

Table Of Contents

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
 Application Number: HSR2010000378
 Project Title: California High-Speed Train Project FY2010 Service Development
 Program between Merced and Fresno
 Status: Awarded

Information for the Applicant

1. FY 2010 High Speed Intercity Passenger Rail (HSIPR) Grant Program: Service Development Programs - Notice of Funding Availability

Online Forms

1. SF-LLL Disclosure of Lobbying Activities
 - (Mail-In Signature Page): Required Signature Page - Please sign & mail in.
2. SF-424 Application for Federal Assistance Version 2
3. SF-424C

Additional Information to be Submitted

1. SF424C-Construction Budget (Required; Upload template as an attachment)
 - (Upload #1): SF424C M-F.pdf
2. SF424D Assurances-Construction (Required; Upload template as an attachment)
 - (Upload #2): SF424D Assurances Construction Programs - signed.pdf
3. HSIPR Service Development Program Application Form (Required; Upload template as an attachment)
 - (Upload #3): HSIPR Merced-Fresno Application.doc
4. HSIPR Service Development Program Budget and Schedule Form (Required; Upload template as an attachment)
 - (Upload #4): 4-Copy of HSIPR Merced-Fresno Budget-Schedule 08-05-10 FY-10 CD1.xls
5. Federal Railroad Administration Assurances & Certifications (Required; Upload template as an attachment)
 - (Upload #5): FRA Assurances Certifications - signed.pdf
6. Service Development Plan (Required; Upload your document as an attachment)
 - (Comments): See URL's, as listed in section B2 of the application and in attachment.
 - (Upload #6): CHSRA Service Development Plan URLs.doc
7. NEPA Documentation (Required; Upload your document as an attachment)
 - (Comments): See URL's, as listed in section G2 of the application and in attachment.
 - (Upload #7): ARRA Sections Deliverables_withPS2link_100802.doc
8. Project Management Plan (Required; Upload your document as an attachment)
 - (Upload #8): 02 Scope PMTeam 2010-11 v2e.pdf
9. Financial Plan (Required; Upload your document as an attachment)
 - (Upload #9): Simple Pro-forma - Merced to Fresno - Supplemental.pdf
10. System Safety Plan (Required; Upload your document as an attachment)

- (Upload #10): SSPP Approach Memo Draft.pdf
11. Railroad and Project Sponsor Agreements (Required; Upload your document as an attachment)
 - (Upload #11): All Stakeholder Agreements August 2010.pdf
 12. Preliminary Engineering (PE) and/or Final Design (FD) Documentation (Required; Upload your document as an attachment)
 - (Mail-In): CA HST Merced to Fresno In Progress 15% Alignment Plans (CD)
 - (Mail-In): Technical Memoranda and Directive Drawings Released as of 8/3/10 (CD)
 - (Mail-In): System Requirements Database Reports as of 8/3/2010 (CD)
 - (Mail-In): CA HST In Progress 15% Design Submittal Merced to Fresno: Track Alignment Plans UPRR/SR99 – BNSF West Chowchilla Design Option (Plan Set)
 - (Upload #12): Transmittal Letter.pdf
 13. Other Relevant and Available Documentation (Optional; Upload your document as an attachment)
 - (Upload #13): Risk Management Plan
 - (Upload #14): OPERATING COST METHODOLOGY for CV & LOSSAN.doc
 - (Upload #15): Cover Letter
 - (Upload #16): Redefined Merced - Fresno Design-Build Section ARRA Track 2 Scope.pdf
 14. Construction Budget Detail and Budget Narrative Instructions (Required; Upload your document as an attachment)
 - (Upload #17): SF424C M-F.pdf

Note: Upload document(s) printed in order after online forms.

Application for Federal Assistance SF-424		Version 02
* 1. Type of Submission:		* 2. Type of Application: * If Revision, select appropriate letter(s):
<input type="checkbox"/> Preapplication	<input checked="" type="checkbox"/> New	<input type="text"/>
<input checked="" type="checkbox"/> Application	<input type="checkbox"/> Continuation	* Other (Specify)
<input type="checkbox"/> Changed/Corrected Application	<input type="checkbox"/> Revision	<input type="text"/>
* 3. Date Received:		4. Applicant Identifier:
<input type="text" value="08/06/2010"/>		<input type="text"/>
5a. Federal Entity Identifier:		* 5b. Federal Award Identifier:
<input type="text"/>		<input type="text"/>
State Use Only:		
6. Date Received by State: <input type="text" value="08/06/2010"/>		7. State Application Identifier: <input type="text"/>
8. APPLICANT INFORMATION:		
* a. Legal Name: <input type="text" value="CALIFORNIA HIGH-SPEED RAIL AUTHORITY"/>		
* b. Employer/Taxpayer Identification Number (EIN/TIN):		* c. Organizational DUNS:
<input type="text" value="911879327"/>		<input type="text" value="011075376"/>
d. Address:		
* Street1:	<input type="text" value="925 L ST STE 1425"/>	
Street2:	<input type="text"/>	
* City:	<input type="text" value="SACRAMENTO"/>	
County:	<input type="text"/>	
* State:	<input type="text" value="California"/>	
Province:	<input type="text"/>	
* Country:	<input type="text" value="UNITED STATES"/>	
* Zip / Postal Code:	<input type="text" value="95814-3704"/>	
e. Organizational Unit:		
Department Name:		Division Name:
<input type="text"/>		<input type="text"/>
f. Name and contact information of person to be contacted on matters involving this application:		
Prefix:	<input type="text"/>	* First Name: <input type="text" value="Roelof"/>
Middle Name:	<input type="text"/>	
* Last Name:	<input type="text" value="van Ark"/>	
Suffix:	<input type="text"/>	
Title:	<input type="text" value="Chief Executive Officer"/>	
Organizational Affiliation:		
<input type="text"/>		
* Telephone Number:	<input type="text" value="916-384-1488"/>	Fax Number: <input type="text"/>
* Email:	<input type="text" value="rvanark@hsr.ca.gov"/>	

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

-Passenger and Freight Railroad Programs

11. Catalog of Federal Domestic Assistance Number:

20.319

CFDA Title:

High-Speed Rail/Intercity Passenger Rail Program

*** 12. Funding Opportunity Number:**

FR-HSR-10-004

* Title:

FY 2010 High Speed Intercity Passenger Rail Grant Program - Service Development Programs

13. Competition Identification Number:

FR-HSR-10-004-011691

Title:

FY 2010 High Speed Intercity Passenger Rail Grant Program - Service Development Programs

14. Areas Affected by Project (Cities, Counties, States, etc.):

Merced County, Madera County, Fresno County

*** 15. Descriptive Title of Applicant's Project:**

California High-Speed Train Project FY2010 Service Development Program between Merced and Fresno

Attach supporting documents as specified in agency instructions.

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:* a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="754570000"/>
* b. Applicant	<input type="text" value="323385000"/>
* c. State	<input type="text" value="0"/>
* d. Local	<input type="text" value="0"/>
* e. Other	<input type="text" value="0"/>
* f. Program Income	<input type="text" value="0"/>
* g. TOTAL	<input type="text" value="1077955000"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

Yes No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

 ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

Upload #1

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: SF424C M-F.pdf

FY10 Merced-Fresno		BUDGET INFORMATION - Construction Programs		
NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.				
COST CLASSIFICATION	a. Total Cost (thousands)	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b) (thousands)	
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
2. Land, structures, rights-of-way, appraisals, etc.	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
4. Architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
5. Other architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
6. Project inspection fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
7. Site work	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
8. Demolition and removal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
9. Construction	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
10. Equipment	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
11. Miscellaneous Design-Build contracts	\$ <input type="text" value="1,024,979.00"/>	\$ <input type="text"/>	\$ <input type="text" value="1,024,979.00"/>	
12. SUBTOTAL (sum of lines 1-11)	\$ <input type="text" value="1,024,979.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,024,979.00"/>	
13. Contingencies (unallocated)	\$ <input type="text" value="52,976.00"/>	\$ <input type="text"/>	\$ <input type="text" value="52,976.00"/>	
14. SUBTOTAL	\$ <input type="text" value="1,077,955.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,077,955.00"/>	
15. Project (program) income	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="1,077,955.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,077,955.00"/>	
FEDERAL FUNDING				
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.			Enter eligible costs from line 16c Multiply X <input type="text" value="70"/> %	\$ <input type="text" value="754,570.00"/>

Upload #2

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: SF424D Assurances Construction Programs - signed.pdf

ASSURANCES - CONSTRUCTION PROGRAMS

OMB Approval No.4040-0009
Expiration Date 07/30/2010

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

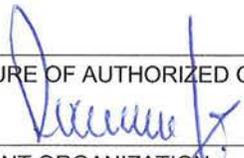
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards of merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> 	<p>* TITLE</p> <p>Chief Executive Officer</p>
<p>* APPLICANT ORGANIZATION</p> <p>California High-Speed Rail Authority</p>	<p>* DATE SUBMITTED</p> <p>Completed on submission to Grants.gov</p>

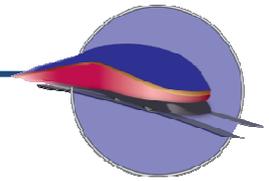
SF-424D (Rev. 7-97) Back

Upload #3

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: HSIPR Merced-Fresno Application.doc

Service Development Program Application Form

High-Speed Intercity Passenger Rail (HSIPR) Program



Applicants interested in applying for funding under the FY10 Service Development Programs solicitation are required to submit this application form and other required documents as outlined in Section H of this application. List and describe any supporting documentation submitted in Section G. Applicants should reference the FY10 Service Development Programs Notice of Funding Availability (NOFA) for more specific information about application requirements. If you have questions about the HSIPR program or this application, please contact the Federal Railroad Administration (FRA) at HSIPR@dot.gov.

Applicants must use [this](#) form by entering the required information in the gray narrative fields, check boxes, or drop-down menus. Submit this completed form, along with any supporting documentation, electronically by uploading it into GrantSolutions.gov by 5:00 p.m. EDT on August 6, 2010.

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 vanArk Chief Executive Officer			
Street Address: 925 L Street Suite 1425	City: Sacramento	State: CA	Zip Code: 95814	Authorized Representative telephone: 916-384-1488 Authorized Representative email: rvanark@hsr.ca.gov	
Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative):		Submitting agency POC telephone: Submitting agency POC email:			
(2) List the name(s) of additional State(s) applying (if applicable):					

B. Eligibility Information

Complete the following section to satisfy requirements for applicant 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 G.2 of this application.

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

(2) Verify the status of eligibility documentation including the dates of issue and how documentation can be verified by FRA. Verify any completed EA or Final 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 a public active URL. See Section 4.2.5 and Appendices 2.1 and 2.2 of the NOFA as references. Second-tier project NEPA documents for projects within the program may also be included. A NEPA decision document (Record of Decision or Finding of No Significant Impact) is not required for an application but must be issued by FRA prior to award of a construction grant. Any eligibility documents should be listed in Section G.2 of this application.

Service Development Planning

Documentation	Date <i>(mm/yyyy)</i>	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
<input checked="" type="checkbox"/> Service Development Plan	<i>Various</i>	<input type="checkbox"/>	The Authority's Service Development Plan is contained in the following three primary documents that are all available on the Authority's Website at the locations shown: 2008 and 2009 Business Plans and Source Documents http://www.cahighspeedrail.ca.gov/library.asp?p=8200 Implementation Plan http://www.cahighspeedrail.ca.gov/library.asp?topic=Implementation+Plan&region=&section=&y

Service NEPA Documents

Documentation	Date <i>(mm/yyyy)</i>	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link



<input type="checkbox"/> Final Environmental Assessment (EA)	<i>mm/yyyy</i>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Final Environmental Impact Statement (EIS)	8/2005	<input type="checkbox"/>	http://www.cahighspeedrail.ca.gov/library/Default.aspx?ItemID=5834
FRA Decision Documents for Service Development Programs			
Documentation	Date (<i>mm/yyyy</i>)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
<input type="checkbox"/> Finding of No Significant Impact (FONSI)	<i>mm/yyyy</i>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Record of Decision (ROD)	11/2005	<input type="checkbox"/>	http://www.cahighspeedrail.ca.gov/library/Default.aspx?ItemID=5834
Documentation (select from the list of choices)	Date (<i>mm/yyyy</i>)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
Final Environmental Impact Statement (EIS)	8/2005	<input type="checkbox"/>	http://www.cahighspeedrail.ca.gov/library/Default.aspx?ItemID=5834
Final Environmental Impact Statement (EIS)	5/2008	<input type="checkbox"/>	http://www.cahighspeedrail.ca.gov/library/default.aspx
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	<i>mm/yyyy</i>	<input type="checkbox"/>	

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.

The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain an electric-powered High-Speed Train (HST) system in California. When completed, the nearly 800-mile train system will provide new passenger rail service to California's major metropolitan areas and through the counties that are home to 93% of the state's population. More than 200 weekday trains are planned to serve the statewide intercity travel market. The HST will be capable of operating speeds of up to 220 miles per hour (mph), with state-of-the-art safety, signaling, and automated train control systems. The system will connect and serve the major metropolitan areas of California, extending from San Francisco in the north to San Diego in the south.

The purpose of the Merced to Fresno HST project is to implement the California HST system consistent with Tier 1 decisions by providing a reliable high-speed electrified train system that links Merced to Fresno and delivers predictable and consistent travel times between these two Central Valley cities and between the Central Valley, the Bay Area, Sacramento and Southern California, when the full system is completed.

(2) List other HSIPR projects or activities related to this Service Development Program application. This includes any pending or selected planning, PE/NEPA, FD/Construction, and other Service Development Program activities or projects. The purpose of this list is to identify overlapping or complementary applications, programs, or projects. Click on the drop-down menu to select the FRA solicitation and to indicate if the project was previously selected.

	Project, Activity, or Service Development Program Name ¹	FRA Solicitation	Federal Funding Request (in thousands of dollars)	Status	Does This Project Include Activities That Overlap with Any Projects Included in This Service Development Plan Application?
1	CA-PHASE1HSRPROGRAM-PE/NEPA/CEQA	Track 2	\$ 194,000.00	Selected	No
2	CA-SF/SANJOSEHSR-DESIGN/BUILD	Track 2	\$ 980,000.00	Selected	No
3	CA-MERCED/FRESNOHSR-DESIGN/BUILD	Track 2	\$ 466,000.00	Selected	No
4	CA-FRESNO/BAKERSFIELDHSR-DESIGN/BUILD	Track 2	\$ 819,500.00	Selected	No
5	CA-LA/ANAHEIMHSR-DESIGN/BUILD	Track 2	\$ 2,187,500.00	Selected	No
6	Altamont Corridor Rail Project Service Development Planning and Service NEPA	FY10 Planning	\$ 4,930.00	Announcement Pending	No
7	CHSTP Phase 2 Los Angeles-San Diego (via Inland Empire)	FY10 Planning	\$ 6,355.00	Announcement Pending	No

¹ Please detail each activity for which HSIPR funding is being requested, or which is directly related to the Corridor Service. For example, if a related Track 1a Project application was already submitted, that application should be separately listed below. If the project covered by that same 1a application is also being submitted as an element of a Track 2 Program, indicate the program when listing the project.

	Service Planning				
8	CHSTP Phase 2 Merced-Sacramento Service Development Planning	FY10 Planning	\$ 5,330.00	Announcement Pending	No
9		Track 1a	\$	Announcement Pending	Yes
10		Track 1a	\$	Announcement Pending	Yes
11		Track 1a	\$	Announcement Pending	Yes
12		Track 1a	\$	Announcement Pending	Yes
13		Track 1a	\$	Announcement Pending	Yes
14		Track 1a	\$	Announcement Pending	Yes
15		Track 1a	\$	Announcement Pending	Yes
17		Track 1a	\$	Announcement Pending	Yes
18		Track 1a	\$	Announcement Pending	Yes
19		Track 1a	\$	Announcement Pending	Yes

D. Executive Summary

Answer the following questions about the proposed program.

(1) Provide a Service Development Program 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).

CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS

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

California High-Speed Train Project between Merced and Fresno via either the A2 (UPRR/SR99) Alignment or the A1 (BNSF) Alignment (or a combination of the two alternative routes) with intermediate cities of Chowchilla and Madera, California. Also includes a wye connection in the vicinity of Chowchilla to the San Jose to Merced Wye Section of the CHSTP. For this FY10 SPD grant application, which would augment the redefined ARRA Track 2 grant for this section, the Merced-Fresno HST facilities would be extended from W. Clinton Ave. (about 2 miles north of downtown Fresno) on the UPRR Roule Alignment through and including the construction of the new Fresno HST station and from there south to join the BNSF route near Bowles, CA and from there south about 10 miles further along the BNSF route to E Conejo Avenue where the line would be connected to the BNSF mainline to provide operational independence in the event the CHSTP is not completed. The estimated cost includes a credit of the proposed W. Clinton Ave. to Fresno Amtrak station that is included in the redefined ARRA grant scope for Merced-Fresno. (Please refer to the "Redefined Merced-Fresno Design-Build Section ARRA Track 2 Scope" document referenced in Section G.)

(3) Indicate the anticipated duration, in months, for this Service Development Program (e.g., 36).

Number of Months: 60

(4) Indicate the anticipated funding information for the Service Development Program below. This information must match the SF-424 documents, and dollar figures must be rounded to the nearest whole dollar. When the non-Federal match percentage is calculated, it must meet or exceed 20 percent of the total project cost.

Federal Funding Request	Non-Federal Match Amount	Total Project Cost	Non-Federal Match Percentage of Total
\$ 754,570,000	\$ 323,385,000	\$ 1,077,955,000	30 %

(5) Indicate the source, amount, and percentage of matching funds for the Service Development Program provided in Section C.4. Identify supporting documentation that will allow FRA to verify the funding source. Click on the prepopulated fields to select the appropriate response from the list of choices. Also, list the percentage of the total project cost represented by each non-Federal funding source.

Non-Federal Funding Sources	New or Existing Funding	Status of Funding ²	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source

² Reference Notes: 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.



	Source?					
State GO Bond Proceeds	New	Committed	Cash	\$ 323,385,000	30 %	Safe, Reliable, High-Speed Passenger Train Bond Act for the 21 st Century
	New	Committed	Cash	\$	%	
	New	Committed	Cash	\$	%	
	New	Committed	Cash	\$	%	
	New	Committed	Cash	\$	%	

(6) Provide a project abstract outlining the Service Development Program. Briefly summarize the program in 4-6 sentences. Capture the milestones, outcomes, and anticipated benefits that will result from implementing the Service Development Program.

This FY10 HSIPR grant application, one of four submitted by the California High-Speed Rail Authority (Authority), builds on the ARRA Track 2 grant awarded in January 2010. Since no decision has yet been made as to which of the Authority’s four ARRA-eligible Design/Build projects will be funded, the Authority has refined the scope of each of these eligible projects, described how operational independence would be achieved, and defined what the measurable benefits would be of each. An updated program scope, budget and schedule for the Merced-Fresno ARRA Track 2 Design/Build Section is attached. This application describes the operational benefits of the enhanced Merced-Fresno scope that could be achieved with additional HSIPR funding of this Section.

(7) Provide a Service Development Program narrative. Include the elements below when describing the main features and characteristics of the Service Development Program. Please limit the response to 12,000 characters.

- How this Service Development Program is organized into phases or groups of component projects.³ Include a description of the activities and the measurable outcomes of each phase or group of activities;
- The location(s) of the Service Development Program’s component projects including name of rail line(s), State(s), and relevant jurisdiction(s) (include a map in supporting documentation);
- Substantive activities of the Service Development Program (e.g., specific improvements intended);
- Service(s) that would benefit from the Service Development Program, the stations that would be served, and the State(s) where the service operates;
- Anticipated service design of the corridor or route with specific attention to any important changes that the Service Development Program would bring to the fleet plan, schedules, classes of service, fare policies, service quality standards, train and station amenities, etc.;
- How the Service Development Program was identified through a planning process and how the Service Development Program is consistent with an overall plan for developing high-speed or intercity passenger rail service, such as a State Rail Plan or plans of local/regional metropolitan planning organizations;
- How the Service Development Program will fulfill a specific purpose and need in a cost-effective manner;
- Any use of new or innovative technologies;
- Any use of railroad assets or rights-of-way, and potential use of public lands and property;
- Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the Service Development Program; and
- Any PE/NEPA activities to be undertaken as part of the Service Development Program, including but not limited to design studies and resulting program documents, the approach to agency and public involvement, permitting actions, and other key activities and objectives of this PE/NEPA work.

Following programmatic environmental review, the Authority and the Federal Railroad Administration (FRA) approved the CHST system for intercity travel in California, and selected corridors for project-level study. Building the 800-mile-long train system is of such magnitude, complexity, and cost that it is impractical to implement as a singular project. The Authority divided the HST system into nine project sections that can be designed, permitted, and constructed, and that allow for the

³ The work to complete Service Development Programs can be organized into individual phases. Phases should produce meaningful and measurable service outcomes (e.g., trip time, frequency, or operational reliability) upon completion. Each phase is made up of one or more component projects that are necessary to deliver the outcome(s).



phased implementation of the proposed system, consistent with the provisions of Proposition 1A, the Safe, Reliable, High-Speed Passenger Train Bond Act, adopted by California voters in November 2008.

The purpose of the Merced to Fresno HST project is to implement the California HST system consistent with Tier 1 decisions by providing a reliable high-speed electrified train system that links Merced to Fresno and delivers predictable and consistent travel times between these two Central Valley cities and between the Central Valley, the Bay Area, Sacramento and Southern California, when the full system is completed. The Merced to Fresno Section of the HST will connect to the San Jose to Merced Section over Pacheco Pass to the east, to the Merced to Sacramento Section to the north, and south via the Central Valley and Bakersfield, to the Southern California sections of the statewide HST system.

The Authority's statutory mandate is to plan, build, and operate a HST system that is coordinated with California's existing transportation network, particularly intercity rail and bus lines, commuter rail lines, urban rail transit lines, highways, and airports. The Authority has responded to this mandate by adopting the following objectives and policies for the proposed HST system:

- Provide intercity travel capacity to supplement critically over-used interstate highways and commercial airports.
- Meet future intercity travel demand that will be unmet by present transportation systems and increase capacity for intercity mobility.
- Maximize intermodal transportation opportunities by locating stations to connect with local transit, airports, and highways.
- Improve the intercity travel experience for Californians by providing comfortable, safe, frequent, and reliable high-speed travel.
- Provide a sustainable reduction in travel time between major urban centers.
- Increase the efficiency of the intercity transportation system.
- Maximize the use of existing transportation corridors and rights-of-way, to the extent feasible.
- Develop a practical and economically viable transportation system that can be implemented in phases by 2020 and generate revenues in excess of operations and maintenance costs.

The approximately 67-mile-long Merced to Fresno Section is an essential component of the statewide HST system. It contains the wye connection from the Central Valley to the Bay Area, and it will provide access to a new transportation mode, and as part of the statewide system it will contribute to increased mobility throughout California.

