Narrative Application Form – Service Development Program Part I

High-Speed Intercity Passenger Rail (HSIPR) Program

Applicants interested in applying for funding under the March 2011 Notice of Funding Availability (NOFA) are required to submit the narrative application forms, parts I and II, and other required documents according to the checklist contained in Section 4.2 of the NOFA and the Application Package Instructions available on FRA's website. All supporting documentation submitted for this Service Development Program should be listed and described in Section H of this form. Questions about the HSIPR program or this application should be directed to the Federal Railroad Administration (FRA) at HSIPR@dot.gov.

Applicants must enter the required information in the gray narrative fields, check boxes, or drop-down menus of this form. Submit this completed form and the statement of work, along with all supporting documentation, electronically by uploading it into www.GrantSolutions.gov by 8:00 p.m. EDT on April 4, 2011.

A. Point of Contact and Applicant Information

Applicant must ensure that the information provided in this section matches the information provided on the SF-424 forms.

(1) Name the submitting agency: California High-Speed Rail Authority		**Provide the submitting agency Authorized Representative name and title:** Roelof van Ark, Chief Executive Officer		
Address 1: 925 L Street	**City:** Sacramento	**State:** CA	**Zip Code:** 95814-	**Authorized Representative telephone:** (916)384-1488 ext. **Authorized Representative email:** rvanark@hsr.ca.gov
Address 2: Suite 1425				
Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative): Name, Title		**Submitting agency POC telephone:** ( ) - ext. **Submitting agency POC email:**		
(2) List out the name(s) of additional State(s) applying (if applicable):				

B. Eligibility Information

Complete the following section to satisfy requirements for application eligibility.

(1) Select the appropriate box from the list below to identify applicant type. Eligible applicants are listed in Section 3.1 of the NOFA.

- ☒ State
- ☐ Amtrak
- ☐ Group of States
- ☐ Amtrak in cooperation with a State or States

If selecting one of the applicant types below, additional documentation is required to establish applicant eligibility. Please select the appropriate box and submit supporting documentation to demonstrate applicant eligibility, as described in Section 3.2 of the NOFA, to GrantSolutions.gov and list the supporting documentation under "Additional Information" in Section H.2 of this application.

- ☐ Interstate Compact
- ☒ Public Agency established by one or more States

(2) Indicate the status of eligibility documentation including the date of issue and how documentation can be verified by FRA. Verify any completed Environmental Assessment (EA) or Final Environmental Impact Statement (EIS) document that demonstrates satisfaction of "Service NEPA" for the proposed Service Development Program by indicating if documents are submitted through GrantSolutions.gov or referenced through an active public URL. Refer to the Service Development Program Application Package Instructions and Section 5.2 of the NOFA for more information. Project-level NEPA documents for component projects within the Service Development Program may also be included.

A NEPA decision document (Finding of No Significant Impact, Record of Decision, or Categorical Exclusion concurrence) is not required at the time of application, but must be issued by FRA prior to award of a construction grant. Applications that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process. Any document not available online should be submitted with the application package and listed in Section H.2 of this application. If more rows are required, please provide the same information for additional documentation in a separate supporting document and list it in Section H.2 of this application.

Service Development Planning			
Documentation	**Date of Issue** *(mm/yyyy)*	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link**
☒ Service Development Plan	9/2009	☒	

Service NEPA Documents			
Documentation	**Date of Issue** *(mm/yyyy)*	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link**
☐ Categorical Exclusion Documentation (worksheet)	/	☐	
☐ Environmental Assessment (EA)	/	☐	
☒ Final Environmental Impact Statement (EIS)	8/2005	☐	http://www.cahighspeedrail.ca.gov/Statewide_Program_Environmental_Reports_EIR_EIS.aspx

FRA Decision Documents for Service Development Programs			
Documentation	**Date of Issue** *(mm/yyyy)*	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link**
☐ Finding of No Significant Impact (FONSI)	/	☐	
☒ Record of Decision (ROD)	11/*2005*	☐	http://www.fra.dot.gov/downloads/RRDev/hst_rod.pdf

Project NEPA Documents			
Documentation (select from the list of choices)	**Date of Issue** *(mm/yyyy)*	**Describe How Documentation Can Be Verified** (choose one)	
		Submitted in GrantSolutions	**Web Link**
Final Environmental Impact Statement (EIS)	/	☐	http://www.cahighspeedrail.ca.gov/lib_Bakersfield_Palmdale.aspx (in process)
	/	☐	
	/	☐	
	/	☐	
	/	☐	
	/	☐	
	/	☐	
	/	☐	
	/	☐	
	/	☐	

(3) Indicate the operational independence of the proposed Service Development Program.[1] Refer to Sections 3.5.2 and 3.4.4 of the NOFA for more information about operational independence and applications related to previously-selected projects.

☐ This program is operationally independent.

☒ This program is operationally independent when considered in conjunction with previously selected or awarded HSIPR program project(s) (identify previously selected or awarded projects below).

☐ This program is not operationally independent.

Briefly clarify the response:

This project is an extension of the Authority's FRA-funded initial construction segment in the Central Valley which is considered to have operational independence. This initial construction segment was funded through 2009 ARRA and 2010 HSIPR funding.

[1] A Service Development Program is considered to have operational independence if, upon being implemented, it will have tangible and measurable benefits, either independently of other investments or cumulatively with projects selected to receive awards under previous HSIPR program solicitations. Additionally, a Service Development Program may demonstrate operational independence by resulting in tangible and measurable progress in implementing new or substantially improved high-speed or intercity passenger rail service.

C. Corridor Service Overview

Respond to the following questions to help put this application into the context of the long-term vision and related work for the HSIPR corridor service.

(1) Provide a brief narrative explaining how this Service Development Program relates to the long-term vision of the HSIPR corridor. If the narrative includes acronyms, the first frequency should be spelled out.

Background: The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain a state-wide California High-Speed Train Program (CHSTP). When completed, the new high-speed rail system will span nearly 800-miles providing reliable, high-speed electrified train service between the Bay Area, the Central Valley, Sacramento and Southern California. The new high-speed rail system will be grade-separated from road vehicle traffic and will operate almost exclusively on separate, dedicated tracks with top design speeds of up to 250 miles per hour (mph) and an operating speed of up to 220 mph. The new high-speed rail system will incorporate state-of-the art safety, signaling, and automated train control systems.

Phase 1: Phase 1 of the CHSTP will construct approximately 520 miles of rail between San Francisco and Anaheim. When completed, Phase 1 will provide 2-hour and 40-minute nonstop service from San Francisco south to Los Angeles. Subsequent phases of the CHSTP include a southern extention (Los Angeles to San Diego via Inland Empire) and a northern extension (Merced to Sacramento).

Phase 1 preliminary engineering/environmental review (PE/NEPA/CEQA) is underway and is being funded through $479 mill (fed+match) in ARRA funding. The Authority has also secured $5.5 billion in federal commitments (ARRA and 2010 High Speed and Intercity Passenger Rail (HSIPR) and local (Prop 1A) to fund construction of infrastructure for its Initial Central Valley Project (ICVP) from Fresno (Madera County -south of Merced) to North Bakersfield.

2011 Funding Request: The Bakersfield Station-South project, the subject of this application, builds on the existing $5.5 b in construction funding for Phase 1 ICVP and a companion Merced Station-Bakersfield Station application (CA-HSR-ICVP Extension-Merced Station/Bakersfield Station) to extend infrastructure approximately 15 miles further south from Bakersfield Station into the Tehachapi Mountains. This southern extension includes approximately 9 miles at-grade construction and approximately 6 miles of viaduct.

(2) List other HSIPR projects or activities related to this Service Development Program application. This includes any pending, selected, or awarded planning, PE/NEPA, FD/Construction, Service Development Programs or projects, and other FRA funded programs. The purpose of this list is to identify overlapping or complementary applications, projects, or programs. Click on the gray boxes to select from the list of choices for FRA Solicitation and Status. If the Solicitation is not included in the prepopulated list, select "Other" and type the name in the adjacent gray box within that field.

	Project, Activity, or Service Development Program Name[2]	FRA Solicitation	Federal Funding Amount[3] (in thousands of dollars)	Status	GrantSolutions Number and/or Award Number	Does the project contain activities or scope also proposed in this application?
1	California High Speed Train Program ARRA Grant - Phase 1 PE/NEPA/CEQA - San Francisco - Anaheim	ARRA-Track 2	$ 194,000,000	Obligated	GS # / FR-HSR-0009-10-00	No
2	California High Speed Train Program ARRA Grant - Phase 1: PE/NEPA/CEQA - San Francisco - Anaheim; Phase 1: FD/CN Fresno-Bakersfield	ARRA-Track 2	$ 2,272,176,231	Obligated	GS # / FR-HSR-0009-10-01	No
3	CA-MERCED/FRESNOHSR-	FY10 SDP	$ 715,000,000	Selected	GS # / Award #	No

[2] If an applicant is submitting an Individual Project application proposing the same or similar scope as a component project contained in this Service Development Program application, the Individual Project application should be listed.

[3] Depending on the status of the Project, Activity, or Program record the amount obligated, awarded, or requested.

	FY10-SDPIMPROVEMENTS					
4	CA-HSR-ICVP Extension-Merced Station/Bakersfield Station	Current NOFA	**$** 1,440,000,000	Pending Announcement	GS # / Award #	No
5	CA-HSR-ICVP Extension-Merced/West	Current NOFA	**$** 960,000,000	Pending Announcement	GS # / Award #	No
6			**$**		GS # / Award #	
7			**$**		GS # / Award #	
8			**$**		GS # / Award #	
9			**$**		GS # / Award #	
10			**$**		GS # / Award #	
11			**$**		GS # / Award #	
12			**$**		GS # / Award #	
13			**$**		GS # / Award #	
14			**$**		GS # / Award #	
15			**$**		GS # / Award #	
16			**$**		GS # / Award #	
17			**$**		GS # / Award #	
18			**$**		GS # / Award #	

D. Executive Summary

Answer the following questions about the proposed program.

(1) Provide a clear, concise, and descriptive project name. The Service Development Program name must consist of the following elements, each separated by a hyphen: (1) the State abbreviation; (2) the route or corridor name; and (3) a Service Development Program descriptor that will concisely identify the program's focus (e.g., HI-Fast Corridor-Main Stem). Please limit the response to 100 characters.

CA-HSR-ICVP Extension-Bakersfield Station/South

(2) If an application containing the proposed scope was previously submitted for consideration and was not selected, indicate the solicitation under which that application was submitted. Check all that apply.

- ☐ ARRA – Track 1
- ☐ ARRA – Track 2
- ☐ FY 2009 – Track 4
- ☐ FY 2009 Residual
- ☐ FY 2010 Service Development Program
- ☐ FY 2010 Individual Project – PE/NEPA
- ☐ FY 2010 Individual Project – FD/Construction
- ☒ N/A

(3) Indicate the anticipated duration, in months, for the proposed Service Development Program. Consider that American Recovery and Reinvestment Act funding must be obligated by September 30, 2017, while FY 2010 funding does not have a deadline.

Number of Months: *99*

(4) Specify the anticipated HSIPR funding information for the proposed Service Development Program. This information must match the SF-424 documents, and dollar figures must be rounded to the nearest whole dollar. All applicants are encouraged to contribute non-Federal matching funds. FRA will consider matching funds in evaluating the merit of the application. See Section 3.3 of the NOFA for further information regarding cost sharing.

HSIPR Federal Funding Request	Non-Federal Match Amount	Total Program Cost	Non-Federal Match Percentage of Total
$1,336,000,000	$334,000,000	$1,670,000,000	20 %

(5) Indicate the source, amount, and percentage of non-Federal match for the proposed Service Development Program (if applicable). The sum of figures below should equal the amount provided in Section D.4. Click on the gray boxes to select the appropriate response from the lists provided in type of source, status of funding, and type of funds. Dollar figures must be rounded to the nearest whole dollar. Also, list the percentage of the total program cost represented by each non-Federal funding source. Provide supporting documentation that will allow FRA to verify each funding source. Any required verification documentation not available online should be submitted with the application package and listed in Section H.2 of this application.

Non-Federal Match Funding Sources	Type of Source	Status of Funding[4]	Type of Funds	Dollar Amount	% of Total Program Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
State GO Bond Proceeds	New	Committed	Cash	$ 334,000,000	20 %	Safe, Reliable, High-Speed Passenger Train Bond Act for the 21st Century (Prop 1A)
				$	%	
				$	%	
				$	%	
				$	%	
Sum of Non-Federal Funding Sources				$ 334,000,000	20 %	N/A

(6) Indicate the name of the corridor where the proposed Service Development Program is located and identify the start and end points as well as major integral cities along the route.

Bakersfield Station - South : Start point Bakersfield Station, CA - end point 15 miles south in to the Tehachapi Mountains.

(7) Describe the project location, using municipal names, mileposts, control points, or other identifiable features such as longitude and latitude coordinates. If available, please provide a project GIS shapefile (.shp) as supporting documentation. This document must be listed in Section H.2 of this application.

This project request provides a southerly extension of the ICVP of the CAHSR program as follows: provides approximately 15 miles of completed infrastructure (civil works and trackwork) from a new, high speed rail station in Bakersville, CA south into the Tehachapi Mountains. This southern extension includes approximately 9 miles at-grade construction and approximately 6 miles of viaduct.

(8) Provide an abstract outlining the proposed Service Development Program. Briefly summarize the narrative provided in the Statement of Work in 4-6 sentences. Capture the major milestones, outcomes, and anticipated benefits that will result from implementing the Service Development Program. For any acronyms, spell out the first frequency with the acronym in parentheses. If this application is divided into phases or groupings of component projects[5], provide a brief abstract of 4-6 sentences for each phase or group of component projects.

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[4] The following categories and definitions are applied to funding sources:

Committed: Committed sources are programmed capital funds that have all the necessary approvals (e.g., statutory authority) to be used to fund the proposed project without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or state capital investment program or appropriation guidance. Examples include dedicated or approved tax revenues, state capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project.

Budgeted: This category is for funds that have been budgeted and/or programmed for use on the proposed project but remain uncommitted (i.e., the funds have not yet received statutory approval). Examples include debt financing in an agency-adopted capital investment program that has yet to be committed in the near future. Funds will be classified as budgeted when available funding cannot be committed until the grant is executed or due to the local practices outside of the project sponsors' control (e.g., the project development schedule extends beyond the State Rail Program period).

Planned: This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for state/local capital grants, and proposed debt financing that has not yet been adopted in the agency's capital investment program.

[5] An application's competitiveness may be improved by demonstrating how a proposed project could be divided into discrete phases, each with operational independence, based on geographic section, type of activity, discrete benefits and costs, or other appropriate criteria.

This project includes all the activities necessary for the final design and construction of approximately 15 miles of rail infrastructure (civil works and trackwork) from a new, high speed rail station in Bakersville, CA south into the Tehachapi Mountains. This southern extension will yield approximately 9 miles at-grade construction and approximately 6 miles of viaduct. The project is comprised of the following Tasks with associated deliverables:

Task 1: Design/Build Program Management

Task 2: Real Property Acquisition

Task 3: Early Work Program

Task 4: Final Design and Construction Contract Work

Task 5: Unallocated Contingency

Implementation of the project is conditioned on the successful completion of project-level EIS/EIR documents and consistent with all necessary Federal, State, and other permits and approvals.

(9) Indicate the type of expected capital investments included in the proposed Service Development Program. Check all that apply.

- ☒ Additional main-line tracks
- ☐ Communication, signaling, and control
- ☐ Electric traction
- ☒ Grade crossing improvements
- ☐ Major interlockings
- ☒ New rail lines
- ☐ Positive Train Control
- ☐ Rolling stock acquisition
- ☐ Rolling stock refurbishments
- ☐ Station(s)
- ☒ Structures (bridges, tunnels, etc.)
- ☐ Support facilities (yards, shops, administrative buildings)
- ☐ Track rehabilitation
- ☐ Other (please describe):

(10) Indicate the anticipated service outcomes for the proposed Service Development Program. Check all that apply.

- ☒ Additional service frequencies
- ☒ Increased average speeds/shorter trip times
- ☒ Increases in operational reliability
- ☒ Increases in ridership
- ☒ Improved on-time performance of passenger trains
- ☒ New service on existing IPR route
- ☒ New service on new route
- ☐ Reroute existing service
- ☒ Service quality improvements
- ☒ Other (please describe): Safety improvements

Briefly clarify the response(s) if needed:

This application adds to and enhances the scope of the previously approved grant for construction of an Initial Central Valley Section: Fresno to Bakersfield as well as additional funding secured from the 2010 HSIPR program for the Initial Central Valley construction. "New service on existing IPR route" refers to operating the Amtrak San Joaquin service on the HST infrastructure in the event the CHSTP is not completed. "New service on new route" refers to proposed new 220 mph HST service that would be operated once the CHSTP is completed. In either case the average speed would be increased providing shsorter trip times and the capacity and scope for increases in frequency. Installation of PTC and grade separations would improve safety and operational reliability and on-time performance.

(11) Describe the rolling stock type (if applicable). Describe the fleet of locomotives, cars, self-powered cars, and/or train sets that are intended to provide service upon completion of the Service Development Program. Note if the equipment is already owned or needs to be acquired.

n/a

(12) Provide information about job creation through the life of the proposed Service Development Program. Please consider construction, maintenance, and operations jobs.

