications and mitigation requirements for the Central Valley from partner agencies such as the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), United States Army Corps of Engineers (USACE), and United

States Fish and Wildlife Service (USFWS). This work includes completion of the permittee-responsible mitigation plan, the regulatory framework for storm water management, geotechnical reports and hydraulic studies.

The Authority continues to pursue environmental clearance on a preferred alignment alternative for the Central Valley Wye in the vicinity of Chowchilla and Fairmead. As of early 2014, the Authority had identified four potential alignments for the Central Valley Wye for additional study, including SR-152 (North) to Road 13 Wye, SR-152 (North) to Road 18 Refined Wye, SR-152 (South) to Road 18 Refined Wye, and Avenue 21 to Road 13 Wye.

In August 2014, following additional study to assess the type and value of aquatic resources impacted, and a desire to reduce impacts to the community of Fairmead, the Authority and Federal Railroad Administration (FRA) proposed to the U.S. Environmental Protection Agency (USEPA) and USACE a slight change in the alignment alternatives. This included withdrawing the SR-152 (South) to Road 18 Refined Wye and SR-152 (North) to Road 18 Refined Wye alternatives and carrying forward the SR-152 (North) to Road 19 Wye for further consideration. This substitution

of the Road 19 alignment was recommended because, in comparison to the Road 18 Refined, it has lower impacts to naturally occurring aquatic resources, follows existing transportation corridors to a greater extent, is preferred by the Greenhills Community for its potential to further minimize noise and visual impacts, and reduces the physical division to the Fairmead community.

Based on this analysis, the USEPA and USACE, on August 29, 2014 and September 3, 2014, respectively, provided the Authority and FRA written approval of Checkpoint B compliance to study three alignment alternatives for the Central Valley Wye. Those alternatives now being carried forward are:

- SR-152 (North) to Road 13 Wye
- Avenue 21 to Road 13 Wye
- SR-152 (North) to Road 19 Wye

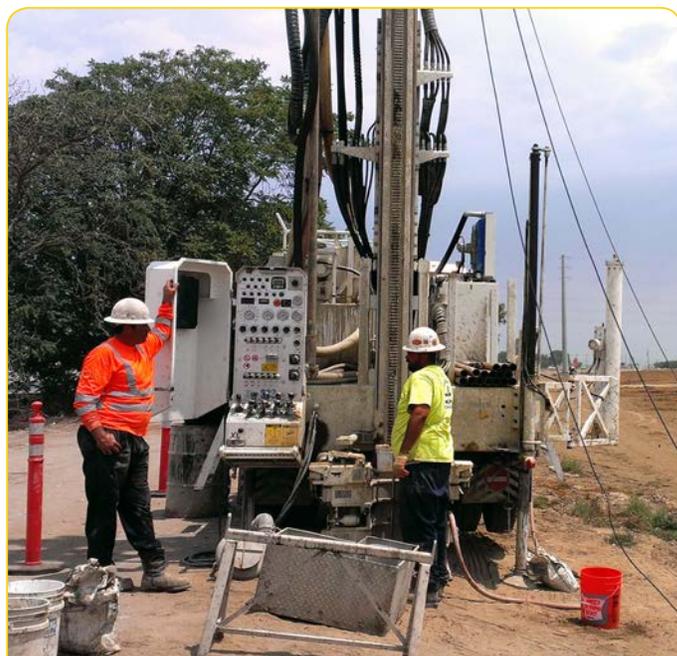
As the three alternatives listed above will be carried forward for analysis in the draft environmental document, technical studies will now be initiated for the three Central Valley Wye alternatives with the estimated completion of the environmental documents and a final alignment selection scheduled for 2016.

Next Steps: We will continue work related to the CP 1A and CP 1B segments, and continue pre-construction activities within the CP 1C segment. In the coming months, area residents will begin to see an increase in demolition work and crews gearing up for the civil engineering work required to build the foundation of the project. We will also continue to work with business and property owners to ensure that impacts to their properties are mitigated and that the relocation process is made as smooth as possible. We will continue to mitigate impacts on important farmland in partnership with the California Department of Conservation, and the preservation and development of unique habitats through mitigation properties such as the Lazy K Ranch in Madera. We will also continue efforts towards reaching out to small businesses to get them involved on the project, and continue to work with the Fresno Economic Development Center and the Fresno Workforce Investment Board to provide job training and opportunities for area residents.

We will also continue to accelerate work on the Central Valley Wye environmental document. This includes working with stakeholders, property owners and our federal partners to move towards the selection of a preferred alternative.

FRESNO TO BAKERSFIELD

On May 7, 2014, the Authority Board of Directors (Board) certified the Final EIR/EIS for the Fresno to Bakersfield project section and



Within the Construction Package 2-3 area, geo-technical work was conducted over the summer. This work is essential to learning more about the geological and soil conditions in the region in preparation for construction of the future high-speed rail program. This particular work was being conducted in the public-right-of-way in Kings County.



On May 6 and 7, the Authority Board of Directors held their monthly meeting in Fresno. At that meeting, the Board certified the Environmental Impact Report for the Fresno to Bakersfield project section. This action capped off a multi-year environmental review process – one of the most comprehensive processes ever done in California. High-speed rail supporters attended the Board meeting to show their support by proclaiming "I Will Ride".

approved a high-speed rail alignment within the Fresno to Bakersfield project section. At the same time, they also approved the preferred alignment from the already approved Fresno Mariposa Street station to the 7th Standard Road in Kern County northwest of Bakersfield. On June 27, 2014, the FRA issued their Record of Decision (ROD) under the National Environmental Policy Act (NEPA) and on August 12, 2014, the Surface Transportation Board (STB) issued their concurrence on the document and authorized construction.

The preferred alternative for the project section is comprised of the Burlington Northern Santa Fe alternative (BNSF), the Corcoran Bypass alternative, the Allensworth Bypass alternative and the Bakersfield Hybrid alternative. Proposed stations are identified as the Downtown Bakersfield station on Truxtun Avenue,

and the East of Hanford/west of Visalia station option located near SR-198.

With state and federal approvals in place, the Authority is moving forward with Construction Package 2-3 (CP 2-3). CP 2-3 is an approximately 60-mile construction section that begins at the southern terminus of CP 1, East American Avenue in Fresno, and ends one mile north of the Tulare-Kern County line. On February 25, 2014, the Authority announced that five world-class teams qualified to bid on the construction package. On April 2, 2014, the Authority invited the teams to submit proposals by issuing a Request for Proposal (RFP). A few months after the RFP was issued, two teams removed themselves from the process. They were Skanska-Ames, a Joint Venture and California Rail Builders. On October 30, 2014, the three remaining teams submitted their proposals. They are Dragados/Flatiron/Shimmick, Golden State Rail Partnership and Tutor Perini/Zachry/Parsons, a Joint Venture. Proposals will be evaluated and scored by the Authority to determine the team offering the best value. The scoring will be weighted 30 percent on technical and 70 percent on price. The contract is estimated at \$1.5 billion to \$2 billion and award is anticipated early next year.

The Authority selected a Project and Construction Management (PCM) team to oversee DB work for CP 2-3. On August 12, 2014, the Authority announced that ARCADIS U.S. Inc. (ARCADIS) was awarded the PCM contract for CP 2-3. ARCADIS was selected after months of interviews and reviews of qualifications during a competitive bidding process among five world-renowned firms. The contract was fully executed on November 7, 2014.

The Authority continues to move forward with certain pre-construction activities in the CP 2-3 area. To date, the Authority has identified 539 parcels necessary to deliver this construction package. Earlier in the year, Kings County had refused to grant access to certain county-owned parcels to allow the Authority to conduct non-damaging, geotechnical investigatory work that will be shared with the design-builder. In March 2014, the Authority filed a petition with the Superior Court for the County of Kings to access 58 locations in the public right-of-way within CP 2-3. In May 2014, the Court ruled that the order for entry was granted for the Authority to access the public right-of-way to do survey work. That work was done throughout the summer, with the majority of the work completed in late August 2014.

In June 2014, seven lawsuits were filed alleging that the Authority violated the California Environmental Quality Act (CEQA) with the certification of the Fresno to Bakersfield environmental documents. While the Authority continues to work with our stakeholders and partners through these lawsuits, the approval by the STB in July 2014 allows the Authority to move forward with construction-related activities within the project section up to 7th Standard Road. Any construction work being done south of 7th Standard Road requires 60-day written notice to the City of Bakersfield. No work in that area has been scheduled at this time.

Next Steps: We will continue to advance the property acquisition process and pre-construction activities within CP 2-3. We will move to select a DB contractor for CP 2-3 and finish design work for the section. We anticipate releasing a Request for Qualification for Construction Package 4 (CP 4), the next 30-mile section of the project from the terminus of CP 2-3 to 7th Standard Road north of Bakersfield later this year.

BAKERSFIELD TO PALMDALE

The Authority continues to collect engineering and environmental data needed to define and analyze project alignment alternatives, maintenance facilities, tunnel and viaduct structures, system operations, construction and design features. The Authority has conducted stakeholder meetings with numerous federal, state and local entities, including the U.S. Department of Defense, Bureau of Land Management, Kern County, the cities of Rosamond, Tehachapi, Lancaster and Palmdale, local farm bureaus, and land and business owners along the alignments. Coordination with key resources agencies such as USACE, USFWS and the CDFW is also underway. Work is progressing on targeting energy needs and assessments through this section. Locations for the traction power and other systems sites are under evaluation based on the latest alignments and profiles.

Next Steps: We will continue stakeholder engagement in the region as we complete a Supplemental Alternatives Analysis (SAA) and move into the draft environmental process.

PALMDALE TO LOS ANGELES

With the ongoing commitment of Cap and Trade auction proceeds, the Authority is poised to advance the planning and construction of multiple segments concurrently resulting in a number of key environmental and mobility benefits. In addition to the work being done in the Central Valley, Authority staff has specifically identified the newly-formed Palmdale to Burbank project section as a key segment that could potentially be accelerated by Cap and Trade proceeds as they become available.



Over the summer, the Authority hosted a series of public information meetings throughout Southern California to discuss the program's regional benefits and the potential for accelerating construction of the system in Southern California.

In May 2014, the Authority released its SAA for the Palmdale to Los Angeles project section and hosted five public meetings along the corridor to share its findings and recommendations and gather public and stakeholder input. Among the key recommendations discussed was the splitting of the project section previously known as Palmdale to Los Angeles into two sections, Palmdale to Burbank and Burbank to Los Angeles and the identification of Palmdale Transportation Center and Burbank Airport Station as future high-speed rail stations.

The Palmdale to Burbank project section will travel from the Palmdale Transportation Center southward to the Burbank Airport Station and is approximately 45 miles long. The Burbank to Los Angeles project section will travel from Burbank Airport Station following the existing rail corridor to Los Angeles Union Station in Downtown Los Angeles and is approximately 15 miles long.

A separate environmental document will be prepared for each section to allow the sections to advance independently or concurrently, depending on the resolution of issues in each segment. This supports the Authority's efforts to bring high-speed

rail to the Los Angeles Basin quicker and to accelerate improvements to the existing passenger rail service in that region.

As a result of local stakeholder input, the Authority is also studying a more direct route from Palmdale to Burbank that would tunnel through the San Gabriel Mountains. This route may be shorter and avoid many impacts to communities along the SR 14 corridor, but must be studied in depth to fully understand both community and resource impacts.