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

- | | |
|---|--|
| <input checked="" type="checkbox"/> New rail lines | <input type="checkbox"/> Rolling stock refurbishments |
| <input type="checkbox"/> Additional main-line tracks | <input type="checkbox"/> Rolling stock acquisition |
| <input checked="" type="checkbox"/> Structures (bridges, tunnels, etc.) | <input type="checkbox"/> Support facilities (yards, shops, administrative buildings) |
| <input type="checkbox"/> Track rehabilitation | <input checked="" type="checkbox"/> Grade crossing improvements |
| <input checked="" type="checkbox"/> Major interlockings | <input type="checkbox"/> Electric traction |
| <input checked="" type="checkbox"/> Station(s) | <input type="checkbox"/> Other (please describe): |
| <input checked="" type="checkbox"/> Communication, signaling, and control | |

(9) Indicate the anticipated service objectives for the Service Development Program for which you are applying. Check all that apply.

- | | |
|---|--|
| <input type="checkbox"/> Additional service frequencies | <input checked="" type="checkbox"/> Increases in operational reliability |
| <input type="checkbox"/> Improved on-time performance of passenger trains | <input checked="" type="checkbox"/> New service on new route |
| <input checked="" type="checkbox"/> Reroute existing service | <input checked="" type="checkbox"/> Service quality improvements |
| <input type="checkbox"/> New service on existing IPR route | <input checked="" type="checkbox"/> Increased average speeds/shorter trip times |
| <input checked="" type="checkbox"/> Increases in ridership | <input checked="" type="checkbox"/> Other (please describe): Safety improvements |

Briefly clarify your response(s) if needed:

This application adds to and enhances the scope of the re-defined Merced-Fresno ARRA Track 2 scope described in an attachment. "Reroute existing 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 shorter trip times. Installation of PTC and grade separations would improve safety of vehicles and trains.

(10) If appropriate, subdivide the Service Development Program into phases (groups of projects) and identify each phase on separate rows of the table.⁴ 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.

Phase	Title ⁵	Frequencies ⁶		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)											

⁴ The work to complete Service Development Programs can be organized into individual phases. Each phase should produce meaningful and measurable service outcomes (e.g., trip time, frequency, and/or operational reliability) upon completion. Each phase is made up of one or more component projects that are necessary to deliver the outcome(s).

⁵ Title should be a brief descriptive name for the phase.

⁶ Frequency is measured in daily one-way train operations. One daily round-trip operation should be counted as two daily one-way train operations.



(11) Provide information on the component projects within each phase of the Service Development Program identified in Section D.10 above. For each phase, please list all the projects in the sequence they will be completed. This section is unlocked- the applicant can add rows as needed for additional projects and phases.

PHASE I.		[Insert Title from Section D.10]
Project Name	Short Project Description	Project Cost (in thousands of dollars)
1		\$ 000
2		\$ 000
3		\$ 000
4		\$ 000
5		\$ 000
Phase I. Total Cost		\$ 000

PHASE II.		[Insert Title from Section D.10]
Project Name	Short Project Description	Project Cost (in thousands of dollars)
1		\$ 000
2		\$ 000
3		\$ 000
4		\$ 000
5		\$ 000
Phase II. Total Cost		\$ 000

PHASE III.		[Insert Title from Section D.10]
Project Name	Short Project Description	Project Cost (in thousands of dollars)
1		\$ 000
2		\$ 000
3		\$ 000
4		\$ 000
5		\$ 000
Phase III. Total Cost		\$ 000

PHASE IV.		[Insert Title from Section D.10]
Project Name	Short Project Description	Project Cost (in thousands of dollars)
1		\$ 000
2		\$ 000
3		\$ 000
4		\$ 000
5		\$ 000
Phase IV. Total Cost		\$ 000

E. Response to Evaluation Criteria

Provide a separate response to the following evaluation criteria to demonstrate how the proposed Service Development Program will achieve each criterion.

(1a) Potential Transportation Benefits

Demonstrate the potential of the proposed Service Development Program investment to achieve transportation benefits in a cost-effective manner:

- Supporting the development of intercity high-speed rail service;
- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership (as measured in passenger miles), increases in operational reliability (as measured in reductions in delays), 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 intercity passenger rail network, including integration with existing intercity passenger rail services, allowance for and support of future network expansion, and promotion of technical interoperability and standardization (including standardizing operations, equipment, and signaling);
- Encouragement of intermodal connectivity and integration through provision of direct, efficient transfers among intercity transportation and local transit networks at train stations, including connections at airports, bus terminals, subway stations, ferry ports, and other modes of transportation;
- Enhancing intercity travel options;
- Ensuring a state of good repair of key intercity passenger rail assets;
- Promoting standardized equipment (or rolling stock), signaling, communications, and power;
- Improved freight or commuter rail operations in relation to proportional cost-sharing (including donated property) by other benefiting rail users;
- Equitable financial participation in the project's financing, including, but not limited to, consideration of donated property interests or services; financial contributions by freight and commuter rail carriers commensurate with the benefit expected to their operations; and financial commitments from host railroads, non-Federal governmental entities, nongovernmental entities, and others;
- 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.

The Merced/Fresno HSIPR plus ARRA base program is an integral part of the State-wide HST program to develop a new intercity passenger rail (IPR) service not provided today, with over 200 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 this line, 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.

OPERATIONAL INDEPENDENCE AND UTILITY -- IMPROVED SAN JOAQUINS TRANSPORTATION BENEFITS

The San Joaquins running on the program's infrastructure would provide the State's first true 125 mph high-speed intercity rail service with the potential for speeds up to 150 mph should today's prototype locomotives advance into commercial production. At the 125 mph speeds, and assuming the express operation of two new round trips in the

State Rail Plan, the San Joaquins could save as much as twenty-four minutes compared to current trip times between Fresno and Merced, Sacramento, and the Bay Area. The existing local trains would also save around 18 minutes, stopping at a new station on the new line to serve Madera. Time savings to the Bay Area and Sacramento will be larger still as a result of other investments in the State Rail Plan.

As a result of the State Rail Plan improvements and forecast growth in the State, riders are anticipated to increase by 200,000 in the year 2018. The additional improvements from the ARRA / HSIPR program will generate another 140,000 passengers in the same year. Thus the improvements from this project will result in 12% more San Joaquin riders than in the State Rail Plan, and 35% more than currently riding the San Joaquins. Ridership will grow to 1.5 million passengers by the tenth year of operation, a 55% increase. The faster services are expected to be more attractive for the longer distance trips and trip length will increase, resulting in an increase over today of 65 million passenger miles in 2018, growing to a 96 million passenger mile increase by the tenth year of operation in 2027, an 67% increase from today. On time performance of the San Joaquins is reasonably good, at around 90%, with trains delays equal to 3% of total time according to the Amtrak Monthly Report for May 2010. Freight and passenger train interference and host railroad delays accounted for roughly 1/2 of the total minutes of delay. The program's construction of a full double track alignment separated from freight trains will improve this component of delay, although interference and slow orders on the remainder of the route will still continue to impose some delay.

The full grade separation of the alignment from crossing road traffic is the most important safety improvement to the transportation system growing from this investment. It will improve safety for road users and rail passengers and personnel alike.

The per train mile cost of operations to the State and Federal governments will be slightly lower, since the payments that Amtrak makes to the host railroad are based on train miles, and some 620,000 train miles per year will be transferred to the State-owned facility. In conjunction with the higher revenues, this will increase the proportion of operations cost covered by passenger fares to 54% from 43% today.

FULL HST SYSTEM TRANSPORTATION BENEFITS

The California HST Full System will build nearly 800 miles of new rail infrastructure separated from vehicular road traffic and conventional freight and passenger trains, allowing operations at up to 220 mph of state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including state-of-the-art train control and communications systems. Safety and reliability of intercity passenger service in California will be significantly improved.

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 May 2009 generated a surplus of \$52 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\$).

(1b) Other Public Benefits

Describe the potential and actual contributions the proposed Service Development Program would make toward achieving transportation benefits in a cost-effective manner:

- Environmental quality and energy efficiency and reduction in dependence on foreign oil, including 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;
- Promoting interconnected livable communities, including complementing local or state efforts to concentrate higher-density, mixed-use, development in areas proximate to multi-modal transportation options (including intercity passenger rail stations);
- Improving historic transportation facilities; and
- Creating jobs and stimulating the economy. Although this solicitation is not funded by the Recovery Act, these goals remain a top priority of this Administration. Therefore, Service Development Program applications will be evaluated on the extent to which the project is expected to quickly create and preserve jobs and stimulate rapid increases in economic activity, particularly jobs and activity that benefit economically distressed areas, as defined by section 301 of the Public Works and Economic Development Act of 1965, as amended (42 U.S.C. 3161) (“Economically Distressed Areas”).

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	(Phase 1, 2020)
Fifth year:	8.0 million bbls	(Phase 1, 2025)
Tenth year	12.7 million bbls	(Full System, 2030)

The same shift of travelers from air & auto to the HST & reductions in fossil fuel consumption will reduce greenhouse gas & 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), NO_x (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.

In the interim case where the San Joaquins would operate on the HS segment because of delay to the HS project, the shift of additional travellers out of automobiles to Amtrak because of the investment will favorably reduce emissions, energy consumption, and dependence on foreign oil.

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 urban landscape. While actual land use decisions will be made by local communities and the real estate market, the Authority will utilize its resources, both financial and otherwise, to encourage development patterns around its stations to include: higher density development in relationship to the existing pattern of development in the surrounding area; a mix of land uses (e.g., retail, office, entertainment, residential); a street pattern and design that promotes walking, bicycling and transit access; the use of context sensitive building design that considers the continuity of building sizes and architectural detailing; and limits on the amount of parking for new development and a preference that station parking be placed in structures.

Most of the stations will serve as multi-modal transportation hubs and be located in downtown areas, either within the central business district or in a nearby location. Successful transit systems share one common trait—excellent pedestrian access. Since transit works best when stations and shops are easily accessible and surrounded by places that people like to visit, the Authority will work with local communities to establish strong, well defined pedestrian and bicycle linkages to downtown areas and other public transit. This will help increase the number of transit patrons and the overall vitality of the surrounding community.

All of the high-speed rail stations will provide access to local bus services and many of the stations will also provide access to local, commuter, and intercity rail services. Since transit system connectivity is important for encouraging ridership, the high-speed stations will include such features as kiosks with transit schedules and fare information, way-finding signage, and the use of real-time technology with train arrival and departure information. These elements are all designed to promote a convenient and “seamless” transit system by reducing travel times, providing more reliable connections, and making it easier to pay so that transfers from the high-speed rail system to other transit modes can occur as safely and easily as possible.

Jobs and the Economy

The Merced/Fresno Design/Build Corridor Program will invest \$4,397 million in year-of-expenditure dollars (YOES), creating an estimated 64,100 full time equivalent jobs over four years. Approximately 96% of these funds will go to design and construction of the infrastructure & track, creating an estimated 21,300 full time equivalent jobs over the period 2012 to 2018. The other roughly 4% of the funds will be spent in acquiring the necessary rights of way whose direct job creation will be much smaller, estimated at enough to round the direct job creation to 21,400. The estimated peak of direct employment, around 6,250 FTE jobs, will occur 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 three EDAs within which the construction will take place and their July 2009 unemployment rates are the counties of Merced (17.6%), Madera (13.9%), Fresno (15%). Additional workers will be drawn from the nine 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%).

The 21,400 direct design/construction jobs will also create an estimated further 42,800 jobs. Half 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 half of the 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 Merced - Fresno Corridor Program to test and safety-certify the first high-speed trainsets. At this point operations and maintenance hiring would likely 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 in 2020 approached.

Operation of Phase 1 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 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 the Amtrak service on the HS segment in the event that the HS project were delayed would also increase ongoing employment and economic activity for the State and the Central Valley, although to a lesser extent.

(2) Sustainability of Benefits

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

- The quality of a Financial Plan that analyzes the financial viability of the proposed rail service;
- The quality and reasonableness of revenue and operating and maintenance cost forecasts for the benefiting intercity passenger rail service(s);
- The availability of any required operating financial support, preferably from dedicated funding sources for the benefiting intercity passenger rail service(s);
- The quality and adequacy of project identification and planning;
- The reasonableness of estimates for user and non-user benefits for the project;
- The reasonableness of the operating service plan, including its provisions for protecting the future quality of other services sharing the facilities to be improved;
- The comprehensiveness and sufficiency, at the time of application, of agreements with key partners (including the railroad operating the intercity passenger rail service and infrastructure-owning railroads) that will be involved in the operation of the benefiting intercity passenger rail service, including the commitment of any affected host-rail carrier to ensure the realization of the anticipated benefits, preferably through a commitment by the affected host-rail carrier(s) to an enforceable on-time performance of passenger trains of 80 percent or greater;
- The favorability of the comparison between the level of anticipated benefits and the amount of Federal funding requested; and
- The applicant's contribution of a cost share greater than the required minimum of 20 percent.

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 HST section, were the HST project to be delayed.

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 High-Speed Train 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 detailed in the December 2009 Business Plan submitted to the state legislature and can be accessed at: <http://www.cahighspeedrail.ca.gov/library.asp?p=8200>. Numerous discussions with government officials and over 50 “expressions of interest” from private companies give confidence that the financial plan is reasonable. However, as discussed, there are a number of challenges in obtaining all of the funding and as described the risk and risk mitigation section as part of this application, the CAHSRA has devised appropriate ways to overcome these financial risks.

Specifically in regards to the section the funding for which the CAHSRA is currently applying, the Authority has high confidence that the key funding sources, from the state bond monies, other local and other state contributions are 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/library.asp?p=6116>.

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.

The revenues and costs for the contingency event of Amtrak San Joaquin service operating on the section requested to be funded by this grant, if the HST project were delayed, are estimated from recent revenues and costs of Amtrak service and future estimates for the San Joaquin services from the California Division of Rail, which pays for a large part of their operating cost. Variances are estimated from changes in run time calculated from train performance models with contingent recovery time added, the diversion of the service away from the host railroad property with appropriate changes in train mile costs, and ridership sensitivities to run time from published professional research, applied to only a portion of the San Joaquin ridership with revenue affected by the improved run times. These forecasts are of reasonable quality for such a contingency event.

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, the 135 mph Acela service, which in May 2009 generated a surplus of \$52 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\$).

In the event of operations by Amtrak on the HST section requested to be funded by this grant in the event the HST project is 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 farebox recovery ratio.

Quality and Adequacy of Project Identification and Planning

Planning for the full California HST system, for which the current grant request is a key component, has been

ongoing for 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 continuing with project-level environmental work now underway. This project is solidly based in the planning for the future transportation system of the State.

Planning for a situation in which Amtrak operates on the HST section in the event the HST project is delayed has had less scrutiny, but is a small improvement of approved plans for the State rail system. The major rail service stakeholders have been consulted, arriving at a consensus on the plan; these include BNSF, which hosts the San Joaquin services, Amtrak, which operates and helps market the service, and the Caltrans Division of Rail that markets the service, provides policy direction, and funds a substantial portion of the costs from an established State program. It has been assumed that moving stations to alternative locations at Wasco, Corcoran, Hanford, Fresno, and Madera will be, on the whole, acceptable because of the significantly faster trip times. However, this is believed to be adequate for the contingency nature of this plan.

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.

In the case of operations by Amtrak on the HST section in the event the HST project is delayed, the project benefits are estimated from realistic evaluation of possible improvements to service. These include the current State Rail Plan forecasts produced for the Caltrans Division of Rail, estimates of faster running time from Parson Brinkerhoff's run time simulator using current Amtrak consists and the future HST alignment profile, and estimates of travel response using published elasticities to intercity rail time savings.

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 at: <http://www.cahighspeedrail.ca.gov/library.asp?p=8200>. 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.

For operations by Amtrak on the HST section in the event the HST project is delayed, the operating service plan is taken directly from existing services provided on the parallel section of the BNSF RR, and planned frequency increases contained in the State Rail Plan. The current service operates well on the BNSF and UP, with high on-time performance, and enough capacity to meet demand. The use of a passenger rail-only right-of-way will speed up service, increase capacity on the current host freight railroad, 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 and the expected relationship of the HST project with existing transportation providers and owners, and 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/library.asp?p=8200>.

For operations by Amtrak on the HST section in the event the HST project is delayed, the existing institutional arrangements among the host railroad, Amtrak, the Federal and State government would remain in place for operations on the section of new infrastructure. Additional agreement would have to be reached between Amtrak and the State on terms for the use of the infrastructure, and the host railroad would have to allow its line to be linked to the high-speed section. Discussions of the concept described here have been held with BNSF, Amtrak, and the Caltrans Division of Rail, with all parties agreeing that it is acceptable. This level of consensus is felt to be sufficient for the

planning purposes of this grant, and negotiations would only take place were it to become clear that the rest of the HST line was going to be delayed. It should be noted that the on-time performance of the Amtrak's San Joaquin service currently stands around 90%, and a significant stretch of dedicated track would normally allow that to be improved.

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 high-speed train 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.

For operations by Amtrak on the HST section in the event the HST project is delayed, interim benefits will be accrued of San Joaquin run times 24 minutes faster than today, a 55% increase in rail passengers, an increase in passenger miles and revenues of 67%, and an improvement in the farebox ratio from 43% today to 54%, assuming fares only rise with inflation. Separate corridors for the passenger and freight rail services over 85 miles in the Central Valley will increase road and rail safety, and reduce rail congestion. These interim benefits will not be as great as those from the full high speed system, but they represent a strong benefit and boost to rail services in the corridor.

State Contribution over 20%

The proposed cost sharing of 30% of the HSIPR cost by the State, and 50% of the ARRA grant, will result in a contribution of over \$2 billion in funds to match the federal grant, well in excess of the required amounts for either program.

(3) Project Delivery Approach

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

- The applicant's financial, legal, and technical capacity to implement the project, including whether the application depends upon receipt of any waiver(s) of Federal railroad safety regulations that have not been obtained;
- The applicant's experience in administering similar grants and projects, including a demonstrated ability to deliver on prior FRA financial assistance programs;
- The soundness and thoroughness of the cost methodologies, assumptions, and estimates for the proposed project;
- The reasonableness of the schedule for project implementation;
- The thoroughness and quality of the Project Management Plan;
- The timing and amount of the project's future noncommitted investments;
- The overall completeness and quality of the application, including the comprehensiveness of its supporting documentation;
- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project's engineering and constructability risks;
- The sufficiency of system safety and security planning;
- The project's progress, at the time of application, towards compliance with environmental protection requirements;
- The readiness of the project to be commenced; and
- The timeliness of project completion and the realization of the project's anticipated benefits.

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 the 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-%202004.13.2010%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.

The Authority has a 9-member board and a core staff to implement the project which consists of an 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 who 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 Fresno-Bakersfield section is 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; Anthony Daniels, Program Director (2006-present), leading the Program Management Team, with more than 40 years of HST project management and high-speed rail experience in the UK, US, and Taiwan; and John Harrison, Deputy Program Director (2009-Present), directing the eight RCs, bringing more than 40 years of intercity rail, rail transit, 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 staff of twenty with 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. This can be accomplished in the year prior to September 2011 to allow work to begin. 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 specific safety and security plan is being drafted for review in the fall.

The project is on schedule to complete the environmental review process by September 2011 as required by the FRA, and the Authority is working closely with the FRA to meet this schedule. The project will then be ready to begin right-of-way acquisition, construction bidding, and procurement activity. The project will be completed by September 2017 as required by the ARRA. Realization of benefits outlined above will then be possible.

:

F. Technical Components

Address the sections below with information on the technical components of the Service Development Program.

(1) Indicate if you are requesting to be considered a “Standard Capital Project” as described in Section 1.3.1 of the NOFA.⁷

- Consider this application to be a “Standard Capital Project.”
 Consider this application to be a “Major Capital Project.”

Explain your response:

By definition, this is a "Major Capital Project" -- a new agency, new technology, multiple stakeholders, and a cost of over \$100 million.

(2) Indicate the operational independence of the Service Development Program.⁸

- This program is operationally independent. This program is not operationally independent.

Briefly clarify your response:

Amtrak San Joaquin service could be re-routed over the proposed new HST infrastructure that would be built under this Service Development Program in the event the CHSTP is not completed.

(3) Provide Right-of-Way Owner(s) information in the program area. Where railroads currently share ownership, identify the primary owner. Click on the prepopulated fields to select the appropriate response from the list of choices.

Type of Railroad	Railroad Right-of-Way Owner	Route-Miles	Track-Miles	Status of Agreements to Implement Projects
Class 1 Freight	BNSF	TBD	TBD	Preliminary Executed Agreement/MOU
Class 1 Freight	UPRR	TBD	TBD	Host Railroad Consulted, but Support not Final
Amtrak				Master Agreement in Place
Amtrak				Master Agreement in Place
Amtrak				Master Agreement in Place
Amtrak				Master Agreement in Place

(4) Name the Intercity Passenger Rail Operator and provide the status of the agreement. If applicable, provide the status of agreement with the partner that will operate the planned passenger rail service (e.g., Amtrak). Click on the prepopulated field to select the appropriate response from the list of choices.

Name of Operating Partner:	Status of Agreement:
Amtrak (for interim use)	No agreement, but partner supports project

⁷ Please note, that administratively, three primary distinctions exist between the Major and Standard Capital Project designation when applied to a Service Development Program: 1) the approach to the environmental review process; 2) FRA’s use of a Letter of Intent (LOI) to contingently commit funds to the Service Development Program (as described in Section 2 of the NOFA); and 3) the project delivery tools required and used by FRA in managing the Service Development Program.

⁸ A Service Development Program is considered to have operational independence if, upon being implemented, it will result in a minimal operating segment of new or substantially improved high-speed or intercity passenger rail service that demonstrates tangible and measurable benefits, even if no additional investments in the same service are made.

(5) Provide information about the existing rail services within the Service Development Program area (e.g., freight, commuter, and intercity passenger). Click on the prepopulated field to select the appropriate response from the list of type of service.

Type of Service	Name of Operator	Top Speed Within Project Boundaries		Number of Route-Miles Within Project Boundaries	Average Number of Daily One-Way Train Operations ⁹ Within Project Boundaries
		Passenger	Freight		
Freight	UPRR		70	50	24
Freight					

(6) Estimate the share of benefits that will be realized by nonintercity rail services and provide the approximate cost share provided by the beneficiary.¹⁰ Click on the prepopulated fields to select the appropriate response from the lists of type of beneficiary, anticipated share of benefits, and approximate cost share. If more than five types of nonintercity passenger rail are beneficiaries, please provide additional information in a separate supporting document, and list it in Section G.2 of this application.

Type of Nonintercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Freight	Less than 50%	0-24%
Freight	Less than 50%	0-24%
Freight	Less than 50%	0-24%
Freight	Less than 50%	0-24%
Freight	Less than 50%	0-24%

(7) Describe the rolling stock type. 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.

Existing Amtrak San Joaquin equipment would be used in the event the CHSTP is not completed. CHSRA would acquire and operate a new fleet of high-speed trainsets for the proposed new HST service.

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

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

G. Additional Information

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

- (1) Please provide any additional information, comments, or clarifications and indicate the section and question number that you are addressing (e.g., Section A, Question 6).** Completing this question is optional.