	FD/ Construction Period	First full year of operation	Fifth full year of operation	Tenth full year of operation
Anticipated number of onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis).	7650			
Indicate the anticipated fiscal year.	N/A			

(13) Divide the Service Development Program into discrete phases (groups of component projects) and identify each phase on a separate row of the table, if possible.[6] Detail the service benefits to be realized after completion of each phase on the corresponding row. At the bottom of the table, provide the anticipated service benefits upon completion of the entire Service Development Program. Use as many rows as necessary; if the Service Development Program cannot be subdivided, summarize the information for the entire Service Development Program in the first row. Refer to Section 4.2.1 of the NOFA for additional information about phasing Service Development Programs.

[6] An application's competitiveness may be improved by demonstrating how a proposed project could be divided into discrete phases, each with operational independence, based on geographic section, type of activity, discrete benefits and costs, or other appropriate criteria.

Phase	Title[7]	Frequencies[8]		Scheduled Trip Time (in minutes)		Average Speed (mph)		Top Speed (mph)		Reliability – Provide Either On-Time Performance Percentage or Delay Minutes	
		Current	Future	Current	Future	Current	Future	Current	Future	Current	Future
I.											
II.											
III.											
IV.											
V.											
VI.											
VII.											
VIII.											
Provide the Cumulative Service Outcome *(Aggregate Benefits of all Phases)*											

[7] Title should be a brief descriptive name for the phase.

[8] Frequency is measured in daily round-trip train operations. One daily round-trip operation should be counted as one frequency.

(14) Provide information on the component projects within each phase of the proposed Service Development Program identified in Section D.14 above. For each phase, please list all component projects in the sequence they will be completed. If this application is not phased, include all component projects within the Phase I table. The sum of Phase Total Costs should equal the Total Program Cost indicated in Section D.4. This section is unlocked – the applicant can add rows and adjust column widths as needed for additional projects and phases.

PHASE I.			*[Insert Title from Section D.13]*
	Component Project Name	**Short Project Description**	**Project Cost**
1			
2			$
3			$
4			$
5			$
		Phase I. Total Cost	$

PHASE II.			*[Insert Title from Section D.13]*
1			$
2			$
3			$
4			$
5			$
		Phase II. Total Cost	$

PHASE III.			*[Insert Title from Section D.13]*
1			$
2			$
3			$
4			$
5			$
		Phase III. Total Cost	$

PHASE IV.			*[Insert Title from Section D.13]*
1			$
2			$
3			$
4			$
5			$
		Phase IV. Total Cost	$

E. Infrastructure Owner(s) and Operator(s)

Address the sections below with information regarding railroad infrastructure owners and operators of the proposed Service Development Program. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process.

(1) Provide information regarding Right-of-Way Owner(s). Where railroads currently share ownership, identify the primary owner. Click on the gray boxes to select the appropriate response from the lists of railroad type, right-of-way owner, and status of agreement. If the Right-of-Way Owner is not included in the prepopulated list, select "Other" and type the name in the adjacent text box within that field. Should this application have more than five owners, please provide the same information for additional owners in a separate supporting document and list it in Section H.2 of this application.

Type of Railroad	Railroad Right-of-Way Owner	Route-Miles	Track-Miles	Status of Agreements to Implement Projects
Class 1 Freight	BNSF	15		Preliminary Executed Agreement/MOU
Class 1 Freight	UPRR	15		Preliminary Executed Agreement/MOU

(2) Name the Intercity Passenger Rail Operator and provide the status of the agreement. If applicable, provide the status of agreement with the entity that will operate the planned passenger rail service (e.g., Amtrak). Click on the gray box to select the appropriate response from the list of choices for Status of Agreement. Should the proposed service have more than three operators, please provide the same information for additional operators in a separate supporting document and list it in Section H.2 of this application.

Name of Operating Partner	Status of Agreement
n/a	

(3) Provide information about the existing rail services within the proposed Service Development Program area (i.e., freight, commuter, and intercity passenger). Click on the gray box to select the appropriate response from the list of type of service and name of operator. If the Name of Operator is not included in the prepopulated list, select "Other" and type the name in the adjacent text box within that field.

Type of Service	Name of Operator	Top Speed Within Project Boundaries (mph)		Number of Route-Miles Within Project Boundaries (miles)	Average Number of Daily One-Way Train Operations[9]
		Passenger	Freight		
Freight	BNSF		60		
Freight	UPRR		60		

[9] One daily round-trip operation should be counted as two daily one-way train operations.

(4) Estimate the share of benefits that will be realized by non-intercity rail services and select the approximate cost share provided by the beneficiary.[10] Click on the gray boxes to select the appropriate response from the lists of type of beneficiary, expected share of benefits and approximate cost share. If more than three types of non-intercity passenger rail are beneficiaries, please provide additional information in a separate supporting document, and list it in Section H.2 of this application.

Type of Non-Intercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share

[10] Benefits include service improvements such as increased speed or on-time performance, improved reliability, and other service quality improvements.

F. Response to Evaluation Criteria

Respond to each of the following evaluation criteria in the gray text boxes provided to demonstrate how the proposed Service Development Program will achieve each criterion.

(1) Project Readiness

Describe the feasibility of the proposed Service Development Program to proceed promptly to award, including addressing:

- The applicant's progress, at the time of application, in reaching compliance with NEPA for the proposed project. Although a NEPA decision document (Record of Decision, Finding of No Significant Impact, Categorical Exclusion determination) is not required at the time of application, applications for Service Development Programs that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process;
- The applicant's progress, at the time of application, in reaching final service outcomes agreements (where necessary) with key project partners. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process; and
- The quality and completeness of the project's Statement of Work, including whether the Statement of Work provides a sufficient level of detail regarding scope, schedule, and budget to immediately advance the project to award.

In 2005, 2008 and 2010, CHSRA completed under NEPA, and certified under CEQA, program-level environmental impact statement reports (EIS/EIR) covering the entire CHSTP and subsequently issued the corresponding RODs/NODs. The Project is wholly contained within the Bakersfield – Palmdale NEPA/CEQA evaluation section. The draft EIS/EIR documents are scheduled for release for Public comment in the second quarter of 2012 with a certified ROD/NOD anticipated in the second quarter of 2013. In addition to substantion progress on completing NEPA milestones, the Authority has secured preliminary executed agreements/MOUs with BNSF and UPRR railroad authorities.

The Authority has the technical, legal and financial capacity to bring this project to a timely obligate funds and implementation. The Authority's Statement of Work for this project reflects the level of detail for scope, schedule and budget used in prior statements of work which have been accepted by FRA and which form the basis for implementation of final design and construction of the Initial Central Valley Secion: Fresno to Bakersfield (agreement FR-HSR-0009-10-01-01). The Authority has grown in the last five years from a small staff managing several consultant teams with an annual budget of $3 million to a larger staff overseeing a robust program management oversight team managing expenditures of $139 million in FY 2010 and the work of a dozen major contracts. The Authority has added project delivery and contract administration staff from Caltrans and other State agencies, engaged a CEO with strong managerial experience, and is building the structures and staff ing resources needed for major project implementation. In 2006, the Authority contracted the services of a PMT, Parsons Brinckerhoff, to oversee and manage the CHSTP. This includes development of engineering design criteria and standards to guide the design, construction and operation of the project. The PMT provides complete program-level management and oversight of 8 regional consulting firms (RCs) who are performing the detailed planning, preparing the project-level environmental documents and performing the preliminary engineering. The RCs performing this work on the ICVP are AECOM and URS/HatchMottMcDonald/Arup. Key staff of the Authority, Program Management Team, Parsons Brinckerhoff, and the Program Management Oversight Consultant, T.Y. Lin, have considerable experience in managing major Federal grants from the FHWA and FTA and are familiar with Federal requirements. The Authority and its consultants have successfully worked with the FRA to complete major program environmental documents and are working to develop a Rule of Particular Applicability to govern the HST project design and operation.

(2a) Transportation Benefits

Describe the transportation benefits that will result from the proposed Service Development Program and how they will be achieved in a cost efficient manner, including addressing:

- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership, increases in operational reliability, reductions in trip times, additional service frequencies to meet anticipated or existing demand, and other related factors;
- Generating cross-modal benefits, including anticipated favorable impacts on air or highway traffic congestion, capacity, or safety, and cost avoidance or deferral of planned investments in aviation and highway systems;
- Creating an integrated high-speed and intercity passenger rail network;
- Encouragement of intermodal connectivity and integration, including a focus on convenient connection to local transit and street networks, as well as coordination with local land use and station area development;
- Ensuring a state of good repair of key intercity passenger rail assets;
- Promoting standardized rolling stock, signaling, communications, and power equipment;
- Improved freight or commuter rail operations, in relation to proportional cost-sharing (including donated property) by those other benefiting rail users;
- Equitable financial participation from benefiting entities in the project's financing;
- Encouragement of the implementation of positive train control (PTC) technologies (with the understanding that 49 U.S.C. 20147 requires all Class I railroads and entities that provide regularly scheduled intercity or commuter rail passenger services to fully institute interoperable PTC systems by December 31, 2015); and
- Incorporating private investment in the financing of capital projects or service operations.

This project is an essential part of the State-wide HST program to develop a new intercity passenger rail (IPR) service not provided today, with over 300 trains per day in 2035, carrying up to 100 million passengers statewide. Of these, approximately 50 million will be carried in Phase 1. Major benefits for mobility, economic activity, air quality, and land use development will be created, as documented in the 2005 California HST Statewide Program EIS/EIR and the 2008 Bay Area to Central Valley Program EIS/EIR.

And in and of itself the program will provide an opportunity to speed up and improve safety for the California and US DOT-supported San Joaquins operated by Amtrak, as well as improve the service quality and capacity of freight service in the Central Valley in the event of delay in implementation of the HST services. The program will build track and structure for top HST speeds of 220 mph, capable of supporting the loads of existing trains and providing the opportunity for fossil-fueled locomotive operation at speeds of 125 mph to 150 mph. The program will fully grade separate the line from Merced to Bakersfield, a distance of 172 miles, and reduce rail and road exposure to accidents at grade crossings. The program will install positive train control technology on the new line to allow safe and efficient operation.

The full grade separation of the alignment from crossing road traffic, alignment fencing, and intrusion detection will be the most important safety improvements to the transportation system growing from this investment. They will improve safety for road users, rail passengers, railroad personnel, pedestrians, and wildlife crossing the corridor.

The California HST itself will be the primary expansion of intercity passenger rail service by:

- creating direct through IPR service from San Diego, Orange County, Riverside, and Los Angeles counties to the Central Valley, Sacramento, and the Bay Area extending the network from Los Angeles to San Diego by way of the Inland Empire

- extending the IPR network up the San Francisco Peninsula to serve San Mateo and San Francisco counties

- providing vastly improved travel times/capacity/frequency of service.

The California HST will also reinforce and improve elements of the existing IPR service. These include:

- providing an overlay of express high-speed IPR service along the route of the existing San Joaquin services from Bakersfield to Sacramento

- providing an overlay of express high-speed IPR service from Anaheim to Burbank along the route of existing

Surfliner services

- expanding passenger demand at existing IPR stations, creating the base for expanded intermodal opportunities, including rail and bus transit, shuttle, and taxi services, (Anaheim, Norwalk/Fullerton, Los Angeles Union Station, Burbank, Bakersfield, Fresno, Merced, Modesto, Stockton, Sacramento, and San Jose).

The California HST will provide on-time performance of nearly 100% (arrival at end point stations within 10 minutes, standard applied to Acela, regardless of distance) based on experience with European and Japanese operations that are completely grade-separated and on new infrastructure, as will be the case with the California HST. The intermediate point punctuality will be very high as well, with delays per 10,000 train miles estimated at under 66 minutes, equivalent to a cumulative 3-minute delay from scheduled arrivals at all intermediate points on a Los Angeles – San Francisco run and less than the normal schedule allowance for end point arrival. These are major improvements over existing IPR service in the US, where the Acela is 90% on time and the Northeast Corridor, the best ranked host railroad, experiences over 600 minutes in train delay per 10,000 train miles.

The California HST will decrease the cost and time of travel for all markets served. For the 75% of passengers attracted from driving, the California HST will save half or more of the trip time; in the example of the LA Basin to San Joaquin Valley market, the 8.3 million yearly riders, nearly all drawn from auto, will save over 1 billion minutes of travel time. And the 2005$ cost of the HST trip in this market of around $40 is also below the driving cost of around $50, saving around $80 million per year.

The most telling indicator of the extent to which the California HST will improve IPR service is that the forecast passenger revenues will exceed the operating and maintenance costs, as is the case in high-speed services around the world, including the Acela service, which in FY 10 generated a surplus of $100.6 million in revenue over fully allocated O&M costs excluding depreciation and interest. The forecast surplus in 2035 for the Full System is over $2 billion (2008$), Phase 1 will generate a substantial surplus, and the Initial Operating Segment will be established at the point where enough of the Phase 1 is in place to generate a surplus.

The HST project will be separated from the freight railroad operation, except for areas where freight lines are crossed, or where the alignment is adjacent to the freight rail right of way. The HST project will negotiate appropriate terms for any such incidental use, along the same lines as normally negotiated by State and local agencies or utilities for road or utilities.

The project's financing envisages private participants, and a wide range of possible mechanisms is being explored such arrangement will equitably link the expected returns, risks, and amount of investment in the project. See the Financial Plan in Section 6 of the application.

Private investment is expected to play a significant role in the project. See Financial Plan in Section 6 of the application..

(2b) Other Public Benefits

Describe the other public benefits that will result from the proposed Service Development Program and how they will be achieved in a cost-effective manner, including addressing:

- The extent to which the project is expected to create and preserve jobs and stimulate increases in economic activity;
- Promoting environmental quality, energy efficiency, and reduction in dependence on oil, including the use of renewable energy sources, energy savings from traffic diversions from other modes, employment of green building and manufacturing methods, reductions in key emissions types, and the purchase and use of environmentally sensitive, fuel-efficient, and cost-effective passenger rail equipment; and
- Promoting coordination between the planning and investment in transportation, housing, economic development, and other infrastructure decisions along the corridor, as identified in the six livability principles developed by DOT with the Department of Housing and Urban Development and the Environmental Protection Agency as part of the Partnership for Sustainable Communities, which are listed fully at http://www.dot.gov/affairs/2009/dot8009.htm.

The Initial Central Valley Project's job creation and stimulus to the economy

The investment of an additional $1,670,000 in year of expenditure dollars (YOE$) in the ICVP would create an estimated further 33,400 full time equivalent jobs over seven years in direct construction, engineering, and project controls, in materials supply and contracted services, and in the wider economy as a result of the spending from the

direct and indirect jobs created. Of the direct jobs, 95% of the spending will go to design and construction of the roadbed, structures, track, and other physical improvements, and management of the construction work, creating an estimated 7,800 full time equivalent jobs over the period 2012 to 2017. The other 5% of the funds will be spent in acquiring the necessary rights of way whose direct job creation will be small. The estimated peak of direct employment from the additional spending would increase the peak year of direct employment by roughly 1,100 jobs to around 8,700 FTE jobs in 2014.

The large majority of these direct jobs will be for construction in counties that are considered Economically Distressed Areas (EDAs), i.e. those counties which have had 24 sequential months of unemployment 1% or more higher than the national average, or in which the per capita income is 80% or less than the national average, both based on end of year 2008 data. The four EDAs within which the construction will take place and their July 2009 unemployment rates are the counties of Fresno (15%), Kings (14.5%), Tulare (15.3%), and Kern (14.4%). Additional workers will be drawn from the eight surrounding economically distressed counties in the Central Valley & Sierra Foothills with unemployment running at 12% or more in July 2009: Stanislaus (16.7%), San Joaquin (16.0%), Calaveras (14.2%), Tuolumne (12.7%), Sacramento (12%), San Benito (12.7%), Kings (14.5%), Tulare (15.3%), and Kern (14.4%). Workers may also be drawn from the high desert portions of adjacent San Bernardino County EDA (13.9%). Although these county-level unemployment rates are lower in 2011, California's state-wide unemployment remains around 12%, nearly 50% higher than the national average.

The7, 800 direct design/construction jobs will create an estimated further indirect 25,600 jobs. A third or so will be with suppliers of materials, equipment, and services to the construction and related activities, spread across California, the West, and to a lesser extent the rest of the US, North America, and overseas. The other two thirds of the indirect job creation will be strongly focused on the Central Valley, on California, and in the Western US, created from the spending of the paychecks of those designing, building, and supplying the high-speed line.

Ongoing operations jobs will begin to be created somewhat prior to the completion of enough high-speed infrastructure in addition to the Fresno-Bakersfield Corridor Program to test and safety-certify the first high-speed trainsets. At this point operations and maintenance hiring would begin for personnel to become the trainers and supervisors for the operational system, and would ramp up as the testing intensified and as revenue service start approached.

Operation of Phase 1 System service will create a strong economic stimulus from the improvements in transportation efficiency. Scaling from the estimates in the 2005 Statewide Program EIS/EIR (see Chapter 5) of an additional 450,000 jobs in year 2035 from the full system's operation, Phase 1 System operations could provide half to 2/3 of that jobs stimulus or 225,000 to 300,000 permanent jobs by 2035. Around 4,000 of them would be from the operation and maintenance of the high-speed train itself, a smaller number of jobs would be created in the supply and service industry, and the great majority of new jobs would be in the broader economy.

Much of the new permanent job creation will occur in California's EDAs. Operations and maintenance jobs will be created more heavily in the Central Valley, historically less economically developed than the rest of the state, and the location of the planned heavy maintenance facility which will have around 1,000 employees, a large proportion of them skilled mechanical and electrical equipment personnel.. In particular the EDAs of Kings, Kerns, Madera, Merced, San Joaquin, Stanislaus, & Tulare, all with July 2009 unemployment of 13.9% or more, will attract a disproportionate share of the benefits as access improves from the HST operation made possible in part by the completion of the Corridor Program.