In August 2014, the Authority conducted a large public outreach effort through 100,000 mailers, legal notices and ads in newspapers, media coverage, social media and other outlets to make the public aware of the Authority's intent to move forward with environmental studies. The Authority also hosted seven public scoping meetings to gather official public comments on these two project sections and the new alternative corridor through the San Gabriel Mountains. More than 900 people attended these scoping meetings and the Authority has received more than one thousand comments, emails and letters on the proposed alignments, stations and general environmental concerns. The scoping report is expected to be completed in early 2015 and more environmental studies and public meetings will be held in 2015. This scoping effort amended the earlier scoping period for the Palmdale to Los Angeles project section that was held in 2007.

In addition to the work the Authority is doing to connect the Antelope and San Fernando Valley, the Authority continues to advance near-term investments and partnerships to deliver regional mobility projects like the Doran Street Grade Separation and the Southern California Regional

Interconnector Project (SCRIP) that will materially improve Los Angeles-San Diego-San Luis Obispo (LOSSAN) corridor service for Metrolink, Amtrak and goods movement. Combined with financial contributions for the Regional Connector Transit Project, Positive Train Control, and Metrolink Tier IV Locomotive purchase, this full program of projects will improve rail service and reduce GHG emissions by 2020.

Next Steps: We will continue to work with stakeholders and regulatory agencies to determine the best possible alignment with the fewest impacts to communities. The Authority is also coordinating with regional partners to ensure projects, including SCRIP, LA Union Station Master Plan and the LA River Revitalization Master Plan, work in conjunction with future high-speed rail routes and stations.

LOS ANGELES TO ANAHEIM

The Authority is refining alignment alternatives appropriate for this urban rail corridor. This approach incorporates the principles of an integrated passenger rail network described in the Authority's 2014 Business Plan. The Authority continues to meet with staff from corridor cities to provide information on the revised conceptual alignment specific to their jurisdiction. The design concept continues to be refined based on feedback from corridor cities. Additionally, the Authority continues to work closely with Metro's LA Union Station Master Plan team and the LOSSAN Joint Powers Authority. The Authority continues to advance near-term investments and partnerships to deliver regional mobility projects like the Rosecrans/Marquardt and State College Grade Separations and the SCRIP that will improve LOSSAN corridor service for Metrolink, Amtrak and goods movement.

The Anaheim Regional Transportation Intermodal Center (ARTIC) is set to open in December 2014 and will serve as a hub for Orange County where freeways, bus routes and rail systems converge. ARTIC services will include Metrolink, Amtrak, OCTA bus, Anaheim Resort Transportation, shuttles, taxis and tour and charter buses. A future high-speed rail station will also be located at ARTIC.

In April 2014, the Authority received letters of support from Disney, the Anaheim Ducks, City National Grove of Anaheim, the Orange County Business Council and the Orange County Convention Visitor and Convention Bureau. These organizations stressed the benefits of an efficient and clean mode of transportation from Los Angeles to Anaheim along with the tens of thousands of jobs and the millions of tax revenue dollars high-speed rail will bring to Orange County.

Next Steps: We will continue meetings with corridor cities in order to finalize alignment alternatives that are practical and feasible and reflect the urban corridor approach that reduces the impacts of high-speed rail to local communities along the corridor, specifically in the Gateway Cities areas.

PHASE II

LOS ANGELES TO SAN DIEGO (VIA THE INLAND EMPIRE)

The Authority meets every other month with regional transportation partners from the four-county Southern California Inland Corridor Group (ICG) to coordinate the high-speed rail program with regional plans. The ICG has been integral in fostering integrated regional planning in order to promote synergy among the many systems and agencies along the 167-mile alignment. With input from the ICG, advancement of conceptual engineering and preliminary environmental review activities continue as the Authority addresses stakeholder feedback received on the alignments presented in the Preliminary Alternatives Analysis (PAA) Report. A draft alignment refinement report has been developed and continues to be updated to reflect most recent coordination efforts.

Next Steps: We will continue to work with the ICG and other regional stakeholders to complete the alignment refinement report.

MERCED TO SACRAMENTO

The Authority continues to engage with stakeholders, coordinate with local agencies and develop engineering in support of project definition. Precision Civil Engineering has begun review of the Merced to Sacramento project section corridor and is developing an outreach plan, which will serve as a roadmap for near term community and stakeholder outreach and further project development. The Central Valley Rail Working Group, along with the San Joaquin Joint Powers Authority will serve as advisory bodies to the ongoing planning of the corridor.

Authority staff has also engaged with City of Sacramento staff and policymakers, as well as the Sacramento Area Council of Governments (SACOG), on the development and future planning of the Sacramento Railyards and downtown station facility. Authority staff will coordinate efforts to complete near-term improvements at the downtown station while planning to accommodate future high-speed rail service to the historic site.

Additionally, the Authority continues to partner with the Northern California Rail Partners to identify and work to prioritize near-term regional rail improvements as part of the Northern California Unified Rail Service. The Authority will continue to explore upgrades to the San Joaquin, Altamont and Capitol Corridor intercity rail lines to improve service and provide connectivity to the future high-speed rail system.

Next Steps: We will continue planning efforts and stakeholder outreach to review draft Alternatives Analysis and receive input for setting project priorities.

Financials

BASELINES, CURRENT AND PROJECTED BUDGETS AND EXPENDITURES TO DATE

The 2014 Business Plan included a cost estimate for the Phase I Blended System by implementation phase: Initial Operating Section (IOS), Bay to Basin, and Phase 1 Blended. Costs for these implementation phases are shown in 2013 and year of expenditure dollars (YOE).

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 contracts value, projected cost at completion, and expenditures by implementation phase. Table 1 also shows the Regional Consultant contracts that fall within each implementation phase of the high-speed rail project. The initial 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 Merced to Sacramento project sections with both remaining under contract to AECOM.
- Subsequent to issuing the contract for the Fresno to Palmdale project 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 regional sections that have been re-procured include Merced to Sacramento, Bakersfield to Palmdale, and Los Angeles to San Diego (Precision Civil Engineering, TY Lin and CH2M Hill, respectively).

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 Revised 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.

TABLE 1: PRE-CONSTRUCTION PHASE BUDGETS BY CONTRACT

| Section | Contract Start | Board Authorization for Amendment ¹ | Current Contract Expiration | Current Contract Value ² | Projected Cost at Complete | Expenditures Thru June 2014 |
|--|----------------|--|-----------------------------|-------------------------------------|----------------------------|-----------------------------|
| Program Management (Parsons Brinkerhoff) ³ | 06-Nov | 13-May | 15-Jun | \$295 | \$468 | \$235 |
| San Francisco - San Jose (HNTB) | Expired | N/A | Expired | \$45 | \$45 | \$45 |
| SF-SJ Future ⁴ | N/A | N/A | N/A | TBD | TBD | \$0 |
| San Jose - Merced (Parsons Transportation Group) | 08-Dec | 14-Jun | 16-Jun | \$73 | \$74 | \$61 |
| Merced - Fresno (AECOM) ⁵ | 07-Feb | 13-May | 15-Jun | \$83 | \$59 | \$58 |
| Fresno - Bakersfield (URS-HMM-Arup/JV) | 07-Feb | 13-Apr | 15-Jun | \$158 | \$111 | \$109 |
| Bakersfield - Palmdale (URS-HMM-Arup/JV) ⁶ | Expired | N/A | Expired | -- | \$26 | \$26 |
| Bakersfield - Palmdale (TY Lin) ⁷ | 14-Feb | N/A | 19-Jan | \$46 | \$14 | \$2 |
| Palmdale - Los Angeles (HMM-URS-Arup/JV) ⁸ | 06-Dec | 14-Jun | 15-Jun | \$74 | TBD | \$60 |
| Los Angeles - Anaheim (STV) ⁹ | 06-Dec | 14-Apr | 15-Mar | \$50 | \$44 | \$37 |
| Los Angeles - San Diego (HNTB) | Expired | N/A | Expired | \$12 | \$12 | \$12 |
| Los Angeles - San Diego (CH2M Hill) ⁷ | 14-Feb | N/A | 16-Jan | \$2 | TBD | \$0 |
| Merced - Sacramento (AECOM) ⁵ | Expired | N/A | Expired | -- | \$8 | \$8 |
| Merced - Sacramento (Precision Civil Engineering) ⁷ | 16-Jan | N/A | 16-Jan | \$1 | TBD | \$0 |
| Altamont (AECOM) (Under SJRRC direction) ¹⁰ | 08-Nov | 14-Apr | 15-Jun | \$55 | \$39 | \$9 |
| Agency Costs (Estimate) ¹¹ | N/A | N/A | N/A | -- | \$66 | -- |
| Contingency (Estimate) | N/A | N/A | N/A | -- | \$10 | -- |
| TOTAL | | | | \$894 | \$976 | \$662 |
| (Dollars in millions) | | | | | | |

TABLE 2: CONSTRUCTION COST BY SECTION

| Baseline Budgets by Section | | Cost Alignment Estimates (Constant Dollars*) | Cost Alignment Estimate (YOE) |
|-----------------------------|---------------------------|--|-------------------------------|
| San Francisco - San Jose | 2012 Business Plan | \$5,699 | \$8,363 |
| | 2014 Business Plan | \$5,813 | \$7,960 |
| San Jose - Merced | 2012 Business Plan | \$14,042 | \$19,757 |
| | 2014 Business Plan | \$14,332 | \$18,978 |
| Merced - Fresno | 2012 Business Plan | \$5,214 | \$5,482 |
| | 2014 Business Plan | \$5,392 | \$5,972 |
| Fresno - Bakersfield | 2012 Business Plan | \$6,705 | \$7,711 |
| | 2014 Business Plan | \$6,927 | \$7,813 |
| Bakersfield - Palmdale | 2012 Business Plan | \$8,092 | \$9,533 |
| | 2014 Business Plan | \$8,359 | \$9,418 |
| Palmdale - Los Angeles | 2012 Business Plan | \$13,100 | \$16,704 |
| | 2014 Business Plan | \$13,468 | \$16,627 |
| Los Angeles - Anaheim | 2012 Business Plan | \$591 | \$815 |
| | 2014 Business Plan | \$603 | \$825 |
| TOTAL | 2012 Business Plan | \$53,443 | \$68,365 |
| | 2014 Business Plan | \$54,894 | \$67,593 |

*2011 dollars are used for 2012 Business Plan estimates. 2013 dollars are used for 2014 Business Plan estimates.
(Dollars in millions)

The projected costs at completion, included in Table 1, reflect the current forecast to complete, which is subject to change, of the pre-construction phase (as documented in the Authority/FRA grant funding contribution plan) plus all expenditures through June 2014. These values include the current federal and state dollars and pre-date Proposition 1A (Prop 1A) when this work was funded using a mix of Public Transportation Account and Reimbursement funding.

Program Management and Agency Costs (costs associated to partner agencies such as CDFW, USACE, and the USFWS) are allocated across pre-construction and construction funding. These planning activities do not include the cost for the environmental documents required to bring electrification to the high-speed rail alignment (i.e. PG&E, SoCal Edison, etc.).

CONSTRUCTION COST

The 2014 Business Plan included updated cost estimates for each implementation phase of the program presented in both base year 2013 dollars and in YOE dollars. Table 2 provides a further breakdown of the construction cost estimates in YOE dollars from the 2014 Business Plan by project section. Approximately \$8.1 billion to \$8.2 billion in program wide costs, which were identified in the 2012 Business Plan, and which remain unchanged in the 2014 Business Plan, have been prorated across the project sections. These costs include approximately \$4.4 billion for rolling stock, \$1.5 billion for program, project and construction management costs, and \$2.3 billion in unallocated contingency funds (approximately 3 percent of the overall cost of the project).