The attached "Re-Defined Merced-Fresno Design-Build Section ARRA Track 2 Scope" document describes the original ARRA Track 2 D/B scope that was originally applied for in October 2009, refinements and re-scoping of the Merced-Fresno ARRA Section, and the new HSIPR grant scope of this application.

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

Document Title	Filename	Description and Purpose
Letter to J. Szabo RE: FY10 Service Development Program Applications	CHSRA FY10 Service Development Program Applications Aug 06 2010.pdf	Cover Letter
Program Management Scope of Work & Deliverables FY2010-2011	02 Scope PMTeam 2010-11 v2e.pdf	Project Management Plan
MERCED TO FRESNO --- SUPPLEMENTAL PRO-- -FORMA SOURCES & USES IN THOUSANDS	Simple Pro-forma - Merced to Fresno - Supplemental.pdf	Financial Plan
APPROACH TO SYSTEM SAFETY PROGRAM AND PLAN	SSPP Approach Memo Draft.pdf	System Safety Plan
Agreements	All Stakeholder Agreements August 2010.pdf	Railroad and Project Sponsor Agreements
CA HST Merced to Fresno In Progress 15% Alignment Plans	CD (submitted via Fed Ex)	Contains plan set listed below
CA HST In Progress 15% Design Submittal Merced to Fresno: Track Alignment Plans UPRR/SR99 – BNSF West Chowchilla Design Option	Plan Set (submitted via Fed Ex)	Plan and Profile; Typical Sections
Federal Register / Vol. 74, No. 189 / Thursday, October 1, 2009 / Notices	http://www.cahighspeedrail.ca.gov/images/chsr/20091002132002_MercedtoFresnoNOI10109.pdf	Notice of Intent
Notice of preparation of a Project Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for a Merced to Fresno High-Speed Train System	http://www.cahighspeedrail.ca.gov/images/chsr/20091002131657_MercedtoFresnoNOP092909.pdf	Notice of Preparation
Draft Scoping Report	http://www.cahighspeedrail.ca.gov/images/chsr/	Draft Scoping Report

Merced to Fresno Section High-Speed Train Project EIR/EIS (Amended Merced to Bakersfield Scoping Report) January 2010	20100127173705_MFScopingReport.pdf	
PRELIMINARY Alternatives Analysis Report Merced to Fresno Section High- Speed Train Project EIR/EIS April 2010	http://www.cahighspeedrail.ca.gov/images/chsr/20100408091943_Merced-Fresno%20Preliminary%20AA%20Report.pdf	Alternatives Analysis - Preliminary
SUPPLEMENTAL Alternatives Analysis Report Merced to Fresno Section High- Speed Train Project EIR/EIS August 2010	http://www.cahighspeedrail.ca.gov/images/chsr/20100805081324_Merced-Fresno%20Supplemental%20AA%20Report.pdf	Alternatives Analysis - Supplemental
Draft Project Environmental Impact Report / Environmental Impact Statement Agency Coordination Plan Merced to Fresno Section High-Speed Train Project EIR/EIS November 2009	http://www.cahighspeedrail.ca.gov/images/chsr/20091210151934_CoordinationPlan-MercedtoFresno.pdf	Agency Coordination Plan
Draft Environmental Justice Outreach Plan Merced to Fresno Section High-Speed Train Project EIR/EIS January 2010	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-MercedtoFresnoSection/0_72ec4	Environmental Justice Outreach Plan
Tribal Consultation Plan for the Merced to Fresno High-Speed Train Project EIR/EIS October 2009	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-MercedtoFresnoSection/0_72ec7	Tribal Outreach Plan
Technical Memoranda and Directive Drawings Released as of 8/3/10 (CD submitted via Fed Ex)	00 Released TM Directive Drawings List 100803.doc 00 Released TM List 10803.doc	1 CD with full copies of Tech Memos and Directive Drawings released 3 August 2010 (one CD submitted for all 4 applications)
System Requirements Database Reports as of 8/3/2010 (CD submitted via Fed Ex)	Link to ProjectSolve: https://ww3.projectsolve2.com/eRoom/SFOF2/FRA rpt_List_of_SRs_grouped_by_Subsystem.pdf rpt_List_of_SRs_grouped_by_Package.pdf rpt_SR_Text_only_sorted_by_SR.pdf rpt_CHSTP_System_Requirements_Full_Details.pdf	1 CD with System Requirements Database Reports released 3 August 2010 (one CD submitted for all 4 applications)
Redefined Merced - Fresno	Redefined Merced - Fresno Design-Build Section	Refined scope, budget/schedule

Design-Build Section ARRA Track 2 Scope	ARRA Track 2 Scope.pdf	and other data for ARRA-funded project
Letter to Attn: Marianne McNamara RE: Supporting Documentation Submitted via FedEx	Transmittal letter.pdf	Transmittal Letter listing supporting documentation (2 boxes) sent to FRA via FedEx
Risk Identification and Mitigation Factors	Risks Identification and Mitigation Factors.pdf	Risk Management Plan
OPERATING COST METHODOLOGY for ARRA GRANT REVISION & HSIPR SUPPLEMENTAL FRESNO-BAKERSFIELD, MERCED-FRESNO, & LOS ANGELES-ANAHEIM	OPERATING COST METHODOLOGY for CV & LOSSAN.doc	Operating Cost Assumptions

H. Checklist of Application Materials

Use this section to determine the thoroughness of your Service Development Program application prior to submission.

Documents	Format
1. Application Form	
<input checked="" type="checkbox"/> HSIPR Service Development Program Application Form [This Form]	Form
2. Budget and Schedule Form	
<input checked="" type="checkbox"/> HSIPR Service Development Program Budget and Schedule Form	Form
3. OMB Standard Forms	
<input checked="" type="checkbox"/> SF 424: Application for Federal Assistance	Form
<input checked="" type="checkbox"/> SF 424C: Budget Information-Construction	Form
<input checked="" type="checkbox"/> SF 424D: Assurances-Construction	Form
4. FRA Assurances Document	
<input checked="" type="checkbox"/> FRA Assurances Document (See Section 4.2.4 of the NOFA)	Form
5. Service Development Supporting Documentation	
<input checked="" type="checkbox"/> Service Development Plan (See Section 3.5 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> NEPA Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
6. Service Delivery Supporting Documentation	
<input checked="" type="checkbox"/> Project Management Plan (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Financial Plan (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> System Safety Plan (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Railroad and Project Sponsor Agreements (See Section 4.2.6 of the NOFA)	No Specified Format
7. Optional Supporting Documentation	
<input checked="" type="checkbox"/> Preliminary Engineering (PE) and/or Final Design (FD) Documentation (See Section 4.2.7 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Other Relevant and Available Documentation (See Section 4.2.7 of the NOFA)	n/a

PRA Public Protection Statement: Public reporting burden for this information collection is estimated to average 32 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0583**.

Upload #4

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: 4-Copy of HSIPR Merced-Fresno Budget-Schedule 08-05-10 FY-10
CD1.xls



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Color Key for Completing this Form:

Cell Type/Color:	Applicant Should	Template will	FRA Use Only:
[Dark Blue]	[Yellow]	[Light Blue]	[Grey]

[Redacted content consisting of multiple blacked-out text boxes and fields.]

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. Limited to 50 characters, the name must consist of the following elements, each separated by a											
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-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS							
Application Assumptions											
1. Please use this section to capture two separate sets of assumptions that will enter the costs shown in subsequent sheets. The contingency rate is the allowance for uncertainties in projected costs. The Annual Inflation Rate will											
Cost Categories*	Contingency Rate Assumption	Annual Inflation Rate Assumptions by Year (%)									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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%	
20 Stations, Terminals, Intermodal	25.0%			2.5%	3.0%	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%	
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%	
50 Communications & Signaling	15.0%			2.5%	3.0%	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%	
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%	
90 Unallocated Contingency	n/a			2.5%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	
100 Finance Charges	n/a										
Category for Operating, Financial, and Sustainability information		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019**
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 "Capital Cost Info." for definitions and explanations of the Standard Capital Cost (SCC) Categories.											
** For 2019 Operating, Financial, and Sustainability Inflation Assumptions, enter a											
If not using the FRA formulas, please describe your methodology in the space provided below as well as listing any supporting documentation.											

Return to the Main Page

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/c
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, s
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

FRA Standard Cost Categories for Capital Projects/Programs*		Notes
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 impr
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		
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		
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	
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 sh		
*NOTE: To help evaluate and compare the costs		

[Return to the Main Page](#)

Detailed Capital Cost Budget

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Program Name: CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS

	Applicant Inputs				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 *)
	Unit	Quantity	Unit Cost (Thousands of Base Yr/FY 11 Dollars)	Non-Unit Based Costs				
10 TRACK STRUCTURES & TRACK					\$ 579,367	\$ 86,905	\$ 666,272	
10.01 Track structure: Viaduct	Miles	8.68	\$ 51,500		\$ 447,020	\$ 67,053	\$ 514,073	
10.02 Track structure: Major/Movable bridge					\$ -	\$ -	\$ -	
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				\$ -	\$ -	\$ -	
10.06 Track structure: At-grade (grading and subgrade stabilization)	Miles	8.66	\$ 2,250		\$ 19,489	\$ 2,923	\$ 22,412	
10.07 Track structure: Tunnel					\$ -	\$ -	\$ -	
10.08 Track structure: Retaining walls and systems	Miles				\$ -	\$ -	\$ -	
10.09 Track new construction: Conventional ballasted			\$ 49,301		\$ 49,301	\$ 7,395	\$ 56,696	
10.10 Track new construction: Non-ballasted			\$ 55,658		\$ 55,658	\$ 8,349	\$ 64,007	
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)			\$ 7,899		\$ 7,899	\$ 1,185	\$ 9,084	
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					\$ 43,519	\$ 10,880	\$ 54,399	
20.01 Station buildings: Intercity passenger rail only			\$ 43,519		\$ 43,519	\$ 10,880	\$ 54,399	
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					\$ -	\$ -	\$ -	
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					\$ 73,913	\$ 11,087	\$ 85,000	
40.01 Demolition, clearing, site preparation					\$ -	\$ -	\$ -	
40.02 Site utilities, utility relocation					\$ -	\$ -	\$ -	
40.03 Hazardous material, contaminated soil removal/mitigation, ground water treatments					\$ -	\$ -	\$ -	
40.04 Environmental mitigation: wetlands, historic/archeology, parks			\$ 5,279		\$ 5,279	\$ 792	\$ 6,070	
40.05 Site structures including retaining walls, sound walls					\$ -	\$ -	\$ -	
40.06 Temporary facilities and other indirect costs during construction					\$ -	\$ -	\$ -	
40.07 Purchase or lease of real estate			\$ 16,955		\$ 16,955	\$ 2,543	\$ 19,499	
40.08 Highway/pedestrian overpass/grade separations			\$ 51,679		\$ 51,679	\$ 7,752	\$ 59,431	
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					\$ 26,378	\$ 3,957	\$ 30,334	
50.01					\$ -	\$ -	\$ -	
50.02					\$ -	\$ -	\$ -	
50.03					\$ -	\$ -	\$ -	
50.04				\$ 26,378	\$ 26,378	\$ 3,957	\$ 30,334	
50.05					\$ -	\$ -	\$ -	
50.06					\$ -	\$ -	\$ -	
50.07					\$ -	\$ -	\$ -	
50.08					\$ -	\$ -	\$ -	
60 ELECTRIC TRACTION								
60.01					\$ -	\$ -	\$ -	
60.02	#				\$ -	\$ -	\$ -	
60.03	#				\$ -	\$ -	\$ -	
60.04					\$ -	\$ -	\$ -	
Constr								
70 VEHICLES								
70.00	#				\$ -	\$ -	\$ -	
70.01	#				\$ -	\$ -	\$ -	
70.02	#				\$ -	\$ -	\$ -	
70.03	#				\$ -	\$ -	\$ -	
70.04	#				\$ -	\$ -	\$ -	
70.05	#				\$ -	\$ -	\$ -	
70.06	#				\$ -	\$ -	\$ -	
70.07	#				\$ -	\$ -	\$ -	
70.08	#				\$ -	\$ -	\$ -	
70.09	#				\$ -	\$ -	\$ -	
70.10	#				\$ -	\$ -	\$ -	
70.11	#				\$ -	\$ -	\$ -	
70.12	#				\$ -	\$ -	\$ -	
70.13	#				\$ -	\$ -	\$ -	
70.14	#				\$ -	\$ -	\$ -	
70.15	#				\$ -	\$ -	\$ -	
80 PROFESSIONAL SERVICES								
80.01					\$ 96,161	\$ -	\$ 96,161	
80.02					\$ -	\$ -	\$ -	
80.03					\$ -	\$ -	\$ -	
80.04				\$ 42,716	\$ 42,716	\$ -	\$ 42,716	
80.04				\$ 25,034	\$ 25,034	\$ -	\$ 25,034	
80.05				\$ 28,411	\$ 28,411	\$ -	\$ 28,411	
80.06					\$ -	\$ -	\$ -	
80.07					\$ -	\$ -	\$ -	
80.08					\$ -	\$ -	\$ -	
80.09					\$ -	\$ -	\$ -	
80.10					\$ -	\$ -	\$ -	
Subtotal (10-80)					\$ 819,338	\$ 112,829	\$ 932,167	
90 UNALLOCATED CONTINGENCY								
Subtotal (10-90)							\$ 48,000	
Subtotal (10-90)							\$ 980,167	
100 FINANCE CHARGES								
TOTAL CAPITAL COSTS (10-100)							\$ 980,167	

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:

Program

CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS

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		\$ 66,600	\$ 133,301	\$ 233,202	\$ 133,271	\$ 66,598	\$ 33,300			\$ 666,272	\$ 666,272
20 STATIONS, TERMINALS, INTERMODAL				\$ 8,160	\$ 19,040	\$ 21,760	\$ 5,440			\$ 54,399	\$ 54,399
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS										\$ -	\$ -
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS		\$ 33,862	\$ 46,561	\$ 4,577						\$ 85,000	\$ 85,000
50 COMMUNICATIONS & SIGNALING					\$ 7,583	\$ 12,133	\$ 10,617			\$ 30,333	\$ 30,334
60 ELECTRIC TRACTION										\$ -	\$ -
70 VEHICLES										\$ -	\$ -
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)		\$ 9,656	\$ 14,484	\$ 19,112	\$ 24,040	\$ 17,301	\$ 9,606	\$ 1,961		\$ 96,161	\$ 96,161
90 UNALLOCATED CONTINGENCY		\$ 4,800	\$ 9,600	\$ 12,000	\$ 12,000	\$ 9,600				\$ 48,000	\$ 48,000
100 FINANCE CHARGES										\$ -	\$ -
Total Program Cost (10-100)	\$ -	\$ 114,919	\$ 203,946	\$ 277,051	\$ 195,934	\$ 127,392	\$ 58,963	\$ 1,961	\$ -	\$ 980,166	\$ 980,167

YEAR OF EXPENDITURE (YOE) DOLLARS	2011	2012	2013	2014	2015	2016	2017	2018	2019	YOE Total**
10 TRACK STRUCTURES & TRACK	\$ -	\$ 68,265	\$ 140,732	\$ 254,820	\$ 150,722	\$ 77,955	\$ 40,343	\$ -	\$ -	\$ 732,838
20 STATIONS, TERMINALS, INTERMODAL	\$ -	\$ -	\$ -	\$ 8,916	\$ 21,533	\$ 25,470	\$ 6,590	\$ -	\$ -	\$ 62,510
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS	\$ -	\$ 34,540	\$ 48,442	\$ 4,857	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,839
50 COMMUNICATIONS & SIGNALING	\$ -	\$ -	\$ -	\$ -	\$ 8,576	\$ 14,202	\$ 12,862	\$ -	\$ -	\$ 35,641
60 ELECTRIC TRACTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
70 VEHICLES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
80 PROFESSIONAL SERVICES (applies to Cats. 10-60)	\$ -	\$ 9,849	\$ 15,217	\$ 20,682	\$ 26,795	\$ 19,862	\$ 11,359	\$ 2,389	\$ -	\$ 106,152
90 UNALLOCATED CONTINGENCY	\$ -	\$ 4,920	\$ 10,135	\$ 13,112	\$ 13,571	\$ 11,237	\$ -	\$ -	\$ -	\$ 52,976
100 FINANCE CHARGES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Program Cost (10-100)	\$ -	\$ 117,574	\$ 214,526	\$ 302,388	\$ 221,198	\$ 148,726	\$ 71,154	\$ 2,389	\$ -	\$ 1,077,955

* 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.

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

[Return to the Main Page](#)

Instructions for Operating and Financial Sheets

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

The sheet "Operating & Maintenance Info." lays out an approach to passenger rail cost accounting and projection that accords with that employed by Amtrak in its recently-implemented "APT" system. The O&M cost categories in the "Operating and Financial Perf." sheet draw on the cost categories in the "Operating & Maintenance Info." sheet. If you have employed other approaches to O&M cost estimation, show the totals in the red-shaded cells for Year 1, Year 5, and Year 10 and provide supporting documentation describing your O&M cost projection methods. Otherwise, if your O&M projections support the O&M line items detailed in 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 for the use of assets initially provided or renewed under the HSIPR program. Instead, it is an annualized allowance for future asset replacement, refurbishment, and expansion. Categories that would describe investments that together make up the CARC are shown in the lower section of the Operating and Financial Performance form. If your method of projecting future capital asset renewals and costs does not support the categories shown in the form, enter your totals in the red-shaded cells labeled "Total capital asset renewal charge (annualized amounts)." If your methodology supports the line items on the form, please fill in the individual category entries and the total will auto-populate. In either case, you will need to explain your methodology and procedures in supporting documentation.

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

- Develop a schedule for the nature and expected cost (in FY 2011 dollars) of capital asset renewals, expansions, and additions for years 1 through 30 of the program's operation. Assign projected costs to the years in which they are expected to occur.
- Calculate the present value of the future expenditures thus assigned, based on the OMB-approved discount rate of 7 percent.
- Annualize the present value by calculating the equal annual payments over 30 years that would equate to 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 the Operating and Financial Performance Spreadsheet.

<i>Operating and Maintenance Information (Standard O&M Cost Categories for Reference)</i>	
Category/Subcategory	Definition
1	
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	Maintenance work 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 su
2 0 0 M a i n t e n a n c e o f E q u i p m e n t (M o E)	
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.

<i>Operating and Maintenance Information (Standard O&M Cost Categories for Reference)</i>	
Category/Subcategory	Definition
3 0 0 T r a n s p o r t a t i o n	
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 sup
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 superintendents, railroad foremen and assistant foremen, and other transportation operations-related activities.
4 0 0 S a l e s a n d M a r k e t i n g	
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.

<i>Operating and Maintenance Information (Standard O&M Cost Categories for Reference)</i>	
Category/Subcategory	Definition
5 0 0 St at io n s	
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.

<i>Operating and Maintenance Information (Standard O&M Cost Categories for Reference)</i>	
Category/Subcategory	Definition
6 0 0 P o l i c e, S e c u r i t y & E n v i r o n m e n t a l S a f e t y	
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.

<i>Operating and Maintenance Information (Standard O&M Cost Categories for Reference)</i>	
Category/Subcategory	Definition
7 0 0 G e n e r a l a n d A d m i n i s t r a t i v e	
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.
T o	Note: Does not include charges for return on, or return of, capital.

Operating Information and Financial Performance							
Instructions:							
Service Development Program Name				CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS			
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 2011 data)		First full year	Fifth full year	Tenth full year
Indicate the fiscal year - use yyyy format as shown for 2010 and 2011			2010	2011	2017	2021	2026
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	5.7	5.7	5.7
3	=line 1 / line 2	Average train speed (mph) over entire route	51.1	51.1	64.2	64.2	64.2
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	929	976	1,428	1,515	1,632
8	e	Passenger-Miles, Thousands	134,730	140,577	228,403	242,419	261,154
9	=line 28 / line 8	Average fare per passenger-mile (FY 2010 dollars, three decimals)	\$0.225	\$0.231	\$0.233	\$0.233	\$0.233
10	=line 8 / line 7	Average trip length (miles)	145.0	144.0	159.9	160.0	160.0
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			228,403	242,419	261,154
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-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS				
			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 2011 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	101	106	124	132	142		
26	e	Seat-miles, thousands	358,974	354,545	495,509	495,509	495,509		
27	=line 8 / line 26	Load factor	38%	40%	46%	49%	53%		
Operating results and continuing investments - Thousands of FY 2011 dollars except where noted									
Revenues (do not include any public subsidies):			FY 2011 dollars	FY 2012 dollars	FY 2011 Dollars	FY 2012 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)	\$29,493	\$30,378	\$31,518	\$32,464	\$53,122	\$56,382	\$60,739
29	e	Income from creditable ancillary activities							
30	=line 28 + line 29	System revenues					\$53,122	\$56,382	\$60,739
Operating and maintenance expenses: (See "O&M Line Item Contents" sheet)									
31	e	Maintenance of way (MOW)							
32	e	Maintenance of equipment (MOE)							
33	e	Transportation							
34	e	Sales and marketing					\$99,005	\$99,359	\$99,748
35	e	Stations							
36	e	Police, Security, and Environmental Safety							
37	e	General and administrative							
38	=sum of lines 31 through 37	Total O&M expense					\$99,005	\$99,359	\$99,748
39	= line 30 - line 38	Operating surplus/(deficit). (State operating (subsidy) for FY 2009 and 2010 if there is a comparable existing service. Otherwise leave blank for those years. For Comparable Existing Service ONLY, enter either FY 2011 dollars (thousands) in yellow cells	\$ (48,695)	\$ (50,156)	\$ (42,539)	\$ (43,815)	\$ (45,883)	\$ (42,978)	\$ (39,008)
40	=line 39 / line 8	Operating surplus/(deficit) per passenger-mile, in dollars (three decimals). (State operating (subsidy) per passenger-mile for FY 2009 and 2010, in FY 2011 dollars, if there is a comparable existing service)	\$ (0.372)		\$ (0.312)		\$ (0.201)	\$ (0.177)	\$ (0.149)

			Service Development Program Name		CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS		
			For Comparable Existing Service Only:		Projections for Full Years of Operation Following Program Completion		
Line No.	Formula (e = entry)	Line Items	<i>(Use best estimates for full-year FY 2011 data)</i>		First full year	Fifth full year	Tenth full year
Capital asset							
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			\$ (45,883)	\$ (42,978)	\$ (39,008)
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.			\$45,883	\$42,978	\$39,008

Service Develop		CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS				
inabil						
Instructions: The upper						
Running Requirements Indicate the fiscal	Funding Requirement in FY 2011	Thousands of Dollars				
		Comparable existing Service (if any)		First full year of operation	Fifth full year of operation	Tenth full year of operation
		2010	2011	2017	2021	2026
		\$50,156	\$43,815	\$45,883	\$42,978	\$39,008
		\$48,695	\$42,539	\$53,707	\$57,728	\$62,231
Sources of Funds						
Source No.	Source Description					
(1)						
(2)						
(3)						
(4)						
(5)						
(6)						
(7)						
(8)						
(9)						
(10)						
Total Available to Meet Requirement		\$0	\$0	\$0	\$0	\$0
Funding (Gap) to be Filled:		\$48,695	\$42,539	\$53,707	\$57,728	\$62,231

Service Develop					CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS			
Analysis of Funding Sources for Sustainability <i>(Refer to the Sustainability Sheet. In this table, projected sources to cover operating deficits cannot include Federal funds.)</i>								
Source No.	Source Description	Percent of Annual Funding Need Covered			New or Existing Funding Source?	Status of Funding *	Types of Funds	Describe Uploaded Supporting Documentation to help FRA verify funding source
		In First Year of Operation	In Fifth Year of Operation	In Tenth Year of Operation				
		2017	2021	2026				
(1)	-	-	-	-				
(2)	-	-	-	-				
(3)	-	-	-	-				
(4)	-	-	-	-				
(5)	-	-	-	-				
(6)	-	-	-	-				
(7)	-	-	-	-				
(8)	-	-	-	-				
(9)	-	-	-	-				
(10)	-	-	-	-				
Total all sources		0%	0%	0%				

* **Explanation of "Status of Funding"**: Committed sources are programmed funds that have all the necessary approvals (e.g. legislative or by referendum) to be used to fund the proposed operation without any additional action. These funds have been formally programmed and budgeted. Examples include dedicated or approved tax revenues, or cash reserves that have been dedicated to the proposed operation.