Operation of an Initial Operating Segment (IOS) would begin even before the completion of Phase 1, and would generate a proportion of the operations and maintenance jobs that will depend on the extent of the IOS. The analysis of alternative IOS options is underway and a detailed sequencing of implementation is expected to be decided by summer of 2011.

Environmental and Energy Benefits

The Full System high-speed train program will reduce oil consumption by 12.7 million barrels of oil per year in 2030. As documented in the Bay Area – Central Valley Program EIS/EIR, this is the savings from diverting air and auto passengers to the electrified HST, which is anticipated to be powered entirely from renewable sources. The California High-Speed Rail Authority Board has adopted the goal of relying on renewables, and the industry is expected to develop sufficient capacity and reliability to provide power from renewables to the HST service at a relatively small premium to fossil fuel sourced power. (See Navigant Consulting, "The Use of Renewable Energy Sources to Provide Power to California's High Speed Rail", May 2008 on www.cahighspeedrail.gov).

Phase 1 will contribute oil consumption savings of roughly 8.9 million barrels (bbls), proportional to the HST passenger miles carried, or 70% of the 21.8 billion passenger miles of the Full System.

Scaled to the expected traffic levels of the HST system as it opens, savings of oil will be:

First full year of operation:	4.5 million bbls
Fifth year:	8.0 million bbls
Tenth year	12.7 million bbls

The same shift of travelers from air & auto to the HST and reductions in fossil fuel consumption will reduce greenhouse gas and other pollutant emissions in the year 2030, the tenth year of assumed operation. CO2 reductions of 12 billion pounds in 2030 air & auto emissions are documented in the EIR/S from the HST Full System operation. Additionally reductions in carbon monoxide (35 tons/day), particulate matter (2.5 & 10 micron) (4 tons/day), NOx (9 tons/day) and total organic compounds (5 tons/day) are shown in the EIS/EIR, generating benefits rated at "medium", equivalent to several percent of the State's total inventory, even if the HST electricity needs were generated with a substantial amount of fossil fuel. The reductions would be 35% of these amounts in the first full year of operations, and in the fifth year 60%. Phase 1 will reduce CO2 emissions by 8.4 billion pounds annually, and the other emissions reductions would also be roughly 70% of those with the Full System.

Operation of an Initial Operating Segment (IOS) would begin even before the completion of Phase 1, and would generate a proportion of the energy savings that will depend on the extent of the IOS. The analysis of alternative IOS options is underway and a detailed sequencing of implementation is expected to be decided by summer of 2011.

Livable Communities

As part of its environmental sustainability program, the Authority has made a commitment to build its high-speed train system in a way that encourages higher density development around its stations so that it is successfully integrated and woven into the surrounding land uses. While actual land use decisions will be made by local communities and the real estate market, the Authority is already providing grants to the Central Valley communities with stations to help determine how to build on the transportation investment in order to improve each community's economic and social vitality.

The high speed rail investment will promote the six livability principles developed by DOT, HUD, and EPA as part of the Partnership for Sustainable Communities:

- Greater transportation choice: the HST service will significantly improve the regional and intercity transportation choices for residents of the Central Valley, which are today largely limited to the private automobile, as well as for the longer markets within the state that also have air service. The HST service is inherently safer and more reliable than either, and much less polluting and dependent on foreign oil. Within the limits of State requirements that the HST not require operating subsidies and that the private sector be willing to invest in a portion of the cost of funding the system, the HST will provide affordable service varying by time of day and year, and by express and local service.

- Promoting equitable, affordable housing: While HST is not designed as a local commuter service, and specific policies to promote equity, energy efficiency, and non-discrimination in housing fall within the purview of other government agencies and society at large, the HST will make more of the State a desirable place to live and do business by enhancing mobility to areas like the Central Valley that historically have been out of the main transportation corridors and urban developments. This will result in greater choice among ranges and types of housing for all Californians.

- Enhanced economic competitiveness: increased accessibility for Central Valley communities and overall improved connections among the various regions of the State will provide additional incentives for economic expansion, opportunities for education, and access to jobs and services. For the full HST system this improved mobility is estimated to create 450,000 more jobs State-wide than would otherwise have occurred by the year 2030. Phase 1 and Initial Operating Segments will help generate a portion of those jobs, as will to a lesser extent the operation of Amtrak on the line, should the HST implementation be delayed.

- Support of existing communities: most of the HST stations will be located in existing urban downtown areas, and it is expected that each station will serve as the focus of higher density development that reduces sprawl and demand for building on valuable agricultural lands. The Authority's planning grants to the Central Valley cities, using Federal funds, is hoped to encourage higher density development around the stations with a mix of land uses, and a street pattern that promotes walking, bicycling and transit access. The Authority's station designs and parking location

policies are meant to be context sensitive and to limit the amount of parking needed as well as the land area devoted to parking around the station.

- Coordination of Federal policies and leveraging of the Federal investment: While Federal agencies are responsible for specific policy coordination, the HST does provide an ideal opportunity to focus Federal resources on the nexus of transportation and land use to help shape local efforts in existing urban areas to develop more sustainable and efficient communities.

- Valuing communities and neighborhoods: the HST project will reinforce and strengthen existing communities, and have more positive impacts on the State's communities at much less cost than investments in equivalent capacity from continuing to expand highways and airports within the State.

(3) Project Delivery Approach

Describe the risk associated with delivery of the proposed Service Development Program within budget, on time, and as designed, including addressing:

- The timeliness of project completion and the realization of the project's benefits;
- The applicant's financial, legal, and technical capacity to implement the project;
- The applicant's experience in administering similar grants and projects;
- The soundness and thoroughness of the cost methodologies, assumptions, and estimates;
- The thoroughness and quality of the Project Management Plan;
- The timing and amount of the project's future noncommitted investments;
- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project's engineering and constructability risks; and
- The sufficiency of system safety and security planning.

The California High-Speed Authority has previously provided significant detail on its statutory basis, budgets, capacity to implement a high speed rail system, timing of investments and operation, progress on environmental clearance, and related implementation issues in its ARRA Track 2 applications of October 2009, in its August 2010 application for SDP funding, in its December 2009 Report to the Legislature, and the April 2010 Addendum to the Report to the Legislature. (The latter two documents can be found on the Authority's website www.cahighspeedrail.ca.gov at the following links: http://www.cahighspeedrail.ca.gov/images/chsr/20091223222521_CHSRA_Business_Plan_Dec_2009.pdf and http://www.cahighspeedrail.ca.gov/images/chsr/20100427185725_Business%20Plan%20ADDENDUM%20-%2004.13.2010%20-%20FINAL.pdf. The discussion below summarizes the salient points responding to the criteria listed above.

The California High-Speed Rail Authority (the Authority) is a state entity and has been given the responsibility to develop a high-speed train system (HST) in the State of California pursuant to Chapter 796 of the Statutes of 1996 (Senate Bill 1420, Kopp and Costa). The Authority is tasked to prepare a plan and design for the HST system, conduct environmental studies and obtain necessary permits, and undertake the construction and operation of a high-speed train passenger network in California. As part of its mission and role within the State government, the Authority goes through a normal annual budget process consistent with other state transportation agencies. In addition to general fund appropriations, the California voters passed Proposition 1A, the Safe, Reliable High-Speed Passenger Train Bond Act on November 4, 2008 which allows for the issuance of $9 billion in general obligation bonds be issued to establish a clean, efficient high-speed train service linking Southern California, the Sacramento San Joaquin Valley, and the San Francisco Bay Area. Proposition 1A bond act allocations are subject to annual budget authorizations, and a special State legislative and executive branch review process prior to use in final design and construction.

The Authority has a 9-member board and a core staff to implement the project which consists of a Chief Executive Officer, Deputy Directors, Chief Engineer, Project Management Oversight, Finance, Government Relations and a support staff that includes the Program Management Team (PMT). The California Attorney General's office provides legal support on all matters including review of environmental deliverables including the Final Environmental Report (EIR) and the Notice of Determination (NOD) for the Authority. The CHSTP also directly involves the FRA which is

the Federal lead agency under NEPA responsible for technical and legal review of the regional project EISs. All environmental deliverables up to and including the Final EIS and Record of Decision (ROD) will be subject to FRA review and approval.

In 2006, the Authority contracted the services of a PMT, Parsons Brinckerhoff, to oversee and manage the CHSTP. This includes development of engineering design criteria and standards to guide the design, construction and operation of the project. The PMT provides complete program-level management and oversight of 8 regional consulting firms (RCs) who are performing the detailed planning, preparing the project-level environmental documents and performing the preliminary engineering. The RCs performing this work in the Merced-Bakersfield section are AECOM and URS/HatchMottMcDonald/Arup.

Key leaders on the project's implementation include Roelof van Ark, the Authority's Chief Executive Officer (July 2010-present), with 30 years of engineering and executive leadership at major transportation systems companies in the US, Europe, and South Africa; Hans Van Winkle, the PMT Program Director (December 2010-present), with more than 30 years of large scale project implementation with the US Army Corps of Engineers and the private sector; Ken Jong (2006-present), Deputy Program Director, with more than 25 years rail and large project engineering and direction), John Popoff and Mike Gillam, Regional Directors – North & South (2010-present), directing the eight RCs, each bringing more than 30 years of transportation project engineering and HST project management experience in the US and Taiwan.

More than 400 persons are involved in the planning and engineering of the CHSTP, including more than 135 senior managers, planners, engineers, and operators with significant project work on one or more of the HST projects in Europe and Asia, as well as the Northeast Corridor. Experts on this project have guided the planning, construction and/or operation of HST systems around the world representing hundreds of billions of dollars in infrastructure development.

CHSRA is working closely with FRA's Office of Safety to develop the basic framework for a Rule of Particular Applicability, building on European Union high-speed rail Technical Specifications and also incorporating other elements FRA believes should be addressed for the California HST system operation at speeds up to 220 mph. Filing of a RPA is anticipated by 12/2010, with concurrent filing as necessary before CPUC. The Authority is working collaboratively with the FRA Office of Safety staff to progress all necessary discussions and technical foundation necessary to achieve this timetable.

The Authority has grown in the last five years from a small staff managing several consultant teams with an annual budget of $3 million to a larger staff overseeing a robust program management oversight team managing expenditures of $139 million in FY 2010 and the work of a dozen major contracts. The Authority has added project delivery and contract administration staff from Caltrans and other State agencies, engaged a CEO with strong managerial experience, and is building the structures and staff ing resources needed for major project implementation. Pages 12-24 of the Authority's December 2009 Report to the Legislature provide detail on the steps being taken and foreseen to build an organization fully capable of managing the construction of the project.

Key staff of the Authority, Program Management Team, Parsons Brinckerhoff, and the Program Management Oversight Consultant, T.Y. Lin, have considerable experience in managing major Federal grants from the FHWA and FTA and are familiar with Federal requirements. The Authority and its consultants have successfully worked with the FRA to complete major program environmental documents and are working to develop a Rule of Particular Applicability to govern the HST project design and operation.

Further information on the planned approach to the project's implementation is further explained in the Authority's December 2009 Report to the Legislature pp. 42-51.

The capital cost estimates are based on preliminary engineering work (in-progress 15% design submittals) being performed in support of project-level EIS/EIR work in each of the segments. Unit costs are provided for 77 categories of cost and quantities are being estimated by each Regional Consultant Team, and reviewed by the Program Management Team. An overview of the major methodologies and assumptions is provided in the Authority's December 2009 Report to the Legislature pp. 84-91. For the current estimates, however, unit costs have been updated to reflect current 2010 expectations. The approach is reasonable, detailed, and includes appropriate contingencies for the level of uncertainty in the design. Further information on capital cost contingencies and risk management was also provided in the 2010 Addendum to the 2009 Report to the Legislature.

The approach to estimating operating costs was summarized in the previous section. More detail on the full system HST costing and operations planning is at pp. 80-83 of the 2009 Report to the Legislature.

The schedule for project implementation has been developed in detail, working with the FRA on reasonable time frames for achieving EIR/EIS certification (NOD/ROD), recognizing the constraints and time requirements for pre-construction activities, construction, and procurement.

A detailed Program Management Plan is in place and is included as additional information.

The use of the available State bond monies to match Federal grants is subject to completing a process of review by the Legislature, an independent review panel, and State financial officers. The process and other State oversight of the Authority is outlined in the December 2009 Report to the Legislature, pp. 127-131.

The PMT has implemented a formal Risk Management Program as a systematic process for identifying, assessing, evaluating, managing, and documenting risks that could jeopardize the success of the Project. The Risk Management Program's objectives are to:

- Link risk and returns
- Provide the means to achieve an acceptable level of CHSTP cost estimate and schedule
- Certainty and establish levels of confidence associated with each
- Rationalize resources
- Exploit opportunities
- Reduce surprises and losses
- Report with greater confidence
- Satisfy legal and regulatory requirements

A copy of the current Risk Register is attached as Appendix B to the April 2010 Addendum to the Business Plan Report to the Legislature.

Further discussion of project risks and potential mitigation is provided in the and the April 2010 Addendum to the Business Plan Report to the Legislature (see pp. 32-44).

The Program Management Team is working closely with the FRA Office of Safety to ensure the sufficiency of the systems safety through a Rule of Particular Applicability. Security issues are also being incorporated into the design and operational concept of the system, and a detailed safety and security plan is being developed.

(4) Sustainability of Benefits

Identify the likelihood of realizing the proposed Service Development Program's benefits, including addressing:

- The applicant's financial contribution to the project;
- The quality of a Financial Plan that analyzes the financial viability of the proposed rail service;
- The quality and reasonableness of revenue, operating, and maintenance cost forecasts;
- The availability of any required operating financial support, preferably from dedicated funding sources;
- The quality and adequacy of project identification and planning;
- The reasonableness of estimates for user and non-user benefits for the project; and
- The reasonableness of the operating service plan.

The likelihood of realizing the benefits of the Service Development Plan depends on many macro-economic, political, geological, and other variables outside of the control of the High-Speed Rail Authority, as well as accurate and current data on California travel patterns, costs of alternatives, analytical rigor, and realism about future assumptions. The planning has been reasonably conscientious in all of these areas, leading to a reasonable likelihood within the constraints of non-controllable events of realizing the Service Development Plan, whether in the full system deployment, or the contingency of Amtrak operating on the High-Speed Train (HST) section, were the HST project to be delayed.
The Authority's Business Plan contains a financial plan overview (http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx) (pages 92-108), which provides an outline of the various funding sources with details on the Authority's financial assumptions. The plan includes information on state, federal funding along with local support information. The plan also contains an overview of the capital expenditures and O&M plan for the project. In addition, the 'Ridership and Revenue Risk Analysis Overview' contained in the 2010 Addendum to the Business

Plan details the Authority's efforts to produce ridership and revenue forecast ranges for the HSR system, and includes information on the refining of current forecasting models, the development of independent forecasts of critical inputs and the conducting of a strong risk analysis to better understand the influence of key determinant of HSR ridership and revenue.

-- Quality of Financial Plan
The reasonableness of the several critical components of the Financial Plan, including the revenue and operating cost forecasts, and (where needed) the availability of financial operating support, are discussed in the following sections. The quality of the Financial Plan is sufficient to support the financial results of both the HST service and of interim Amtrak service operating on the HST section, if the HST project were to be delayed. Furthermore, the Authority and its consultants have extensively analyzed the opportunities for funding the rest of the $42.5 B California HST Project, accessing a number of funding and financing sources, including further federal grant funding, federal innovative finance programs, local funding support, and private funding. The latter may be a combination of senior non-recourse debt, junior or mezzanine capital, and private equity, provided by a concessionaire involved in a public-private partnership with the CAHSRA. This plan is outlined in the December 2009 Business Plan and its April 2010 addendum, submitted to the state legislature and can be accessed at: http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx. It should be noted that this business plan is currently being revised. Numerous discussions over the last three years with government officials and multiple "expressions of interest" from private companies give confidence that the financial plan is reasonable. Furthermore, the Authority's March, 2011 request for expressions of interest (RFEI) process yielded over 1,100 responses from numerous companies and organizations, which are in the process of being reviewed. However, as discussed, there are a number of challenges in obtaining all of the funding and as described in the risk mitigation section of this application, the CAHSRA has devised appropriate ways to overcome these financial risks.

Specifically, in regards to the section funding for which the CAHSRA is currently applying, the Authority has high confidence that the key funding sources, state bond monies, available. With the available federal grant monies made available through the ARRA and 2010 legislation, the Authority will be able to complete the proposed technical scope in this application, should it be successful in receiving the requested grant amounts.

-- Quality and Reasonableness of Revenue and Operating Cost Forecasts
Revenue and ridership forecasts for the full CA HST system are derived from a state-of-the-art network-based model developed for the San Francisco Bay Area Metropolitan Transportation Commission, with the cooperation of the California High Speed Rail Authority (CAHSRA). The quality, detail, and effort of the data collection, model validation and calibration, and the peer review process to which the work was submitted are explained on the CAHSRA site at:
http://www.cahighspeedrail.ca.gov/Ridership_and_Revenue_Forecasting_Study.aspx
Full system operating costs are based on forecast service activity and are driven by pertinent variables such as trainset miles, US railroad labor costs, documented power consumption for HST trainsets, California energy costs (including surcharges for green energy), station staffing, HST trainset maintenance labor and materials costs, maintenance of way requirements for passenger only HST lines, and US administrative, management, and insurance requirements. They are based on an appropriate mix of overseas HST experience and California conditions and cost.