TABLE 3: CONSTRUCTION PHASE BUDGETS BY CONTRACT

| Contract | Contract Execution Date | Current Contract Value | Current Contract Value + Total Provisional Sums ¹² | Board of Directors Approved Contingency | Expenditures To Date |
|--|-------------------------|------------------------|---|---|----------------------|
| DB Services for Construction Package 1 (Tutor-Perini/Zachry/Parsons) | 8/16/2013 | \$969,988,000 | \$1,022,988,000 | \$160,000,000 | \$89,770,069 |

Table 3 shows the breakdown of costs for the contract awarded to TPZP for CP 1. The contract price for CP 1 is \$969,988,000 with additional Authority-controlled provisional sums of \$53,000,000 for utility relocation, construction contract work, and unforeseen circumstances, such as the discovery of hazardous materials. Table 3 also shows the \$160,000,000 contingency, approved by the Board, which was based on Authority staff’s risk-informed contingency assessment reports and recommended contingency estimates and the unit price allowance for hazardous soil remediation.

Schedule

Current and Projected

The Authority establishes program and segment schedules based on a number of factors, and incorporates some contingency in anticipation of unforeseeable external factors. The schedules are based on the best available information and represent the Authority's expectations. However, the Authority does not control many factors that can affect the schedule negatively, such as delays due to litigation. Schedules may also be affected by stakeholder input, such as requests for extensions of comment periods beyond statutory/regulatory requirements and requests for analysis of additional alternatives. In addition, schedules rely on completion of third party agreements with Cities, Counties, private and public utility companies, freight railroads and other parties whose facilities are impacted by the projects. Timelines for completing these agreements are not within the Authority's complete control. Finally, negotiation and completion of federal and state environmental permits needed to proceed to construction can take longer than estimated in the project schedule and can impact construction schedules.

CONSTRUCTION/IMPLEMENTATION SCHEDULE

As detailed earlier in this report, TPZP continues to advance design and construction work on CP 1. With state and federal approvals now in place, the Authority is also moving forward with the delivery of CP 2-3. On October 30, 2014, 3 world-class teams submitted proposals to the Authority to carry out design and construction work on CP 2-3. The Authority anticipates awarding the contract for this construction package in early 2015. The Authority remains on schedule to complete design and construction of the first construction section by 2018.

Table 4 on page 22 shows the phased implementation schedule adopted by the Authority in the 2014 Business Plan.

ENVIRONMENTAL SCHEDULE

In cooperation with the FRA, the ROD for the Fresno to Bakersfield project section was issued on June 27, 2014, with construction approval obtained from the STB on August 12, 2014. With these clearances, the Authority is moving forward to acquire real property and begin construction.

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 the Bookends (the San Francisco Bay Area and Los Angeles Basin) and on Connectivity projects. These extended timelines will allow additional time for community outreach and stakeholder input.

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 Revised 2012 Business Plan.

TABLE 4: IMPLEMENTATION SCHEDULE

| Section | Length (approx) | Endpoints | Service Description | Planning Schedule |
|---------------------------------|-----------------|--|---|-------------------|
| Initial Operating Section (IOS) | 300 miles | Merced to San Fernando Valley | <ul style="list-style-type: none"> → One-seat ride from Merced to San Fernando Valley. → Closes north-south intercity rail gap, connecting Bakersfield and Palmdale and then into Los Angeles Basin. → Begins with construction of up to 130 miles of high-speed rail track and structures in Central Valley. → Private sector operator. → Ridership and revenues sufficient to attract private capital for expansion. → Connects with enhanced regional/local rail for blended operations with common ticketing. | 2022 |
| Bay to Basin | 410 miles | San Jose and Merced to San Fernando Valley | <ul style="list-style-type: none"> → One-seat ride between San Francisco and San Fernando Valley.¹³ → Shared use of electrified/upgraded Caltrain corridor between San Jose and San Francisco Transbay Transit Center. → First high-speed rail service to connect the San Francisco Bay Area with the Los Angeles Basin. | 2026 |
| Phase 1 | 520 miles | San Francisco to Los Angeles/ Anaheim | <ul style="list-style-type: none"> → One-seat ride between San Francisco and Los Angeles.¹³ → Dedicated high-speed rail infrastructure between San Jose and Los Angeles Union Station. → Shared use of electrified/upgraded Caltrain corridor between San Jose and San Francisco Transbay Transit Center. → Upgraded Metrolink corridor from LA to Anaheim. | 2028 |

TABLE 5: PROJECTED MILESTONES FOR ENVIRONMENTAL REVIEW PROCESS/POTENTIAL CONSTRUCTION COMPLETION

| Section | Receive Record of Decision | Complete Construction |
|--|---|-----------------------|
| Merced - Fresno | BASELINE REVISED June 2012 COMPLETED | 2018 ¹⁴ |
| Fresno - Bakersfield | BASELINE REVISED December 2012 Spring 2014 | 2018 |
| San Francisco - San Jose ¹⁵ | BASELINE REVISED December 2014 2016 | 2028 |
| San Jose - Merced | BASELINE REVISED December 2013 2017 | 2026 |
| Bakersfield - Palmdale | BASELINE REVISED February 2014 2017 | 2021 |
| Palmdale - Burbank ¹⁶ | BASELINE REVISED October 2013 2017 | 2022 |
| Burbank - Los Angeles ¹⁶ | BASELINE REVISED October 2013 2016 | TBD |
| Los Angeles - Anaheim | BASELINE REVISED December 2014 2016 | TBD |
| Merced - Sacramento (Phase 2) | BASELINE REVISED TBD TBD | TBD |
| Los Angeles - San Diego (Phase 2) | BASELINE REVISED TBD TBD | TBD |

Milestones Achieved

Since March 2014

AUTHORITY FILLS KEY EXECUTIVE AND PROJECT MANAGEMENT STAFF POSITIONS

The Authority continues to fill key executive and program management positions to oversee the design and construction of the high-speed rail program. These new positions include the recent addition of Melissa DuMond as Director of Planning and Integration for coordinating station area development, overseeing the advancement of integrated service with other rail providers, and management of general corridor planning activities; James Andrew, the Assistant Chief Counsel responsible for developing and implementing the Authority's legal strategy and assisting with environmental and CEQA legal issues; and, Jason Kimbrough, Deputy Director of External Affairs managing stakeholder outreach and legislative affairs. In the coming months, the Authority anticipates the selection of a Director of Engineering, Director of Operations and Maintenance and a Chief Administrative Officer.

THEA SELBY APPOINTED TO THE BOARD OF DIRECTORS

In March 2014, Assembly Speaker John A. Pérez appointed Thea Selby to the Board. Selby is currently a principal at Next Steps Marketing in the San Francisco Bay Area. She also serves as Executive Committee Member and Board Member with the San Francisco Transit Riders Union and as an Advisory Board Member of Californians for High-Speed Rail. Selby was Content Chair of Exceptional Woman in Publishing's 2014 Women's Leadership Conference and is a co-founder of the Lower Haight Merchant + Neighbor Association. Selby replaced former Board Member Thomas Umberg on the Board. Umberg was appointed to the Board by then-Assembly Speaker Fabian Nunez in February 2008. Umberg served as Chairman of the Board from June 2011 to February 2012.

WORLD-CLASS TEAMS SUBMIT PROPOSALS AND DEEMED QUALIFIED TO PROVIDE DB SERVICES FOR CP 2-3

In April 2014, the Authority issued a RFP to five world-class teams inviting them to bid on the CP 2-3 DB contract. CP 2-3 is the second major construction package of the high-speed rail program. It extends in excess of 60 miles through the Central Valley from East American Avenue in Fresno County to one mile north of the Kern-Tulare county line and is estimated to cost between \$1.5 billion to \$2 billion. The selected DB team will be responsible for delivering final designs for bridges, culverts, trenches and tunnels, utility relocations, aerial structures, grade separations, security and drainage. The qualified teams in alphabetical order are:

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.

- California Rail Builders: Ferrovial Agroman US Corp. and Granite Construction Company
- Dragados/Flatiron/Shimmick: Dragados USA, Inc., Flatiron West, Inc. and Shimmick Construction Co., Inc.
- Golden State Rail Partnership: OHL USA, Inc. and Samsung E&C America, Inc.
- Skanska-Ames, a Joint Venture: Skanska USA Civil West California District Inc. and Ames Construction, Inc.
- Tutor Perini/Zachry/Parsons, a Joint Venture: Tutor Perini Corporation, Zachry Construction Corporation and Parsons Transportation Group Inc.

After the RFP was released, two teams removed themselves from the bidding process. They were California Rail Builders and Skanska-Ames, a Joint Venture. Proposals were due on October 30, 2014 from the qualified bidders, and final contract selection is anticipated in early 2015.

AUTHORITY CONTRIBUTES TO A DIVERSE WORKFORCE IN CALIFORNIA

In April 2014, the Authority joined the Women Construction Owners & Executives (WCOE) in a major effort to maximize small business participation, especially those owned by women, on the high-speed rail program. To date, 26 women-owned small businesses are committed to work on the program. During a special ceremony on Capitol Hill at the WCOE National Conference,

Board Chairman Dan Richard and WCOE President Lee Cunningham signed a Memorandum of Understanding (MOU) that ensures women-owned construction firms and female construction executives are aware of, and prepared for, job opportunities on the project.

The MOU outlines the Authority and WCOE's joint outreach efforts to strengthen and expand the utilization of women-owned firms and women construction executives on the high-speed rail project. The Authority and WCOE will exchange information and material to improve awareness of the project and have made a strong commitment to facilitating joint education and training programs that will benefit women-owned companies and female construction executives.

AUTHORITY APPROVES AND SUBMITS 2014 BUSINESS PLAN

On April 30, 2014, the Authority submitted its 2014 Business Plan to the California Legislature as required by state law. The Authority's business plan is an overarching policy document used to inform the Legislature, the public, and stakeholders of the project's implementation, and to assist the Legislature in making policy decisions regarding the project. The 2014 Business Plan summarizes the progress the Authority has made over the last two years, updates the Authority's 2012 Business Plan to include recent ridership and revenue forecasts and cost esti-



The Authority's 2014 Business Plan was submitted to the California Legislature on April 30 and is available on the Authority's website at http://www.hsr.ca.gov/About/Business_Plans/2014_Business_Plan.html.

mates – all of which were informed by and improved through rigorous scrutiny and review by a range of external experts and academics – and describes the next major decisions and milestones which lie ahead.

With its release, the Authority fulfilled the statutory requirement established by Public Utilities Code Section 185033, as amended by Assembly Bill (AB) 528 (Lowenthal, Chapter 237, Statutes of 2013), to prepare, publish, adopt, and submit an updated business plan to the Legislature on May 1, 2014. The next Business Plan will be released in 2016.

AUTHORITY ENTERS AGREEMENT WITH SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

In May 2014, the Board approved entering into a Memorandum of Understanding (MOU) with the San Joaquin Valley Unified Air Pollution Control District (District). This MOU commits the Authority to offset its construction criteria pollutant emissions, commits the District to source, procure and secure the offsets on behalf of the Authority, and outlines a process for detailed Voluntary Emission Reduction Agreements (VERA) as the Authority builds out the high-speed rail program within the District’s boundaries. This MOU ensures that while thousands of Valley residents get to work on construction of the project, their families and communities will not suffer negative impacts from the construction emissions and other pollutants. This agreement is important, as the Central Valley has some of the worst air quality in the nation. The District has established offset programs for replacing aging farm and other equipment, including replacing school bus engines and irrigation pumps. These mitigations complement the Authority’s requirements of all DB contractors and their subcontractors to use clean Tier-IV construction vehicles and recycle 100 percent of steel and concrete.