Budgeted: This category is for funds that have been budgeted and/or programmed for use in the proposed operation but remain uncommitted, i.e., the funds have not yet received statutory approval. An example would be a budget that has been submitted to the Legislature but not approved.

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 operating or capital grants, and proposed debt financing that has not yet been adopted in the agency's CIP.

The above 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.

Upload #5

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: FRA Assurances Certifications - signed.pdf

**U.S. Department of Transportation
Federal Railroad Administration**

**Certifications Regarding Debarment, Suspension and Other Responsibility Matters,
Drug-Free Workplace Requirements and Lobbying**

**PART A: Certification Regarding Debarment, Suspension and Other Responsibility Matters – Primary Covered Transactions
(Pursuant to 2 CFR Part 180)**

- (1) The grantee certifies to the best of its knowledge and belief, that it and its principles:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;
 - (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the grantee is unable to certify to any of the statements of this certification, he or she shall attach an explanation to this application.

PART B: Certification Regarding Drug-Free Workplace Requirements (Pursuant to 49 CFR Part 32)

- A. The grantee certifies that it will or continue to provide a drug-free workplace by:
 - (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
 - (b) Establishing an ongoing drug-free awareness program to inform employees about—
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will—
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee is so convicted—
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (e) and (f).

B. The grantee may insert in the space below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)
California High-Speed Rail Authority
925 L Street, Suite 1425
Sacramento, CA 95814
 Check if there are workplaces on file that are not identified here.

PART C: Certification Regarding Lobbying (Pursuant to 49 CFR Part 20)

CHECK IF APPLICABLE
 CERTIFICATION IS FOR THE AWARD OF A GRANT OR COOPERATIVE AGREEMENT EXCEEDING
 \$100,000
 OR
 A FEDERAL LOAN EXCEEDING \$150,000

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award document for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 USC 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the certifications in Parts A, B, and C (if C is applicable) are true.



SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Roelof van Ark, Chief Executive Officer

TYPED NAME AND TITLE

6 Aug 2010

DATE

Upload #6

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: CHSRA Service Development Plan URLs.doc

California High-Speed Train Project Service Development Plan

The Authority's Service Development Plan is contained in the following three primary documents that are all available on the Authority's Website at the locations shown:

2008 and 2009 Business Plans and Source Documents

<http://www.cahighspeedrail.ca.gov/library.asp?p=8200>

Implementation Plan

<http://www.cahighspeedrail.ca.gov/library.asp?topic=Implementation+Plan®ion=§ion=&y>

Upload #7

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: ARRA Sections Deliverables_withPS2link_100802.doc

California High-Speed Train: ARRA Section Environmental Document Deliverables

August 5, 2010

Document	San Francisco to San Jose Section	Merced to Fresno Section	Fresno to Bakersfield Section	Los Angeles to Anaheim Section
Notice of Intent	http://www.cahighspeedrail.ca.gov/images/chr/20100222094251_SF-SJ_NOI.PDF	http://www.cahighspeedrail.ca.gov/images/chr/20091002132002_MercedtoFresnoNOI10109.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091002140958_FresnoBakersfieldNOI.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20080129113250_LAtoOrangeCountyNOI.PDF
Notice of Preparation	http://www.cahighspeedrail.ca.gov/images/chr/20090113113149_San%20Francisco%20to%20San%20Jose%20NOP.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091002131657_MercedtoFresnoNOP092909.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091002140900_FresnoBakersfieldNOP.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20080117135825_LAtoOrangeCountyNOP.pdf
Draft Scoping Report	http://www.cahighspeedrail.ca.gov/images/chr/20090818174750_DraftSFtoSJScopingReportv2.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20100127173705_MFScopingReport.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20100621122236_FB%20Amended%20Scoping%20Report%20Draft%20Dec%202009%20rev%202.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091104113558_Draft_Scoping_Report_sm.pdf
Alternatives Analysis	<p>Preliminary http://www.cahighspeedrail.ca.gov/images/chr/20100408092523_SF-SJ%20Preliminary%20Alternatives%20Analysis%20Report.pdf</p> <p>Supplemental http://www.cahighspeedrail.ca.gov/images/chr/20100805081646_SF-SJ%20Supplemental%20AA%20Report.pdf</p>	<p>Preliminary http://www.cahighspeedrail.ca.gov/images/chr/20100408091943_Merced-Fresno%20Preliminary%20AA%20Report.pdf</p> <p>Supplemental http://www.cahighspeedrail.ca.gov/images/chr/20100805081324_Merced-Fresno%20Supplemental%20AA%20Report.pdf</p>	<p>Preliminary http://www.cahighspeedrail.ca.gov/images/chr/20100623191810_FB%20Prelim%20AA%20Rpt%206%202%202010.pdf</p> <p>Supplemental N/A</p>	<p>Preliminary http://www.cahighspeedrail.ca.gov/images/chr/20090611110104_20090602162631AgendaItem9.pdf</p> <p>Supplemental http://www.cahighspeedrail.ca.gov/images/chr/20100717142121_LA-AA%20Supplemental%20AA%20Report.pdf</p>
Agency Coordination Plan	http://www.cahighspeedrail.ca.gov/images/chr/20091210152034_CoordinationPlan-SF-SJ.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091210151934_CoordinationPlan-MercedtoFresno.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091211123204_FresnoBakersfieldACP.pdf	http://www.cahighspeedrail.ca.gov/images/chr/20091210151745_CoordinationPlan-LAtoOC.pdf
Environmental Justice Outreach Plan	https://ww3.projectsolve2.com/eRoomReq/Files/SFOF/CHSTP-SanJosetoSanFranciscoSection/08ce11/FJ%20EJ%20Outreach%20Plan%20February%202010.docx	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-MercedtoFresnoSection/072ec4	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-FresnoBakersfieldSection/074956	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-AnaheimtoLosAngelesSection/081368
Tribal Outreach Plan	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-SanJosetoSanFranciscoSection/08ce11/FJ%20EJ%20Outreach%20Plan%20February%202010.docx	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-MercedtoFresnoSection/072ec4	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-FresnoBakersfieldSection/074951	https://ww3.projectsolve2.com/eRoom/SFOF/CHSTP-AnaheimtoLosAngelesSection/089bd

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Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: 02 Scope PMTeam 2010-11 v2e.pdf

California High-Speed Train Project



Program Management Scope of Work & Deliverables

FY 2010 - 2011

PLUS A FORECAST THROUGH 2013

PB Americas, Inc.

For the

California High-Speed Rail Authority

April 19, 2009

Revised June 1, 2010

TABLE OF CONTENTS

TASK 1	PROGRAM MANAGEMENT AND CONTROLS.....	5
1.1	PROGRAM MANAGEMENT	7
1.2	SCHEDULE AND DOCUMENT CONTROL.....	8
1.3	ADMINISTRATION, CONTRACTS AND SPECIAL PROJECTS.....	9
1.4	QUALITY ASSURANCE AND QUALITY CONTROL	9
1.5	RISK MANAGEMENT.....	10
TASK 2	PUBLIC COMMUNICATIONS & EDUCATION.....	11
2.1	STATEWIDE COMMUNICATIONS & PUBLIC EDUCATION (NOT IN CONTRACT SCOPE)	11
2.2	NEWS MEDIA RELATIONS & RC OUTREACH (NOT IN CONTRACT SCOPE)	11
2.3	STATE, FEDERAL AND REGIONAL INTEREST GROUP ACTIVITY.....	11
2.4	COMMUNICATIONS ASSISTANCE TO RC OUTREACH (NOT IN CONTRACT SCOPE).....	11
TASK 3	ENGINEERING MANAGEMENT	12
3.1	TEAM MANAGEMENT.....	13
3.1.1	Engineering Team Management	13
3.2	INFRASTRUCTURE	14
3.2.1	Technical Support	14
3.2.2	Technical Advisory Panel (TAP).....	14
3.2.3	Architectural and Aesthetic Design Guidelines.....	15
3.3	SYSTEMS.....	16
3.3.1	Technical Support	16
3.3.2	System Design	16
3.3.3	Performance Specifications.....	17
3.4	RAILROAD OPERATIONS (MOVED TO TASK 7).....	17
3.5	MAINTENANCE	18
3.5.1	Technical Support	18
3.5.2	Preliminary Maintenance Plans.....	18
3.5.3	Performance Specifications.....	19
3.6	ROLLING STOCK	19
3.6.1	Technical Support	19
3.6.2	Rolling Stock Performance Specification.....	20
3.7	REGULATORY APPROVALS.....	20
3.7.1	Federal Railroad Administration (FRA).....	20
3.7.2	California Public Utilities Commission (CPUC)	21
3.7.3	CHSTP System Requirements Database Management.....	21
3.7.4	Verification and Validation.....	21
3.8	CHSTP STANDARD DRAWINGS.....	22
3.8.1	CHSTP Standard Drawings.....	22
3.9	STANDARD SPECIFICATIONS.....	27
3.9.1	Standard Specifications.....	27
3.10	COST ESTIMATING	29
3.10.1	15 % Design Level Capital Cost Estimate.....	29
3.10.2	30% Design Level Capital Cost Estimate Item List and Unit Costs.....	29
3.10.3	Develop Program Level Estimate.....	29
3.11	CHSTP DESIGN MANUAL (FINAL)	30
3.12	DESIGN SUBMITTAL REVIEWS	32
3.12.1	Submittal Reviews and Compliance Reviews.....	35

3.13	RISK MANAGEMENT.....	36
3.13.1	Risk Management Program and Program Risk Register	36
3.14	PROCUREMENT SUPPORT	37
3.14.1	Technical Support	37
3.15	SURVEY CONTROL.....	38
3.15.1	Establish Network of Control Survey Monuments	38
3.16	SYSTEM INTEGRATION.....	39
3.16.1	CHSTP System Requirements.....	39
3.16.2	CHSTP Design Manual Reviews.....	39
3.16.3	Regional Consultant Design Submittals	39
TASK 4	ENVIRONMENTAL REVIEW	41
4.1	PROJECT TASK MANAGEMENT	41
4.2	PROGRAM MANAGEMENT COORDINATION	41
4.3	ENVIRONMENTAL SCOPING	42
4.4	ALTERNATIVES ANALYSIS (AA) PROCESS.....	42
4.5	ENVIRONMENTAL METHODS	43
4.6	PUBLIC/ AGENCY INVOLVEMENT AND COORDINATION	43
4.7	REVIEW OF ENVIRONMENTAL, SOCIAL, ECONOMIC AND COMMUNITY ISSUES.....	44
4.8	REVIEW OF TECHNICAL REPORTS AND DEIR/ EIS.....	45
4.9	PERMITS AND APPROVALS	52
4.10	STATEWIDE TECHNICAL TASKS.....	52
4.11	GIS SUPPORT SERVICES.....	53
4.12	AGENCY AGREEMENTS FOR COORDINATION & FUNDING	54
4.13	SECTION 404 AND 408 COORDINATION.....	54
4.13.1	Section 404 Activities.....	54
4.13.2	Section 408 Activities.....	55
TASK 5	REGIONAL CONSULTANT OVERSIGHT.....	56
5.1	PROJECT MANAGEMENT	57
5.2	MEETINGS.....	58
5.3	ENGINEERING AND ENVIRONMENTAL REVIEW	59
5.3.1	Project Scoping and Alternatives Development	59
5.3.2	Environmental Review	59
5.3.3	Preliminary Engineering.....	61
TASK 6	RIGHT OF WAY ASSESSMENT & ACQUISITION	63
6.1	RIGHT OF WAY GUIDELINES MANUAL.....	63
6.2	STANDARD FORMS & DOCUMENTS.....	63
6.3	ACQUISITION STRATEGY AND PROTOCOLS.....	63
6.4	IDENTIFY PRIORITY ACQUISITIONS.....	64
6.5	GIS DATABASE FOR REAL ESTATE.....	64
6.6	PRE-QUALIFY VENDORS.....	64
6.7	RELOCATION PLAN.....	64
TASK 7	RAILROAD SYSTEM OPERATIONS AND REVENUE MANAGEMENT.....	65
7.1	RAILROAD SYSTEM OPERATIONS MANAGEMENT	65
7.2	RAILROAD SYSTEM OPERATIONS AND SERVICE PLANNING	66
7.2.1	Operations & Service Planning	66
7.2.2	Operations Plan	66
7.2.3	Passenger Stations Plan	67
7.2.4	Operations Control Center (OCC).....	67

7.2.5	“On-Train” Operations and On-Board Services.....	68
7.2.6	Train Performance Report	69
7.2.7	Concept of Operations	70
7.2.8	Operations Report and Train Simulation Model	70
7.2.9	Technical Support	71
7.2.10	Safety and Security Planning.....	71
7.3	RIDERSHIP AND REVENUE FORECAST UPDATES.....	72
7.3.1	Ongoing Forecasts of Ridership and Revenue.....	72
7.3.2	IR/BS& Informational Support	72
TASK 8	CONSTRUCTION / PROCUREMENT DOCUMENTS.....	74
8.1	STAGING AND CONSTRUCTION PLANNING.....	74
8.2	PROCUREMENT AND BID PACKAGES.....	76
8.3	COST ESTIMATING	76
8.4	PROCUREMENT / CONSTRUCTION INSPECTION SUPPORT	76
TASK 9	DESIGN, CONSTRUCTION & MANUFACTURING (FUTURE).....	77
9.1	CONSTRUCTION DESIGN OVERSIGHT.....	77
9.2	TRACK CONSTRUCTION	77
9.3	STATION CONSTRUCTION.....	77
9.4	ROLLING STOCK PROCUREMENT.....	77
TASK 10	TESTING AND COMMISSIONING (FUTURE).....	77
10.1	TRACK CERTIFICATION.....	77
10.2	ELECTRIFICATION	77
10.3	CLEARANCE TESTING - ROLLING STOCK	77
10.4	STATIC TESTING- ROLLING STOCK.....	77
10.5	DYNAMIC TESTING- ROLLING STOCK.....	77
10.6	MAINTENANCE FACILITY & EQUIPMENT	77
10.7	OPERATIONS CENTER AND CONTROL SYSTEMS.....	77
10.8	TICKETING AND RESERVATIONS.....	77
TASK 11	OPERATIONAL START UP (FUTURE).....	77
11.1	OPERATIONAL PLAN	77
11.2	STAFFING MANAGEMENT	77
11.3	STAGING AND STAFFING PERSONNEL.....	77
11.4	TRAINING.....	77
11.5	TICKETING, STATION AND WEB.....	77
11.6	SIMULATED SERVICE.....	77
11.7	REVENUE SERVICE.....	77
TASK 12	CONSOLIDATED MASTER LIST OF DELIVERABLES.....	78

Tasks 9, 10 & 11 are Future Activities yet to be planned.

Task 1 Program Management and Controls

The Program Management Team (PMT) will provide overall management and planning of the project with the purpose of establishing consistency of approach, design and process as well as maintaining momentum as the project evolves from one stage to the next. Currently the PMT is managing the regional consultant work with the goal of completing the 15% and 30% design, draft and final EIR/ES, accomplishing the Notice of Determination (NOD) and Record of Decision (ROD), and developing the Rule of Particular Applicability (RPA). Once the NOD/ROD and RPA is approved the project will evolve to the next step of the program, which will include ROW acquisition, permitting, preparing bid documents, contractor qualifications and selection, construction and procurement, staffing training and eventual revenue service operations. All work will be as directed by the Authority. In addition the PMT will support the Authority with discussion and negotiations, establish and enforce the master schedule, provide document control, administrative, technical and engineering services and provide Quality Assurance and Control for the PMT and the Authority. The PMT consists of:

- The Program Manager – This is the lead position for the PMT and is responsible for all PMT activities including the overall management, planning, and execution of the program. The Program Manager answers directly to the Executive Director of the California High Speed Rail Authority and is housed in their offices. The Program Manager is responsible for managing all activities performed under the project. The eight Regional Consultants, contracted directly with the Authority, are managed by the Program Manager through the PMT for all planning activities, environmental documents, and preliminary design. The Program Manager also manages the operation of the PMT, railroad operations, ROW, construction/procurement, and is responsible for the overall project quality. The program Manager is also responsible for bringing the preliminary engineering and planning elements to fruition through procurement, testing, and start-up.
- The Deputy Program Manager – This position answers directly to the Program Manager and is responsible for management of the eight Regional Managers who oversee the eight Regional Consultants and is housed in the Authority's offices. The position is responsible for monitoring the progress of the Regional Consultants to the schedule including their reporting, preparation of monthly and yearly scope, schedule, and budget documents, evaluation of progress, and oversight of mitigation efforts to maintain the project progress. The position also acts as the deputy for the Program Manager and represents him/her in situations where either schedule conflicts exist or as directed. This position is intended to free up the Program Manager to address policy matters as well as perform the more detailed functions that the program requires.
- The Engineering Manager – This position answers directly to the Program Manager and is responsible for developing all system-wide design criteria and standards in addition to ensuring Regional Consultant design accuracy and compliance to standards. The Engineering Manager has a sizeable PMT staff responsible for developing design criteria, technical memoranda, directive drawings, standard plans, standard specifications, and ensuring the design basis for all engineering for the environmental documents and final design are defined and consistent. This position supports the eight Regional Consultants by providing them with standards and reviewing all of their engineering submissions for quality and adherence to standards.

- The Operations Manager – This position reports directly to the Program Manager and is housed in the Authority's offices. The Operation Manager is responsible for project controls including scope, schedule, and budget adherence, together with engineering management support. The position monitors all contractual obligations of the PMT, including Donald Newlands, manages and maintains the integrated baseline schedules for the PMT and Regional Consultants as well as monitoring the Regional Consultants obligations to the Authority. This position is also responsible for all day-to-day operational matters (e.g. quality audits, document control, schedules, budgets, scopes, contracts, subcontracts, billings, periodic reports, etc.)
- The Environmental Manager – This position answers directly to the Program Manager and is responsible for overseeing all environmental processes. The Environmental Manager oversees the eight Regional Consultants for adherence to all state and federal requirements for accuracy and compliance to applicable laws and standards. This position supports the eight Regional Consultants by providing them with guidance and reviewing all of their environmental submissions for quality and adherence to standards.
- The Construction/ Staging/ Procurement Manager – This position answers directly to the Program Manager and is responsible for the preparation of construction/procurement documents and delivery including research, analysis, and recommendations for the construction and procurement methodology and implementation including considerations for construction staging approach, contract sizes, content of contracts (terms and conditions and technical documents), delivery systems, operations, rolling stock, ROW, market conditions, test track staging, systems elements, and the financial plan. The position is also responsible for providing constructability reviews of plans, specifications, and estimates. These reviews include assessing the viability of the design for the intended use, the applicability of the design for the site conditions, value engineering, and addressing other matters related to means and methods of construction.
- The Railroad Operations Manager – This position reports directly to the Program Manager and is responsible for developing all rail operating criteria and standards. The role of Rail System Operations Manager is to define the purpose and need and establish the point of view / perspective of the operator. The main priorities of Rail Operations Manager is to develop a detailed system definition of the attributes of railroad from the operator's standpoint, taking a holistic and comprehensive overview to describe how the railroad will be operated, and develop a requirements definition plan that identifies the staffing, facilities and infrastructure resources that are necessary to operate and maintain the railroad. The responsibilities also include coordination with railroads, operating agencies/ rail service providers, and with FRA on development of HST System rules and procedures and their relationship to current regulations and new regulations that will emerge from the HST Project (Petition for a Rule of Particular Applicability). The Railroad Operation Manager also manages the Operations and Service Planning effort for ridership demand forecasts, system capacity requirements, service design, developing the Operations Plan Report, Passenger Stations Planning Report and the On-Train Operations and On-Board Services Report.

This small PMT core staff is responsible for the management of the CHST program in close coordination with the CHSR Authority staff.

1.1 Program Management

Provide, implement, and manage a program management system that enables the integrated monitoring and control of the entire program in terms of:

- a. The process, budget and schedule for the development of consistent and coordinated engineering and environmental work product of the PMT, Regional Consultant teams and other consultants at the Authority's direction.
- b. Regional Consultants' activities as they relate to work scope, progress schedule and budget.
- c. Regional Consultants' efforts with Construction/ Procurement efforts.
- d. Regional Consultants' forecasts for progress and trending.
- e. Mitigation methods for underperforming work tasks for Regional Consultants.
- f. The Federal Railroad Administration (FRA) and California Public Utilities Commission (CPUC) regarding safety certification, Rule of Particular Applicability covering vehicle types, operations requirements, system concept, train controls and other safety-related issues.
- g. Electrification needs and related issues with the CPUC, electric power utilities and CalTrain.
- h. Development of ridership and revenue forecasts with different travel conditions, station locations, years of opening, prices, operating plans and running times, etc. as required.
- i. Engineering design criteria, standards and guidance.
- j. Environmental processes (Federal and State).
- k. Bidding documents, requirements and processes.
- l. Procurement strategies.
- m. Staging of construction sections and packages.
- n. Construction Management of sections, packages and overall system elements.

Provide the following documents and staffing support needs necessary to:

- o. Update and maintain the Project Management Plan and protocols.
- p. Support the Authority in negotiations and discussions with freight railroads, Joint Powers Boards, passenger service operators and others
- q. Attend Board meetings and prepare responses and recommendations to Board inquiries at the Authority's direction. Prepare meeting materials for presentation to the Board as requested.
- r. Develop capital and operating costs, revenue forecasts, cash flow, phasing, and related information to the finance team; review and comment on draft financing plans. Review presentations of financing plan.
- s. Assist with preparing the annual business plan at the Authority's direction.
- t. Develop visual simulations of high-speed train and line and provide materials to assist in realistic simulations.
- u. Prepare monthly progress reports for the Program including the PMT as well as the eight Regional Consultants. The monthly progress report will address key accomplishments, program, cost, schedules, critical issues and forecasts.
- v. Compile, process, review and oversee all PMT monthly invoicing.
- w. Prepare year-end (FY10/ 11) list of accomplishments and deliverables.
- x. Develop and recommend scope, schedule and budget for PMT for FY11-12.