-- Availability of Financial Support for Operations
The full 220 mph California HST system will not require financial support for operations, as is the case in high-speed services around the world, including at the lower end of the speed range (in FY 2010 the 135 mph Acela service serving Boston to New York and Washington DC generated a surplus of $100.6 million in revenue over fully allocated O&M costs excluding depreciation and interest, and for the four months of FY 11 through January had generated $52 million in surplus on revenues of $165 million). The forecast surplus in 2035 for Phase 1 of the HST system is $1.8 billion ($2009).
In the event of operations by Amtrak on the HST section requested to be funded by this grant if the HST project were delayed, the operating subsidy that would be provided for service on the current route (currently provided by Caltrans Division of Rail and the Federal government) will be reduced. This is because of the faster operations that will attract more passengers, generate more revenue, and reduce operating costs, ultimately increasing the fare-box recovery ratio.
Quality and Adequacy of Project Identification and Planning
Planning for the full California HST system has been ongoing for over 15 years, with increasingly stringent scrutiny of plans, alignments, station stops, operability, costs, ridership and revenue, and benefits to the State from Federal and other State agencies, local governments, and a wide range of stakeholders culminating in the approval of Program EIR/EISs in 2005 and 2008, the approval by California voters of $9 billion for funding the HST system, and the continuing project-level environmental work now underway. This project is solidly based in the planning for the future transportation system of the State.

-- Reasonableness of Project Benefits
The benefits of the full California HST system were estimated by professional, respected economists and modelers, and have been judged to be sufficiently credible to be included in the Program EIR/EIS work approved by the US Department of Transportation's Federal Railroad Administration and the State of California's High Speed Rail Authority. They also led to the passage of Proposition 1A in California's November 2008 election, providing $9 billion of State bonding authority for construction of the California HST system.

-- Reasonableness of the Operating Service Plan
For the full California HST system, the close coordination between the ridership forecast and the operating service plan, the sizing of the trainset fleet, storage facilities, track capacity for the completely separated HST system, and station sizing and parking requirements is described in the CAHSRA 2009 Report to the Legislature and the April 2010 addendum, both available on the Authority website : http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx. The HST plan does not involve sharing facilities with freight services except sharing a right-of-way on the San Jose-San Francisco Peninsula, in a temporally separated manner. Sharing with other passenger services is planned to be contingent on sufficient track and station capacity, compliance with regulatory requirements, and is eminently reasonable.

-- Agreements with Key Partners
For the full California HST system, the Authority's powers, relations with other regulatory agencies, MOU's with local and regional government and private entities, the expected relationship of the HST project with existing transportation providers and owners, and the approach to project delivery is extensively discussed in the CHSRA December 2009 Report to the Legislature and the April 2010 addendum, both available on the Authority website at: http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx.

-- Comparison of Anticipated Benefits and Amount of Federal Funding Requested
For the full California HST system at 2030 levels, federal capital expenditures will have created an estimated $11 billion in direct annual benefits to its riders, to drivers and air passengers who experience less congestion, and to the State as a whole in pollution reduction and accident reduction. In five years of operation, the benefits will exceed the cost of building the line and operating it. In economist's terms, California will realize $150 billion in present value of net benefits by 2050—nearly triple the total present value of the cost of the project. Not only will HST passengers benefit from the system, more than a third of the benefits will be accrued by air and auto travelers in the form of reduced delays, reduced air pollution, and reduced auto accidents and fatalities.

-- State Contribution at 20%
The proposed sharing of 20% of the HSIPR cost by the State will result in a State contribution of 344 million for the project.

G. Statement of Work

The Statement of Work (SOW) is a required document. This must be submitted using the Narrative Application Form Part II. Statement of Work available on FRA's website to provide the required information. The quality and completeness of this document will be measured as a Project Readiness evaluation criterion, as outlined in Section 5.2.1 of the NOFA. Please provide the SOW as a separate document and list it in Section H.2 of this application.

The SOW is a description of the work that will be completed under the grant agreement and must address the background, scope, and schedule, and include a high-level budget for the proposed Service Development Program.

(1) The SOW is required for a complete application package.

(2) The SOW should contain sufficient detail so that both FRA and the applicant can:

a. Understand the expected outcomes of the work to be performed by the applicant, and

b. Track applicant progress toward completing key project tasks and deliverables during the period of performance.

(3) The SOW should clearly describe project objectives, but allow for a reasonable amount of flexibility regarding how the objectives will be accomplished. It is important to describe the overall approach to and expectations for project/activity completion.

(4) If the SOW describes work for phases and/or groups of component projects, the larger program should be explained in the background section of the SOW. The remainder of the SOW should be limited to describing the activities that directly contribute to the combined FRA and applicant effort which is funded under the grant agreement.

H.Optional Supporting Information

Provide a response to the following, as necessary, for the Service Development Program.

(1) Please provide any additional information, comments, or clarifications and indicate the section and question number that being addressed (e.g., Section E. 2). Completing this question is optional.

re: Section E. --While no final alignment has been selected its is anticipated that there will be minimal impact on the existing infrastructure owners given that a new alignment on separate right of way will likely result from the Environmental Review Process.

re: Section D. (12) -- job creation during operations of the initial operating segment, Phase 1, and in the event of delay, Amtrak independent utility operations are described in Section F.(2b), with the level of contingency that is appropriate to the current level of planning.

(2) Please provide a document title, filename, and description for all optional supporting documents. Ensure that these documents are uploaded to GrantSolutions.gov with the narrative application form and use a logical naming convention.

Document Title	Filename	Description and Purpose
Cover Letter to J. Szabo	J. Szabo Cover Letter	Cover Letter
ICVP Extension - Bakersfield Station – South Project Map	Bakersfield Station-South Project Map.pdf	Project Location Map
Letters of Support	2011 HSIPR Letters of Support	Letters of Support from various project constituencies
Federal Register / Vol. 74, No. 171 / Friday, September 4, 2009 / Notices (Bakersfield to Palmdale)	http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=681	Notice of Intent (Bakersfield to Palmdale)
Notice of preparation of a Project Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for a Bakersfield to Palmdale High-Speed Train System	http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=8258	Notice of Preparation (Bakersfield to Palmdale)
Draft Scoping Report Bakersfield to Palmdale Section High-Speed Train Project EIR/EIS June 2010	http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=6845	Draft Scoping Report (Bakersfield to Palmdale)
PRELIMINARY Alternatives Analysis Report	http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=6148	Alternatives Analysis – Preliminary (Bakersfield to Palmdale)

Bakersfield to Palmdale Section High-Speed Train Project EIR/EIS September 2010		
Draft Project Environmental Impact Report / Environmental Impact Statement Agency Coordination Plan Bakersfield to Palmdale Section High-Speed Train Project EIR/EIS December 2009	http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=6140	Agency Coordination Plan (Bakersfield to Palmdale)

STATEMENT OF WORK
(March 2011)

Extension of Initial Central Valley Project: Bakersfield Station – South of the California High-Speed Train Program

INTRODUCTION

In 2008, the California State Legislature adopted AB 3034, finding "it imperative that the state proceed quickly to construct a…high-speed passenger train system to serve the major metropolitan areas….It is the intent of the Legislature that the entire high-speed train system shall be constructed as quickly as possible…and that it be completed no later than 2020…." Also in 2008, California voters passed Prop 1A, approving $9 billion in bonds to support construction of the high-speed train. The Legislature and the voters specifically directed that the system should include California's Central Valley, as well as other major California population centers.

The California High-Speed Rail Authority (CHSRA) through the California High-Speed Train Program (CHSTP) is working to fulfill AB 3034's directive. The new high-speed rail system will be grade-separated from road vehicle traffic and will operate almost exclusively on separate, dedicated tracks with a top design speed of up to 250 mph and an operating speed of up to 220 mph. The 800-mile, statewide program will provide reliable, high-speed electrified train service between the Bay Area, the Central Valley, Sacramento, and Southern California.

Phase 1 of the Program involves construction of about 520 miles of the system between San Francisco and Anaheim. When completed, Phase 1 will provide 2-hour and 40-minute nonstop service—competitive with air travel—between San Francisco and Los Angeles compared with over 6 hours of travel time by automobile. Subsequent phases of the CHSTP include a southern extension (Los Angeles to San Diego, via the Inland Empire) and a northern extension (from Merced to Sacramento).

The American Recovery and Reinvestment Act (ARRA), enacted February 17, 2009, contained $8 billion to fund high-speed and intercity passenger rail (HSIPR) projects. On January 28, 2010, USDOT announced the selection of the four CHSRA design/build project sections eligible to receive up to $2.25 billion[1] in ARRA funds.

In September 2010, the Federal Railroad Administration (FRA) and the Grantee executed the Agreement with a Federal award amount of $194 million for preliminary engineering (PE) (up to 30% design and additional design work for discrete areas as needed and agreed to by FRA), environmental documentation to support final environmental decisions in the form of Federal

[1] FRA awarded $400 million of the $2.25 billion to Transbay Joint Powers Authority (TJPA) for specific HSR-related improvements to Transbay Terminal, reducing the total funding amount to $1.85 billion for Phase 1 PE/NEPA/CEQA work and final design/construction.

Records of Decisions (RODs) and California Notices of Determination (NODs) for each of the seven sections of Phase 1 of the High-Speed Train (HST) System and other work required prior to the start of construction including right-of-way (ROW) acquisition planning and development of the necessary procurement plans and documents for final design and construction for Phase 1 of the system.

- On January 28, 2010, USDOT announced the selection of the four sections eligible to receive up to $1.65 billion, leaving the decision to the CHSRA as to which section would be built first.
- As part of its application for FY 2010 HSIPR funding, the CHSRA redefined the four ARRA-eligible sections and submitted them to FRA as part of its applications for additional funding.
- On October 25, 2010, the USDOT announced an additional $715 million in FY 10 SDP funds for use by the CHSRA in the Central Valley. On November 4, 2010, the FRA clarified that both the FY 09 ARRA funds and the FY 10 SDP funds must be applied to a single Central Valley project to be determined by the CHSRA.
- On December 2, 2010, the CHSRA Board adopted a resolution for allocation of the funding for the Initial Construction Segment (ICS) in the Central Valley.
- On December 9, 2010, the FRA announced an additional $616 million in ARRA funds for use by the CHSRA in the Central Valley.
- On December 20, 2010, the CHSRA Board approved incorporating the $616 million in ARRA funds into the ICS for the continuation of the project south to Bakersfield (Kern County).
- To date, the CHSRA and the FRA have concluded a Funding & Cooperative Agreement for the ARRA portion of the funds secured for the ICS but have not yet done so for the remaining FY 2010 funds ($715M) that are associated with the ICS.

BACKGROUND AND KEY ASSUMPTIONS

- In 2005, 2008, and 2010, CHSRA and FRA completed under the NEPA, and certified under the CEQA, program-level environmental impact statements/reports (EIS/EIR) covering the entire CHSTP and subsequently issued the corresponding RODs/NODs.

- CHSRA and FRA are currently preparing project-level EIS/EIR documents for the CHSTP. The CHSRA and FRA anticipate issuance of the draft EIS/EIR documents for the Bakersfield to Palmdale section for public comment in the second quarter of 2012. A certified ROD/NOD is anticipated for the second quarter of 2013. CHSRA and FRA will not make final decisions regarding specific facilities, construction, alignments, or mitigation measures in either section until the associated EIS/EIR is complete and certified.

- Subject to FRA and CHSRA environmental decisions, CHSRA intends to implement a design/build approach for the Phase 1 Program as funding becomes available in prioritized geographic sections. Pending completion of environmental review, CHSRA would start construction of an initial Central Valley Section from Merced Station to Bakersfield Stations

(Kern County), California. CHSRA would extend the construction approximately 15 miles southward from Bakersfield Station to the end of an approximately 3-mile long viaduct rising from the Central Valley into the Tehachapi Mountains (hereinafter the "Project").

- The timing and sequencing of each subsequent section of the CHSTP will commence as environmental requirements are met, decisions are made, and funding becomes available.

- Prior to the completion of Phase 1 of the Program, CHSRA will complete an initial operating segment (IOS) upon which to begin operating HST service. This segment will require electrification, centralized train control and communications systems, maintenance facilities, and a fleet of high-speed trainsets. The initial operating segment will be identified in a future Board action and will likely make up to a 200- to 300-mile line, a portion of which will be the ICS.

- The Project EIR/EIS, has yet not been completed by CHSRA and FRA. The Project does not presume a specific alignment as the ROD/NOD for such selected alignment has not yet been completed.

GENERAL OBJECTIVE

The Authority will complete, or will cause to be completed, the activities necessary for final design and construction of the Project. As described in Tasks 1 though 5 below, the Project includes ROW acquisition and site work, final design, and construction of fully grade-separated mostly dedicated HST guideway, including aerial structures (viaducts) and track work. Implementation of final design and construction of the Project is conditioned on successful completion of project-level EIS/EIR documents and consistent with all necessary Federal, State, and other permits and approvals. Also included is program management and associated professional services involved in managing final design and construction of the overall Project. HST systems elements are not included in this Project (e.g., electrification, communications systems, train control, rolling stock, and vehicle maintenance facilities); these elements will be added by CHSRA as additional funding permits and are required to complete an initial operating segment.

DESCRIPTION OF WORK

The final design and construction of the Project between Bakersfield and the entry into the Tehachapi Mountains, is included in the following major tasks described below.

Task 1 Design/Build Program Management

Task 1 includes management, oversight, and reporting of all tasks necessary to, and all contractors associated with, completing the Project including coordination with appropriate local, regional, State, and Federal agencies, all railroad owners and operators within the Project area, and outreach to local communities affected by the Project. In addition, CHSRA will direct the real property acquisition efforts for the Project. Specific construction management activities will

include contract administration, submittal review, quality assurance inspection, materials inspection, management of claims and change orders, and review and approval of progress payment requests and final acceptance of the work. CHSRA is also responsible for public communication and outreach to citizens, communities, and stakeholders during all aspects and phases of Project design and construction.

CHSRA will provide to FRA the following documents to reflect Project progress:

- Annual Work Plan (AWP): CHSRA will prepare a detailed staffing plan and cost estimate for the Project. The AWP outlines the work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement, and tracking of deliverables so that implementation of the Project stays on schedule and within budget.

- Program Management Plan (PMP) Updates: CHSRA will update the Phase 1 Program Management Plan (PMP) and produce a Project-specific PMP addressing the management requirements of this Project and submit it to FRA for review and written approval. CHSRA will update both documents annually.

- Financial Plan Updates: CHSRA will review the Financial Plan and provide annual updates of the relevant information to FRA. The Financial Plan and updates specific to this Project shall incorporate the Interim Use Reserve discussed above and in Task 5 below. Updates of the Financial Plan will be submitted to FRA for review and written approval.

    - Prior to the release of each of the Requests for Proposals (RFPs) for the design and/or construction contracts, CHSRA will provide for FRA review and written approval a financial plan for the Project that demonstrates CHSRA has secured firm commitments of all funding (other than that provided through this Agreement) required to complete construction of the Project. The financial plan shall provide (in year-of-expenditure dollars) finalized annual projections for the sources and uses of all funds, during the development and construction phases of the Project and a detailed assessment of financial risks facing the Project during both the construction (including risks such as capital cost overruns, revenue shortfalls, and maintenance cost overruns), along with proposed actions for mitigating or accommodating such risks (including assessment of additional funding sources available to compensate for potential capital financing shortfalls).

    - CHSRA will provide FRA with a financial plan that covers the entire Phase 1 Program (including the *Project*) (the Phase 1 Financial Plan) that lays out in as much detail as possible (1) annual projections for the sources and uses of all funds, during the development and construction phases of the Phase 1 Program and for the first 20 years of operations, and (2) an assessment of financial risks facing the Phase 1 Program during both the construction and operations phases (including risks such as capital cost overruns, revenue shortfalls, and operating and maintenance cost overruns), along with proposed actions for mitigating or

accommodating such risks (including assessment of additional funding sources available to compensate for potential capital or operating financing shortfalls).

- For post-RFP period review, CHSRA will provide FRA with updates to the Project Financial Plan, on at least an annual basis, or more often if there are material changes to the previous plan, updates to the Phase 1 Financial Plan, on at least an annual basis, or more often if there are material changes to the previous plan and financial plans for any additional projects funded with HSIPR funds, including the initial operating segment.

- Design/Build Program Plan: CHSRA will prepare a Design/Build Program Plan that identifies: (1) the suitability of the Project as a design/build candidate, (2) the performance metrics to be used to assess successful Project completion, (3) the composition of the design/build Project team, (4) Project scope, (5) the decision factors to be used for the selection from among the design/build proposals, and (6) the methods for contract administration. Submittal of a Design/Build Program Plan is necessary to complete procurements and must be submitted to FRA for review and written approval.

- RFPs for Design and/or Construction Services: CHSRA will provide a copy of the proposed terms and conditions of the RFPs related to proposed contracts for design and/or construction services to FRA for its review and written approval prior to formally soliciting such proposals. CHSRA will work closely with FRA to complete such reviews in sufficient time to avoid impacting the Project schedule.

- Final Inspection and Acceptance Reports: Upon completion of construction, CHSRA shall invite FRA to participate in the final inspection and acceptance of the work.

- Service Development Plan Updates: CHSRA will refine and update the Phase 1 Service Development Plan and provide two updates to FRA of the relevant information based on mutual agreement with FRA that may include Operations (Service Goals, Operations Analysis, including railroad operation simulation and equipment, operations planning, and crew scheduling analysis); Fleet Management Plan (this includes a determination of the number of trainsets required for the HSIPR Corridor); Capital Needs (Phase 1 Investments and Cost Estimate); and Operating and Financial Results (Methods, Assumptions, and Outputs for Travel Demand Forecasts; Expected Revenue; and all Operating Expenses). The Service Development Plan shall be developed and updated for the purpose of informing design and construction determinations and decision making and shall be limited in scope to such purpose.

Task 2 Real Property Acquisition

The system will use or be adjacent to existing transportation ROWs to the extent feasible and will require property acquisitions. Such acquisitions include right-of-way for the track alignment and stations consistent with Project requirements.