BOARD OF DIRECTORS APPROVES ALIGNMENT FOR FRESNO TO BAKERSFIELD PROJECT SECTION

On May 7, 2014, the Board certified the Final EIR/EIS for the Fresno to Bakersfield project section of the high-speed rail program and approved a high-speed rail alignment within the Fresno to Bakersfield project section. On June 27, 2014, the FRA approved the alignment for Fresno to Bakersfield Project Section issuing a ROD under NEPA. Shortly thereafter, on August 12, 2014, the STB issued a decision authorizing the alignment between Fresno and Bakersfield. Together, these actions allow the Authority to begin construction of the project from Fresno to the south.

TEST PILE WORK BEGINS

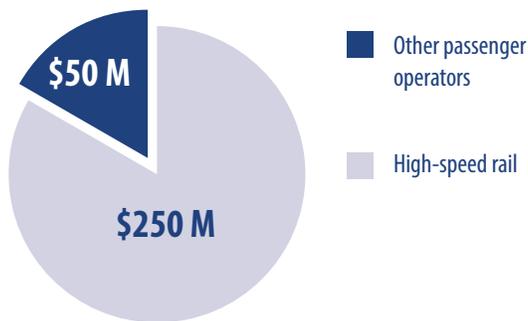
On June 23, 2014, TPZP and their subcontractors started test pile work along the Fresno River in Madera County to finalize design for a viaduct where the high-speed train will cross the river. Four firms won contracts to do the test pile work. Outback Materials is a Small Business Enterprise. Two others are certified small businesses - Moore Twining Associates, which opened in Fresno in 1898, and Martinez Steel, based in Fontana.

PRIVATE-SECTOR FIRMS EXPRESS INTEREST IN HIGH-SPEED RAIL

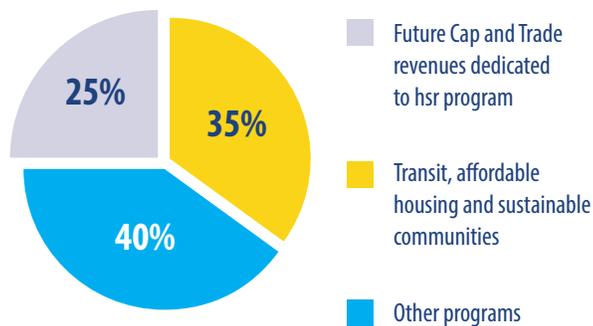
In June 2014, as the Legislature considered proposals for the dedication of Cap and Trade proceeds, a cross-section of private-sector firms expressed interest in the development of the high-speed rail program. The firms that put forth letters were ACS Infrastructure Development,

2014-2015

The Budget Act of 2014 includes \$300 million for Rail and Transit Modernization



2015 AND FORWARD



This year's allocation of Cap and Trade auction revenues and the promise of 25 percent of future Cap and Trade revenue has been a game-changer for the Authority. The steady stream of revenue furthers the Authority's ability to accelerate the high-speed rail program. It also allows the Authority to continue to move forward with bookend and connectivity projects throughout the state.

Inc., AECOM, SENER Engineering and Systems, Inc., Vinci Concessions, Siemens Rail Systems, RAILGRUP, SACYR USA, Acciona Concesiones, and ASTALDI. The companies were interested in areas of investment, construction, and maintenance of the high-speed rail program. Private sector interest has been particularly acute in the program due to recent court decisions involving Prop 1A funds and future Cap and Trade revenues committed to the program. The Authority continues to meet with a range of parties, both domestic and international, who are interested in participating in the program.

LEGISLATURE APPROPRIATES CAP AND TRADE REVENUES TO HIGH-SPEED RAIL

On June 20, 2014, the Governor signed the Budget Act of 2014 (SB 852 and SB 862) which included an appropriation of proceeds from the state's Cap and Trade program to various programs and projects that will reduce greenhouse gas emissions in furtherance and accordance with AB 32, the California Global Warming Solutions Act of 2006.

Specifically, SB 852 appropriated \$872 million in Cap and Trade auction proceeds from the Greenhouse Gas Reduction Fund (GGRF) in Fiscal Year (FY) 14-15, with \$250 million going to the high-speed rail project, \$25 million towards the Transit and Intercity Rail Capital Program and \$25 million towards the Low Carbon Transit Operations Program. SB 862 also appropriated \$400 million to the Authority beginning in the FY 15-16. These one-time appropriations are augmented by SB 862, known as the Cap and Trade Expenditure Plan (Plan), which established a programmatic structure for the continuous appropriation of annual Cap and Trade proceeds from the GGRF. The ongoing investments made by the Plan align with the investment areas identified by the California Air Resources Board's "Cap and Trade Auction Proceeds Investment Plan: Fiscal Years 2013-14/2015-16" to reduce greenhouse gas emissions that contribute to climate change and cut other forms of air pollution, particularly in disadvantaged communities.

The Authority has estimated that the high-speed rail system will reduce GHG emissions by 141,000 to 230,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) in the first year of operations in 2022. By 2030, after Phase 1 is operational, the Authority projects that the system will have reduced GHG emissions, cumulatively, between 3.4 million to 5.7 million MTCO_{2e}, based on the low and high scenarios. The Authority expects these reductions to rise to least a million MTCO_{2e} for each year after 2030.

Beginning in FY 15-16, SB 862 appropriates 35 percent of all future Cap and Trade proceeds to the investment area of Transit, Affordable Housing, and Sustainable Communities that includes three programs that promote rail and transit modernization. These programs include the Affordable Housing and Sustainable Communities Program (20 percent), the Transit and Intercity Rail Modernization Program (10 percent), and the Low Carbon Transit Operations Program (5 percent). SB 862 also appropriates 25 percent of all future Cap and Trade proceeds, beginning in FY 15-16, to the Authority for the initial operating segment and Phase 1 Blended System as described in the 2012 Business Plan, including, acquisition and construction costs of the project; environmental review and design costs of the project; other capital costs of the project; and, repayment of any loans made to the Authority to fund the project. The remaining 40 percent will be appropriated annually in the budget or legislation for investment in programs that include low carbon transportation, energy efficiency and renewable energy, and natural resources and waste diversion.



The first building to be demolished as part of the high-speed rail program was the Hollywood Inn in downtown Fresno on July 14. The former bar had been closed for several years and was a blight on the community. As the building was being torn down, members of the community expressed their thanks that the building was finally razed. Demolition activities were done by J. Kroeker, Inc., a woman-owned certified small business based in Fresno.

DEMOLITION WORK BEGINS IN DOWNTOWN FRESNO

In July 2014, the Authority's DB contractor, TPZP demolished the blighted and long-abandoned Hollywood Inn, the first building statewide to be cleared to make way for the high-speed rail program. To date, the Authority has demolished approximately 13 structures. The largest structure to be demolished to date is the vacant Del Monte Building in downtown Fresno. Demolition activities are currently being done by TPZP's sub-contractor J. Kroeker Inc., a women-owned local demolition firm. In the coming weeks, TPZP will complete design and residents will start to see structures and civil engineering work being constructed.

AUTHORITY AWARDS STATION-AREA PLANNING FUNDS TO CITY OF GILROY

In July 2014, the Authority and the City of Gilroy entered into a station-area funding agreement that allowed the city and the Authority to initiate the planning process for a potential high-speed rail station in the downtown area of the city. The City of Gilroy is located in the San Jose to Merced project section.

As part of the station area development process outlined in the Authority's business plans and through the station communities grant program, the Authority provides station-area funds to help partner cities initiate planning efforts for high-speed rail stations in their communities. Other partner cities that have entered into similar agreements with the Authority include Fresno and Merced. The station-area planning grant will provide funding as the city of Gilroy works to identify potential sites and develops conceptual designs for a high-speed station. The grant will also be used to support the city's efforts to identify alternatives for station-area development, promote connectivity to regional transportation systems and conduct cost-analysis and evaluate financing options for a station.



The Authority's Chief Executive Officer Jeff Morales attended the United Nation's Climate Summit in New York City this fall. At the summit, he participated in a policy room session for the Transport Action Area and talked about how high-speed rail systems – including California's future system – are one of the most efficient modes of transportation with the lowest carbon loads.

AUTHORITY AWARDS CONTRACT FOR PROJECT AND CONSTRUCTION MANAGEMENT SERVICES FOR CP 2-3

In August 2014, ARCADIS was awarded the PCM contract for CP 2-3. ARCADIS was selected after months of interviews and reviews of qualifications during a competitive bidding process among five world-renowned firms. The purpose of the PCM contract is to provide design and construction oversight for CP 2-3. This oversight minimizes construction risks and ensures delivery of a high-speed rail system meets the mandates of Prop 1A. Specific PCM duties include oversight of inspection and testing of the high-speed train infrastructure, technical and environmental compliance including hazmat oversight, utility relocation, construction safety and public outreach.

AUTHORITY CEO JEFF MORALES PARTICIPATES IN THE UNITED NATIONS CLIMATE SUMMIT

On September 23, 2014, Authority CEO Jeff Morales attended the United Nation's Climate Summit in New York City. He participated in the "Policy Room" session for the Transport Action Area. It was an opportunity to bring key private sector partners together with government attendees to discuss transportation commitments made during the summit. Mr. Morales presented an intervention reflecting on transportation policy needed to support the development of high-speed rail as a low carbon mode of transportation.

AUTHORITY RELEASES REQUEST FOR EXPRESSIONS OF INTEREST FOR TRAINSETS

In early 2014, Amtrak and the Authority issued a joint RFP to obtain state-of-the-art high-speed rail trainsets. The goal was to obtain service-proven designs that could meet Amtrak's need for high-speed rail equipment in the Northeast Corridor and the Authority's needs for high-speed rail equipment for use on California's high-speed rail system. Based on feedback from the leading global rail car manufacturers participating in the joint procurement, Amtrak and the Authority determined in June 2014 that a common set of equipment would not be economically and operationally feasible for the two separate systems and decided to seek equipment separately.

On October 2, 2014, the Authority issued a Request for Expressions of Interest (REOI) regarding the first high-speed trainsets and maintenance facility in the United States. The announcement allows the Authority to begin to engage with high-speed rail trainset manufacturers to help shape the Authority's upcoming RFP for trainsets. The REOI also allows the Authority to hear from manufacturers about the development of a heavy maintenance facility and three light maintenance facilities. Trainsets will be cleaned, washed, and housed overnight at the light maintenance facility while the heavy maintenance facility would be used for major overhauls

and other major maintenance work on the trainsets. The Authority will select and environmentally clear the land in California's Central Valley for the location of the heavy maintenance facility as well as sites along the alignment for the light maintenance facilities. As of October 22, 2014, the Authority has received 10 expressions of interest.