- y. Providing engineering review of construction documents relating to DBOM, PPP, DB, or any combination of the above.
- z. Providing testing, commissioning, witnessing, documentation, and acceptance.
- aa. Provide web based project document controls (ProjectSolve2 based) along with public website, project email archives, and PS&E document controls.
- bb. Other duties and special projects as assigned.

TASK 1.1 DELIVERABLES	Schedule
1.1.1 Senior Program Management Team joint progress review with Authority staff, PM team, Regional Consultant teams	Monthly
1.1.2 PMT/ Authority staff progress/ status review	Weekly
1.1.3 Program Monthly Progress Report	Monthly
1.1.4 Update the Project Management Plan and protocols	As required
1.1.5 Year End Listing of Deliverables	June '11 / 12 / 13
1.1.6 Prepare Next Fiscal Year's work scope and budget	April '11 / 12 / 13
1.1.7 Board Requested studies and Reports	As requested
1.1.8 Monthly Reports to the Operations Committee	Monthly

1.2 Schedule and Document Control

- a. Complete expansion and revision of detailed Work Breakdown Structure to apply to all teams to allow coordinated tracking of a uniform schedule progress, budget, deliverables, and other project work documents.
- b. Complete expansion and revision of a detailed master schedule to reach the Record of Decision incorporating the schedule of each Regional Consultant team and the PM team. Update the ROD master schedule monthly.
- c. Complete resource-loaded schedule for PM team fiscal year program, and update monthly.
- d. Establish and maintain baseline program schedule and budgets (construction, operations, and revenue) for Phase 1 and sections, as well as full 800-route-mile program.
- e. Expand & revise baseline program schedule and budgets (construction, operations, and revenue) for Phase 1 and sections, as well as full 800-route-mile program.
- f. Carry out document control procedures regarding use of ProjectSolve2. Manage the process for creation, storage, and management of archival materials, conversion of hard copy materials to electronic form. Update document control policies and procedures and staff as needed.
- g. Maintain letter log database of all PM team and Authority correspondence.
- h. Respond to inquiries to the Authority; maintain log of contacts/responses.
- i. Select a technology for the document control system in addition to ProjectSolve2 and acquire the technical expertise to; establish program wide policies, procedures and protocols and implement the document control library based on a paperless system (Paperless/ hard copy, retention and accessibility policies to be set by the Authority).

TASK 1.2 DELIVERABLES	Schedule
1.2.1 Updated and revised Work Breakdown Structure	As Required
1.2.2 Resource loaded schedule for PM team fiscal years work	July '10/ 11/ 12
1.2.3 Updates to NOD/ ROD and PMT schedules	Monthly
1.2.4 Update Master Program Schedule	September '10/ 11/ 12
1.2.5 Review of Regional Consultants Monthly Progress Report and schedules	Monthly
1.2.6 Modify monthly Progress Report to address Earned Value Methodology	August '10
1.2.7 Select Document Control technology, acquire expertise in document control and create policies, procedures and protocols to implement document control system	June '11

1.3 Administration, Contracts and Special Projects

- a. Prepare and issue invoices and track RMC budgets for the year.
- b. Audit compliance.
- c. Maintain and update the program's Project Solve2 site.
- d. Prepare correspondence, memos, reports and other written materials.
- e. Assist in Authority office staffing and functioning.
- f. Maintain Team directory up to date.
- g. Review and comment on terms of other Authority contracts as requested, covering scopes of work, budgets, schedules, contract provisions, incentives, and oversight.
- h. Support the Authority requests for special projects and assignments with technical, commercial and or administrative support or other duties as directed.
- i. Provide oversight and management support for Donald Newlands & Associates based on task order approved work. Set priorities and review work products and schedule adherence.

TASK 1.3 DELIVERABLES	Schedule
1.3.1 Invoices	Monthly
1.3.2 Update Program Directory	As required
1.3.3 Special Project Assignments	As Assigned

1.4 Quality Assurance and Quality Control

- a. Maintain, update, audit compliance with and enforce the PMT QA/QC plan.
- b. Update and maintain the PMT QA/QC plan as required
- c. Train new PMT staff, Authority supervisory staff, Regional Consultant management in the QA/QC requirements, and provide refresher courses or updates as needed.
- d. Evaluate Regional Consultant compliance with requirements of the Program Management QA/QC plan.
- e. Implement change control function to document change requests and track impacts on scope, budget and schedule.
- f. Maintain risk register and management plan.

TASK 1.4 DELIVERABLES	Schedule
1.4.1 Update Memo on change control function process	October '10
1.4.2 Report on 1 st 4 Regional Consultant QA/QC compliance	November '10 / 11 / 12
1.4.3 Report on 2 nd 4 Regional Consultant QA/QC compliance	February '11 / 12 / 13
1.4.4 Report on current risk register and risk management plan	April '11 / 12 / 13
1.4.5 Update the QA/QC plan	As required

1.5 Risk Management

The CHSTP Risk Management Plan is considered an element of the PMT Program Management Plan and includes:

- Communicate the objectives of the CHSPT risk management program and the particular methodology for qualitative and quantitative assessment of risk.
- Establish consistent protocols for identification and analysis of risks based on the DOD MIL-STD 882D.
- Update existing risk register, assist in identifying new risks and dependencies within the regional teams and across regional boundaries, and develop management strategies for individual risks.

The CHSTP Risk Management Plan activities and reporting are keyed to the regional project development milestones: 15% Design, Draft EIR/ES, Final EIR/ES, 30% Design and release of the RFQ/RFP for design and construction. Anticipated segments to be included in the Risk Management program for FY 10/ 11 include:

- 15% Design Level
 - San Francisco – San Jose
 - San Jose – Merced
 - Merced – Fresno
 - Fresno – Bakersfield
 - Palmdale – Los Angeles
 - Los Angeles – Anaheim
 - Altamont Corridor
- 30% Design Level
 - San Francisco – San Jose
 - Merced – Fresno
 - Fresno – Bakersfield
 - Los Angeles to Anaheim

Risk Management activities will be supported by various disciplines within the PMT including:

- Infrastructure
- Systems
- Operations and Safety
- Maintenance

- Rolling Stock
- Systems Integration

DELIVERABLES	Schedule
3.13.1 Updated Risk Register	Quarterly beginning Sep 10

Risk Management – Future Year Assumptions

FY 11/ 12 Assumptions

- Manage and coordinate Risk Management Program for the CHSTP including identification of system wide risks
- Update Risk Registers and prepare Program level risk analysis for consideration and action by the Authority to reduce or mitigate identified risks

FY 12/ 13 Assumptions

- Manage and coordinate Risk Management Program for the CHSTP including identification of system wide risks
- Update Risk Registers and prepare Program level risk analysis for consideration and action by the Authority to reduce or mitigate identified risks

Task 2 Public Communications & Education

2.1 Statewide Communications & Public Education (Not in Contract Scope)

2.2 News Media Relations & RC Outreach (Not in Contract Scope)

2.3 State, Federal and Regional Interest Group Activity

- a. Provide analysis and recommendations to the Authority pertaining to the high-speed train project.
- b. Strategic Public Relations and Public Affairs consulting in support of the high speed rail project.
- c. Media relations (Outreach and education to California news media)
- d. Coalition and third party development and education.
- e. Public Opinion Leaders Education Program to educate public opinion leaders and elected officials about the high speed rail project.
- f. Provide help as needed in developing and distributing specific local / regional letters, fact sheets or other materials.
- g. Provide support for and reply to queries for the Board and Authority staff.

TASK 2.3 DELIVERABLES		Schedule
2.3.1	Written analysis and reports pertaining to state and federal policy, legislation and funding	as needed

2.4 Communications Assistance to RC Outreach (Not in Contract Scope)

Task 3 **Engineering Management**

At the Program level, the engineering efforts are focused on four key areas of activity.

System Design

- Develop CHSTP requirements and design for a network-wide 2x25 kV traction power supply system and coordinate with CPUC for approvals process
- Develop standard designs for overhead contact system to a level necessary to ensure a consistent application across the CHSTP network
- Develop train control system specifications that provides Authority requirements for performance, capacity, and safety for consistent application across the CHSTP network
- Develop rolling stock specifications to support procurement and acceptance of trainsets that meet Authority performance and safety requirements
- Develop system level preliminary maintenance plans for use in defining maintenance facilities, including locations, size, and activities of each facility.

Design Criteria

- Develop design criteria that supports FRA safety standards and requirements, and the Petition for Rule of Particular Applicability.
- Ensure all subsystems deliver a reliable and safe HSR system commensurate with HSR industry standards, are integrated at the design criteria level, and provide a consistent design approach to be applied to each CHSTP Section.
- Prepare Technical Memoranda and Directive drawings as the primary technical reference during preliminary engineering.
- Prepare CHSTP Design Manual as the primary design reference during final design

Regulatory Approvals

- Review and determine CHSTP compliance requirements with state and federal safety regulations
- Coordinates, develops and implement review and approval protocols with the affected regulatory agencies including FRA and CPUC
- Oversee and implement CHSTP project delivery risk management requirements necessary to meet regulatory agency requirements and Authority Program objectives.

Technical Support and Oversight

- Provides engineering support to the Regional Managers and Regional Teams
- Review technical submittals prepared by the Regional Teams for compliance and consistency with CHSTP requirements, and adherence to system level designs for traction power, signaling, and communications.

3.1 Team Management

To develop the required CHSTP design information and to support the Regional Managers and consultants, the Engineering Team is organized along discipline lines and functions as a matrix organization within the Program Management Team. This structure provides the full range of technical services required for the CHSTP and ensures close coordination and integration within the Engineering Team. The disciplines lines include:

- Engineering Management
- Infrastructure
- Systems
- Maintenance
- Rolling Stock
- Regulatory Approvals
- System Integration

3.1.1 Engineering Team Management

Resource, coordinate and manage Engineering Management Team including

- o Regular coordination meetings
- o Develop and implement schedule and priorities
- o Develop and implement engineering team protocols for production of internal documents
- o Develop and implement engineering team protocols for review of external documents
- o Maintain log of action items and requested information
- o Report progress of engineering team activities
- o Update engineering team schedules
- o Maintain ProjectSolve2 site for Technical Memo database, working files, and Reference documents

Coordinate and lead regular Engineering Manager teleconferences / meetings to disseminate and solicit information, and identify critical engineering issues with the Regional Managers and the Section Design Teams.

Provide general support to the Program Management Team related to engineering and technical issues

DELIVERABLES	Schedule
3.1.1a Engineering Team Management Plan and Protocols	Update as required
3.1.1b Documentation of coordination and progress meetings	Monthly
3.1.1c Progress Updates to Program Progress Report and Schedule	Monthly

Team Management - Future Year Assumptions

FY11/ 12 Assumptions

- Additional administrative support required

FY12/ 13 Assumptions

- No significant change from previous FY

3.2 Infrastructure

3.2.1 Technical Support

Regional Teams– Infrastructure technical support will be provided to the PMT Regional Managers and the Regional Consultants on an as-needed and as-requested basis. Support includes workshop reviews, consultation on application of criteria, and review of design variance requests. The major areas of technical support include:

- Alignment
- Structures including viaducts, tunnels and trenches
- Seismic Design
- Geotechnical
- Station Functionality and Architecture
- Maintenance Facilities

FRA Petition for a Rule of Particular Applicability (RPA) – CHSTP System Requirements (SR) for Infrastructure have been developed in accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability. Infrastructure Technical support will be provided as required during the development of the Petition for RPA, including revisions to CHSTP SRs based on review and discussion with the FRA.

CPUC Order for Instituting Rule (OIR) – Infrastructure Technical support will be provided as required to develop waivers or new rule in accordance with CPUC procedures, including development of new rule or waivers in support of an OIR application to CPUC.

DELIVERABLES	Schedule
3.2.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

3.2.2 Technical Advisory Panel (TAP)

Assemble a TAP to provide feedback on the methods, procedures, and criteria used in the seismic design of high-speed train structures. The panel will be comprised of recognized experts in the field of Seismology, Seismic and Geologic Hazards, Tunneling, Geotechnical Engineering, Soil-Structure Interaction Analysis, Performance-Based Earthquake Engineering and Structural Engineering. The TAP will be implemented as approved by the Authority.

The technical advisory panel activities include:

- Review, evaluate, analyze, and provide written comments on pertinent project specific standards, design criteria and philosophies, and technical memoranda specific to the member's field of expertise.
- Assess seismic design and performance criteria and make recommendations for improvement.
- Attend and participate in project TAP meetings on a quarterly basis.
- Participate in interim meetings and project teleconferences.

- Prepare draft and final report summarizing findings and recommendations.

DELIVERABLES	Schedule
3.2.2a Technical Advisory Panel Meeting Agenda and Minutes	Within 4 weeks of meeting date
3.2.2b Technical Advisory Panel Draft and Final Report	Jan 11 Draft Apr 11 Final

3.2.3 Architectural and Aesthetic Design Guidelines

Develop guidance with articulation of architectural objectives and principles, aesthetic guidelines, design criteria, elements of continuity and variability and project expectations. In addition to stations, architectural guidance will be developed for guide way structures, tunnel portals, maintenance facilities, operations control center and ancillary structures including vent shafts and substations, as agreed with the Authority.

Architectural activities to support development of Architectural and Aesthetic Design Guidelines include:

- Development of Architectural Technical Memoranda and Directive Drawings in support of Final Design. This guidance will be separate to the CHSTP Design Manual.
- Development of preliminary Signage and Graphics recommendations.
- Architectural Coordination with Regional Consultants
- Review of Station Design concepts and submittals to ensure functionality

DELIVERABLES	Schedule
3.2.3a Station Architecture and Design Principles	Oct 10 Draft Jan 11 Final
3.2.3b Architectural Aesthetic Guidelines	Feb 11 Draft May 11 Final
3.2.3c Preliminary Signage and Graphics Recommendations	Mar 11 Draft Jun 11 Final

Infrastructure - Future Year Assumptions

FY11/12 Assumptions

- Technical updates and revisions support
- Architectural review support for station development activities
- Development of Program Aesthetic Guidelines and Wayside Signage Guidelines

FY12/13 Assumptions

- Technical updates and revisions support
- Architectural review support for station development activities
- Architectural review support for application of Aesthetic Guidelines

3.3 Systems

Including Traction Power, Power Distribution, Train Controls and Communications

3.3.1 Technical Support

Regional Teams– Systems technical support will be provided to the PMT Regional Managers and the Regional Consultants on an as-needed and as-requested basis. Support includes workshop reviews, consultation on application of criteria, and review of design variance requests. The major areas of technical support include:

- Traction power design and utility company coordination
- Overhead Contact System (OCS) design coordination
- Train Control and Communications interface and wayside requirements
- Station and Maintenance Facilities communication and power requirements

FRA Petition for a Rule of Particular Applicability (RPA) – CHSTP System Requirements (SR) for Infrastructure have been developed in accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability. Systems Technical support will be provided as required during the development of the Petition for RPA, including revisions to CHSTP SRs based on review and discussion with the FRA.

CPUC Order for Instituting Rule (OIR) – Systems Technical support will be provided as required to develop waivers or new rule in accordance with CPUC procedures, including development of new rule or waivers in support of an OIR application to CPUC.

DELIVERABLES	Schedule
3.3.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

3.3.2 System Design

Finalize design approach/ strategy for key systems in support of preparing the Procurement Documents. The key HSR systems include:

- Traction Power Supply
- Overhead Contact System (OCS)
- Train Controls
- Communications

Systems design requirements will be incorporated into the Systems Procurement Specifications.

Confirm availability and technical viability of enabling technologies and systems, including

- Utility Company coordination and applications
- Traction Power Simulations
- OCS design standards for 220 mph

- Train Control System compatibility with other operator systems (Caltrain, Metrolink)
- Communications radio bandwidth availability

3.3.3 Performance Specifications

Prepare performance specifications for use in the Procurement Documents.

Technical areas to be addressed include:

- Traction Power System Analysis and Design
 - Traction Power Facility Equipment
 - Traction Power System Analysis
- Overhead Contact System (OCS)
 - OCS configuration
- Train Control
 - Suitability for U.S. Safety
 - Positive Train Control
- Communications
 - Communications System Architecture and Design
 - System Interfaces
 - SCADA

DELIVERABLES	Schedule
3.3.3a Performance Specification for Traction Power Supply	Jan 11 Draft Apr 11 Final
3.3.3b Performance Specification for Overhead Contact System	Mar 11 Draft Jun 11 Final
3.3.3c Performance Specification for Train Control System	Mar 11 Draft Jul 11 Final
3.3.3d Performance Specification for Communications	Feb 11 Draft May 11 Final

Systems - Future Year Assumptions

FY 11/ 12 Assumptions

- Technical updates and revisions support

FY 12/ 13 Assumptions

- Technical updates and revisions support

3.4 Railroad Operations (moved to Task 7)

3.5 Maintenance

3.5.1 Technical Support

Regional Teams – Maintenance technical support will be provided to the PMT Regional Managers and the Regional Consultants on an as-needed and as-requested basis. Support includes workshop reviews, consultation on application of criteria, and review of design variance requests. The major areas of technical support include:

- Heavy Maintenance Facility
- Lay-up and Storage Facilities
- Maintenance-of-Way (MOW) Facilities and Access

FRA Petition for a Rule of Particular Applicability (RPA) – Maintenance requirements are addressed in the CHSTP System Requirements (SR) which have been developed in accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability. Maintenance Technical support will be provided as required during the development of the Petition for RPA, including revisions to CHSTP SRs based on review and discussion with the FRA.

CPUC Order for Instituting Rule (OIR) – Maintenance technical support will be provided as required to develop waivers or new rule in accordance with CPUC procedures, including development of new rule or waivers in support of an OIR application to CPUC.

DELIVERABLES	Schedule
3.5.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

3.5.2 Preliminary Maintenance Plans

Maintenance of Rolling Stock – Finalize inspection and maintenance activities and frequency intervals (time or mileage as appropriate) typical for high speed rail rolling stock for purposes of determining rolling stock facility requirements and locations, for purposes of developing performance specifications. Maintenance criteria to include:

- Types of facilities
- Activities and major equipment and plant required at each of the facility types
- Required frequency
- Approximate location for each of the facility types
- Approximate size of each facility type
- Contact time at each location

Maintenance of Way (MOW) – Finalize inspection and maintenance activities and frequency intervals (time or mileage as appropriate) typical for high speed rail infrastructure for purposes of developing MOW facility requirements and procurement specifications.

DELIVERABLES	Schedule
3.5.2 a Preliminary Maintenance Plan – Rolling Stock Maintenance Plan and Facility Requirements	May 11
3.5.2b Preliminary Maintenance Plan -- MOW and Facility Requirements	Jun 11

3.5.3 Performance Specifications

Prepare performance specifications for use in the Procurement Documents.

Technical areas to be addressed include:

- Rolling Stock Maintenance Facilities, including Heavy Maintenance and Lay up/Storage sites
- MOW Maintenance Facilities

DELIVERABLES	Schedule
3.5.3a Performance Specification -- Rolling Stock Maintenance Plan and Facility Requirements	Feb 11 Draft Jun 11 Final
3.5.3b Performance Specification – MOW Maintenance Plan and Facility	Mar 11 Draft Jun 11 Final

Maintenance – Future Year Assumptions
FY 11/ 12 Assumptions

- Technical updates and revisions support

FY 12/ 13 Assumptions

- Technical updates and revisions support

3.6 Rolling Stock

3.6.1 Technical Support

Regional Teams– Rolling Stock technical support will be provided to the PMT Regional Managers and the Regional Consultants on an as-needed and as-requested basis. The major areas of technical support include:

- Rolling Stock operating and maintenance facility requirements

FRA Petition for a Rule of Particular Applicability (RPA) – Rolling Stock requirements are addressed in the CHSTP System Requirements (SR) which have been developed in accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability. Rolling Stock Technical support will be provided as required during the development of the Petition for RPA, including revisions to CHSTP SRs based on review and discussion with the FRA.

CPUC Order for Instituting Rule (OIR) – Rolling Stock technical support will be provided as required to develop waivers or new rule in accordance with CPUC procedures, including development of new rule or waivers in support of an OIR application to CPUC.

DELIVERABLES	Schedule
3.6.1 Revised Technical Memoranda in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

3.6.2 Rolling Stock Performance Specification

Prepare performance specifications for use in the Procurement Documents.

Confirm that the Rolling Stock Performance Specification is consistent with the major parameters of the CHSRA Business Plan, Programmatic EIR/S, and Basis of Design

Finalize the Rolling Stock Performance Specification suitable for use in supporting the procurement documents for the CHSTP Program.

Rolling Stock Performance Specification to be consistent with the CHSTP Table of Contents for Trainset Specification as outlined in EMT Memo date 26 June 09.

DELIVERABLES	Schedule
3.6.2 Performance Specification for Rolling Stock	Jun 11 Final

Rolling Stock – Future Year Assumptions

FY 11/ 12 Assumptions

- Implement and support industry outreach and review of Rolling Stock Performance Specification
- Technical updates and revisions

FY 12/ 13 Assumptions

- Implement and support vehicle procurement process
- Technical updates and revisions support

3.7 Regulatory Approvals

3.7.1 Federal Railroad Administration (FRA)

Petition for Rule of Particular Applicability (RPA)

- Prepare petition in accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability
- Prepare Petition for RPA consistent with FRA HSPR Safety Strategy and submit to FRA for development of a Notice of Proposed Rule Making (NPRM)
- Prepare System Description including key attributes for
 - Dedicated HSR Corridor
 - Shared Use Corridors
 - Concept of Operations
- Prepare the Substance of the Rule per FRA guidance
- Provide technical support to FRA during the NPRM process

DELIVERABLES	Schedule
3.7.1 FRA Petition for RPA	Oct 10

3.7.2 California Public Utilities Commission (CPUC)

Develop and submit Order for Instituting Rule (OIR) application per CPUC guidance

OIR application will address the following General Orders

- o GO 95 Overhead Electric Line Construction
- o GO 26D Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings
- o Other General Orders as determined with CPUC that are applicable to the CHSTP.

DELIVERABLES	Schedule
3.7.2 CPUC Order for Instituting Rule	Mar 11 Draft Sep 11 Final

3.7.3 CHSTP System Requirements Database Management

In accordance with TM 0.9 Process to Support Development of a Draft Rule of Particular Applicability, the CHSTP System Requirements Database will be maintained and updated as required to support the Petition for RPA and in support of other technical documents, including:

- o CPUC OIR
- o Elements of the Final CHSTP Design Manual

DELIVERABLES	Schedule
3.7.3 CHSTP System Requirements Management System Recommendation memo	Sep 10

3.7.4 Verification and Validation

Implement Verification and Validation (V&V) tools and processes to ensure that the California High-Speed Rail system meets specifications and that fulfills its intended purpose.

Complete relationships definition between Principal Requirements, Functional Requirements and CHSTP System Requirements.

Complete verification process for Principal Requirements.

Determine and recommend a Requirements Management approach and system that can support the CHSTP Program V&V process through construction.