CHSRA will obtain and manage the necessary property rights for the system in a lawful, fiscally sound, and publicly acceptable manner. Real property acquisition will comply with all Federal, State, and local laws including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Real Property Acquisition will be accomplished through a headquarters element, a regional specialist oversight office, and a local team that will conduct on-the-ground real property acquisition functions. These responsibilities will be carried out through the leadership of a CHSRA HQ element consisting of a Real Property Director reporting to the CEO, and a senior State real property specialists responsible for:

- Appraisals and acquisition
- Coordination of real property aspects regarding utilities relocations and railroad and other public agency agreements and
- Relocation assistance and property management

CHSRA will have appropriate legal support which will provide real property legal services to the Director. A specialist real property consultant for program support will provide program-wide services to the Director, such as recommending acquisition standards and procedures as well as providing quality assurance and audit of the acquisition process.

On-the-ground real property activities will be carried out by onsite real property specialty consultants and may include:

- Parcel identification
- Survey and mapping
- Appraisals
- Offers of just compensation
- Negotiations
- Property acquisition and
- Relocation entitlement

CHSRA shall establish a Regional Real Property Office for the Project, which will have appropriate legal support and be staffed by senior State real property specialists who oversee the functions carried out by the onsite consultants and process those cases where State governance is appropriate.

Task 3 Early Work Program

Certain work activities associated with implementing the Project may be advanced as part of an early work program as described in the deliverables below. The Early Works Program will include soft (e.g., planning, design, coordination, negotiation, legal) and hard (e.g., construction, land acquisition, implementation) costs as described below and associated with (1) utility relocation, (2) site clearing/demolition, (3) highway/roadway relocation/grade separations, (4) environmental remediation/hazardous materials disposal and (5) environmental (NEPA/CEQA) mitigation. Implementing these activities with Federal funds is contingent upon FRA written

approval of the planning for these activities, which are outlined below. Activities in the early work program will occur only to the extent that they are consistent with legal requirements associated with satisfying environmental review requirements and approved by FRA.

CHSRA will provide to FRA the following documents to reflect Project progress:

- Utility Relocation Plan: CHSRA will identify all utilities that will be relocated and outline the roles and responsibilities to successfully complete all early utility relocation for the Project, contracting approach, and schedule for completing all necessary utility relocations. CHSRA will submit the Utility Relocation Plan to FRA for review and written approval. CHSRA will implement the Utility Relocation Plan and periodically update the Plan to reflect implementation progress.

- Site Clearing and Demolition Plan: CHSRA will define the area of the Project that will need to be cleared and any demolition of existing structures and outline the roles and responsibilities to successfully complete Project site clearing and demolition activities, contracting approach, and schedule for completing all necessary site clearing and demolition of existing structures. CHSRA will submit the Site Clearing/Demolition Plan to FRA for review and written approval. CHSRA will implement the Site Clearing/Demolition Plan and periodically update the Plan to reflect implementation progress.

- Highway/Roadway Relocation/Grade Separations Plan: Highway/roadway relocations and grade separations will be completed in coordination with California Department of Transportation (Caltrans) or other owners of roadway facilities (e.g., counties, local jurisdictions) during the early stages of construction, consistent with CHSRA/Caltrans Master Agreement. CHSRA will work with Caltrans and other interested parties to develop a Highway/Roadway Relocation/Grade Separations Plan that describes in detail what Highway/Roadway relocation and grade separations are required at each location along the route where such relocation or grade separation is required to support the Project. CHSRA will submit the Highway/Roadway Relocation/Grade Separations Plan to FRA for review and written approval. CHSRA will implement any elements of the Highway/Roadway Relocation/Grade Separations Plan it is responsible for under the Plan, coordinate with Caltrans for completion of highway/roadway-specific work, and periodically update the Plan to reflect implementation progress.

- Environmental Remediation/Hazardous Materials Disposal Plan: CHSRA will develop a plan to implement remediation and hazardous material disposal activities consistent with mitigation measures CHSRA and FRA adopted and documented in the CEQA/NEPA environmental process. This plan will include compliance with existing and applicable Federal and State regulations, appropriate Authority policies, and the use of best management practices. This plan will identify procedures for testing and remediating known or suspected hazardous materials encountered during the construction of the Project. CHSRA will submit the Environmental Remediation/Hazardous Materials Disposal Plan to FRA for review and written approval. CHSRA will implement the

Environmental Remediation/Hazardous Materials Disposal Plan and periodically update the Plan to reflect implementation progress.

- Environmental (NEPA/CEQA) Mitigation: The EIS/EIR final decisions by FRA and CHSRA may require mitigation measures that could include, but are not limited to purchase of wetlands mitigation sites, noise control (for example, construction of noise walls, reinforcement of structure in sensitive receptors), preservation of agricultural lands, construction of local traffic control improvements (for example, traffic calming measures, geometric roadway improvements, installation of traffic lights). Adopted mitigation measures and associated plan for implementation would be set forth in the Environmental (NEPA/CEQA) Mitigation Implementation Plan required by the PE/NEPA/CEQA Agreement. CHSRA will implement the Environmental (NEPA/CEQA) Mitigation Implementation Plan. Updates to the Plan to reflect implementation progress are covered under the PE/NEPA/CEQA Agreement.

Task 4 Final Design and Construction Contract Work

The vast majority of the work associated with this Agreement is associated with the final design and construction contracts that will be procured, awarded, and administered by CHSRA for delivery of this Project. As a deliverable in Task 1 of this Agreement for review and written approval by FRA, CHSRA will prepare and deliver to FRA a Design/Build Program Plan that identifies: (1) the suitability of the Project as a design/build candidate; (2) the performance metrics to be used to assess successful Project completion; (3) the composition of the design/build Project team; (4) Project scope; (5) the decision factors to be used for the selection from among the design/build proposals; and (6) the methods for contract administration. As currently envisioned, up to three to four separate contracts will be utilized, including two to three geographically -based civil infrastructure contracts and at least one Project-wide track work contract. CHSRA's detailed Design/Build Program Plan will be prepared in the first quarter of FY2011. CHSRA will provide the Design/Build RFPs and CHSRA's selected Design/Build contractors to FRA for review and written approval prior to award.

Task 5 Unallocated Contingency

The project schedule is shown below.

PROJECT SCHEDULE

The initial construction section in the Central Valley funded with ARRA money defined as Fresno to Bakersfield (Kern County) will be completed, and all reimbursable expenses per this Agreement will have been submitted and approved by FRA by September 2017.

	Start	Finish
Task 1: Design/Build Program Management	**4-1-14**	**9-30-19**

Task 2: Real Property Acquisition	**9-1-13**	**6-30-16**
Task 3: Early Work Program	**9-1-13**	**12-1-14**
Task 4: Design/Build Contract Work	**3-1-14**	**9-30-18**
Task 5: Unallocated Contingency	**Throughout the Project**	**9-30-19**

PERFORMANCE OBJECTIVES AND DELIVERABLES

CHSRA shall achieve the following performance objectives to be authorized for funding of Project components and for the Project to be considered complete.

Overall Post Award Prerequisites

1. Prior to commencing any activities described Tasks 2-4, CHSRA shall provide to FRA an updated Program Management Plan, including an updated cost estimate appropriate to the level of project development. This submittal must be approved by FRA in writing.

2. Prior to award of Design/Build contract work funded by this Agreement, CHSRA shall complete PE and environmental documentation for the Project

3. CHSRA shall execute any required stakeholder agreements with infrastructure owners and operators and other stakeholders as appropriate in advance of the commencement of work on any activity described Tasks 2-5, copies of which will be submitted prior to execution to FRA for approval.

<u>Task-Specific Deliverables</u>

CHSRA shall achieve the following deliverables.

	Delivery Date
Task 1: Design/Build (D/B) Program Management	
Unless FRA determines otherwise in writing, the Authority may not continue to conduct any construction activities, unless and until the Authority submits, and FRA approves in writing, the following deliverables:	
2011 Annual Work Plan (AWP)	10-11
2012 AWP	7-12
2013 AWP	7-13
2014 AWP	7-14

2015 AWP	7-15
2016 AWP	7-16
2017 AWP	7-17
Design/Build (D/B) Program Plan	7-12
2012 Financial Plan Update	7-12
2012 PMP Update	7-12
2012 Service Development Plan Update	7-12
2013 Financial Plan Update	7-13
2013 PMP Update	7-13
2014 Financial Plan Update	7-14
2014 PMP Update	7-14
2015 Financial Plan Update	7-15
2015 PMP Update	7-15
2016 Financial Plan Update	7-16
2016 PMP Update	7-16
2016 Service Development Plan Update	7-16
2016 Operations Modeling/Schedules/Demand Forecast Update for Ridership & Revenue	7-16
2017 Financial Plan Update	7-17
2017 PMP Update	7-17
2017 Service Development Plan Update	7-17
2018 Financial Plan Update	7-18
2018 PMP Update	7-18
2018 SDP Update	7-18
Task 2: Real Property Acquisition	
Quarterly Updates to the Real Property Acquisition Plan	Quarterly
Task 3: Early Work Program[2]	
Utility Relocation Plan	1-14
Site Clearing/Demolition Plan	1-14
Railroad Track Relocation Plan	1-14

[2] The Plans associated with Early Works activities covered by this Agreement will be updated periodically to reflect implementation progress.

Highway Relocation Plan	1-14
Environmental Remediation/HazMat Disposal Plan	12-13
Task 4: D/B Contract Work	
D/B Contract #1 RFP	11-13
D/B Contract #2 RFP	11-13
D/B Contract #3 RFP	11-13
D/B Project-wide Track Work RFP	4-18
CHSRA D/B Contractor Selection	5-14
D/B Contract #1 Final Inspection and Acceptance Report	2-19
D/B Contract #2 Final Inspection and Acceptance Report	4-19
D/B Contract #3 Final Inspection and Acceptance Report	6-19
D/B Project wide Track Work Inspection and Acceptance Report	9-19
Task 5: Unallocated Contingency	
Contingency Management Plan (CMP)	7-12
CMP Quarterly Updates	Quarterly

PROJECT ADMINISTRATION

CHSRA will provide Project receipts and documents as required by FRA. CHSRA will obtain documentation of materials, payrolls and work performed, invoices and receipts, etc., during the Program from contractors and consultants as conditions of payment. These will be submitted or made available to FRA as required.

PROJECT BUDGET

The total estimated cost of the Project in Year of Expenditure (YOE) dollars is $1.67 billion of which $1.336 billion would be funded by FRA and $334 million would be funded by the CHSRA. A cost summary by task is shown below and detailed in the SDP Budget-Schedule Workbook.

Cost Summary: Bakerfield-South			
Task Description	**Federal (80%)**	**State (20%)**	**Total (YOE)**
Design-Build Contracts	$1,291,200,000	$322,800,000	$1,614,000,000
Unallocated Contingency	$44,800,000	$11,200,000	$56,000,000
Total	$1,336,000,000	$334,000,000	$1,670,000,000

PROJECT COORDINATION

CHSRA will perform all tasks required for the Project including necessary coordination with all involved Federal and State agencies, local governments, and all railroad owners and operators and stakeholders using processes already in place. CHSRA's project coordination process is based on ongoing practice, executed Memoranda of Understanding and other Agreements, and public involvement processes developed for the NEPA/CEQA phase of the Project.

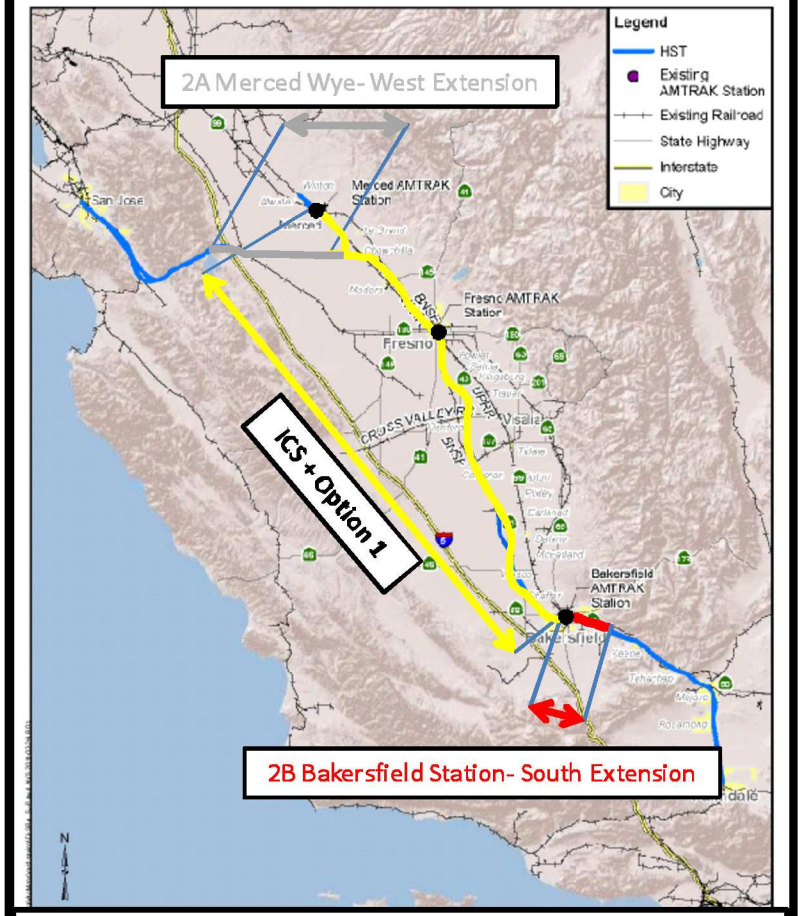
PROJECT MANAGEMENT

CHSRA's staff organization currently consists of an Executive Director/Chief Executive Officer, three Deputy Directors (Finance and Administration, Environmental/Planning, and Communications/ Public Policy/Outreach), a small support staff as well as a Chief Engineer contractor, a Project Management Oversight contractor, a Government Relations Management contractor, a Program Management Team, and seven Regional Consultant Teams. Additionally, CHSRA employs a financial consultant contractor and a public outreach and communications contractor. CHSRA plans to hire a Construction Management consultant for this Project. The Authority's organization for this work will be supported by appropriate legal services.

CHSRA will engage contractors through the competitive bidding process established by the State of California for all construction activities and in compliance with Federal regulations. CHSRA will provide construction oversight and will give direction to the construction engineering and contractor.

CHSRA will provide all of the deliverables in a timely manner for FRA's review, acceptance, or approval.

GRANT REQUEST 3
BAKERSFIELD – SOUTH



Note: Information based on known preliminary engineering and estimates. Limits of work assume lowest cost alternatives which are subject to change due to environmental review, funding and final design.

CALIFORNIA High-Speed Rail

Service Development Program Budget and Schedule Form

Welcome to the Service Development Program Budget and Schedule Form. To begin, save this Excel workbook to your computer and open the file. The buttons below will help you to easily navigate the forms contained in this file. To get started click on the button labeled "General Info and Assumptions"

Note 1: Yellow cells require you to enter values and blue cells are set up to auto-populate based on formulas that are embedded in the forms. If you have questions about this form or the formulas and calculations contained herein, please email the HSIPR Program Manager at HSIPR@dot.gov.

Note 2: For purposes of this application, "Fiscal Year (FY)" refers to the Federal fiscal year (October 1- September 30).

Color Key for Completing this Form:

Cell Type/Color:	Applicant Should Input a Value	Template will Auto-Populate (see note 1 above)	FRA Use Only: Applicant Does Not Complete

Buttons for Pages within this Form:

- General Info and Assumptions (click here first)
- Capital Cost Info. (Standard Cost Categories for reference)
- Detailed Capital Cost Budget
- Annual Capital Cost Budget
- Instructions for Operating & Financial Sheets
- Operating & Maintenance Info
- Operating and Financial Performance
- Sustainability Sheet
- Analysis of Funding Sources for Sustainability
- Program Schedule

General Information

Below, please indicate the Service Development Program name. The Service Development Program name must be identical to the name listed in the Application Form.

1. Please enter the requested data into the yellow cells.
This information will auto-populate other areas of the form.

Service Development Program Name
(*same as on Application Form*): CA-HSR-ICVP Extension-Bakersfield Station/South

Application Assumptions

1. Please use this section to capture two separate sets of assumptions that will affect the costs shown in subsequent sheets. The contingency rate is the allowance for uncertainties in projected costs. The Annual Inflation Rate will be used to convert between 2011 constant dollars and Year of Expenditure dollars. Enter the assumed annual inflation rate for each category for each year, with the exception of 2011. Inflation rates for 2011 are not used in Year of Expenditure calculations in other sections of this form.

Cost Categories*	Contingency Rate Assumption (%)	Annual Inflation Rate Assumptions by Year (%)									
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Categories for Detailed Capital Cost Budget											
10 Track Structures and Track	15.0%		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
20 Stations, Terminals, Intermodal	25.0%		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
30 Support Facilities: Yards, Shops, Admin. Bldgs	25.0%		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
40 Sitework, Right of Way, Land, Existing Improvements & Special Conditions	15.0%		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
50 Communications & Signaling	15.0%		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
60 Electric Traction	15.0%		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
70 Vehicles	0.0%										
80 Professional Services (applies to Cats. 10-60)	0.0%		2.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
90 Unallocated Contingency	n/a		2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
100 Finance Charges	n/a										
Category for Operating, Financial, and Sustainability information		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020**
Operating, Financial, Sustainability Information-- All-Purpose Inflation Rates		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

* See the "Capital Cost Info." tab for definitions and explanations of the Standard Capital Cost (SCC) Categories.
** For 2020 Operating, Financial, and Sustainability Inflation Assumptions, enter a single annual inflation rate for 2020 that will be used for 2020 and all subsequent years.