CALIFORNIA TRANSPORTATION COMMISSION ALLOCATES PROP 1A FUNDS FOR LOCAL RAIL IMPROVEMENTS

On October 9, 2014, the California Transportation Commission allocated \$78.6 million in Prop 1A funds designated for connectivity projects for a Maintenance Shop and Yard Improvements project in Alameda County. This funding will allow BART to expand capacity for maintenance and warehouse activities for future BART fleets. The project also includes retrofitting the existing Maintenance and Engineering Storage Yard with sound walls along the east side of the current test track. As a result of the allocation BART will also have the requisite funding needed to upgrade the tracks and retaining walls that connect the Hayward Maintenance Complex to the Main Line tracks.

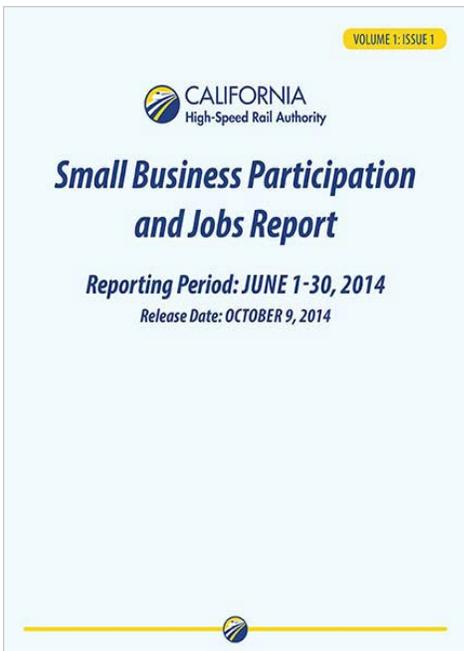
AUTHORITY RELEASES SMALL BUSINESS PARTICIPATION AND JOBS REPORT

The Authority is committed to ensuring that certified small businesses play a major role in building the statewide high-speed rail system. The Authority's Small Business Program has an aggressive 30 percent small business participation goal for construction of California's high-speed rail system and is creating local jobs and economic activity for the small business community.

On October 14, 2014, the Authority released its first Small Business and Job Participation report. Covering the period of June 1-30, 2014, this report looked at 21 prime contractors that logged 139,838 man hours worked, resulting in 832 full-time equivalent jobs. The prime contractors combined have 156 certified small businesses, including 21 certified Disabled Veteran Business Enterprises, committed to work on the program. In an effort to provide a timely and transparent accounting of jobs and small business participation in the program, the Authority will begin issuing this report quarterly starting in November 2014.

BOARD OF DIRECTORS APPROVES RIGHT-OF-WAY SERVICE CONTRACTS

On September 16, 2014, the Board approved right-of-way support services contracts with eight firms. Six of the eight firms are certified small businesses, with three firms based in California and three others currently having offices in California. The terms negotiated with the eight firms include the location of offices based in Madera, Fresno, Tulare, Kings or Kern County. Firms will also be required to adhere to the Authority's 30 percent small business participation goal. The contract terms are four years each and combined will not exceed \$35 million.



Small Business Participation and Jobs Report

Reporting Period: JUNE 1-30, 2014
Release Date: OCTOBER 9, 2014

The Authority's first Small Business Participation and Jobs Report provided a much-needed summary of how the high-speed rail program is creating jobs and business opportunities throughout the state. It also provided a snapshot of progress being made in the Central Valley – an area of the state with high unemployment. The report and future reports are available on the Authority's website at http://www.hsr.ca.gov/Newsroom/studies_reports.html.

COURT OF APPEAL OVERTURNS LOWER COURT’S RULING, CLEARS PATH FOR AUTHORITY TO SELL PROPOSITION 1A BONDS; CALIFORNIA SUPREME COURT DENIES PETITION FOR REVIEW

On July 31, 2014, the Third District Court of Appeal issued its ruling on two legal challenges, ‘High-Speed Rail Authority v. All Persons Interested’ on bond validation action and ‘Tos v. California High-Speed Rail Authority’ on the 2011 preliminary funding plan, in favor of the Authority. The Court directed the trial court to enter a judgment validating the authorization of the bond issuance and compelled the trial court to vacate its ruling requiring the Authority to redo its preliminary funding plan.

On August 13, 2014, Tos petitioners petitioned for a rehearing of the Third District Court of Appeal decision. On October 15, 2014, the California Supreme Court denied the petition for review of the two lawsuits. This major legal victory means the Third District Court of Appeal rulings will stand, allowing the issuance of the Prop 1A bonds and withdrawing the requirement to issue a new funding plan.



The Authority hosted a pre-bid conference in Los Angeles for Regional Consultant services for the Palmdale to Burbank project section and the Burbank to Los Angeles and Los Angeles to Anaheim project sections. Attendees learned more about the services and the Authority's small business participation goals.

AUTHORITY RELEASES REQUEST FOR QUALIFICATIONS FOR REGIONAL CONSULTANT SERVICES FOR SOUTHERN CALIFORNIA PROJECT SECTIONS

In October 2014, the Authority released two separate Requests for Qualifications (RFQ) for Regional Consultant services for the Palmdale to Burbank and Burbank to Los Angeles/Anaheim project sections of the high-speed rail program. The Authority is seeking qualified firms to provide planning, preliminary engineering, alternatives development, financial and programming analysis, stakeholder coordination, environmental services and right-of-way preservation services for both project sections. The Palmdale to Burbank contract is estimated at \$56 million. The Burbank to Los Angeles/Anaheim contract is estimated at \$51 million. Both contracts are for five-year terms and include the Authority’s adopted 30 percent goal for Small Business and Disadvantaged Business participation in the work. The Authority held a pre-bid conference in Los Angeles for all interested parties on October 28, 2014, and Statements of Qualifications are due December 5, 2014.

PROTECTING WATER QUALITY DURING CONSTRUCTION

The Authority has worked closely with the State Water Resources Control Board (SWRCB), among others, to ensure that we have the proper permitting in place to protect the area watersheds. On August 26, the Authority achieved the designation as a non-traditional permittee under the Phase II Small Municipal Separate Storm Water (MS4) Permit from

the SWRCB. The Authority completed this process in a little less than one year. This is a general permit for construction activities and a set of stringent water quality control standards developed in close partnership with the SWRCB. The Authority's water conservation policy, currently under development with the Project Delivery team, will continue to guide water efficiency in construction and operation, reducing the amount of potable water used.

FUTURE MILESTONES

RELEASE OF REQUEST FOR QUALIFICATION FOR DESIGN-BUILD SERVICES FOR CP 4

The Authority anticipates releasing the Request for Qualification for DB services for CP 4 in November 2014. CP 4 is approximately 30 miles extending from the terminus of CP 2-3 to Galpin Street north of Bakersfield. CP 4 is located within the counties of Tulare and Kings and the cities of Hanford, Corcoran and Allensworth. The anticipated contract cost is \$830 million, with the contract to be awarded in late 2015. The Authority will be hosting a pre-bid conference for this DB contract in December 2014.

IMPLEMENTATION OF STATEWIDE URBAN FORESTRY PROGRAM

In an effort to offset future construction emissions, and to provide environmental benefits to all Californians, the Authority is implementing an Urban Forestry Program. Through this program, the Authority will be planting thousands of trees throughout the state, including in communities that could benefit from the trees but are not directly served by high-speed rail. For the first leg of construction in the Central Valley, the Authority will partner with several small businesses to work with local organizations to locate and plant at least 4,600 trees within urban areas in and near Fresno to offset the greenhouse gas emissions produced by the construction of CP 1. The Authority anticipates planting 500 trees beginning in January 2015 and will launch a program that educates people on the benefits of trees and urban greening.

RELEASE OF REQUEST FOR PROPOSAL FOR TRAINSETS AND MAINTENANCE FACILITIES

The Authority anticipates releasing a RFP for trainsets and maintenance facilities in Spring 2015. The contract from this procurement is anticipated to include a base order, plus options for production of up to 95 trainsets. Trainsets are anticipated to be a single-level electric multiple unit capable of operating in revenue service at speeds up to 220 mph, and based on a service-proven trainset in use in commercial high-speed passenger rail service at speeds of 186 mph for a minimum of five years.

CONTINUED COLLABORATION WITH COMMUNITIES ON STATION AREA PLANNING

The Authority will continue to work with local government entities to develop station area plans around the future high-speed rail stations. The Authority, in partnership with the FRA, has dedicated funding to support station cities in the development of station area plans that are consistent and supportive of local and regional planning efforts required by SB 375 (Steinberg, Chapter 728, Statutes of 2008) and the Authority's Station Area Development Policies. These planning

efforts will focus on a range of activities appropriate to the local context to create a high-speed rail station that can serve as a new city “gateway” or hub for community development. It will also include working with regional and local transit providers to enhance connectivity to high-speed rail stations, plan for intensified development around stations, facilitate adoption or amendment to general plans and zoning codes, and developing a financing/phasing plan to support the station area plan including tools to attract private investors. To date, the Authority has entered into station-area funding agreements with the cities of Merced and Fresno; it anticipates entering into a station-area funding agreement with the City of San Jose in 2015.

ACHIEVING BROADER PUBLIC BENEFIT

As has been noted by legislative committees, the California Public Commission, and other state agencies, the development of a statewide dedicated right-of-way has the potential to provide significant public benefit beyond the transportation provided by the system. For example, the fiber optic lines and communications equipment that will be installed as part of the high-speed rail program can potentially be tapped to provide other benefits, especially in disadvantaged communities. Those benefits could range from education to agriculture to public safety to emergency services. The Authority will continue to work with its sister agencies on evaluating the potential for the utilization of its contiguous right-of-way for cabling pathways and structures including antennas and other equipment.

RECORDATION OF FINAL CONSERVATION EASEMENT WITH LAZY K

In January 2013, the Board of Directors authorized the Authority’s Chief Executive Officer, or a designee of the Chief Executive Officer, to execute a series of agreements or easements necessary to meet a number of biological mitigation obligations contained in the Merced to Fresno EIR/EIS and help fulfill the high-priority preservation of wildlife habitat called for under the California Endangered Species Act, the federal Endangered Species Act, and a number of other state and federal statutes. The Authority anticipates recordation of the final conservation easement for the site in spring 2015.

IMPLEMENTATION OF CONSERVATION PROGRAM TO PROTECT IMPORTANT FARMLAND

In April 2013, the Authority and several Central Valley farm bureaus and stakeholders entered into a series of agreements to preserve farmland and mitigate the effects of high-speed rail construction on agricultural operations. These agreements resulted in the creation of a \$4 million Agricultural Mitigation Fund that will be used to protect Important Farmland in perpetuity. In June 2013, the Authority entered into a contract with the California Department of Conservation that represented the culmination of an agreement between the Authority and the agricultural interests in the Central Valley. This agreement will preserve Important Farmland by identifying suitable agricultural land for mitigation of project impacts and by purchasing agricultural easements from willing sellers. For every acre impacted, at least one acre will be preserved in perpetuity. The Authority and the California Department of Conservation anticipates implementing this conservation and mitigation program by the end of 2014.

Issues

LEGAL CHALLENGES

COFFEE-BRIMHALL LLC V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

COUNTY OF KINGS V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

COUNTY OF KERN V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

FIRST FREE BAPTIST CHURCH OF BAKERSFIELD V.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

DIGNITY HEALTH V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

CITY OF BAKERSFIELD V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 5, 2014

CITY OF SHAFTER V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Sacramento Superior Court, Filed June 6, 2014

On May 7, 2014, the Board certified that the Final EIR/EIS for the Fresno to Bakersfield project section had been completed in compliance with CEQA. The above listed parties thereafter filed lawsuits under CEQA alleging that, among other claims, that the Authority certified a legally inadequate EIR, failed to recirculate the revised draft EIR properly, and made inadequate CEQA findings.