DELIVERABLES	Schedule
3.7.4a EMT Memo – Definition of Principal – Functional Requirements Relationships	Oct 11
3.7.4b EMT Memo – Definition of Functional – System Requirements Relationships	Jun 11

3.7.4c EMT Memo - Verification of Principal Requirements	Dec 11

Regulatory Approvals – Future Year Assumptions

FY 11/ 12 Assumptions

- Provide technical support and coordination with FRA on comments from the public review on the Notice of Proposed Rule Making for the CHSTP
- Provide technical support and coordination with CPUC on comments from the public review on the Order Instituting Rulemaking for CHSTP
- Review and confirm compliance of the CHSTP SRS and EMT documents with the FRA NPRM and CPUC OIR
- Confirm verification and validation of the CHSTP System Requirements and the procurement and construction documents
- Management of a system requirements management tool

FY 12/ 13 Assumptions

- Provide technical support and coordination with FRA on comments on the Notice of Proposed Rule Making for the CHSTP
- Provide technical support and coordination with CPUC on the Order Instituting Rulemaking for CHSTP
- Confirm verification and validation of the CHSTP System Requirements and the procurement and construction documents
- Management of a system requirements management tool

3.8 CHSTP Standard Drawings

3.8.1 CHSTP Standard Drawings

Prepare and check Standard Drawings required to support the Procurement Documents Review and update Standard Drawings list as needed to support the Procurement Documents. The list of drawings is expected to be revised to reflect the developing needs of the Procurement Strategy.

Standard Drawings are anticipated for the following design elements. Categories for drawings include:

- Infrastructure
 - General
 - Track
 - Drainage
 - Retaining Walls
 - Sound Walls
 - Bridges
 - Stations
 - Access Control
- Overhead Contact System (OCS)

- Train Speed up to 220 mph
- Train Speed 125 mph or less
- Typical Arrangements
- Schematic by Section
- Traction Power
 - General
 - Traction Power Schematics by Section
 - Typical Power Schematics
 - Typical Conceptual Layouts
 - Typical Equipment Arrangements
 - Typical Neutral Return Systems
 - Typical Relay and Metering Full Line Diagram
 - Typical Duct Bank and Manhole Details
 - Typical Auxiliary Power Supply Diagram
 - Typical Ground Grid Design
 - Typical Schedule Template
 - SCADA Communications Interface by Section
- Train Controls
 - ATC System Concept Block Diagram
 - ATC- Typical
 - Station Interlocking Layout - Typical
 - Universal Interlocking Layout - Typical
 - Yard Transfer Track layout - Typical
 - Wayside Fixed Signs - Typical
 - Signal and Aspects
 - Switch Layout
 - Transponder Installation - Typical
 - Yard Power Derail - Typical
 - ATC Equipment Grounding and Bonding Arrangements
 - ATC On-Board DMI - Typical
 - ATC ATSHMI - Typical
 - ATC System Configuration and Interfaces
 - ATC Interfaces to Other Systems - Schematic - Typical
 - ATC Section Contract Limits
- Communications
 - Symbols and Abbreviations
 - Maintenance Management Information System Overview

- Cable Transmission System
- Fiber Optic Cable Network
- Supervisory Control and Data Acquisition System
- Telephone Systems
- Passenger Information System
- Video Surveillance Systems
- Wireless Communications System
- Equipment Cabinet and Interfaces
- Typical Communications Interface Cabinet
- Typical Fiber Optical Switching Node: Chassis Details
- Station Communications Plans
- Voice Radio Communications Requirement
- Microwave Distribution System (MDS)

DELIVERABLES	Schedule
3.8.1 List of Standard Plans	Updated as required
3.8.2 CHSTP Standard Drawings – Infrastructure	Sep 10
Set 1 (10 Drawings estimated)	
○ General	
○ Access Control	
Set 2 (20 Drawings estimated)	Dec 10
○ Retaining Walls	
○ Sound Walls	
Set 3 (50 Drawings estimated)	Mar 11
○ Track	
○ Drainage	
Set 4 (40 Drawings estimated)	Jun 11
○ Bridges	
○ Stations	
3.8.3 CHSTP Standard Drawings – Overhead Contact System	Sep 10
Set 1 (60 Drawings estimated)	
○ Train Speed up to 220 mph	
○ Train Speed 125 mph or less	
○ Typical Arrangements	
○ OCS Schematic (LA- Ana)	
Set 2 (10 Drawings estimated)	Dec 10
○ OCS Schematic (SF-SJ)	

<ul style="list-style-type: none"> ○ OCSSchematic (Merced-Fresno) 	
<p>Set 3 (20 Drawings estimated)</p> <ul style="list-style-type: none"> ○ OCSSchematic (San Jose-Merced) ○ OCSSchematic (Fresno-Bakersfield) ○ OCSSchematic (Palm-LA) 	Mar 11
<p>Set 4 (20 Drawings estimated)</p> <ul style="list-style-type: none"> ○ OCSSchematic (Bakersfield-Palmdale) ○ OCSSchematic (Merced-Sacramento) ○ OCSSchematic (LA-San Diego) 	Jun 11
<p>3.8.4 CHSTP Standard Drawings – Traction Power System</p> <p>Set 1 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ General ○ Typical Duct Bank and Manhole Details 	Sep 10
<p>Set 2 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Typical Power Schematics ○ Typical Auxiliary Power Supply Diagram 	Dec 10
<p>Set 3 (30 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Typical Conceptual Layouts ○ Typical Equipment Arrangements ○ Typical Relay and Metering Full Line Diagram ○ Typical Ground Grid Design 	Mar 11
<p>Set 4 (50 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Traction Power Schematics by Section ○ Typical Neutral Return Systems ○ Typical Schedule Template ○ SCADA Communications Interface by Section 	Jun 11
<p>3.8.5 CHSTP Standard Drawings – Communications</p> <p>Set 1 (20 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Symbols and Abbreviations ○ Maintenance Management Information System Overview ○ Cable Transmission System ○ Fiber Optic Cable Network 	Jan 11
<p>Set 2 (25 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Supervisory Control and Data Acquisition System ○ Telephone Systems ○ Passenger Information System ○ Video Surveillance Systems 	Mar 11

<ul style="list-style-type: none"> ○ Wireless Communications System 	
Set 3 (10 Drawings estimated) <ul style="list-style-type: none"> ○ Equipment Cabinet and Interfaces ○ Typical Communications Interface Cabinet ○ Typical Fiber Optical Switching Node: Chassis Details ○ Station Communications Plans ○ Voice Radio Communications Requirement ○ Microwave Distribution System (MDS) 	Jun 11
3.8.6 CHSTP Standard Drawings – Train Controls Set 1 (10 Drawings estimated) <ul style="list-style-type: none"> ○ ATC System Concept Block Diagram ○ ATC – Typical 	Sep 10
Set 2 (5 Drawings estimated) <ul style="list-style-type: none"> ○ Station Interlocking Layout - Typical ○ Universal Interlocking Layout - Typical ○ Yard Transfer Track layout - Typical 	Dec 10
Set 3 (10 Drawings estimated) <ul style="list-style-type: none"> ○ Wayside Fixed Signs - Typical ○ Signal and Aspects - Typical ○ Switch layout - Typical ○ Transponder Installation - Typical ○ Yard Power Derail - Typical 	Mar 11
Set 4 (10 Drawings estimated) <ul style="list-style-type: none"> ○ ATC Equipment Grounding and Bonding Arrangements - Typical ○ ATC On-Board DMI - Typical ○ ATC ATSHMI - Typical ○ ATC System Configuration and Interfaces ○ ATC Interfaces to Other Systems - Schematic - Typical ○ ATC Section Contract Limits 	Jun 11
3.8.7 CHSTP Standard Drawings – Maintenance Facilities (20 Drawings estimated) <ul style="list-style-type: none"> ○ To be determined 	Jun 11

Standard Drawings – Future Year Assumptions
FY 11/ 12 Assumptions

- Prepare addenda and revisions to Standard Drawings as needed

FY 12/ 13 Assumptions

- Prepare addenda and revisions to Standard Drawings as needed

3.9 Standard Specifications

3.9.1 Standard Specifications

Maintain listing of Standard Specifications required to support the Procurement Strategy

Standard Specifications will be prepared to support the final design and construction of the CHSTP. The format of the CHSTP Standard Specifications will be based on CSI (Construction Specifications Institute) guidelines, and will consider similar standard specifications developed by Caltrans and railroad operators in California.

CHSTP Standard Specifications categories include:

- Division 01 General Requirements
- Division 02 Existing Conditions
- Division 03 Concrete
- Division 04 Masonry
- Division 05 Metals
- Division 06 Wood, Plastics, and Composites
- Division 07 Thermal and Moisture Protection
- Division 08 Openings
- Division 09 Finishes
- Division 10 Specialties
- Division 11 Equipment
- Division 12 Furnishings
- Division 13 Special Construction
- Division 14 Conveying Equipment
- Division 21 Fire Suppression
- Division 22 Plumbing
- Division 23 HVAC
- Division 25 Integrated Automation
- Division 26 Electrical
- Division 27 Communications
- Division 28 Electronic Safety and Security
- Division 31 Earthwork
- Division 32 Exterior Improvements
- Division 33 Utilities
- Division 34 Transportation
 - Trackwork
 - Traction Power
 - Train Control
 - Commissioning

DELIVERABLES	Schedule
3.9.1 Updated List of Standard Specifications	Quarterly
3.9.2 CHSTP Standard Specifications by Division	Sep 10 (Substantially complete)
Set 1 (100 specifications estimated) <ul style="list-style-type: none"> o Division 01 General Requirements o Division 22 Plumbing 	
Set 2 (100 specifications estimated) <ul style="list-style-type: none"> o Division 09 Finishes o Division 10 Specialties o Division 21 Fire Suppression o Division 26 Electrical o Division 31 Earthwork 	Dec 10 (Substantially complete)
Set 3 (100 specifications estimated) <ul style="list-style-type: none"> o Division 02 Existing Conditions o Division 03 Concrete o Division 04 Masonry o Division 05 Metals o Division 27 Communications o Division 28 Electronic Safety and Security o Division 32 Exterior Improvements 	Mar 11 (Substantially complete)
Set 4 (200 specifications estimated) <ul style="list-style-type: none"> o Division 06 Wood, Plastics, and Composites o Division 07 Thermal and Moisture Protection o Division 08 Openings o Division 11 Equipment o Division 12 Furnishings o Division 13 Special Construction o Division 14 Conveying Equipment o Division 23 HVAC o Division 25 Integrated Automation o Division 33 Utilities o Division 34 Transportation 	Jun 11 (Substantially complete)

Standard Specifications – Future Year Assumptions

FY 11/ 12 Assumptions

- Prepare addenda and revisions to Standard Specifications as needed
- Review of special provisions prepared by the Designers

FY 12/ 13 Assumptions

- Prepare addenda and revisions to Standard Specifications as needed
- Review of special provisions prepared by the Designers

3.10 Cost Estimating

3.10.1 15 % Design Level Capital Cost Estimate

Maintain the CHSTP Program level capital cost item list and units of measurement for use by the Regional Consultants in developing cost estimates for the 15% level submittals.

As required, update unit prices for each item identified in the Item List. Unit prices will be statewide costs, with local adjustments by the Regional teams to reflect unique regional design or site conditions as appropriate.

Conduct reviews and workshops with the Regional Managers and Regional Consultant teams to confirm compliance with Program requirements and adherence to industry best practices for cost estimating.

DELIVERABLES	Schedule
3.10.1 15% Cost Estimate Workshop and Review Comments	Within 4 weeks after a formal workshop

3.10.2 30% Design Level Capital Cost Estimate Item List and Unit Costs

Implement cost estimate approach to support the cost methodology required for the FTA New Starts Program, in anticipation of an FRA funding program mandate similar to FTA funding program requirements.

Develop cost item list and measurement for use by the Regional Consultants in developing cost estimates for the 30% level submittals.

As required, update unit prices for each item identified in the Item List. Unit prices will be statewide costs, with local adjustments by the Regional teams to reflect unique regional design or site conditions as appropriate.

Conduct reviews and workshops with the Regional Managers and Regional Consultant teams to confirm compliance with Program requirements and adherence to industry best practices for cost estimating.

DELIVERABLES	Schedule
3.10.2 Cost items and Unit Prices for 30% Design Submittal	Jan 11

3.10.3 Develop Program Level Estimate

Develop and implement cost estimating methodology to support roll-up to Program levels allowing for presentation of costs by construction category and geographic limits as identified in the Program level documents, and consistent with FRA ARRA application requirements.

Program Level Estimates will be based on best available Regional section information at the time including previous Program level data, 15% Design Submittal cost data, or 30% Design submittal cost data.

DELIVERABLES	Schedule
3.10.3a Program Estimate Updates	As requested

Cost Estimating – Future Year Assumptions

FY 11/ 12 Assumptions

- Review and update 15% Design Cost Estimate Methodology and Unit prices as needed
- Review and support 15% Design Submittal Cost Estimates prepared by Designers
- Review and update 30% Design Cost Estimate Methodology and Unit prices as needed
- Review and support 30% Design Submittal Cost Estimates prepared by Designers
- Prepare Program level cost estimate summaries

FY 12/ 13 Assumptions

- Review and update 30% Design Cost Estimate Methodology and Unit prices as needed
- Review and support 30% Design Submittal Cost Estimates prepared by Designers
- Prepare Program level cost estimate summaries

3.11 CHSTP Design Manual (Final)

The purpose of the Design Manual is to provide design guidance for the final design of the California High-Speed Train Project, and ensure a safe and reliable operating railway that meets the performance requirements as set forth by the CHSRA.

The Design Manual will include the design requirements for the five subsystems including Infrastructure, Systems, Rolling Stock, Operations, and Maintenance. These sections identify specific areas for which design criteria and guidelines are to be established.

The Design Manual currently consists of 27 sections as noted below.

- Section 1.0 General
- Section 2.0 Climatic Conditions
- Section 3.0 Design Survey and Mapping
- Section 4.0 Track Geometry
- Section 5.0 Trackway Clearances
- Section 6.0 Trackwork
- Section 7.0 Station Design
- Section 8.0 Civil Site Design
- Section 9.0 Drainage Design
- Section 10.0 Utilities
- Section 11.0 Earthwork
- Section 12.0 Geotechnical Design
- Section 13.0 Seismic Design

- Section 14.0 Structural Design
- Section 15.0 Tunnel Design
- Section 16.0 Electrical Systems
- Section 17.0 Mechanical
- Section 18.0 Traction Power Facilities
- Section 19.0 Overhead Contact System and Return System
- Section 20.0 Grounding, Bonding and Lighting Protection System
- Section 21.0 Corrosion Control
- Section 22.0 Signalling
- Section 23.0 Train Control
- Section 24.0 Electromagnetic Compatibility and Interference
- Section 25.0 Supervisory Control and Data Acquisition System
- Section 26.0 Communications
- Section 27.0 Rolling Stock Interface Requirements

DELIVERABLES	Schedule
3.11.1 Final CHSTP Design Manual	Jun 11
Set 1 <ul style="list-style-type: none"> ○ Section 1.0 General ○ Section 2.0 Climatic Conditions ○ Section 3.0 Design Survey and Mapping 	Sep 10 (Substantially complete)
Set 2 <ul style="list-style-type: none"> ○ Section 4.0 Track Geometry ○ Section 5.0 Trackway Clearances ○ Section 10.0 Utilities ○ Section 17.0 Mechanical ○ Section 18.0 Traction Power Facilities 	Dec 10 (Substantially complete)
Set 3 <ul style="list-style-type: none"> ○ Section 7.0 Station Design ○ Section 8.0 Civil Site Design ○ Section 9.0 Drainage Design ○ Section 11.0 Earthwork ○ Section 12.0 Geotechnical Design ○ Section 16.0 Electrical Systems ○ Section 19.0 Overhead Contact System and Return System Section ○ 24.0 Electromagnetic Compatibility and Interference 	Mar 11 (Substantially complete)
Set 4 <ul style="list-style-type: none"> ○ Section 6.0 Trackwork 	Jun 11 (Substantially

<ul style="list-style-type: none"> o Section 13.0 Seismic Design o Section 14.0 Structural Design o Section 15.0 Tunnel Design o Section 20.0 Grounding, Bonding and Lighting Protection System o Section 21.0 Corrosion Control o Section 22.0 Signaling o Section 23.0 Train Control o Section 25.0 SCADA o Section 26.0 Communications o Section 27.0 Rolling Stock Interface Requirements 	complete)
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Standard Specifications – Future Year Assumptions

FY11/12 Assumptions

- Prepare addenda and revisions of the CHSTP Design Manual as needed

FY12/13 Assumptions

- Prepare addenda and revisions of the CHSTP Design Manual as needed

3.12 Design Submittal Reviews

The Design Submittal Review process needs to support the California High-Speed Rail Program in the following key areas:

- Confirm a system design approach by ensuring technical compliance with the CHSTP System Requirements and CHSTP Design Criteria
- Confirm there is a technically feasible and constructible option that meets the objectives of the CHSRA Program and can serve as the basis for a refined construction cost estimate
- Develop the CHSRA technical team to be knowledgeable of the specific design elements of each section and to generate sufficient technical resource levels to manage the procurement and final design phases of the CHSRA Program

Based on the volume of design submittals for the 15% and 30% design phases and combined with the accelerated delivery to support the ARRA funding requirements, the estimated level of effort to manage and review the Regional Consultant Design Submittals over FY10/11 and 11/12 is in the range of 25,000 hours per FY and will vary depending on the number of design packages prepared to support the Design/Build procurement process. It should also be noted that the submittal reviews will likely be on the critical path for completion of the 15% and 30% design submittals.

To achieve the above stated objectives, the design submittal review responsibilities within the PMT are as follows:

- Overall management of the design submittal review process and schedule from receipt of the submittal to closure of the comments is to be the responsibility of the PMT Regional Manager or delegate. This includes distribution of submittals, setting up of the workshop meetings, and resolving outstanding comments/issues via Review Manager.

- The PMT Regional Management Team to perform reviews of the basic infrastructure elements including alignment, utilities, drainage, right-of-way, and grade separations.
- The EMT will provide support for all elements of the design submittals as requested by the Regional Managers with specific assigned responsibility on the more complex technical elements including viaducts, tunnels, trenches, geotechnical, seismic, traction power, OCS, train controls, and communications.

This assignment of responsibilities roughly splits the level of effort 40/60 between the Regional Manager and EMT technical resources, respectively, and is presented in more detail in the following matrices. Depending on the section, each Regional Manager will need to allocate a 50%-75% FTE of their FY 10/11 staff increase to the Submittal Review management effort. As the review requirements are also affected by the procurement strategy, the level of effort for submittal reviews will need to be monitored during the year to confirm that it is adequately resourced.

Step	15% Design Submittal Review Process Activity	RC	RM / RE	EMT	QA/QC
1	Receive and Distribute In-Progress Design Submittal	-	R	-	-
2	Schedule OTS Submittal Review Meeting	S	R	S	-
3,4,5	Review and Comment (overall mgmt)	-	R	-	-
a	Alignment	-	R	S	-
b	Structures/Tunnels	-	-	R	-
c	Grade Separations	-	R	S	-
d	Traction Power and Distribution	-	-	R	-
e	Utilities	-	R	S	-
f	Right of Way	-	R	-	-
g	Stations	-	S	R	-
h	Maintenance Facilities	-	S	R	-
6	Respond to Comments	R	-	-	-
7	Review Responses and Resolve "Disagreements"	-	R	S	-
8	Verify that drawings/reports are updated per the agreed response to comments	R	-	-	-
8a	Audit Verification process	S	S	-	R
9	Prepare Draft Design Submittal for Integration Reviews	R	-	-	-
10	Schedule OTS Submittal Review Meeting	S	R	S	-
11, 12, 13	Review and Comment (overall mgmt)	-	R	-	-
a	Design Drawings	-	S	R	-
b	Cost Estimate	-	R	S	-
c	Design Variances	-	S	R	-
d	Technical Reports - Structures, Tunnels, Stations, Maint Facilities	-	S	R	-
e	Technical Reports - Other	-	R	S	-
14	Respond to Comments	R	-	-	-
15	Review Responses and Resolve "Disagreements"	-	R	S	-
16	Verify that drawings/reports are updated per the agreed response to comments	R	-	-	-
16a	Audit Verification process	S	S	-	R
17	Prepare Record Issue of Design Submittal	R	-	-	-

R = Responsible, S = Support

Step	30% Design Submittal Review Process Activity	RC	RM / RE	EMT	QA/QC
1	Receive and Distribute Draft Design Submittal ready for Procurement	-	R	-	-
2	Schedule OTS Submittal Review Meeting	S	R	S	-
3,4,5	Technical Compliance / Feasibility (Overall Mgmt)	-	R	-	-
a	Alignment	-	R	S	-
b	Structures/Tunnels	-	-	R	-
c	Grade Separations	-	R	S	-
d	Traction Power and Distribution	-	-	R	-
e	Utilities	-	R	S	-
f	Right of Way	-	R	-	-
g	Stations	-	S	R	-
h	Maintenance Facilities	-	S	R	-
i	Design Variances	-	S	R	-
j	Technical Reports - Structures, Tunnels, Stations, Maint Facilities	-	S	R	-
k	Technical Reports - Other	-	R	S	-
6	Integration and Procurement Reviews (Overall Mgmt)	R	-	-	-
a	Design Drawing Package incl. Directive and Standard Drawings - Integration Review	-	S	R	-
b	Cost Estimate	-	R	S	-
c	Specifications / Special Provisions	-	S	R	-
7	Respond to Comments	R	-	-	-
8	Review Responses and Resolve "Disagreements"	-	R	S	-
9	Verify that drawings/reports are updated per the agreed response to comments	R	-	-	-
9a	Audit Verification process	S	S	-	R
10	Prepare Record Issue of Design Submittal	R	-	-	-

3.12.1 Submittal Reviews and Compliance Reviews

Review design submittals for compliance with design criteria and standards.

Reviews will be performed for compliance with infrastructure, systems, and maintenance requirements.

Reviews will be managed using Review Manager, a web-based comments management tool, to ensure that all comments are verified and closed.

Review and comment on design variance requests.

Design Submittal Reviews will be performed in accordance with the current version of TM 0.7 Design Submittal Protocol.

Design submittal reviews – Future Year Assumptions FY11/12 Assumptions

- Perform compliance reviews of the 15% Design Submittals as submitted by the Designers
- Perform compliance reviews of the 30% Design Submittals as submitted by the Designers

FY 12/ 13 Assumptions

- Perform compliance reviews of the 30% Design Submittals as submitted by the Designers

DELIVERABLES	Schedule
3.12.1 Submittal Review Comments via Review Manager	As required

3.13 Risk Management

3.13.1 Risk Management Program and Program Risk Register

The Risk Management Program is structured around the following three fundamental activities:

- Assemble the means to perform the work required by the Project (Strategic Risks);
- Perform the project work (Technical Risks); and
- Monitor project cost and schedule as necessary (Cost and Schedule Risks).