If not using the FRA formulas, please describe your methodology in the space provided below as well as listing any supporting documentation.

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FRA Standard Cost Categories for Capital Projects/Programs*		Notes
10 TRACK STRUCTURES & TRACK		
10.01	Track structure: Viaduct	Include elevated track structure of significant length consisting of multiple spans of generally equal length
10.02	Track structure: Major/Movable bridge	Include all elevated track structures with a movable span, and/or with a span of significant length (generally of approximately 400'' or longer)
10.03	Track structure: Undergrade Bridges	Include elevated track structure of greater than 20 feet that does not fall into 10.01 and 10.02
10.04	Track structure: Culverts and drainage structures	Include all minor undergrade passageways (generally of 20 feet or less in width)
10.05	Track structure: Cut and Fill (> 4' height/depth)	Include grading and subgrade stabilization of roadbed
10.06	Track structure: At-grade (grading and subgrade stabilization)	All grading and subgrade stabilization of roadbed not included under cost categories 10.01 through 10.05 and 10.07
10.07	Track structure: Tunnel	Definition self-explanatory
10.08	Track structure: Retaining walls and systems	Definition self-explanatory
10.09	Track new construction: Conventional ballasted	Include all ballasted track construction on prepared subgrade, on new or existing rights-of-way
10.10	Track new construction: Non-ballasted	Include all slab, direct fixation, embedded, and other non-ballasted track construction on prepared subgrade, on new or existing rights-of-way
10.11	Track rehabilitation: Ballast and surfacing	Include undercutting, ballast cleaning, tamping, and surfacing not associated with new track construction
10.12	Track rehabilitation: Ditching and drainage	Definition self-explanatory
10.13	Track rehabilitation: Component replacement (rail, ties, etc)	Definition self-explanatory
10.14	Track: Special track work (switches, turnouts, insulated joints)	Include minor turnouts and interlocking, such as crossovers and turnouts at the ends of passing tracks
10.15	Track: Major interlockings	Significant interlockings at major stations and where routes converge from three or more directions
10.16	Track: Switch heaters (with power and control)	Include cost of power distribution equipment from commercial power source to interlocking location
10.17	Track: Vibration and noise dampening	Definition self-explanatory
10.18	Other linear structures including fencing, sound walls	Definition self-explanatory
20 STATIONS, TERMINALS, INTERMODAL		As associated with stations, include costs for rough grading, excavation, station structures, enclosures, finishes, equipment; mechanical and electrical components including HVAC, ventilation shafts and equipment, station power, lighting, public address/customer information systems; safety systems such as fire detection and prevention, security surveillance, access control, life safety systems, etc. Include all construction materials and labor regardless of who is performing the work.
20.01	Station buildings: Intercity passenger rail only	Definition self-explanatory
20.02	Station buildings: Joint use (commuter rail, intercity bus)	Definition self-explanatory
20.03	Platforms	Definition self-explanatory
20.04	Elevators, escalators	Definition self-explanatory
20.05	Joint commercial development	Construction at station sites intended to support non-transportation commercial activities (shopping, restaurants, residential, office space). Do not include cost of incidental commercial use of station space intended for use by passengers (newsstands, snack bar, etc). Costs may not be allowable for Federal reimbursement
20.06	Pedestrian / bike access and accommodation, landscaping, parking lots	Include sidewalks, paths, plazas, landscape, site and station furniture, site lighting, signage, public artwork, bike facilities, permanent fencing
20.07	Automobile, bus, van accessways including roads	Include all on-grade paving
20.08	Fare collection systems and equipment	Include fare sales and swipe machines, fare counting equipment
20.09	Station security	Definition self-explanatory
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS		
30.01	Administration building: Office, sales, storage, revenue counting	Definition self-explanatory
30.02	Light maintenance facility	Include service, inspection, and storage facilities and equipment
30.03	Heavy maintenance facility	Include heavy maintenance and overhaul facilities and equipment
30.04	Storage or maintenance-of-way building/bases	Definition Self-explanatory
30.05	Yard and yard track	Include yard construction and track associated with yard
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS		Include all construction materials and labor regardless of who is performing the work.
40.01	Demolition, clearing, site preparation	Include project/program-wide clearing, demolition and fine grading
40.02	Site utilities, utility relocation	Include all site utilities-storm, sewer, water, gas, electric
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments	Include underground storage tanks, fuel tanks, other hazardous materials and treatments, etc.
40.04	Environmental mitigation: wetlands, historic/archeology, parks	Include other environmental mitigation not listed
40.05	Site structures including retaining walls, sound walls	Definition self-explanatory
40.06	Temporary facilities and other indirect costs during construction	Definition self-explanatory
40.07	Purchase or lease of real estate	If the value of right-of-way, land, and existing improvements is to be used as in-kind local match to the Federal funding of the project/program, include the total cost on this line item. In backup documentation, separate cost for land from cost for improvements. Identify whether items are leased, purchased or acquired through payment or for free. Include the costs for permanent surface and subsurface easements, trackage rights, etc.

FRA Standard Cost Categories for Capital Projects/Programs*		Notes
40.08	Highway/pedestrian overpass/grade separations	Other than the grade separations included in this line item, highway-rail grade crossing safety enhancements generally fall under 50.06.
40.09	Relocation of existing households and businesses	In compliance with Uniform Relocation Act

FRA Standard Cost Categories for Capital Projects/Programs*		Notes
50 COMMUNICATIONS & SIGNALING		
50.01	Wayside signaling equipment	Definition Self-explanatory
50.02	Signal power access and distribution	Definition Self-explanatory
50.03	On-board signaling equipment	Include on-board cab signal, Automatic Train Control (ATC), and Positive Train Control (PTC) related equipment
50.04	Traffic control and dispatching systems	Definition self-explanatory
50.05	Communications	Definition self-explanatory
50.06	Grade crossing protection	Includes all types of highway-rail grade crossing safety enhancements except for grade separation projects, which fall under 40.08.
50.07	Hazard detectors: dragging equipment high water, slide, etc.	Definition self-explanatory
50.08	Station train approach warning system	Definition self-explanatory
60 ELECTRIC TRACTION		
60.01	Traction power transmission: High voltage	Definition self-explanatory
60.02	Traction power supply: Substations	Definition self-explanatory
60.03	Traction power distribution: Catenary and third rail	Definition self-explanatory
60.04	Traction power control	Definition self-explanatory
70 VEHICLES		Include professional services associated with the vehicle component of the project/program. These costs may include agency staff oversight and administration, vehicle consultants, design and manufacturing contractors, legal counsel, warranty and insurance costs, etc.
70.00	Vehicle acquisition: Electric locomotive	Definition self-explanatory
70.01	Vehicle acquisition: Non-electric locomotive	Definition self-explanatory
70.02	Vehicle acquisition: Electric multiple unit	Definition self-explanatory
70.03	Vehicle acquisition: Diesel multiple unit	Definition self-explanatory
70.04	Veh acq: Loco-hauled passenger cars w/ ticketed space	Include cars with coach space, sleeping compartments, etc.
70.05	Veh acq: Loco-hauled passenger cars w/o ticketed space	Include dedicated food service, lounge, baggage and other service support cars
70.06	Vehicle acquisition: Maintenance of way vehicles	Definition self-explanatory
70.07	Vehicle acquisition: Non-railroad support vehicles	Include hi-rail bucket trucks, and other highway vehicles
70.08	Vehicle refurbishment: Electric locomotive	Definition self-explanatory
70.09	Vehicle refurbishment: Non-electric locomotive	Definition self-explanatory
70.10	Vehicle refurbishment: Electric multiple unit	Definition self-explanatory
70.11	Vehicle refurbishment: Diesel multiple unit	Definition self-explanatory
70.12	Veh refurb: Passeng. loco-hauled car w/ ticketed space	Include coaches, sleeping cars, etc.
70.13	Veh refurb: Non-passeng loco-hauled car w/o ticketed space	Include food service, lounge, baggage and other service support cars
70.14	Vehicle refurbishment: Maintenance of way vehicles	Definition self-explanatory
70.15	Spare parts	Definition self-explanatory
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)		Cat. 80 applies to Cats. 10-60. Cat. 80 includes all professional, technical and management services related to the design and construction of infrastructure (Cats. 10 - 60) during the preliminary engineering, final design, and construction phases of the project/program (as applicable). This includes environmental work, design, engineering and architectural services; specialty services such as safety or security analyses; value engineering, risk assessment, cost estimating, scheduling, ridership modeling and analyses, auditing, legal services, administration and management, etc. by agency staff or outside consultants.
80.01	Service Development Plan/Service Environmental	
80.02	Preliminary Engineering/Project Environmental	
80.03	Final design	
80.04	Project management for design and construction	
80.05	Construction administration & management	
80.06	Professional liability and other non-construction insurance	
80.07	Legal; Permits; Review Fees by other agencies, cities, etc.	
80.08	Surveys, testing, investigation	Include professional liability insurance and other non-construction insurance on 80.05 unless insurance
80.09	Engineering inspection	Definition self-explanatory
80.10	Start up	Definition self-explanatory
90 UNALLOCATED CONTINGENCY		Includes unallocated contingency, project/program reserves. Document allocated contingencies for individual line items on Detailed Capital Cost Budget.

100 FINANCE CHARGES	Include finance charges expected to be paid by the project/program sponsor/grantee prior to either the completion of the project or the fulfillment of the FRA funding commitment, whichever occurs later in time. Finance charges incurred after this date should not be included in Total Project Cost. Derive finance charges from the project's financial plan, based on an analysis of the sources and uses of funds.

*NOTE: To help evaluate and compare the costs of different applications FRA has developed 10 main Standardized Capital Cost Categories. These are provided to establish consistency in the use of the worksheets. The SCC cost breakdown is based on a traditional Design Bid Build model. If your project is Design Build, to the best of your ability, separate construction costs from design, administration, testing, etc. Put all construction costs in 10 through 60. Put design, administration, testing, etc. in "80 Professional Services." If you are not sure where to put a certain element of the project, consider the issue in general terms, using this sheet as a guide.

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Detailed Capital Cost Budget

Instructions:
To assist FRA in comparing projects, this form provides a breakdown of capital cost using Standard Cost Categories (SCCs). Definitions of FRA's SCCs can be found in the "Capital Cost Info" tab of this workbook. The data you enter in this form should be drawn from budget estimates or analysis you have available for your project.

1. Enter values in the yellow cells below. You should only provide data for those costs categories associated with this project; leave other cells blank.

2. The light blue cells will auto-populate based on the Contingency rates entered in "General Info."

3. Explain any large discrete, identifiable and/or unique capital investments in the space provided at the bottom of this form. Where an explanation is appropriate, place an asterisk in the far right column to denote that an explanation is provided. Please include the reference to the Cost Category number in your explanation. Example: "10.07: Tunnel at [location], #.# miles in length, consists of one twin-tube New Austrian Tunneling Method tunnel with cross-passages located every .25 miles."

4. For purposes of this application "Base Year Dollars" are Fiscal Year (FY) 2011 Dollars.

Program Name: CA-HSR-ICVP Extension-Bakersfield Station/South

		Applicant Inputs							
		Unit	Quantity	Unit Cost (Thousands of Base Yr/FY 11 Dollars)	Non-Unit Based Costs	Total Allocated Cost (Thousands of Base Yr FY11 Dollars)	Allocated Contingency (Thousands of Base Yr/FY 11 Dollars)	TOTAL COST (Thousands of Base Yr/FY 11 Dollars)	Explanation Provided? (if so use *)
10 TRACK STRUCTURES & TRACK						$ 776,938,586	$ 116,540,788	$ 893,479,374	
10.01	Track structure: Viaduct	Miles	6.00	$ 87,224,135		$ 523,344,810	$ 78,501,722	$ 601,846,532	
10.02	Track structure: Major/Movable bridge				$ 2,428,713	$ 2,428,713	$ 364,307	$ 2,793,020	
10.03	Track structure: Undergrade Bridges					$ -	$ -	$ -	
10.04	Track structure: Culverts and drainage structures	#				$ -	$ -	$ -	
10.05	Track structure: Cut and Fill (> 4' height/depth)	Miles	14.42	$ 2,227,664		$ 32,122,915	$ 4,818,437	$ 36,941,352	
10.06	Track structure: At-grade (grading and subgrade stabilization)	Miles	9.00	$ 2,449,958		$ 22,049,622	$ 3,307,443	$ 25,357,065	
10.07	Track structure: Tunnel					$ -	$ -	$ -	
10.08	Track structure: Retaining walls and systems	Miles	2.74	$ 23,364,498		$ 64,018,725	$ 9,602,809	$ 73,621,533	
10.09	Track new construction: Conventional ballasted				$ 70,706,721	$ 70,706,721	$ 10,606,008	$ 81,312,729	
10.10	Track new construction: Non-ballasted				$ 43,232,811	$ 43,232,811	$ 6,484,922	$ 49,717,733	
10.11	Track rehabilitation: Ballast and surfacing					$ -	$ -	$ -	
10.12	Track rehabilitation: Ditching and drainage					$ -	$ -	$ -	
10.13	Track rehabilitation: Component replacement (rail, ties, etc)					$ -	$ -	$ -	
10.14	Track: Special track work (switches, turnouts, insulated joints)				$ 19,034,270	$ 19,034,270	$ 2,855,141	$ 21,889,411	
10.15	Track: Major interlockings					$ -	$ -	$ -	
10.16	Track: Switch heaters (with power and control)					$ -	$ -	$ -	
10.17	Track: Vibration and noise dampening					$ -	$ -	$ -	
10.18	Other linear structures including fencing, sound walls	Miles				$ -	$ -	$ -	
20 STATIONS, TERMINALS, INTERMODAL						$ 67,883,796	$ 16,970,949	$ 84,854,745	
20.01	Station buildings: Intercity passenger rail only				$ 47,929,947	$ 47,929,947	$ 11,982,487	$ 59,912,434	
20.02	Station buildings: Joint use (commuter rail, intercity bus)					$ -	$ -	$ -	
20.03	Platforms					$ -	$ -	$ -	
20.04	Elevators, escalators					$ -	$ -	$ -	
20.05	Joint commercial development					$ -	$ -	$ -	
20.06	Pedestrian / bike access and accommodation, landscaping, parking lots					$ -	$ -	$ -	
20.07	Automobile, bus, van accessways including roads				$ 19,953,849	$ 19,953,849	$ 4,988,462	$ 24,942,311	
20.08	Fare collection systems and equipment					$ -	$ -	$ -	
20.09	Station security					$ -	$ -	$ -	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS						$ -	$ -	$ -	
30.01	Administration building: Office, sales, storage, revenue counting					$ -	$ -	$ -	
30.02	Light maintenance facility					$ -	$ -	$ -	
30.03	Heavy maintenance facility					$ -	$ -	$ -	
30.04	Storage or maintenance-of-way building/bases					$ -	$ -	$ -	
30.05	Yard and yard track					$ -	$ -	$ -	
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS						$ 242,573,521	$ 36,386,028	$ 278,959,549	
40.01	Demolition, clearing, site preparation					$ -	$ -	$ -	
40.02	Site utilities, utility relocation				$ 18,010,627	$ 18,010,627	$ 2,701,594	$ 20,712,221	
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments					$ -	$ -	$ -	
40.04	Environmental mitigation: wetlands, historic/archeology, parks				$ 25,722,149	$ 25,722,149	$ 3,858,322	$ 29,580,471	
40.05	Site structures including retaining walls, sound walls				$ 7,729,678	$ 7,729,678	$ 1,159,452	$ 8,889,130	
40.06	Temporary facilities and other indirect costs during construction				$ 35,561,161	$ 35,561,161	$ 5,334,174	$ 40,895,335	
40.07	Purchase or lease of real estate				$ 106,709,202	$ 106,709,202	$ 16,006,380	$ 122,715,582	
40.08	Highway/pedestrian overpass/grade separations				$ 48,840,704	$ 48,840,704	$ 7,326,106	$ 56,166,810	
40.09	Relocation of existing households and businesses					$ -	$ -	$ -	