Actions Taken: The required CEQA settlement meetings occurred, but no settlement has been reached. The cases have been consolidated and further dates will be determined at the case management conference scheduled for November 21, 2014.

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Section (g)

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

**JOHN TOS, AARON FUKUDA AND COUNTY OF KINGS V.
CALIFORNIA HIGH-SPEED RAIL AUTHORITY**

Sacramento Superior Court, Filed November 14, 2011

The Tos lawsuit is currently proceeding in two parts. The first part regarding the Authority's funding plan required under Prop 1A was consolidated with the bond validation action (see 'High-Speed Rail Authority v. The Superior Court of Sacramento County'). On the second part, the plaintiffs allege that the high-speed rail project as proposed does not meet the requirements of Prop 1A. The Court has not set a hearing date for these claims.

Actions Taken: The Authority is currently compiling the administrative record for the hearing on the second part. It is anticipated a hearing date will be scheduled in early 2015.

ORDER INSTITUTING RULEMAKING, R. 13-03-009

California Public Utilities Commission, Filed March 21, 2013.

On March 21, 2013, the California Public Utilities Commission (PUC) issued the Order Instituting Rulemaking (OIR), at the request of the Authority, which initiated a rulemaking proceeding. The stated goal of the OIR was to "determine whether to adopt, amend or repeal regulations governing safety standards for the use of 25kv electric lines to power high-speed trains." The Authority, along with interested parties, including utilities and railroads, engaged in a series of five technical panel meetings over 11 days to review, discuss and attempt to reach a consensus on the proposed General Order (GO). On December 30, 2013, the Safety and Enforcement Division (SED) of the PUC issued the Technical Panel Report including the revised proposed GO. The revised GO included modifications the panel meetings reached through consensus, however, several remaining items were left without a full consensus. On July 8, 2014, the PUC issued the Final Scoping Memo and the determination that evidentiary hearings would be required to resolve the remaining items including the definition of "agency" in the draft GO; whether or not natural gas pipelines that parallel or cross the right-of-way of the high-speed rail train need to be encased; whether lower voltage lines that cross over the high-speed rail lines have to be routed through a separate solid structure; how overhead and underground crossings may intersect with the high-speed rail line; to what extent may the earth be used as a return path for residual current; what training rules should be adopted for operators of the high-speed rail system; and, how to harmonize the proposed new GO with existing GOs 126, 52 and 26-D.

Actions Taken: The PUC has scheduled evidentiary hearings for December 15-19, 2014. The PUC's decision is then scheduled to be issued June 11, 2015.

TOWN OF ATHERTON V. CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Court of Appeal, Third Appellate District, Filed April 13, 2012.

The Court of Appeal issued its ruling on July 24, 2014 and affirmed the Sacramento Superior Court's ruling that the Authority had complied with the environmental review requirements in CEQA for the Bay Area to Central Valley Program EIR/EIS. The Court held the Authority properly used a program EIR and tiering and deferred site-specific analysis such as the vertical alignment to a later project EIR. The challenge to the revenue and ridership modeling presented a disagreement among experts that does not make the revised final EIR inadequate. Additionally, the Court determined that it need not decide the broader question of federal preemption because the Court found the specific circumstances of this case established an exception to federal preemption under the market participation doctrine.

Actions Taken: The Authority has filed a request for the decision to be depublished. The request for depublication was denied on October 29, 2014.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY, ET AL. V. THE SUPERIOR COURT OF SACRAMENTO COUNTY (TOS, ET AL.)

Sacramento Superior Court, Filed March 19, 2013

On July 31, 2014 the Third District Court of Appeal ruled that the State's prior authorization to issue bonds under Prop 1A was valid; and that the Authority's funding plan process under Prop 1A does not have to be re-done. On August 13, 2014, Tos petitioners' petitioned for rehearing of the Third District Court of Appeal's July 31 decision. On October 15, 2014, the California Supreme Court denied their request for review.

Actions Taken: No further action is required.

RIGHT-OF-WAY

Before construction can begin on a given parcel of land, the Authority must obtain legal possession of the parcel. Thus, the acquisition of property rights is directly linked to the ability to meet CP 1 project deadlines. This ability is affected by the timing of achievement of environmental milestones, receipt of funding, completion of multiple levels of governmental review and approval processes and the cooperation of property owners. Delays in the acquisition process could affect the CP 1 contractor's ability to meet project deadlines and costs.

For more detail on this topic, please see this report's Risk Management section.

Actions Taken: The Authority is mitigating and managing the risk associated with right-of-way in a variety of ways, including development of a highly detailed acquisition plan, vetting the acquisition plan with contractors and prioritizing acquisition to meet initial contractor work-zone requirements and securing technical expertise and additional capacity. The Authority is also working to streamline the right-of-way process in order to mitigate for schedule challenges that gave a late start to the acquisition process.

THIRD PARTY AGREEMENTS

The Authority is in the process of negotiating numerous agreements to facilitate design, cost apportionment and relocations of utilities, facilities and railroads that are impacted by the design and construction of the high-speed rail project. Due to the complexity of the high-speed rail project and the necessity of developing new relationships with these entities which will extend through construction to operation, some of these agreements have taken longer to finalize than anticipated. These stakeholder concerns include compliance with the federal requirements such as Buy America, possible impacts of the high-speed rail project on future growth, maintenance of facilities, or services provided by these entities, designing relocations to be compatible with the safety standards of the high-speed rail and ensuring continuation of service during construction. Third parties are also concerned with setting precedents with a new State Agency and project funding, and are therefore cautious in negotiating agreements. Failure to execute these agreements in a timely fashion can impact the design phase of and construction of CP 1, CP 2-3 and CP 4.

Actions Taken: The Authority is addressing these concerns on a number of fronts. For the railroads, design work and coordination is progressing to address concerns about future growth and protection of services, including intrusion barriers. Issues related to the electrification of the train are being handled through the rulemaking process with the PUC in technical and all-party workshops for a new General Order. The Authority is working in collaboration with utilities and the FRA for early identification of any potential Buy America issues; and negotiations are continuing on agreements to resolve remaining issues and development of a working relationship with stakeholders.

Risk Management

Identifying and managing project risk is an essential element of successfully delivering the high-speed rail program. The Authority is utilizing a state-of-the-art approach to risk management, including extensively detailed calculation of variables to quantify risk and the incorporation of lessons learned by global experts from other programs.

The Authority is also working with the California Legislature's Peer Review Group (PRG), not just to implement provisions of SB 1029 (Budget Act of 2012), but to also gain the benefit of their perspective and guidance to continually improve the program.

The risk management program provides the Authority with a formal, systematic approach to identifying, assessing, evaluating, documenting and managing risks that could jeopardize the success of the program. These include specific engineering, environmental, planning, right-of-way, procurement, construction, organizational, stakeholder, budget and schedule risks, or any other potential inabilities to deliver the required results.

OVERVIEW OF KEY RISK AREAS

ENVIRONMENTAL APPROVALS

The risk associated with environmental approvals may be broadly separated into the risk of obtaining approvals in the requisite time necessary to avoid delays to construction, and the risk associated with conditions of the approval (e.g. work windows). While the working relationship between our staff and the staff at FRA and the various resource agencies, including USACE, USEPA, USFWS, SWRCB, CDFW, is constructive, 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 documents/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, as is the relationship between property acquisition and ability to implement pre-construction requirements. Per terms of the contract with the DB contractor, meeting these conditions will be the responsibility of the DB contractor, but they will not be fully known until the permit is in hand and not achievable until the property(ies) in question are acquired.

MANAGEMENT AND 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.

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

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/Memorandum of Agreement (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 and fund Permission to Enter (PTE) agreement and access with private land owners to facilitate early access to properties.
- Pursue early access to parcels and funding of survey work whenever feasible.
- Regional Coordinators to develop a outreach and communication 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 delayed decisions and reviews.
- Obtain process concurrence from lead and permitting agencies.
- Integrate environmental considerations earlier into the Alternative Analysis process.
- 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 mitigation sites, and include standard mitigation measures in EIS/EIR.

FINANCING AND FUNDING

A number of risks exist for the overall program related to funding and financing. Funding risks include failure to receive the anticipated amount of public funding at the requisite time and failure to manage the timing of committed funds against the cash flow requirements of the program. Both of these funding risks could delay the development of the program. Financing risks include failure to attract lenders and/or investors and increase in interest rates. Both of these financing risks could increase the cost of borrowing and investment, delaying construction until borrowing can be put in place or threaten the ability to raise financing. While the Central Valley project is

fully funded, there remains funding risks related to recent court rulings (under appeal, see Litigation risk below) and 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. Long-term funding risk has been reduced by the Authority securing a long-term, continuous funding stream of auction proceeds from the Cap and Trade program. These proceeds consist of one time amounts of \$250 million in FY 14-15 and \$400 million in FY 15-16 plus 25 percent of total auction proceeds generated starting in FY 15-16. Cap and Trade provides an important additional funding stream that can be used for project costs.

Steps to mitigate future funding and financing risks include:

- Utilize phased implementation to align construction costs with funding.
- Implement innovative delivery models that transfer risk, drive down costs and accelerate schedule.
- Focus on delivering the Burbank to Palmdale segment to accelerate private sector investment into the program.
- Work with private sector lenders and investors to define requirements for financing secured by Cap and Trade.
- Utilize American Recovery and Reinvestment Act (ARRA) reserves to preserve funding for the minimum systems and track connections.
- Continue to work with legislators, the USDOT, the private sector and other stakeholders to maintain support for funding the programs, such as the High-Speed Intercity Passenger Rail Program; the Passenger Rail Investment and Improvement Act of 2008; the FTA New Starts Program; the Transportation Investment Generating Economic Recovery Discretionary Grant program; the Passenger Rail Investment and Improvement Act reauthorization, etc. and investigate other future funding sources.
- Continue to engage private sector entities to discuss timing and requirements for private investment and delivery strategies to reduce costs and attract investment.
- Monitor the Cap and Trade proceeds to understand the level of future funding that the program may generate.
- Continue to work closely with the FRA regarding ARRA grant funding requirements.

- Continue to analyze the Authority’s ability to utilize innovative Federal financing tools, such as Railroad Rehabilitation & Improvement Financing program and the Transportation Infrastructure Finance and Innovation Act program.
- Continue to perform scenario and sensitivity analysis to test the project's financial performance under different ranges of inputs (see Ridership).
- Continue to develop 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.

LEGAL

In the normal course of business associated with implementing a complex transportation infrastructure project, public agencies typically address a range of litigation challenges and adjudicatory administrative processes related to project funding, environmental clearances, property acquisition and contract disputes. These litigation challenges have the potential to affect project schedules, costs and financing.

MANAGEMENT AND MITIGATIONS

The Authority works closely with affected stakeholders to address issues before they become formal lawsuits or, for legal issues raised through lawsuits, the Authority typically seeks to resolve them directly with the stakeholders through settlement discussions. In addition to court resolution processes, the Authority seeks to use alternative dispute resolution such as mediation or arbitration. For litigation purposes, the Authority is represented by the California Attorney General’s office except in those cases where additional expertise may be required.

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 and are estimated as percentages of the system elements that are subject to the testing and startup operations.