The CHSTP Risk Management Plan is considered an element of the PMT Program Management Plan and includes:

- Communicate the objectives of the CHSTP risk management program and the particular methodology for qualitative and quantitative assessment of risk
- Establish consistent protocols for identification and analysis of risks based on the DOD MIL-STD 882D.
- Update existing risk register, assist in identifying new risks and dependencies within the regional teams and across regional boundaries, and develop management strategies for individual risks

The CHSTP Risk Management Plan activities and reporting are keyed to the regional project development milestones: 15% Design, Draft EIR/ EIS, Final EIR/ EIS, 30% Design and release of the RFQ/ RFP for design and construction. Anticipated segments to be included in the Risk Management program for FY 10/ 11 include:

- 15% Design Level
 - San Francisco – San Jose
 - San Jose – Merced
 - Merced – Fresno
 - Fresno – Bakersfield
 - Palmdale – Los Angeles
 - Los Angeles – Anaheim
 - Altamont Corridor
- 30% Design Level
 - San Francisco – San Jose
 - Merced – Fresno
 - Fresno – Bakersfield
 - Los Angeles to Anaheim

Risk Management activities will be supported by various disciplines within the PMT including:

- Infrastructure
- Systems
- Operations and Safety
- Maintenance
- Rolling Stock
- Systems Integration

DELIVERABLES	Schedule
3.13.1 Updated Risk Register	Quarterly beginning Sep 10

Risk Management – Future Year Assumptions

FY 11/ 12 Assumptions

- Manage and coordinate Risk Management Program for the CHSTP including identification of system wide risks
- Update Risk Registers and prepare Program level risk analysis for consideration and action by the Authority to reduce or mitigate identified risks

FY 12/ 13 Assumptions

- Manage and coordinate Risk Management Program for the CHSTP including identification of system wide risks
- Update Risk Registers and prepare Program level risk analysis for consideration and action by the Authority to reduce or mitigate identified risks

3.14 Procurement Support

3.14.1 Technical Support

Provide technical support on an as-requested basis during the development and implementation of the Procurement Strategy and Procurement Documents

Technical areas of support include:

- Infrastructure
- Systems
- Maintenance
- Rolling Stock
- Systems Integration

DELIVERABLES	Schedule
3.14.1 TBD based on request	As required

Procurement – Future Year Assumptions

FY 11/ 12 Assumptions

- Provide technical support in the development and implementation of the procurement strategy
- Review and comment on proposer technical qualifications as requested
- Review and comment on proposer change requests during the procurement phase

FY 12/ 13 Assumptions

- Provide technical support in the development and implementation of the procurement strategy
- Review and comment on proposer technical qualifications as requested
- Review and comment on proposer change requests during the procurement phase

3.15 Survey Control

3.15.1 Establish Network of Control Survey Monuments

Establish control survey monuments at two mile intervals along the CHSTP alignment to ensure that all surveys use the same adjustment and epoch

Support control transitions between zones of the California Coordinate System are handled uniformly.

Establish control during preliminary design and maintain through the construction period.

Where possible, tie in to Existing California High Precision Geodetic Network (CA-HPGN and CA-HPGN-D) stations;

- Datum will be NAD 1983 (2007) horizontal
- Datum will be NAVD 88 vertical
- California Coordinate System will be used

The control monumentation will be established for use during all phases of the Project

- 30% Design
- Final Design
- Right-of-way definition and delineation
- Construction control

Control Survey Monuments to be established by section based on Program delivery priorities.

Prepare and submit quarterly Control Survey Monument Report

DELIVERABLES	Schedule
3.15.1a Establish 250 Control Survey Monuments	June '11
3.15.2b Maintain Control Survey Monuments – Maintenance Report	Quarterly

Survey Control – Future Year Assumptions
FY11/12 Assumptions

- CHSTP Survey monument maintenance

FY12/13 Assumptions

- CHSTP Survey monument maintenance

3.16 System Integration

3.16.1 CHSTP System Requirements

Confirm interface issues as identified in the CHSTP System Requirements Database have been appropriately considered and addressed within the CHSTP System Requirements documentation

Coordinate with the applicable EMT Subsystem Manager to address and resolve identified integration and interface issues.

Post comments as appropriate in Review Manager for tracking and management.

DELIVERABLES	Schedule
3.16.1 System Requirement Support	As required

3.16.2 CHSTP Design Manual Reviews

Confirm that identified CHSTP SR interface and integration resolution is reflected in the CHSTP Design Manual.

Post comments as appropriate in Review Manager for tracking and management.

DELIVERABLES	Schedule
3.16.2 Design Manual Review	As required

3.16.3 Regional Consultant Design Submittals

As available, review 15% and 30% Design Submittals for boundary integration issues of adjacent sections.

Coordinate with the applicable Regional Managers and/or Regional Engineers to address and resolve identified boundary integration issues.

Post comments as appropriate in Review Manager for tracking and management.

Design submittal pairs to review for integration include:

- 15% Design Level
 - San Francisco-San Jose / San Jose-Merced
 - San Jose-Merced / Merced-Fresno
 - Merced-Fresno / Fresno-Bakersfield
 - Palm-Los Angeles / Los Angeles-Anaheim
 - Altamont / San Jose

DELIVERABLES	Schedule
3.16.3 Regional Consultant Design Submittals Review	As required

System Integration – Future Year Assumptions

FY 11/ 12 Assumptions

- Confirm integration of 15% Design Submittals with Systems elements and adjacent sections
- Confirm integration of 30% Design Submittals with Systems and adjacent sections

FY 12/ 13 Assumptions

- Confirm integration of 30% Design Submittals with Systems elements and adjacent sections

Task 4 Environmental Review

4.1 Project Task Management

Provide daily program management and oversight of the environmental work performed by the ten Regional teams. Liaison between Authority staff, Federal Railroad Administration (FRA), and the environmental managers for the Regional teams; provide regular briefings to Authority staff on the status of environmental work; and prepare, as needed, correspondence, memos and other documentation for Authority use.

TASK 4.1 DELIVERABLES		Schedule
4.1.1	Attend 12 monthly Program Management (PM) and 12 PM/ Regional Team meetings. Provide progress reports on environmental status of Regional teams at these meetings Develop	Monthly
4.1.2	Conduct 26 bi-weekly environmental coordination conference calls with FRA, Authority, and Attorney General's Office, to review environmental progress and discuss issues. Prepare meeting agenda, action item log, and meeting minutes	Bi-Weekly
4.1.3	Conduct 26 bi-weekly conference calls with the environmental leads for each of the ten Regional teams to review progress and discuss issues Prepare meeting agenda, action item log, and meeting minutes.	Bi-Weekly
4.1.4	Attend Team meetings for each of the ten Regional teams to monitor progress and manage schedule.	As needed
4.1.5	Monitor overall environmental management schedule. Monthly progress reports will be prepared and presented to the Authority and FRA for each of the Regional teams.	Monthly
4.1.6	Prepare monthly status reports to include all of the activities listed above	Monthly
4.1.7	Provide regular briefings to FRA and Authority staff as needed	As needed
4.1.8	Prepare written materials for FRA and Authority use, as needed.	As needed

4.2 Program Management Coordination

Coordinate and facilitate the implementation of environmental tasks among the four Regional teams (i.e., Los Angeles to San Diego, Merced to Sacramento, Bakersfield to Palmdale, and Altamont Corridor) that will be preparing the Alternatives Analysis and the six Regional teams preparing environmental technical reports/ environmental document sections. The PMT will provide clear and consistent technical guidance in the form of technical memos addressing the data and information needed by the regional teams, monitor agency consultation activities, review and approve deliverables, and monitor project schedule.

TASK 4.2 DELIVERABLES		Schedule
4.2.1	Traffic Impact Criteria Technical Memo	July 2010
4.2.2	Finalize Noise & Vibration Mitigation Policy	August 2010
4.2.3	Noise Fact Sheet / Noise Simulation Program	July 2010
4.2.4	Draft Station Oriented Development MOU	October 2010
4.2.5	Context Sensitive Solutions for Authority Website	September 2010
4.2.6	Guidance on Implementing Renewable Energy Policy	October 2010
4.2.7	Guidance on Implementing Sustainability for the CAHSIP	October 2010
4.2.8	Revised Alternatives Analysis Methods for Project-Level EIR/EIS	July 2010
4.2.9	Provide additional technical guidance memos to the Regional teams, as needed	As needed
4.2.10	Provide summaries of regional team and PMT progress and schedule for PMO. Attend monthly meetings with PMO.	Monthly
4.2.11	Provide guidance memos on protocol and legal adequacy on maintaining administrative records	As needed

4.3 Environmental Scoping

Review the relevant materials related to environmental scoping, including the Notice of Intent (NEPA) and Notice of Preparation (CEQA), display and handout materials to be used at individual scoping meetings; mailing lists and notice distribution lists; and an Environmental Scoping Report.

TASK 4.3 DELIVERABLES		Schedule
4.3.1	Comments on each HST Section NOI and NOP	Completed
4.3.2	Comments on each HST section scoping materials as listed above	Completed
4.3.3	Comment on Draft Scoping Reports	Completed
[TASK 4.3 HAS BEEN COMPLETED]		

4.4 Alternatives Analysis (AA) Process

Provide guidance to the Los Angeles to San Diego, Merced to Sacramento, Bakersfield to Palmdale, and Altamont Corridor Regional teams in developing project alternatives for preliminary design and environmental review. Review of Supplemental AA Reports prepared by the ARRA Regional teams and the Palmdale-LA and San Jose-Merced Regional teams. Review of the Preliminary AA Reports prepared by the Bakersfield to Merced, LA to San Diego, Merced to Sacramento, and Altamont Corridor Regional Teams.

Assist with the agency and stakeholder/public coordination conducted as part of the AA process in consultation with the FRA, Authority, and AG.

TASK 4.4 DELIVERABLES		Schedule
4.4.1	Notes on meetings with the environmental lead for the Regional teams on the implementation of the AA process (as needed)	As needed
4.4.2	Comments on the Preliminary and Supplemental AA reports 20 days after submittal	As submitted
4.4.3	Review & approve the Preliminary and Supplemental AA reports before submittal to Authority & FRA 10 days after submittal	As submitted

4.5 Environmental Methods

Continue to modify and update, as needed, the fifteen environmental methods presented in the Project Environmental Analysis Methodologies Report prepared as Version 3 during FY09/ 10 for conducting the technical analyses needed to produce a project environmental document.

TASK 4.5 DELIVERABLES		Schedule
4.5.1	Updates of methodologies issued as needed	As needed
4.5.2	Prepare Version 4 of the Project Level Environmental Analysis Methodologies Report.	February 2011

4.6 Public/Agency Involvement and Coordination

Organize, coordinate, lead/attend public and agency meetings on behalf of the FRA and Authority staff. These will include:

- Plan and participate at two Statewide Agency Meetings in Sacramento (Fall/Spring)
- Coordinate with Regional teams on resource agency, stakeholder, and public meetings in each of the following regions in support of the AA process:
 - San Jose to San Francisco
 - San Jose to Merced
 - Merced to Fresno
 - Fresno to Bakersfield
 - Bakersfield to Palmdale
 - Palmdale to Los Angeles
 - Los Angeles to Anaheim
 - Los Angeles to San Diego
 - Merced to Sacramento
 - Altamont Corridor
- Coordinate with regional teams on convening tribal and environmental justice coordination meetings

Following these meetings, notes will be prepared summarizing the issues discussed, decisions reached, and subsequent actions to be taken.

TASK 4.6 DELIVERABLES		Schedule
4.6.1	Six month update of statewide agency participants	August 2010 & February 2011
4.6.2	Prepare agendas, presentations, and notices for Statewide Agency meetings and distribute	As needed
4.6.3	Conduct Statewide Agency meetings	Fall 2010 and , Spring 2011
4.6.4	Prepare and distribute Statewide Agency meeting minutes	Fall 2010 and Spring 2011
4.6.5	Coordinate and lead/ attend resource agency, stakeholder, public meetings in each of the ten Regional team HST Project Sections	Bi-Monthly
4.6.6	Review and comment on interagency meeting agendas, handout materials, and presentation graphics	As needed
4.6.7	Review and comment on interagency meeting notes	As needed

4.7 Review of Environmental, Social, Economic and Community Issues

Review and provide guidance on environmental, social, economic and community technical and policy issues for each the Regional teams. Provide data and information requested by the Regional teams. A log will be maintained with all the requests for information and issues raised by the regional teams along with responses provided by the PMT. These issues will include but not be limited to:

• Land use, demographics & socioeconomics	• Hazardous Materials
• Visual and aesthetics	• Utilities
• Air Quality	• Energy
• Noise and Vibration	• Public Safety
• Biological Resources and Ecosystems	• Right-of-Way Acquisition/ Relocation
• EMI/EMF	• Environmental Justice
• Traffic and Circulation	• Water Quality / Water Resources
• Prime and Unique Farmland	• Community Impacts
• Cultural Resources	• Construction Impacts
• Parklands and Open Space; Section 4(f)	• Cumulative and Secondary Impacts

TASK 4.7 DELIVERABLES		Schedule
4.7.1	Log of any issues raised by the Regional teams will be prepared and maintained on ProjectSolve to be used as a reference for the preparation of environmental studies	As needed

4.8 Review of Technical Reports and DEIR/EIS

Provide review of the Purpose and Need, Project Descriptions, technical reports and the Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) sections prepared by the Regional teams as indicated in Table 1. It is assumed that two cycles of reviews will be needed for each of the 71 documents listed in Table 1. The following documents are assumed to be ready for review during the FY10/ 11:

- 6 Project Descriptions
- 6 Purpose & Needs
- 66 Technical Report Baseline Sections
- 66 Technical Report Impact/Mitigation Sections
- 108 DEIR/EIS Baseline Sections
- 108 DEIR/EIS Impact/Mitigation Sections
- 6 Admin Draft DEIR/EIS
- 5 Draft DEIR/EIS
- 5 Responses to Comments
- 5 Admin Final DEIR/EIS
- 25 Environmental Concurrence Documents
- 5 Mitigation Monitoring Reports
- 4 Final DEIR/EIS

Coordinate and manage the comments provided by the PMT, Authority, and FRA. Review of response to comments and revisions to technical reports and DEIR/EIS sections.

TASK 4.8 DELIVERABLES		Schedule
4.8.1	Prepare and distribute comments to all environmental technical reports and EIR/ES sections as per the deliverable dates listed in Table 1.	As Submitted
4.8.2	Review of revised technical reports, DBR/ES sections	As Submitted
4.8.3	Review of Administrative Draft EIR/ES	As Submitted
4.8.4	Review of Draft EIR/ES	As Submitted
4.8.5	Review of Response to Comments	As Submitted
4.8.6	Review of Admin. Draft Final EIR/ES	As Submitted
4.8.7	Review of Section 404 Concurrence	As Submitted
4.8.8	Review of 106 Concurrence	As Submitted
4.8.9	Review of Section 7 Consultation	As Submitted
4.8.10	Review of Section 408/208.10 Coordination	As Submitted
4.8.11	Review of Section 401 Coordination	As Submitted
4.8.12	Review of Mitigation Monitoring Report	As Submitted
4.8.13	Review of Final EIR/EIS	As Submitted
4.8.14	Review of NOD and ROD	As Submitted

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable – 2010-11	LA- Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI- Merced	SI-SF	LA-SD	Merced- SAC	Altamont
Purpose & Need	Jul10	Jul10	Dec10	Jul10	Jul10	Jul10	Done	Dec11	Nov11	Feb11
Project Description	Jul10	Jul10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jun11
Technical Reports										
Transportation – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Transportation – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Air Quality – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Air Quality – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Noise & Vibration – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Noise & Vibration – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Biological Resources & Wetlands – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Biological Resources & Wetlands – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Hydrology and Water Resources – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Hydrology and Water Resources – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Geology, Soils, Seismicity – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Geology, Soils, Seismicity – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
HAZARDOUS MATERIALS/ WASTES – EXISTING CONDITIONS	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
HAZARDOUS MATERIALS/ WASTES – IMPACTS	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Community Impact Assessment – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Community Impact Assessment – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Aesthetics & Visual Quality – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI- Merced	SI-SF	LA-SD	Merced- SAC	Altamont
Aesthetics & Visual Quality – Impacts	July 10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Cultural Resources – Existing Conditions	July 10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Cultural Resources – Impacts	July 10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Draft Relocation Impact Report – Existing	July 10	July 10	Jul11	Jul10	Aug10	Jan11	Aug10	Jan12	Nov11	Jul11
Draft Relocation Impact Report - Impacts	July 10	Aug10	Aug11	Jul10	Sept10	Feb11	Jul10	Mar12	Jan12	Jul11
BR/ ES Sections										
Transportation – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Transportation – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Air Quality – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Air Quality – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Noise & Vibration – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Noise & Vibration – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
EMI/EMF – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
EMI/EMF – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Public Utilities and Energy – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Public Utilities and Energy – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Biological Resources & Wetlands – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Biological Resources & Wetlands – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11

Table 1 (cont'd)
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SJ-Merced	SJ-SF	LA-SD	Merced- SAC	Altamont
Hydrology and Water Resources – Existing Conditions	Aug 10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Hydrology and Water Resources – Impacts	Jul 10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Geology, Soils, Seismicity – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Geology, Soils, Seismicity – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
HAZARDOUS MATERIALS/ WASTES – EXISTING CONDITIONS	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
HAZARDOUS MATERIALS/ WASTES – IMPACTS	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Safety and Security – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Safety and Security – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Socioeconomics, Communities, and Environmental Justice – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Socioeconomics, Communities, and Environmental Justice – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Local Growth, Station Planning & Land Use – Existing Conditions	July 10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Local Growth, Station Planning & Land Use – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Agricultural Land – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Agricultural Land – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SJ-Merced	SJ-SF	LA-SD	Merced- SAC	Altamont
Parks, Recreation, and Open Space – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Parks, Recreation, and Open Space – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Aesthetics & Visual Quality – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Aesthetics & Visual Quality – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Cultural Resources – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Cultural Resources – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Cumulative Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Section 4(f) and Section 6(f) Evaluations – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Section 4(f) and Section 6(f) Evaluations – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul 10	Apr12	Feb12	Aug11
Administrative Draft EIR/ES	Sept 10	Oct 10	Sep11	Jul10	Oct 10	Mar11	Aug10	Jun12	Apr12	Oct 11
Draft EIR/ES for Public Circulation	Dec 10	Jan11	Dec11	Oct10	Dec10	Jul11	Nov10	Dec12	Oct 12	May12
Response to Comments	Apr11	May11	Mar12	Feb11	Apr11	Nov11	Mar11	May13	Mar13	Oct 12
Administrative Final EIR/ES	May11	Jun11	May12	Mar11	May11	Dec11	Apr11	Jul13	Apr13	Jan13
Section 404 Concurrence	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
106 Concurrence	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13

Table 1
Environmental Work Products to be Reviewed by PMT

	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI-Merced	SI-SF	LA-SD	Merced- SAC	Altamon t
Section 7 Consultation	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Section 408/208.10 Coordination	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Section 401 Coordination	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Mitigation Monitoring Report	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Final EIR/EIS	Jun 11	Aug11	Jun12	May11	Jun11	Feb12	Jun11	Aug13	Jun13	Mar13
Preparation of NOD and ROD	Aug 11	Oct11	Sep12	Aug11	Aug11	Apr12	Aug11	Dec13	Aug13	May13

4.9 Permits and Approvals

Identify the state and federal environmental permits and approvals required for the construction and operation of the HST system. Prepare a strategy for the application and implementation of these permits and approvals either for the system as a whole or for each of the HST sections. Provide guidance to the Regional teams in coordinating with the resource agencies that will need to either approve or permit the CAHST Projects. Work with the Regional teams in preparing a schedule for coordination plan for the completion of each permit required. Review work products prepared by the Regional teams for each of the permits and approvals needed. The PM team will assume a lead role in coordination with key agencies for Section 106, Section 7, Section 404, Section 401, and Section 408/208.10 consultation, and will coordinate with Regional teams regarding overlapping jurisdictional issues and information requirements for permits and approvals.

TASK 4.9 DELIVERABLES		Schedule
4.9.1	Identify all state and federal environmental permits and approvals and information needed to support these permits and approvals.	August 2010
4.9.2	Preparation of coordination and schedule of permits and approvals by ARRA Regional teams	October 2010
4.9.3	Preparation of coordination plan and schedule of permits and approvals by Palmdale-LA and San Jose-Merced Regional teams	January 2011
4.9.4	Identify milestones in project schedule to obtain permits and approvals	November 2010 & February 2011
4.9.5	Monitor schedule and coordination plan activities of the four ARRA Regional Teams and Palmdale-LA and San Jose-Merced Regional teams	Monthly
4.9.6	Maintain status log of work done by the Regional teams related to obtaining needed agency permits and approvals.	Monthly

4.10 Statewide Technical Tasks

Prepare the following statewide technical studies to be included in each of the Project Level Environmental Documents:

- Describe the air emission sources included in the analysis (e.g., HST operations, traffic around stations and electrical generation for the system).
- Prepare conformity analysis with the adopted Regional Transportation Plan (RTP) and State Implementation Plan (SIP).
- Prepare environmental settings conditions for each analysis region including:
 - Attainment status
 - Monitored data
 - CARB emission inventory
 - Meteorological conditions
 - Regulatory framework

- Analyze regional emissions within each air basin and for each alternative:
- Quantify regional mobile source emissions using area wide projections of AADT and corresponding latest version of EMFAC emission burdens as supplied by the ARB
- Quantify regional rail and aircraft emissions using area wide projections of daily mileage and/or operational (landings/ take-offs) and applicable emission factors
- Estimate statewide and basin-wide changes in air quality emission rates due to HST power requirements
- Determine significance of potential regional air quality impacts and estimate air quality benefits
- Prepare discussion of greenhouse gas emissions and analysis methodologies taking into consideration:
 - The Global Warming Solutions Act of 2006 (AB32)
 - SB375
 - SB97
 - Climate Action Program at Caltrans
 - Any additional future regulations enacted at the time of analysis
- Quantify greenhouse gas emissions on a statewide level resulting from changes in:
 - Roadway VMT
 - Aircraft trips
 - Power requirements due to the HSR
- Prepare discussion of possible greenhouse gas emission impacts quantified on a local basis for MPOs
- Compare the greenhouse gas emissions resulting from the HST Alternative with the No Build/ No Project Alternative to estimate the project's impact on statewide greenhouse gas emissions
- Compare the HST Alternative with the No Build/ No Project Alternative to identify any potential air quality benefits/ impacts from a mode-shift from auto to rail.

TASK 4.10 DELIVERABLES		Schedule
4.10.1	Regional Air Quality technical report to be included in each of the HST Section EIR/ EISs	August 2010

4.11 GIS Support Services

GIS support would include updating and maintenance of the existing High Speed Train GIS database. Support staff and sub-consultants with data needs. Provide updated graphics, raster and vector files and data processing. Convert engineering files into a workable GIS format for inclusion in environmental documents.

TASK 4.11 DELIVERABLES		Schedule
4.11.1	GIS work as directed	As needed

4.12 Agency Agreements for Coordination & Funding

Continue to coordinate with the Corps and USEPA on the NEPA/ Section 404 Integration MOU and with SHPO on the Section 106 Programmatic Agreement. Prepare and negotiate, on behalf of the Authority, updates to funding agreements with resource agencies.