	Unit	Quantity	Unit Cost (Thousands of Base Yr/FY 11 Dollars)	Non-Unit Based Costs	Total Allocated Cost (Thousands of Base Yr FY11 Dollars)	Allocated Contingency (Thousands of Base Yr/FY 11 Dollars)	TOTAL COST (Thousands of Base Yr/FY 11 Dollars)	Explanation Provided? (if so use *)
50 COMMUNICATIONS & SIGNALING					$ -	$ -	$ -	
50.01 Wayside signaling equipment					$ -	$ -	$ -	
50.02 Signal power access and distribution					$ -	$ -	$ -	
50.03 On-board signaling equipment					$ -	$ -	$ -	
50.04 Traffic control and dispatching systems					$ -	$ -	$ -	
50.05 Communications					$ -	$ -	$ -	
50.06 Grade crossing protection					$ -	$ -	$ -	
50.07 Hazard detectors (dragging equipment, , slide, etc.)					$ -	$ -	$ -	
50.08 Station train approach warning system					$ -	$ -	$ -	
60 ELECTRIC TRACTION					$ -	$ -	$ -	
60.01 Traction power transmission: High voltage					$ -	$ -	$ -	
60.02 Traction power supply: Substations	#				$ -	$ -	$ -	
60.03 Traction power distribution: Catenary and third rail	#				$ -	$ -	$ -	
60.04 Traction power control					$ -	$ -	$ -	
Construction Subtotal (10-60)					$ 1,087,395,903	$ 169,897,765	$ 1,257,293,669	
70 VEHICLES					$ -	$ -	$ -	
70.00 Vehicle acquisition: Electric locomotive	#				$ -	$ -	$ -	
70.01 Vehicle acquisition: Non-electric locomotive	#				$ -	$ -	$ -	
70.02 Vehicle acquisition: Electric multiple unit	#				$ -	$ -	$ -	
70.03 Vehicle acquisition: Diesel multiple unit	#				$ -	$ -	$ -	
70.04 Veh acq: Loco-hauled passenger cars w/ ticketed space	#				$ -	$ -	$ -	
70.05 Veh acq: Loco-hauled passenger cars w/o ticketed space	#				$ -	$ -	$ -	
70.06 Vehicle acquisition: Maintenance of way vehicles	#				$ -	$ -	$ -	
70.07 Vehicle acquisition: Non-railroad support vehicles	#				$ -	$ -	$ -	
70.08 Vehicle refurbishment: Electric locomotive	#				$ -	$ -	$ -	
70.09 Vehicle refurbishment: Non-electric locomotive	#				$ -	$ -	$ -	
70.10 Vehicle refurbishment: Electric multiple unit	#				$ -	$ -	$ -	
70.11 Vehicle refurbishment: Diesel multiple unit	#				$ -	$ -	$ -	
70.12 Veh refurb: Passeng. loco-hauled car w/ ticketed space	#				$ -	$ -	$ -	
70.13 Veh refurb: Non-passeng loco-hauled car w/o ticketed space	#				$ -	$ -	$ -	
70.14 Vehicle refurbishment: Maintenance of way vehicles	#				$ -	$ -	$ -	
70.15 Spare parts					$ -	$ -	$ -	
80 PROFESSIONAL SERVICES					$ 162,211,975	$ -	$ 162,211,975	
80.01 Service Development Plan/Service Environmental					$ -	$ -	$ -	
80.02 Preliminary Engineering/Project Environmental					$ -	$ -	$ -	
80.03 Final Design				$ 43,110,908	$ 43,110,908	$ -	$ 43,110,908	
80.04 Project management for design and construction				$ 47,353,649	$ 47,353,649	$ -	$ 47,353,649	
80.05 Construction administration & management				$ 63,521,810	$ 63,521,810	$ -	$ 63,521,810	
80.06 Professional liability and other non-construction insurance					$ -	$ -	$ -	
80.07 Legal; Permits; Review Fees by other agencies, cities, etc.				$ 8,225,608	$ 8,225,608	$ -	$ 8,225,608	
80.08 Surveys, testing, investigation					$ -	$ -	$ -	
80.09 Engineering inspection					$ -	$ -	$ -	
80.10 Start up					$ -	$ -	$ -	
Subtotal (10-80)					$ 1,249,607,878	$ 169,897,765	$ 1,419,505,644	
90 UNALLOCATED CONTINGENCY							$ 49,000,000	
Subtotal (10-90)							$ 1,468,505,644	
100 FINANCE CHARGES								
TOTAL CAPITAL COSTS (10-100)							$ 1,468,505,644	

Space provided for additional descriptions of capital costs.
See Example under "Instructions" above. Please include references to specific Cost Category numbers.

Annual Capital Cost Budget

Instructions:
This form provides a breakdown by year of the capital costs entered in the previous "Detailed Capital Cost Budget". The data you enter in this form should be drawn from budget estimates or analyses you have available for your project.

1. In the yellow cells in the "Base Year/ FY 2011 Dollars" table, enter the annual dollar figures for each cost category in thousands of Base Year/FY 2011 Dollars.

2. In the "Base Year/ FY 2011 Dollars" table, the numbers in the "Double Check Total" column will auto-populate from the "Detailed Capital Cost Budget" in the previous tab. The numbers in the "Base Yr/FY 11 Total" column will be the sum of the annual data entered to the left. The two columns should match for each Standard Cost Categpry. If the entries in the "Double Check Total" column are not identifcal, the Base Year/FY 11 values you entered in the previous tab do not match the values entered in this tab.

3. The light blue cells in the Year of Expenditure (YOE) table will auto-populate using Inflation rates from the "General Info" tab.

Program Name: CA-HSR-ICVP Extension-Bakersfield Station/South

BASE YEAR FY 2011 DOLLARS (Thousands)	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total in Base Yr /FY 11 Dollars*	Check Figures Taken from Detailed Budget‡
10 TRACK STRUCTURES & TRACK				$ 205	$ 313	$ 179	$ 143	$ 45	$ 9	$ 893	$ 893,479,374
20 STATIONS, TERMINALS, INTERMODAL				$ 21	$ 30	$ 17	$ 13	$ 3	$ 1	$ 85	$ 84,854,745
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS										$ -	$ -
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS			$ 42	$ 70	$ 98	$ 28	$ 28	$ 11	$ 3	$ 279	$ 278,959,549
50 COMMUNICATIONS & SIGNALING										$ -	$ -
60 ELECTRIC TRACTION										$ -	$ -
70 VEHICLES										$ -	$ -
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)			$ 5	$ 40	$ 57	$ 28	$ 24	$ 6	$ 2	$ 162	$ 162,211,975
90 UNALLOCATED CONTINGENCY				$ 12	$ 15	$ 12	$ 7	$ 2	$ 0	$ 49	$ 49,000,000
100 FINANCE CHARGES										$ -	$ -
Total Program Cost (10-100)	**$ -**	**$ -**	**$ 47**	**$ 349**	**$ 511**	**$ 263**	**$ 215**	**$ 68**	**$ 15**	**$ 1,468**	**$ 1,468,505,644**

YEAR OF EXPENDITURE (YOE) DOLLARS	2011	2012	2013	2014	2015	2016	2017	2018	2019	YOE Total**
10 TRACK STRUCTURES & TRACK	$ -	$ -	$ -	$ 227	$ 357	$ 211	$ 175	$ 57	$ 11	$ 1,038
20 STATIONS, TERMINALS, INTERMODAL	$ -	$ -	$ -	$ 23	$ 34	$ 20	$ 16	$ 4	$ 1	$ 98
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS	$ -	$ -	$ 43	$ 74	$ 106	$ 31	$ 31	$ 13	$ 3	$ 301
50 COMMUNICATIONS & SIGNALING	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
60 ELECTRIC TRACTION	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
70 VEHICLES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)	$ -	$ -	$ 5	$ 44	$ 64	$ 32	$ 29	$ 8	$ 2	$ 184
90 UNALLOCATED CONTINGENCY	$ -	$ -	$ -	$ 13	$ 17	$ 14	$ 9	$ 2	$ 1	$ 57
100 FINANCE CHARGES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Program Cost (10-100)	**$ -**	**$ -**	**$ 49**	**$ 382**	**$ 577**	**$ 308**	**$ 260**	**$ 84**	**$ 18**	**$ 1,678**

* For the purpose of this application, base year dollars are considered FY 2011 dollars.
**Year-of-Expenditure(YOE) dollars are inflated Base Year dollars. Applicants must determine their own inflation rate and enter it on the "General Info" tab. Applicants should also explain their proposed inflation assumptions (and methodology, if applicable) in the Application Form.
‡ As a convenience to applicants in cross-checking their figures, this column shows the "Total Costs" by category in FY 2011 dollars carried over from the "Detailed Capital Cost Budget" sheet.

If not using the FRA-provided formulas, please describe your methodology in the space provided below as well as listing any supporting documentation.

Instructions for Operating and Financial Sheets

Service Development Program applicants are required to project their corridor service's operatir financial performance at least through the tenth full year of operation (a longer period is require capital asset renewal charge -- see below).

The sheet "Operating & Maintenance Info." lays out an approach to passenger rail cost accounti projection that accords with that employed by Amtrak in its recently-implemented "APT" system cost categories in the "Operating and Financial Perf." sheet draw on the cost categories in the "C Maintenance Info." sheet. If you have employed other approaches to O&M cost estimation, sho the red-shaded cells for Year 1, Year 5, and Year 10 and provide supporting documentation desc O&M cost projection methods. Otherwise, if your O&M projections support the O&M line items the form, enter your data and the total O&M expense will auto-calculate.

With respect to the "Capital Asset Renewal Charge" (CARC): please note that this is not a charge assets initially provided or renewed under the HSIPR program. Instead, it is an annualized allow future asset replacement, refurbishment, and expansion. Categories that would describe invest together make up the CARC are shown in the lower section of the Operating and Financial Perfo If your method of projecting future capital asset renewals and costs does not support the categc the form, enter your totals in the red-shaded cells labeled "Total capital asset renewal charge (a amounts)." If your methodology supports the line items on the form, please fill in the individua entries and the total will auto-populate. In either case, you will need to explain your methodolo procedures in supporting documentation.

An illustrative methodology for estimating the CARC follows. It can be applied to the total CARC constituent line items.

- Develop a schedule for the nature and expected cost (in FY 2011 dollars) of capital asset rene expansions, and additions for years 1 through 30 of the program's operation. Assign projected c years in which they are expected to occur.
- Calculate the present value of the future expenditures thus assigned, based on the OMB-appr rate of 7 percent.
- Annualize the present value by calculating the equal annual payments over 30 years that woul the present value at the approved discount rate.
- The annualized number will be the CARC, and should be entered on the appropriate row(s) of t and Financial Performance Spreadsheet.

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Operating and Maintenance Information
(Standard O&M Cost Categories for Reference)

Category/Subcategory	Definition
100 Maintenance of Way (MoW)	
101 MoW Track	Maintenance work on track assets along the right-of-way, including the roadbed, rails, cross-ties, ballast, and grade crossings.
102 MoW Communications & Signal	Maintenance work on Communications & Signal assets, including telegraph, telephone, radio systems; train signal and interlocking systems; and buildings, right-of-way, or other facilities supporting and housing these assets and systems.
103 MoW Electric Traction	Operation of electric propulsion systems and maintenance work on electric transmission assets, including catenary and support apparatuses; transmission systems; power substations; and building and structures housing these systems.
104 MoW Bridges & Buildings	Maintenancework on physical assets, including tunnels, bridges, culverts, overhead highway bridges, signs, and ancillary buildings.
105 MoW Support	General support for front-line MoW activities (Track, Communications & Signal, Electric Traction and Buildings & Bridges), including management and supervision; training; material control and procurement; support for capital projects; and other general support.
200 Maintenance of Equipment (MoE)	
201 MoE Turnaround	Cleaning, inspection, and minor repairs of rolling stock both prior to departure and en-route.
202 Loco Maintenance	Maintenance of train locomotives, including both preventive/scheduled maintenance and as-needed maintenance due to locomotive failures, bad orders, freeze damage, wrecks, and so on. Does not include major repairs and overhauls or other capital work.
203 Car Maintenance	Maintenance of train cars, including passenger coaches, dining cars, sleeping cars, and baggage cars. Includes both preventive/scheduled maintenance and as-needed maintenance due to car failures, bad orders, freeze damage, wrecks, and so on.
204 Major Repairs - Expensed	Repairs to rolling stock, components or equipments performed in major overhaul facilities or backshops that are not capitalizable.
205 MoE Support	General support for front-line MoE activities, including managerial, administrative, material control, and other activities in support of turnaround servicing, rolling stock maintenance and repair, and component work.
300 Transportation	
301 Onboard Services (OBS)	Services provided to customers onboard trains, including food and beverage, entertainment, sleeping car services, and so on. Included are direct and indirect labor charges of OBS employees providing services onboard trains; commissary management and support.
302 Trainmen & Enginemen (T&E)	Direct labor and indirect labor-related costs of enginemen (train engineers who operate locomotives) and trainmen (conductors in overall control of trains) as well as general support for and management of T&E employees and crew bases.
303 Yard	Activities required to support the movement of train equipment in preparation for revenue service, including moving trains between the yard and station, train makeup and breakup, moving equipment to and from mechanical facilities, and managerial costs.
304 Fuel	Diesel fuel costs for trains used in passenger service. Includes fuel costs only.
305 Power - Electric Traction	Electric power costs for trains used in passenger service. Includes power costs only.
306 Train Movement	Activities associated with moving passengers from endpoint to endpoint, including train dispatching, signal or interlocking operations, and the operations of any control or operations center(s).
307 Train Movement-Railroad Services	Costs for services provided by other railroads, including infrastructure access, leasing of equipment, purchased fuel, equipment maintenance or repairs, dispatching and signal services, and station costs.
308 Transportation Support	Support and management of front-line train operations activities, including the costs of general and assistant superintendants, railroad foremen and assistant foremen, and other transportation operations-related activities.
400 Sales and Marketing	
401 Sales	Field sales and sales administration, travel agent services, and commercial account services, including expenditures for travel agency commissions, credit card commissions, and airline system access fees.
402 Information & Reservations	Reservation services to both the general public other distribution channels, such as travel agencies, including the costs of call centers and information systems required to support reservation services.
403 Marketing	Marketing and sales support activities, including market research, customer relations, advertising, production of timetables, and sales promotions.
500 Stations	
501 Stations	Station service activities, including ticketing, cleaning and maintenance, lounge operation, red cap and porter services, baggage services, stationmaster and usher activities, snow and ice removal, and training and supervision of staff.

Operating and Maintenance Information
(Standard O&M Cost Categories for Reference)

Category/Subcategory	Definition
600 Police, Security & Environmental Safety	
601 Police and Security	Traditional police patrolling activities and surveillance, intelligence, and counterterrorism efforts in support of train service, facilities, and right-of-way.
602 Environmental & Safety	Activities to ensure and oversee environmental, health, and safety of employees and customers, including environmental and safety compliance.
700 General and Administrative	
701 Corporate Administration	Managerial and administrative activities that are enterprise-wide in scope and support all operations of the project or enterprise.
702 Centralized Services	Services that are enterprise-wide in scope, including IT, payroll operations, human resources, accounting, procurement, and so on.
Total Operating and Maintenance Costs – for Purposes of HSIPR Program Application	Note: Does not include charges for return on, or return of, capital.

Return to the Main Page

Operating Information and Financial Performance

Instructions:
1. Input the operating and financial information in the yellow cells. (Dollar values are in millions of 2011 constant dollars except as noted.)

2. Ensure the light blue cells have auto populated with data based on the imbedded equations.

3. Do not input information in cells with hatch marks.

4. If there is no "Comparable Existing Service," leave the FY 2011 and FY 2012 columns blank.

			Service Development Program Name		CA-HSR-ICVP Extension-Bakersfield Station/South		
			For Comparable Existing Service Only:		Projections for Full Years of Operation Following Program Completion		
Line No.	Formula (e = entry)	Line Items		*(Use best estimates for full-year FY 2012 data)*	First full year	Fifth full year	Tenth full year
		Indicate the fiscal year - use yyyy format as shown for 2011 and 2012	2011	2012	2018	2022	2027
		Physical, production, and traffic factors for the corridor program					
1	e	Route-miles, total	363	363	363	363	363
2	e	Typical trip time over entire route (hours)	7.1	7.1	5.8	5.8	5.8
3	=line 1 / line 2	Average train speed (mph) over entire route	51.1	51.1	62.6	62.6	62.6
4	e	Top operating speed (mph)	79	79	125	125	125
5	e	Trains per day (round-trips)(average over the course of a year)	6.0	6.0	10.0	10.0	10.0
6	e	Trains per day (round-trips)(typical weekday)	6.0	6.0	10.0	10.0	10.0
7	e	Passenger-Trips, Thousands	979	1,008	1,373	1,457	1,570
8	e	Passenger-Miles, Thousands	145,086	149,353	215,653	231,802	252,858
9	=line 28 / line 8	Average fare per passenger-mile (FY 2010 dollars, three decimals)	-	-	$0.239	$0.239	$0.239
10	=line 8 / line 7	Average trip length (miles)	148.2	148.2	157.1	159.1	161.1
		Effect on other modes-traffic in the city-pairs served:					
11	e	Percent of air traffic diverted			0%	0%	0%
12	e	Percent of intercity auto traffic diverted			1%	1%	1%
12a	e	If comparable service now exists: Percent of intercity rail traffic diverted			0%	0%	0%
13	e	Percent of intercity bus traffic diverted			0%	0%	0%
		Rail corridor traffic by source (thousands of passenger-miles):					
14	e	Diverted from air			0	0	0
15	e	Diverted from auto			215,653	231,802	252,858
16	e	Diverted from conventional/previous rail			0	0	0
17	e	Diverted from bus			0	0	0
18	e	Induced			0	0	0