MANAGEMENT AND MITIGATIONS

To further refine its understanding of the system’s O&M costs, the Authority undertook a comprehensive effort to develop a bottom-up O&M cost model for the 2014 Business Plan. The new model includes a detailed estimate of each cost category based on the current information about the system, service plans, federal regulations, and industry standards that is available. The model produces a separate estimate from the top-down 2012 Business Plan estimate and helps validate the results of the 2012 effort. The model is also capable of producing both high and low cost scenarios to further evaluate the potential range of O&M costs based on current system design/plans. The model was designed to follow the U.S. Department of Transportation Office of Inspector General’s (DOT IG) guidance for the creation of O&M cost forecasts and the FRA WBS.

As an “intermediate” forecast, the estimate for the 2014 Business Plan accounts for all known cost categories and includes appropriate contingencies (based on the DOT IG guidance) for each cost category.

A thorough reassessment of appropriate contingency was undertaken to develop risk-based contingencies based on a number of applicable reference projects (for a particular O&M cost category), guidance contingency percentages defining limits, and a group of experts' 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.

Additionally, the Authority has undertaken an effort to understand the risks associated with the O&M forecasts more thoroughly. To do that, the Authority conducted Monte Carlo Simulations that analyzed the risk to the total cost estimate based on the accuracy of other O&M forecasts (reference cases) and to specific cost categories based on uncertainties internal to those categories (bottom-up). The two Monte Carlo simulations were run as an interim step in the development of the forecasts but they showed that current contingency percentages covered the majority of the scenarios in the reference case and nearly all scenarios in the bottom-up case. The preliminary results of the new estimating approach and these Monte Carlo simulations were shared with the PRG in July 2013. The Group subsequently commented that significant progress had been made in the creation of O&M cost estimates.

In September 2012, the Authority commissioned the Union Internationale des Chemins de Fer (UIC), the International Union of Railways, to conduct a review of the operations and maintenance estimates that were developed to support the 2012 Business Plan as required by SB 1029 (Budget Act of 2012). 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 issued its report earlier this year, which was delivered to the Legislature and is available on the Authority website.

For the 2014 Business Plan, the Authority has developed a comprehensive life cycle cost model to capture the 50-year capital rehabilitation and replacement costs for the infrastructure and assets of California's high-speed rail system. The 2014 model transparently presents the meth-

odology used to develop lifecycle requirements for each asset, allows changes to rehabilitation and replacement costs, timing, and spread for each asset, and generates outputs to summarize 50-year lifecycle costs in real and inflated dollars. The model has two scenarios built in; the base scenario assumes that assets are rehabilitated and replaced according to specifications, while the low scenario aims to optimize costs by modifying the frequency and spread of rehabilitation and replacement activities.

The 2014 model uses the 2012 Business Plan to establish system and service assumptions, and the model methodology is based on established research and practice by MAINTenance, renew-aL, and Improvement of rail transportation INfrastructure to reduce Economic and environmental impacts (MAINLINE), which is part of the European Union-funded research program. MAINLINE's methodology is documented in Proposed methodology for a Lifecycle Assessment Tool and aims to capture all costs involved throughout the life of an asset, including construction, operations, maintenance, and end-of-life. The 2014 model also draws from lifecycle guidance by the International Union of Railways and the European Investment Bank, based on the planning and experience with existing systems.

The model includes detailed estimates for each cost category based on the design life and experience around the world for asset lifespans and rehabilitation requirements. Contingency was applied to the model to account for inherent risks and uncertainties with forecasting lifecycle costs. Unallocated contingency and allocated contingency were applied to mirror those percentages applied to each asset category in the capital cost model. Professional services, which includes all professional, technical, and management services related to the design and construction of infrastructure during the preliminary engineering, final design, and construction phases of the project, was also applied to each second level asset cost category.

RAILROAD AGREEMENTS

Given the interface with existing railroad right-of-way, there is a need to come to agreement with the railroad companies. Although we have regular, ongoing communication with the railroads, at this time, there are not agreements 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 right-of-way 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.

MANAGEMENT AND 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 DB contractors. The DB contract mandates 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. The Authority has recently executed an Insurance and Indemnification Agreement with the UPRR. The Authority has also made substantial progress in negotiating the Engineering, Construction and Maintenance Agreement with the UPRR and has begun negotiations with UPRR on a Purchase and Sale Agreement for the parcels required for CP 1. Substantial progress has also been made between the Authority and BNSF in negotiating the template for the overpass agreements that will be required for CP 1. The Authority and BNSF are also working cooperatively to identify engineering solutions for mitigating the adjacency issues within CP 1 and CP 2-3. Importantly, to expedite the development of additional agreements, BNSF has agreed to negotiate a series of master agreements, along the main subject areas. These agreements would establish the roles and responsibilities for the parties to reduce future delays throughout the Central Valley.

RIDERSHIP AND FAREBOX 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. Although the Authority is using best practices in its modeling, given that the program is entirely new, and no high-speed rail system 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 AND 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.

The model developed for the 2014 Business Plan was enhanced with additional features and the latest available input data to address SB 1029 requirements. Four main sources of data were updated complementing previous dataset and widening the range of perspectives. The most recent dataset was developed in conjunction with Caltrans to ensure better consistency with other California model suites. Additional features include more detailed access/egress mode choice model, variable forecast horizon years, streamlined model structure and faster run times.

As part of the 2014 Business Plan forecasting effort, the Authority developed a Risk Analysis Model to estimate a ridership and revenue forecast range and an associated probability for each of the Business Plan scenarios. The risk model was used to develop Monte Carlo Simulations for each of the Business Plan scenarios and associated forecast year. The risk analysis model included a range of assumptions relating to various risk factors having the greatest combination of uncertainty and impact on the results.

Main risk factors considered in this analysis include:

- Change in demographic growth rate
- Change in household income and size
- Change in statewide and regional spatial distribution
- Automobile fuel cost
- Highway capacity
- Airline ticket prices and frequency of service
- Change in overall amount of long distance travel
- Amount of travel induced by the introduction of high-speed rail

For each risk factor, minimum, most-likely and maximum values were estimated based on best available research and analysis. These served as inputs to Monte Carlo simulations which allowed the Authority to quantify the full range of potential ridership and revenue outcomes together with the probability of each outcome. Based on this distribution of outcomes, low, medium and high projected values for ridership and revenue were also determined. The ‘low’ projection is more likely than not to be exceeded by actual future ridership. It just as likely that the actual results will be greater than the medium projection as that the medium projection will exceed actual results. The ‘high’ projection will have a correspondingly smaller probability that it will be met or exceed by actual results. Together, these values provide a better picture of the range of potential ridership and revenue scenarios than a single point estimate as well as quantify the probability for each potential outcome. Applying Monte Carlo simulations to each 2014 Business Plan scenario, the risk model provided a probability distribution of ridership and revenue outcomes resulting from identified risk factors together with a sensitivity analysis highlighting the main drivers for ridership and revenue. For additional details, please see the 2014 Business Plan Ridership and Revenue Technical Memorandum.

RIGHT-OF-WAY

Before construction can begin on a given parcel of land, the Authority must obtain legal possession of the parcel. Thus, the acquisition of property rights is directly linked to the ability to meet established project deadlines. This ability is affected by the timing of achievement of environmental milestones, receipt of funding, completion of multiple levels of governmental review and approval processes and the cooperation of property owners.

While the actual right-of-way acquisition process on the CP 1A and CP 1B continues to lag behind the estimated baseline acquisition schedule provided in the awarded CP 1 contract, the process has begun to trend more positively. In line with the management and mitigation measures outlined in the Authority's March 1, 2014 Project Update Report, the Authority has worked with its DB contractor to implement a series of measures to mitigate impacts to the CP 1 contract completion date (see details below). Taken together, these measures have facilitated improved outcomes and advanced delivery of CP 1. In addition, the appropriation of Cap and Trade auction proceeds to the high-speed rail program has largely eliminated funding availability as a primary risk driver for CP 1 by allowing for timelier payment to property owners and preventing the revision of appraisals. To date, 374 of the 384 parcels needed for this construction package have been appraised and 372 first written offers have been extended to impacted property owners. Crucial to the start of heavy construction, 19 percent of necessary parcels have been delivered to the DB contractor. Current projections suggest that CP 1 right-of-way acquisition will not negatively impact the estimated timeline for completion of the First Construction Section (FCS). However, CP 1 right-of-way acquisition may impact the cost of the CP 1 contract. It should be noted that such cost risks were identified in early risk assessments and provided for in the CP 1 contract contingency approved by the Board.

Of the 141 parcels required for CP 1C, 140 have been appraised and 96 first written offers have been made.

The Authority further notes that improvements made to the right-of-way acquisition process for CP 1 have strengthened its ability to meet its projected acquisition schedule for CP 2-3 and point to improved project delivery outcomes for subsequent construction packages. Following the receipt of the ROD for the Fresno to Bakersfield project section in June 2014 and the issuance of the STB's decision authorizing the alignment between Fresno and Bakersfield in August 2014, the Authority has moved to proactively acquire right-of-way in advance of the selection of its CP 2-3 DB contractor. To date, the Authority has appraised 247 of the 539 parcels needed for this construction package.

While different parcels present different challenges in the right-of-way acquisition schedule, the primary risk drivers are the following:

- Acceptance rate on First Written Offers
- Learning curve associated with the Authority's distinct acquisition and condemnation processes for Authority staff, contractors and review agencies.
- Coordination of processes with SPWB
- Railroad agreements
- Necessary design refinements and the impact on environmental clearance and right-of-way process

MANAGEMENT AND MITIGATIONS

The Authority continues to mitigate and manage the risk associated with right-of-way in a variety of ways, including development of a highly detailed acquisition plan, vetting the acquisition plan with contractors and prioritizing acquisition to meet initial contractor work-zone requirements and securing technical expertise and additional capacity. Since March 2014, the Authority has worked to establish better communication with impacted property owners, is in the process of hiring four more right-of-way consultants, and assigned a dedicated right-of-way program manager charged with strategic planning and identifying and addressing procedural bottlenecks.

Steps being taken include:

- Joint work with CP 1 DB contractor to potentially resequence or accelerate portions of the work in the most efficient manner
- Application of improved assumptions for the CP 2-3 right-of-way acquisition plan
- Consultation with DOF and the SPWB to reduce review and approval processes
- Focused training on distinct aspects of the Authority’s right-of-way process (e.g. partial acquisition appraisals, RON/condemnation process) for all right-of-way consultants and reviewing and approving agencies
- Coordination with all review agencies with respect to the project status and expected workload. Coordination with Caltrans Legal and the court system to ensure potential caseloads can be handled on a timely basis
- Continue regular meetings with right-of-way and DB contractor to identify status of parcel acquisition and provide that priority parcels receive proper attention
- Implementation of recommendations from Authority-led Value Analysis study
- Hiring staff with institutional knowledge of the right-of-way acquisition process as well as obtaining “loaner” staff from Caltrans
- Provide that right-of-way consultants adhere to the timing and quality requirements outlined in the contracts and Task Orders

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. Without adequate staffing and expertise necessary to make timely, informed decisions necessary to advance the program, delays and increased costs are likely.

MANAGEMENT AND MITIGATIONS

The risk(s) associated with staffing and organizational structure have been addressed with new key hires as follows:

1. Assistant Chief Counsel
2. Deputy Director of External Affairs
3. Director of Planning and Integration

The Authority has made significant progress in filling the positions authorized by the Legislature. At the start of November 2014, there are 151 staff members, up from 115.5 reported in March 2014. In the next several months, the number of staff members is expected to increase to 168.