			Service Development Program Name				CA-HSR-ICVP Extension-Bakersfield Station/South		
			For Comparable Existing Service Only:				Projections for Full Years of Operation Following Program Completion		
Line No.	Formula (e = entry)	Line Items			*(Use best estimates for full-year FY 2012 data)*		First full year	Fifth full year	Tenth full year
		Rail corridor traffic by source (percentage distribution of total):							
19	=line 14 / line 8	Diverted from air					-	-	-
20	=line 15 / line 8	Diverted from auto					100%	100%	100%
21	=line 16 / line 8	Diverted from conventional/previous rail					-	-	-
22	=line 17 / line 8	Diverted from bus					-	-	-
23	=line 18 / line 8	Induced					-	-	-
		Operating efficiency factors							
24	e	Train-miles. thousands	1330		1330		1835	1835	1835
25	=line 8 / line 24	Passenger-miles per train mile	109		112		118	126	138
26	e	Seat-miles, thousands	388,438		407,859		495,509	495,509	495,509
27	=line 8 / line 26	Load factor	37%		37%		44%	47%	51%
		Operating results and continuing investments - Thousands of FY 2011 dollars except where noted							
		Revenues (do not include any public subsidies):	FY 2012 dollars	FY 2013 dollars	FY 2012 Dollars	FY 2013 Dollars			
28	e	Passenger transportation revenue (for Comparable Existing Service ONLY, enter either FY 2011 dollars (thousands) in yellow cells OR FY 2012 dollars (thousands) in the blue cells)	$36,153		$35,700		$51,590	$55,453	$60,490
29	e	Income from creditable ancillary activities							
30	=line 28 + line 29	System revenues					$51,590	$55,453	$60,490
		Operating and maintenance expenses: *(See "O&M Line Item Contents" sheet)*							
31	e	Maintenance of way (MOW)							
32	e	Maintenance of equipment (MOE)					The cells below are assumed to be the "red" ones		
33	e	Transportation					referenced in the instructions		
34	e	Sales and marketing					$114,108	$114,320	$114,551
35	e	Stations					see suppmental document for methodology		
36	e	Police, Security, and Environmental Safety							
37	e	General and administrative							
38	=sum of lines 31 through 37	Total O&M expense					$114,108	$114,320	$114,551
39	= line 30 - line 38	Operating surplus/(deficit). (State operating (subsidy) for FY 2010 and 2011 if there is a comparable existing service. Otherwise leave blank for those years. For Comparable Existing Service ONLY, enter either FY 2012 dollars (thousands) in yellow cells OR FY 2013 dollars (thousands) in the blue cells. **For rough comparability with any future deficits, express the (subsidy) as a negative number)**					$ (62,519)	$ (58,867)	$ (54,061)
40	=line 39 / line 8	*Operating surplus/(deficit) per passenger-mile, in dollars (three decimals). (State operating (subsidy)per passenger-mile for FY 2010 and 2010, in FY 2011 dollars, if there is a comparable existing service)*	-		-		$ (0.290)	$ (0.254)	$ (0.214)

			Service Development Program Name		CA-HSR-ICVP Extension-Bakersfield Station/South		
			For Comparable Existing Service Only:		Projections for Full Years of Operation Following Program Completion		
Line No.	Formula (e = entry)	Line Items		*(Use best estimates for full-year FY 2012 data)*	First full year	Fifth full year	Tenth full year
Capital asset renewal charges: Annualized amounts providing for capital expenditures expected after completion of initial construction. The annualized amounts would be based on a long-term projection. Provide methods and assumptions in supporting documentation.							
41	e	Fixed infrastructure - capitalized MOW					
42	e	Fixed infrastructure - subsequent expansions					
43	e	Vehicles -capitalized MOE - overhauls, refurbishments etc.					
44	e	Vehicles - fleet replacements					
45	e	Vehicles - fleet expansions					
46	e	All other					
47	=sum of lines 41 through 46	Total capital asset renewal charge (annualized amounts)			-	-	-
48	=line 39 - line 47	Surplus/(deficit) after capital asset renewal charge			**$ (62,519)**	**$ (58,867)**	**$ (54,061)**
49	calc. from line 48	Is there a projected (deficit) and thus, a Funding Requirement?			Yes	Yes	Yes
50	calc. from line 48	If there is a Funding Requirement, express it in absolute dollars in this row, and carry it over to the Sustainability Sheet.			$62,519	$58,867	$54,061

Service Development Program Name	CA-HSR-ICVP Extension-Bakersfield Station/South

Sustainability

Instructions: The upper half of this sheet will auto-populate with data from "Operating and Financial Perf". In the lower half of the sheet, please indicate the sources from which the 2010 and 2011 operating subsidies were supplied and projected sources for annual funding requirements once the Program is in service. Please provide any additional information or clarifications as supplemental documentation. All dollars should be in Thousands.

Funding Requirements (from "Operating and Financial Perf." sheet)	Thousands of Dollars				
	Comparable existing Service (if any)		First full year of operation	Fifth full year of operation	Tenth full year of operation
Indicate the fiscal year:	2011	2012	2018	2022	2027
Funding Requirement in FY 2011 Constant Dollars *(State operating subsidy for FY 2011 and FY 2012 if existing service)*	-	-	$62,519	$58,867	$54,061
Funding Requirement in Year-of-Expenditure Dollars *(State operating subsidy for FY 2011 and FY 2012 if existing service)*	-	-	$75,741	$81,838	$89,263

Sources of Funds (Year-of-Expenditure Dollars). Note: Projected sources to cover operating deficits cannot include Federal funds.

Source No.	Source Description					
(1)				The operation provides	The operation provides	The operation provides
(2)				a reduction in	a reduction in	a reduction in
(3)				Federal and State	Federal and State	Federal and State
(4)				subsidy requirements	subsidy requirements	subsidy requirements
(5)				compared to	compared to	compared to
(6)				projected requirements	projected requirements	projected requirements
(7)				without the independent	without the independent	without the independent
(8)				utility investment	utility investment	utility investment
(9)				See application text.	See application text.	See application text.
(10)						
Total Available to Meet Requirement		$0	$0	$0	$0	$0
Funding (Gap) to be Filled:		$0	$0	$75,741	$81,838	$89,263

Service Development Program Name	CA-HSR-ICVP Extension-Bakersfield Station/South

Analysis of Funding Sources for Sustainability

(Refer to the Sustainability Sheet. In this table, projected sources to cover operating deficits cannot include Federal funds.)

		Percent of Annual Funding Need Covered						
		In First Year of Operation	In Fifth Year of Operation	In Tenth Year of Operation				
Source No.	Source Description	2018	2022	2027	New or Existing Funding Source?	Status of Funding*	Types of Funds	Describe Uploaded Supporting Documentation to help FRA verify funding source
(1)	-	#VALUE!	#VALUE!	#VALUE!				
(2)	-	#VALUE!	#VALUE!	#VALUE!				
(3)	-	#VALUE!	#VALUE!	#VALUE!				
(4)	-	#VALUE!	#VALUE!	#VALUE!				
(5)	-	#VALUE!	#VALUE!	#VALUE!				
(6)	-	#VALUE!	#VALUE!	#VALUE!				
(7)	-	#VALUE!	#VALUE!	#VALUE!				
(8)	-	#VALUE!	#VALUE!	#VALUE!				
(9)	-	#VALUE!	#VALUE!	#VALUE!				
(10)	-	-	-	-				
Total all sources		**#VALUE!**	**#VALUE!**	**#VALUE!**				

*** Explanation of "Status of Funding"**

Committed: Committed sources are programmed capital funds that have all the necessary approvals (e.g.statutory authority) to be used to fund the proposed project without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or state capital investment program or appropriation guidance. Examples include dedicated or approved tax revenues, state capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project..

Budgeted: This category is for funds that have been budgeted and/or programmed for use in the proposed project but remain uncommitted (i.e., the funds have not yet received statutory approval). Examples include debt financing in an agency-adopted capital investment program that has yet to be committed in the near future. Funds will be classified as budgeted when available funding cannot be committed until the grant is executed or due to the local practices outside of the project sponsors' control (e.g., the project development schedule extends beyond the State Rail Program period).

Planned: This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for state/local capital grants, and proposed debt financing that has not yet been adopted in the agency's capital investment program.

These examples are illustrative. Applicants are free to provide other substantiated approaches to meeting the funding requirements to offset projections of both operating deficits and capital asset renewal charges.

Schedule- Service Development Program

Instructions:

1. In the yellow cells below, enter the anticipated "Start Date" and "End Date" for each high level activity (e.g., Final Design, Construction, Service Ops).

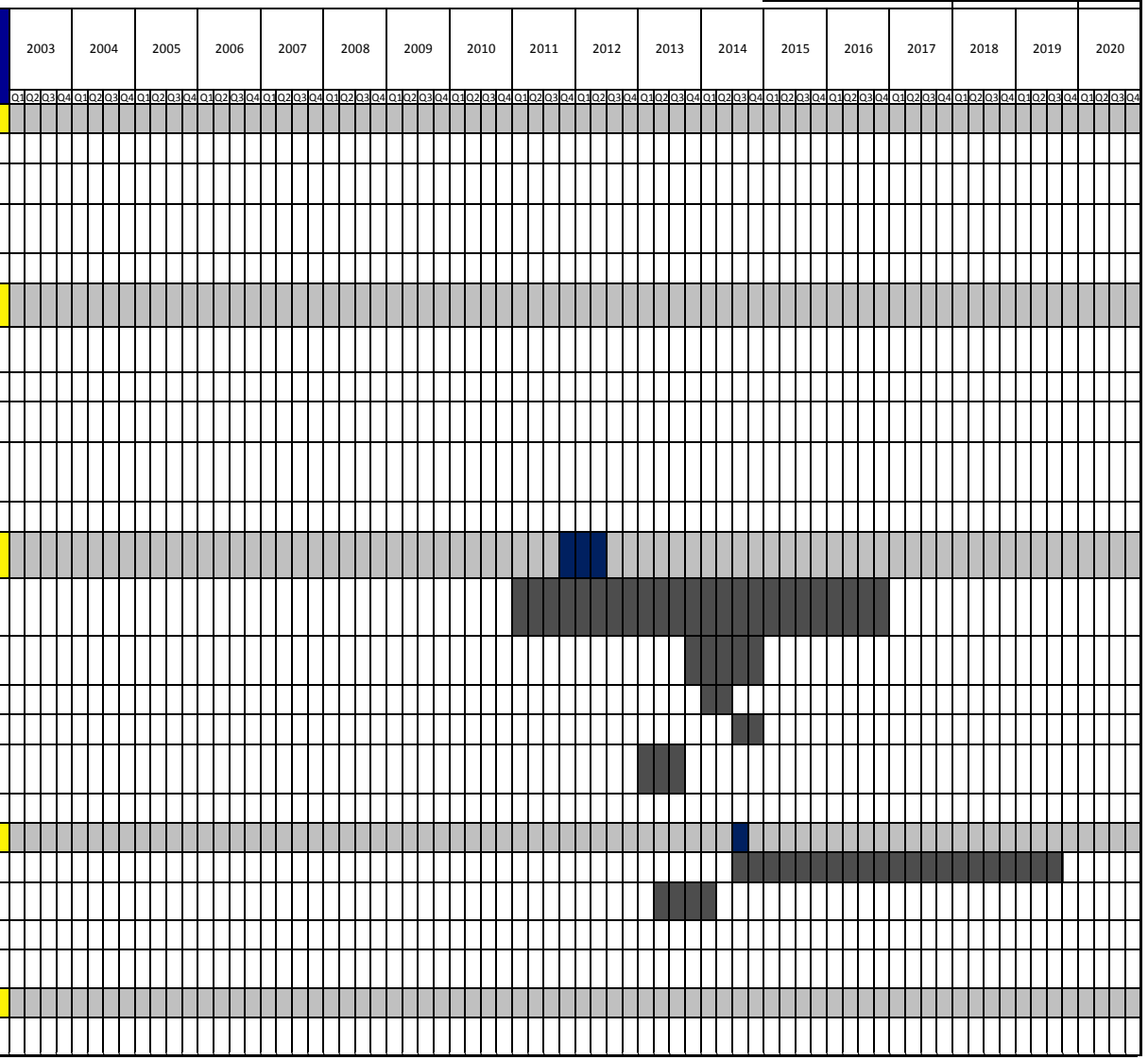
2. Illustrate the anticipated timing and duration of each task item on the chart below. Shade the quarters for each corresponding year in which work will take place on a task. Shade all cells in the corresponding row in which an activity will take place. Enter an 'X' in a cell to shade that cell. The quarters represent calendar year quarters (Jan - Dec).

3. Complete this process for all of the tasks, both high-level tasks (e.g., Final Design) and subtasks (e.g., Issue request for bids, make awards of FD contracts).

Service Development Program Name

CA-HSR-ICVP Extension-Bakersfield Station/South

	Start Date	End Date
Service Development Plan		
Develop Service Development Plan		
Develop Service Selection NEPA documentation		
Receive environmental determination for Service Selection NEPA		
Preliminary Engineering (PE)		
Issue requests for bids, make awards of PE contracts		
PE Drawings; and cost estimate, schedule, ridership forecast		
Develop Project NEPA Document		
Receive environmental determination for Project NEPA		
Submit request / receive FRA funding obligation for FD/Construction (if applicable)		
Final Design (FD)		
Issue requests for bids, make awards of FD contracts	Dec 2011	June 2012
FD Drawings; and cost estimate, schedule refinement	Jan 2011	Dec 2016
Acquisition of real estate, relocation of households and businesses	Oct 2013	Dec 2014
Conduct reviews	Jan 2014	June 2014
Issue requests for bids	Sep 2013	Nov 2013
Submit request / receive FRA approval for Construction	Oct 2012	Mar 2013
Construction		
Make awards of construction contracts	Sept 2014	Sept 2014
Construct infrastructure	Sept 2014	Sept 2019
Finalize real estate acquisitions and relocations	June 2013	June 2014
Acquire and test vehicles		
Service Operations - Project/Program Close Date		
Service Operations		
Completion of project/program close-out, resolution of claims		



Bakersfield - South Route
PRO-FORMA SOURCES & USES IN THOUSANDS

Fiscal Year End	[Date]		30/Sep/11	30/Sep/12	30/Sep/13	30/Sep/14	30/Sep/15	30/Sep/16	30/Sep/17	30/Sep/18	30/Sep/19	30/Sep/20	30/Sep/21	30/Sep/22	30/Sep/23	30/Sep/24	30/Sep/25	30/Sep/26	30/Sep/27	30/Sep/28	30/Sep/29	30/Sep/30
Periodic Growth in Revenue	[%]	**Totals**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	5.0%	4.7%	4.5%	5.3%	5.0%	4.8%	4.6%	4.4%	3.9%	3.8%	3.6%
Federal Grants - Capital Investments	[$ in '000]	**1,335,926**	0	0	0	189,417	324,598	401,903	276,463	114,108	29,437	0	0	0	0	0	0	0	0	0	0	0
State Grants - Capital Investments	[$ in '000]	**333,981**	0	0	0	47,354	81,150	100,476	69,116	28,527	7,359	0	0	0	0	0	0	0	0	0	0	0
Operating Revenue	[$ in '000]		0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.2	62.3	65.4	68.5	71.6	75.4	79.2	83.0	86.8	90.6	94.1	97.6	101.2
Operating Subsidies [1]	[$ in '000]		0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.1	65.0	65.8	66.7	67.5	68.2	68.9	69.6	70.3	71.0	71.8	72.5	73.3
Capital Replacement Subsidies	[$ in '000]		0	0	0	0	0	0	0	0	0	0	0	4,286	4,286	4,286	4,286	4,286	4,286	4,286	4,286	4,286
Total Sources	**[$ in '000]**		**0.0**	**0.0**	**0.0**	**236,771.8**	**405,747.6**	**502,378.3**	**345,578.5**	**142,758.5**	**36,923.2**	**131.2**	**135.2**	**4,425.4**	**4,429.9**	**4,434.4**	**4,438.9**	**4,443.4**	**4,447.9**	**4,452.1**	**4,456.4**	**4,460.7**
Capital Costs	[$ in '000]		0	0	0	(236,772)	(405,748)	(502,378)	(345,578)	(142,635)	(36,796)	0	0	0	0	0	0	0	0	0	0	0
Operating Costs	[$ in '000]		0.0	0.0	0.0	0.0	0.0	0.0	0.0	(123.3)	(127.3)	(131.2)	(135.2)	(139.1)	(143.6)	(148.1)	(152.6)	(157.1)	(161.6)	(165.9)	(170.2)	(174.5)
Capital Replacement Costs	[$ in '000]		0	0	0	0	0	0	0	0	0	0	0	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)
Total Uses	**[$ in '000]**		**0.0**	**0.0**	**0.0**	**(236,771.8)**	**(405,747.6)**	**(502,378.3)**	**(345,578.5)**	**(142,758.5)**	**(36,923.2)**	**(131.2)**	**(135.2)**	**(4,425.4)**	**(4,429.9)**	**(4,434.4)**	**(4,438.9)**	**(4,443.4)**	**(4,447.9)**	**(4,452.1)**	**(4,456.4)**	**(4,460.7)**
Change in Cash	**[$ in '000]**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

[1] This is to cover interim Amtrak service only.

Bakersfield - South Route
PRO-FORMA SOURCES & USES IN THOUSANDS

Fiscal Year End	[Date]	30/Sep/31	30/Sep/32	30/Sep/33	30/Sep/34	30/Sep/35	30/Sep/36	30/Sep/37	30/Sep/38
Periodic Growth in Revenue	[%]	3.5%	3.4%	3.3%	3.2%	3.1%	3.0%	2.9%	2.8%
Federal Grants - Capital Investments	[$ in '000]	0	0	0	0	0	0	0	0
State Grants - Capital Investments	[$ in '000]	0	0	0	0	0	0	0	0
Operating Revenue	[$ in '000]	104.7	108.3	111.9	115.4	119.0	122.6	126.2	129.8
Operating Subsidies [1]	[$ in '000]	74.0	74.8	75.5	76.3	77.0	77.8	78.5	79.3
Capital Replacement Subsidies	[$ in '000]	4,286	4,286	4,286	4,286	4,286	4,286	4,286	4,286
Total Sources	**[$ in '000]**	**4,465.0**	**4,469.3**	**4,473.7**	**4,478.0**	**4,482.3**	**4,486.6**	**4,491.0**	**4,495.3**
Capital Costs	[$ in '000]	0	0	0	0	0	0	0	0
Operating Costs	[$ in '000]	(178.8)	(183.1)	(187.4)	(191.7)	(196.0)	(200.4)	(204.7)	(209.0)
Capital Replacement Costs	[$ in '000]	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)	(4,286)
Total Uses	**[$ in '000]**	**(4,465.0)**	**(4,469.3)**	**(4,473.7)**	**(4,478.0)**	**(4,482.3)**	**(4,486.6)**	**(4,491.0)**	**(4,495.3)**
Change in Cash	**[$ in '000]**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

[1] This is to cover interim Amtrak service only.