In addition, the Authority requested and received, as part of SB 852, provisional authority to hire an additional 35 positions to support delivery of the program. These positions will support the Authority's Program Management Division, which includes Transportation and Commercial Planning, Project Management, Environmental Planning, Right-of-Way, Engineering, Design and Construction, Contract Compliance and Operations and Management, and are necessary to effectively manage and oversee design, acquisition and construction of the program. Hiring of these positions will commence pending Joint Legislative Budget Committee notification.

STAKEHOLDER SUPPORT

The program could experience adverse effects due to a possible weakening of public support, both at the local and state levels. Locally, interest groups could attempt to prevent or delay advancement of the system by hampering the local authorization and permitting processes or inhibiting local collaboration. At the state level, declining public support could translate into unnecessary problems with fiscal processes and oversight functions. Maintaining public support at both 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 costs 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 risk that public support will erode and/or the program's overall costs could exceed current cost estimates.

MANAGEMENT AND MITIGATIONS

Mitigation of this risk overlaps to some extent with staffing risk, as described above. Regional Directors in Northern California, the Central Valley and Southern California were appointed in 2012, and the Authority's corresponding regional offices all opened in 2013. The Regional Directors and their staff have a program-level understanding of the cost implications of potential program decisions, and they use this information to act as a point of contact for local and regional stakeholders when addressing their needs and concerns related to potential project effects in their regions. Regular stakeholder and/or public meetings are held by all Regional Directors and their staff to facilitate communication opportunities and relationships between the high-speed

rail program and its myriad publics. At the state level, coalition building and ongoing legislative communication are the cornerstones of a concerted public affairs effort which also includes collaboration with the Regional Directors. Finally, a Small Business Advocate, a position created in 2012, and small business outreach team serve as the main points of contact between the Authority and small businesses. This coordinated effort conducts outreach sessions to educate small businesses regarding the high-speed rail program and opportunities, partners with other State agencies to provide resources to small businesses, and advocates for California certified small businesses.

TECHNICAL

The program will be measured by public acceptance and in compliance with Prop 1A passed by voters in 2008, which impose legal, political, financial, and technical challenges. Transportation programs have varying degrees of technical issues throughout each phase of a major capital program that include the environmental phase, preliminary engineering and final design through construction and startup of revenue operations. Technical issues are usually evaluated in an analytical manner and resolved through established design procedures and standards that meet best practices in the industry.

Since high-speed rail systems do not currently operate in the United States, the project assessed European and Asian high-speed rail systems in order to develop guidance and technical requirements that could be adapted to the US market. With the majority of alignment segments in the program still largely in the project level environmental phase, a concerted effort was made to develop criteria and provide technical guidance to support the regional environmental teams as alignment alternatives are developed and project impacts evaluated and appropriate mitigation measures considered to eliminate or minimize impacts on the environment.

MANAGEMENT AND MITIGATIONS

Technical challenges will be identified throughout development of the program with solutions developed by engineers and industry experts involved in the implementation of the system. Several of the significant engineering challenges and steps being taken to provide solutions are listed below:

- Adjacent Railroad Hazard Risk Assessment – Models have been developed that quantify the risks of potential derailment by adjacent freight railroads and allow the risks to be evaluated and ranked as to their significance. Risk analysis accounts for safety records, derailment frequencies, alignment geometry (i.e., tangent tracks, curve radii, gradients) and separation distances between freight and high-speed rail tracks. Mitigation measures such as intrusion barriers, earth berms and increased track separation have been developed and are currently under discussion and review by the freight railroads. Models have been developed based on parameters including trainset length, weight and configuration, train speed, and offset of barrier from track in order to assess the adequacy of the intrusion barrier to mitigate the impact of alternate derailment scenarios. This work is continuing to confirm the appropriateness of the design parameters for use in the design of intrusion protection barriers.

- Earthquake faults throughout northern and southern California regions pose significant challenges particularly for the alignments through the Tehachapi Mountains between Bakersfield and Palmdale and the San Gabriel Mountains between Palmdale and the San Fernando Valley. Major faults can cause a severe misalignment of track and cause damage to structures during seismic events. Mitigations include crossing active faults on at-grade alignments where practical or crossing faults in underground structures with seismic fault chambers or oversized tunnel segments that accommodate shifts in track alignment so that tracks and systems can be repaired and revenue service restored. The Southern California segments are proceeding into a project level environmental phase and engineers supported by seismic and tunnel experts have begun to conduct analyses during establishment of environmental footprints. Technical solutions will be based on practices that balance cost, reliability and risk for the project.
- Mountainous terrain also poses challenges in establishing vertical alignments that achieve the high-speed operational requirements without requiring the extensive use of capital-intensive underground structures and support facilities. Balancing the design requirements with the existing topography may require the use of long tunnels and tall aerial viaducts or high embankments to support the high-speed tracks. Due to potentially long haul distances in mountainous terrain to quarry sites to obtain fill material or disposal sites for tunnel muck, balanced cut and fill sections are being evaluated to avoid an excessive number of tunnels or embankments within the alignments under consideration. Engineers are developing design concepts to support the project definition phase and identification of environmental impacts.
- Tunnels with lengths up to 12 miles are being evaluated in the mountainous terrain in southern California regions between Bakersfield and San Fernando Valley. The Authority has reached out to industry experts in the past to establish criteria for tunnel configurations and operating speeds. The Authority has recently conducted a tunneling workshop with industry participants, both national and international contractors to provide feedback on constructibility, subsurface investigation, risk, contract packaging, delivery methods and commercial aspects. The Authority has also reached out to technical experts in the industry on ventilation and fire and life safety aspects and will continue to reach out to industry experts in these fields in evaluating technologies and tunneling methods in use today. Tunneling can be particularly challenging in remote mountainous areas where access to work sites is difficult. Tunneling under national forests is being evaluated with respect to surface penetrations for ventilation and systems facilities that can disrupt recreational areas and other 4 F uses. Alternative solutions include evaluation of twin bore tunnels with the addition of service tunnels or other potentially less costly configurations that will minimize environmental impacts and still provide for tunnel ventilation and systems facilities as well as a place of refuge in the event of an emergency evacuation.
- Developing and completing phased geotechnical investigation programs to support environmental process and evaluation of geologic conditions, seismic ground motions, ground water depths and hydrostatic pressure are required for the development of design,

construction and to secure permits. Mitigations may include ground water monitoring, recharging of ground water both within the project area and an established zone of influence outside project limits. Other mitigations may include secondary tunnel liners to establish water tightness in the tunnels. Technical analyses will be conducted as these segments proceed through the environmental and preliminary engineering phases.

- In regions of the Central Valley where the high-speed rail alignment will be constructed, regional subsidence has occurred in the soils due to consolidation settlement of alluvium that occurs in response primarily to groundwater pumping, hydro compaction, and oil and gas extraction. In prior ‘wet’ years, the associated decrease in groundwater pumping had resulted in a steady recovery of water levels and a reduced rate of subsidence. Recent literature has documented the effects of the continuous drought in areas of California, particularly in the San Joaquin Valley, expanding the geographic extent and increasing the rate of subsidence and potentially impacting the high-speed rail alignments. Further data and analytical work is necessary and the Authority is moving ahead to hire a consultant to evaluate available data in the region relevant to subsidence, consult with local agencies that may have similar concerns and develop an instrumentation and monitoring program to record the occurrence of subsidence and to document potential impacts to high-speed rail tracks and facilities as a result of subsidence.
- The implementation of blended operation in Northern and Southern California requires consideration for development of technical guidance that reflects the unique operating conditions and right-of-way constraints within these urban corridors. Engineers are looking at establishing a basis on which to evaluate these corridors and establish footprints for the environmental process. Interaction will follow with the transportation agencies and railroads that operate in these corridors.
- Access to stations in urban areas such as Transbay Terminal and Los Angeles Union Station pose significant alignment challenges for high-speed rail in order to fit within constrained corridors usually with existing commuter rail, freight or other transit systems where additional right-of-way opportunities are limited. Potential alignments and station footprints continue to be evaluated and discussed with local agencies and solutions will be developed as project level environmental documents are progressed in these sections.

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 Authority (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 identified utility owners who will be impacted, there may be some utilities for which the Authority does not have enough information in order for DB contractors or utility owner to price the cost of the relocation or removal. There is also a risk that such relocation or removal may require additional right-of-way.

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.

Cooperative 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 AND MITIGATIONS

The Authority is working to mitigate and manage the risk associated with utilities in a variety of ways, including working closely with the affected utility companies in managing utility design and construction requirements, and in finalizing all cooperative utility agreements. In June 2013, Governor Brown signed SB 85 (Committee on Budget and Fiscal Review, Chapter 35, Statutes of 2013) that established a framework for the reimbursement or payment, and apportionment, of utility relocation costs, clarifying the Authority's utility relocation process on land acquired for the high-speed rail project. SB 85 will help the Authority minimize delays in project delivery from a failure to reach agreements with utility companies regarding the relocation of utility facilities. These provisions were modeled after existing statutes utilized by Caltrans for the relocation of utilities within right-of-way acquired for highway purposes in order to establish a familiar framework for utility companies.

Footnotes

1. The Board authorized amendments to these contracts on the dates shown.
2. The Current Contract Value of the expired contracts are set equal to the Expenditures at closeout. This provides a reduction in the total Current Contract Values.
3. Projected value (through FY 17-18). A portion of the PMT costs are now allocated to construction funding.
4. San Francisco to San Jose is part of the blended system. Caltrain is leading the environmental process for electrification.
5. The Sacramento to Fresno contract value, inclusive of the Merced to Sacramento and Merced to Fresno Sections, is shown in the Merced to Fresno Current Contract Value. The projected cost is lower due to the termination of the Merced to Sacramento section under the AECOM contract reducing the projected cost and expenditures
6. The Fresno to Palmdale contract value, inclusive of the Fresno to Bakersfield and Bakersfield to Palmdale sections, is shown in the Fresno to Bakersfield Current Contract Value. The projected cost is lower due to the reduction in work scope and eventual termination of the Bakersfield to Palmdale section under the URS contract reducing the projected cost and expenditures.
7. Architectural & Engineering contracts for these sections were re-procured and contracts have been executed.
8. The future plans of this contract are currently under consideration for amendment or re-procurement.
9. The reduction in work scope as a blended alignment in this report lowered the projected cost.
10. The Altamont corridor is under the direction of the SJRRC. The agreement between SJRRC and Authority has not been completed regarding Authority financial support of the environmental document.
11. Agency costs consist of multiple contracts with an estimate to complete.
12. Total Provision Sums (\$53,000,000) = Utility Provisional Sum (\$25,000,000) + Construction Contract Work Provisional Sum (\$20,000,000) + Building Hazardous Materials Provisional Sum (\$8,000,000)
13. One-seat ride means that passengers do not need to switch trains, even if the train operates over two systems (e.g., moving north on dedicated high-speed rail infrastructure and then moving onto Caltrain tracks at San Jose, assuming electrification of Caltrain corridor as soon as 2020 as proposed by Caltrain.
14. Completion date does not include construction of Central Valley Wye.
15. Caltrain's Peninsula Corridor Electrification Project environmental review is anticipated to be completed by the end of 2014.
16. The Palmdale to Los Angeles project section was split into two sections, Palmdale to Burbank and Burbank to Los Angeles, in Summer 2014. The baseline dates for receipt of Record of Decision for these sections reflect the baseline date for the Palmdale to Los Angeles project section. The revised dates for receipt of Records of Decision reflect the anticipated dates for these two new sections.