TASK 4.12 DELIVERABLES		Schedule
4.12.1	Complete NEPA/ Section 404 Integration MOU	July 2010
4.12.2	Complete Section 106 Programmatic Agreement (PA)	July 2010
4.12.3	Complete five of the remaining seven interagency funding agreements for FY2010/ 11	July 2010
4.12.4	Prepare seven interagency funding agreements for FY2011/ 12	January 2011

4.13 Section 404 and 408 Coordination

4.13.1 Section 404 Activities

Continue coordination with EPA and the Corps on meeting the requirements of NEPA/ Section 404 Integration process; schedule and attend checkpoint meetings for the regional teams; review checkpoint packages prepared by the teams to ensure concurrence on the Purpose and Need, Range of Alternatives to be carried forward into the EIR/ EIS, LEDPA, and Draft Compensatory Mitigation Plan (DCMP).

TASK 4.13 DELIVERABLES		Schedule
4.13.1.1	Provide technical review comments on Purpose and Need checkpoint packages	As submitted
4.13.1.2	Assist regional teams in responding to EPA and Corps comments on Purpose and Need	As submitted
4.13.1.3	Provide technical review comments on Range of Alternatives checkpoint packages	As submitted
4.13.1.4	Assist regional teams in responding to EPA and Corps comments on Range of Alternatives	As submitted
4.13.1.5	Provide technical review comments on LEDPA checkpoint packages	As submitted
4.13.1.6	Assist regional teams in responding to EPA and Corps comments on LEDPA	As submitted
4.13.1.7	Provide technical review comments on Draft Compensatory Mitigation Plan (DCMP) checkpoint packages	As submitted
4.13.1.8	Assist regional teams in responding to EPA and Corps comments on Draft Compensatory Mitigation Plan (DCMP)	As submitted

4.13.2 Section 408 Activities

Continue coordination with the Corps on meeting requirements of Section 408 of the Clean Water Act; schedule and attend initial coordination meetings for five regional teams with the Corps and local flood control district jurisdictions to identify water crossings subject to Section 408/208.10 requirements schedule and attend follow-up meetings for all ten teams to present design details as they are developed related to structures over or under water crossings. We will also direct the regional teams in packaging materials required by the Corps. All documentation related to coordination efforts will be posted to the dedicated Corps Section 408 ProjectSolve website. It is assumed that coordination with the Corps will continue for the four ARRA HST sections and the SJ-Merced and Palmdale to LA HST sections on a monthly basis

TASK 4.13.2 DELIVERABLES		Schedule
4.13.2.1	Meeting summaries for all coordination meetings	Monthly
4.13.2.2	Technical review of presentations and submittal packages	As submitted

Task 5 Regional Consultant Oversight

Project Staging Overview

In accordance with the Agreement with the California High-Speed Rail Authority (Authority), the HS project implementation is divided into the following four stages;

Stage I	Preliminary Engineering for completion of EIR/EIS, ROW, Program phasing and ridership and Implementation Plan
Stage II	Final Design and Pre-Construction
Stage III	Construction and Preparations for Operations
Stage IV	System Testing and Commissioning

This FY2010-2011 work plan covers the regional oversight work required to continue with Stage I, Preliminary Engineering, working toward the completion of the EIR/EIS final documents to achieve a Record of Decision and complete the 30% preliminary design documents. The 30% preliminary design documents will be used for the procurement packages in anticipation of Design-Build construction contracts.

Regional Sections

The project has been divided by the Authority into ten logical sections for preliminary engineering and environmental clearance, with eight regional consultant teams performing the work under direct contract to the Authority:

Phase I

- San Francisco to San Jose
- San Jose to Merced
- Merced to Fresno
- Fresno to Bakersfield
- Bakersfield to Palmdale
- Palmdale to LA Union Station
- LA Union Station to Anaheim

Phase II

- Los Angeles to San Diego
- Merced to Sacramento
- Altamont Corridor Rail Project

The Program Management Team (PMT) has assigned a Regional Manager (RM) for each section to manage, oversee and review the work performance and deliverables of the Regional Consultant within each section and to ensure a consistent approach to the work by the Regional Consultants between each section. The Program Director and Deputy Director will manage the Regional Managers through the preliminary engineering and environmental processes to NOD/ROD certification, moving to right of way acquisition, contractor qualifications, bid document release,

contractor selection, final design review, construction oversight and other duties as required moving toward revenue service.

The Regional Manager's efforts are focused in the following three key areas of activity:

1. Project Management
2. Communications (Technical and Outreach Meetings)
3. Engineering and Environmental Review

5.1 Project Management

- Oversee all activities performed by the Regional Consultants (RC), with a particular focus on interfaces between disciplines to ensure consistency within the geographic section, as well as with overarching Program Goals.
- Act as a day-to-day liaison between the RC and the Program Director and the Authority's Contract Manager, providing up to date communication about the Program.
- Provide oversight and coordination support to match the overall statewide goals and the annual work program.
- Direct regional public and agency questions posed to the Authority or Program Director to the Authority Deputy Director for communication or assigned designee.
- Provide a consistent assessment of work performed against stated work plan, budget and schedule to verify results match stated progress and billing from regional consultants. This includes having weekly teleconferences and performing a monthly scope, schedule and budget review meeting with the RC Project Manager and team.
- Review submitted invoices and compare with stated work completed schedule, budget and deliverables due.
- Oversee Regional Consultant compliance with project procedures and protocols.
- Report project status and progress and review and comment on Regional Consultant monthly status reports.
- Coordinate with other regional managers and their regional Consultants for outreach, engineering, environmental and quality issues when necessary to ensure consistency of engineering design, progress and to share proposals and ideas.
- Prepare meeting minutes/ notes, reports and memoranda required by the Program Director.
- Assist in definition of scope and budget changes, when requested.
- Ensure consistent approach to Regional Consultant project schedule updates in accordance with program requirements.
- Ensure prompt production of meeting / discussion minutes by RC and submittal to project document management system (ProjectSolve2).

Task 5.1 DELIVERABLES		Schedule
5.1a	RM Weekly and Monthly Progress Report including assessment of RC progress, budget and schedule	Weekly/ Monthly

5.1b	Report and Memoranda as directed by Program Director	As required
5.1c	Work Plan, Budget estimate and scope changes	As required
5.1d	Assessment report on RC Invoice	Monthly
5.1e	Post responses to Public Inquiries Log on Project Solve2	As required

5.2 Meetings

- The Regional Manager shall act as needed as an extension of the Authority staff at functions and meetings to explain and educate about the high-speed rail program context, benefits, tentative schedules, etc., whereas the regional consultants' are tasked with performing the environmental and preliminary engineering work.
- Weekly progress and status meetings/ teleconferences with Regional Consultant Project Manager. Hold face to face meetings on a bi-weekly basis minimum.
- Meet at least bi-weekly with the Authority's Regional Director of the project section.
- Monthly progress and status meetings with Regional Consultant(s) team(s).
- Monthly scope, schedule and budget review meeting with the RC Project Manager(s).
- Quarterly Senior Program Management (PM) meetings with the PMT, Authority, PMO and Regional Teams.
- Assist and support public outreach meetings and review RC/ Outreach presentation material and graphics. Facilitate final review and approval with Authority's Regional Director and Authority Outreach Team.
- Participate in meetings with major stakeholders, elected officials, and government staff as needed.
- Assist in project environmental agency meetings as needed.
- Provide follow-up to meetings, further information and updates wherever possible to maintain goodwill of stakeholders, officials, agencies, public groups, etc.
- Arrange / coordinate engineering design review workshops between PMT/ RC/ Engineering as appropriate.
- Participate in field meetings to review environmental impacts with affected parties and discuss possible alternatives and / or mitigation measures.

Note: All meeting minutes / notes / field notes shall be posted on Project Solve2. Copies will be provided to the Program Director, Deputy Program Director and Authority's Regional Director.

Task 5.2 DELIVERABLES		Schedule
5.2a	Summary / meeting report of each outreach meeting(s)	Within 3 days of meeting
5.2b	Summary / meeting report of each stakeholder, elected official and or government staff	Within 3 days of meeting (24 hours for elected official)
5.2c	Log of tasks and issues from weekly teleconferences and notes of monthly meetings with RC Project Manager and team	Within 3 days of meeting

5.3 Engineering and Environmental Review

5.3.1 Project Scoping and Alternatives Development

- Oversee Regional Consultant progress in defining and clarifying Alternatives.
- Facilitate screening of alternatives in accordance with the adopted Alternatives Analysis Methods.
- Ensure screening is impartially undertaken, all affected parties are contacted / consulted and all relevant points of view / concerns are addressed.
- With PMT Environmental Lead, review and provide comments on Preliminary and Supplemental Alternatives Analysis Reports.

Task 5.3.1 DELIVERABLES		Schedule
5.3.1a	Comments on Scoping Report	Completed
5.3.1b	Comments on Preliminary and Supplemental Alternatives Analysis Report	Within 10 days of receipt
5.3.1c	Review and comment on Environmental Technical Studies	Within 10 days of receipt
5.3.1d	Review and comment on 15% Design	Within 10 days of receipt
5.3.1e	Review and comment on Admin / Draft EIR/ ES	Within 10 days of receipt

5.3.2 Environmental Review

- Review the relevant design materials related to the draft technical studies and draft EIR/ ES. (See section 3.12 for further clarification of the submittal review process)
- Review Regional Consultant (RC) documents, drawings, and other activities for compliance with project Technical Guidelines, Definition and Scope, any binding statements made within the Programmatic EIR/ ES and Authority requirements.
- Coordinate with specialist engineering and environmental review of specific subjects (Task 4 Environmental work).
- Monitor and oversee agency consultation activities by the RC.
- Review and provide comment on environmental technical reports prepared by the RC.
- Enforce consistency in the environmental approach by the RC for the EIR/ ES documents.
- Review and provide comment on EIR/ ES sections prepared by the RC.
- Facilitate review of Administrative Draft EIR/ ES by PMT, followed by the review of the revised Admin. DEIR/ S by the Authority, AG and FRA.
- Oversee preparation of Draft EIR/ ES, public circulation, scheduling of public hearings and collection of public comments by RC.
- Monitor responses to all substantive comments received on the Draft EIR/ ES for consistency with Authority policies and mitigation commitments.

- Oversee preparation of Final EIR/ EIS by RC and facilitate review by PMT, Authority AG, and FRA legal.
- Review and accept RC deliverables prior to submittal to the Program Director, the Authority and the FRA

Task 5.3.2 DELIVERABLES		Schedule
5.3.2a	Comments on the NOI and NOP for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2b	Comments on scoping materials as listed above for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2c	Comment on Environmental Scoping Report for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2d	Comments on AA Reports -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	July 2010 September 2010 June 2010 June 2010 November 2010 August 2010 June 2010 December 2010 February 2011 December 2010
5.3.2e	Comment on environmental studies for -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	July 2010 July 2010 July 2010 July 2010 August 2010 August 2010 July 2010 July 2012 July 2012 July 2012
5.3.2f	Preparation of the Admin Draft EIR/ EIS Report for -San Francisco to San Jose	September 2010

	-San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	April 2011 August 2010 November 2010 September 2011 October 2010 September 2010 June 2012 April 2012 October 2011
5.3.2g	Review and Comment on environmental technical reports	Within 10 days of receipt
5.3.2h	Comments on RC deliverables for compliance with Program criteria	Within 10 days of receipt

5.3.3 Preliminary Engineering

- Coordinate and communicate operating, maintenance, engineering and other technical standards to be used in design development.
- Provide oversight and overall review of Regional Consultant documents, drawings, and other section specific activities pertaining to 15% design criteria.
- Monitor Regional Consultant progress with 15% preliminary designs. Work with the Regional Consultants for compliance with the requirements of the Design Submittal Protocol (TM 0.7).
- Facilitate review of In-progress and Draft 15% design submittals
- Provide oversight and overall review of Regional Consultant documents, drawings, and other section specific activities pertaining to 30% design criteria.
- Monitor Regional Consultant(s) progress with 30% preliminary designs
- Ensure all drawings and specifications are reviewed by the Engineering Management Team to ensure consistency with design standards and from section to section.
- Arrange appropriate meetings and discussions to resolve engineering and technical issues.

Task 5.3.3 DELIVERABLES		Schedule
5.3.3a	Comments on Regional Consultant deliverables for compliance with Program design criteria	Within 10 days of receipt
5.3.3b	End of year section progress report, reporting on engineering and EIR/EIS progress	June 30, 2011
5.3.3c	Preparation of the 15% Design for: -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale	December 2010 December 2010 September 2010 August 2010 November 2010

	-Palmdale to Los Angeles	October 2010
	-Los Angeles to Anaheim	August 2010
	-Los Angeles to San Diego	August 2012
	-Merced to Sacramento	October 2011
	-Altamont Corridor	April 2011

Task 6 Right of Way Assessment & Acquisition

6.1 Right of Way Guidelines Manual

Develop Right of Way Guidelines Manual with guidelines and protocol for procurement and preparation of reports, instruments, documents, studies, maps (plat), descriptions (legal), and special services or expertise, as required, to support:

- Right of Way Engineering
- Title and Escrow
- Appraisal
- Acquisition
- Environmental Due Diligence (site specific - land)
- Relocation Assistance and Planning
- Property Management (interim and long term)
- Environmental Survey for presence of Asbestos and Lead Paint
- Disposition of Excess Real (land/buildings) and Personal Property

TASK 6.1 DELIVERABLES		Schedule
6.1.1	Right of Way Guidelines Manual, Draft	July '10
6.1.2	Right of Way Guidelines Manual, Final for PD release	August '10

6.2 Standard Forms & Documents

Prepare draft standardized forms and documents for a CAHSR real estate acquisition & relocation assistance program compliant with California legal requirements and administrative guidelines.

TASK 6.2 DELIVERABLES		Schedule
6.2.1	Standard Forms & Documents, Draft	September '10

6.3 Acquisition Strategy and Protocols

- a. Provide advice for proactive acquisition strategy.
- b. Prepare draft protocol for responsibilities of statewide real estate program manager and regional section team real estate teams.
- c. Advise on project controls to include in statewide QA/QC protocols.

TASK 6.3 DELIVERABLES		Schedule
6.3.1	Memo on Strategy for Proactive Acquisition	August '10
6.3.2	Draft protocol for PM team and Regional team ROW acquisition responsibilities	September '11
6.3.3	Memo on ROW acquisition items and processes to include in QA/QC procedures	September '11

6.4 Identify priority acquisitions

Assist in identifying priority acquisitions

TASK 6.4 DELIVERABLES		Schedule
6.4.1	Memo on recommended priority acquisitions	March '11

6.5 GIS database for real estate

Create a statewide GISdatabase, linked to the PM team GISdatabase, accessible by Authority and all consultants covering real estate maps, data on acquisition status, ownership, appraisal data, relocation assistance, and related information.

TASK 6.5 DELIVERABLES		Schedule
6.5.1	Proposed structure, content, location of data base	June '11
6.5.2	Year-end report on database establishment	June '11

6.6 Pre-Qualify Vendors

Solicit qualifications and screen respondents to establish a pre-qualified list of providers statewide and regionally for:

- Valuation (Land/Building, Fixtures and Equipment, Business Goodwill, Leasehold Interest),
- Right-of-Way Survey (Legal Descriptions, Base and Parcel Plat Maps)
- Environmental Due Diligence (Surveys for detection of contamination)
- Title & Escrow (Prelim Title Reports, Litigation Guarantees, Escrow Services)

TASK 6.6 DELIVERABLES		Schedule
6.6.1	Solicitation document and related materials	June '11
6.6.2	Report on initial response	June '11
6.6.3	Initial list of screened and qualified vendors by specialty	June '11

6.7 Relocation Plan

Prepare a Relocation Plan consistent with California requirements for priority sections to identify, categorize, quantify, and address the anticipated displacement of businesses, farms and residences.

TASK 6.7 DELIVERABLES		Schedule
6.7.1	Relocation Plan, Draft	May '11
6.7.2	Relocation Plan, Final for PD release	June '11

Task 7 Railroad System Operations and Revenue Management

The ongoing scope for Railroad System Operations Management, Operations and Service Planning, and Revenue Management (RSOSPRM) is to define the attributes of the CA HST railroad system and establish the point of view/perspective of the “Operator” of the CA HST System that will provide a specific set of operating directives, parameters, and service guidelines and standards for the CHSTP.

The main priorities of RSOSPRM and key focus areas are to provide:

- A detailed system definition of the attributes of railroad from the rail system operator’s standpoint.
- A holistic and comprehensive overview describing how the railroad will be operated.
- A requirements definition plan that identifies the staffing, facilities and infrastructure resources that are necessary to operate (and maintain) the railroad.

Additional details and description of deliverables are defined in the subtasks that follow below.

7.1 Railroad System Operations Management

Major activities and, critical actions and interfaces of Railroad Systems Operations Management are:

- Direct coordination with railroads, operating agencies/rail service providers and stakeholders as required
- Direct the development of ongoing operations input to the Engineering Management Team and Regional Engineering teams to contribute to system design elements and guidance for the EMT and Regional Teams
- Review and comment on Engineering design elements to ensure responsiveness to operations functional requirements
- Direct coordination with FRA and the development and preparation of HST railroad system rules & procedures and their relationship to current regulations and new regulations that will emerge from the HST Project – Petition for a Rule of Particular Applicability. Key categories include:
 - CFR- Regulatory Issues
 - Comparative analysis with TSI’s
 - Roadway Worker Protection
 - Railroad System Operating Rules
 - System Safety Rules & Procedures
 - Standard Operating Procedures
 - Emergency Action Plans & Procedures
- Direct the development of the basis for the railroad system operational elements of the procurement documents.

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.1 a	Direct coordination with railroads, operating agencies, stakeholders	Ongoing	Ongoing	Ongoing
7.1 b	Direct development of operations input for systems design elements (15% and 30% design)	Ongoing	Ongoing	Ongoing
7.1 c	Review & comment on Engineering design to ensure operational requirements are met (15% and 30% design)	Ongoing	Ongoing	Ongoing
7.1 d	Direct development of detailed HST railroad system rules & procedures, interface with current rules and regulations	2/2011 Draft 6/2011 Final Draft	7/2012 Update	6/2013 Update
7.1 e	Direct coordination with FRA on rules, procedures and regulatory issues pertaining to railroad operations and operational safety and security	Ongoing	Ongoing	Ongoing
7.1f	Direct development of operational elements of CHSTP procurement documents	1/2011 Draft 6/2011 final draft	Update as necessary	Update as necessary

7.2 Railroad System Operations and Service Planning

The scope and key products & deliverables for Railroad System Operations and Service Planning are as follows:

7.2.1 Operations & Service Planning

- System capacity requirements
- Service design
 - Service guidelines and standards
 - Service "product" measurements
 - Operations and Service Performance metrics
 - Timetable/ schedules development

7.2.2 Operations Plan

- Dynamic computer simulation modeling
- HST System statewide model
 - Trip time analysis
- Analysis and validation of timetable/ schedule alternatives, revisions and updates
- Analysis of system capacity utilization, train/ schedule performance and operational reliability
- Development of daily trainset equipment cycles

- Determine operational fleet requirements to deliver service plan
- Prepare fleet estimate including spares
- Input to O & M cost estimates
 - Fleet size
 - Train miles/ car miles
- Provide critical operational input to selection (including configuration and size) of locations/ sites, sizing of layup/ storage, cleaning, inspection and maintenance facilities (for rolling stock) for Phase 1 and Full Build.
- Description of requirements, configuration and sizing of facilities for maintenance of way: equipment, material inventories and maintenance staff

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.2 a	Operations and Service Planning report(s); Service Design & Service Plan; ridership demand, system capacity, service guidelines and standards	9/2010 Draft 12/2010 Final Draft	7/2011 Update	7/2012 Update
7.2.2 b	Operations Plan report(s); computer model, trip time analysis, timetable, system capacity utilization, performance, reliability	7/2010 Update (ongoing)	7/2011 Update (ongoing)	7/2012 Update (ongoing)
7.2.2 c	Trainset equipment cycles & estimate fleet size report(s)	7/2010 Update (ongoing)	7/2011 Update (ongoing)	7/2012 Update (ongoing)
7.2.2 d	Layup, storage requirements for inspection, cleaning, maintenance facilities for rolling stock	7/2010 Update (ongoing)	7/2011 Update (ongoing)	7/2012 Update (ongoing)

7.2.3 Passenger Stations Plan

- Describe requirements, configuration and sizing of stations
 - Develop customer service station guidelines and standards
 - Define assumptions on approach for ticketing/ fare collection
 - Define assumption on approach for checked items such as bicycles and luggage
 - Develop stations staffing requirements definition and staffing plans

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.3 a	Passenger Stations planning, requirements for station guidelines, standards, ticketing, staffing	10/2010 Draft 1/2011 Final Draft	7/2011 Update	7/2012 Update

7.2.4 Operations Control Center (OCC)

- Describe requirements for train dispatching / train movement / train control

- Configuration and sizing of OCC (one or more facilities)
 - Analyze the difference between a central control and distributed control approach in configuring a system operations center; prepare alternatives analysis comparing advantages / disadvantages of each approach
 - Address redundancy in Standard Operating Procedures and Emergency Action Plans
 - Develop staffing requirements
 - Develop training and qualification requirements as relates to regulations, operating rules, system physical characteristics and safety
- Develop parameters for “other” System OCC Requirements
 - Power director/ load dispatcher functions for OCC and propulsion power sectionalizing
 - Priority security functions appropriate to reside in control center
 - Engineering coordination/ interface functions
 - Direct interface/ coordination/ control – terminal operations
 - Transbay Terminal
 - 4th and King
 - Los Angeles
 - Anaheim
 - Sacramento
 - San Diego

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.4 a	Operations Control Center (OCC) / System Control Center requirements	7/2010 Ongoing Refinements	7/2011 Ongoing Refinements	7/2012 Ongoing Refinements

7.2.5 “On-Train” Operations and On-Board Services

- Develop approach for train operations regarding operators/ drivers
 - Regulatory requirements
 - Licensing and certification
 - Staffing requirements
 - Training & qualifications
 - Evaluate potential provision for ATC in the long term
- Include in development of service guidelines and standards
- Develop service plan for on-board train “product” and amenities desired by the Authority
 - Staffing requirements/ plan based on service plan
- Develop HST System “Operating Doctrine” & Prepare comprehensive Concept of Operations Report

- Includes many of the items described above
- Focus on definition of how the HST System will be operated and the requirements of the FRA petition for the RPA to include:
 - Train Dispatching
 - Train Service Operations
 - Station Operations
- Interface with the minimum requirements of the FRA RPA on how the HST System will be inspected and maintained (developed in maintenance planning under Task 3)
 - Rolling Stock – Train Service Maintenance
 - Develop maintenance profiles
 - Define maintenance programs by level
 - Subdivide programs by level by facility
 - Physical Plant
 - Right of Way
 - Track, Switches, Signals, Communications, OCS, Sub-Stations etc.
 - Bridges and aerial structures
 - Station Maintenance

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.5 a	On Train operations and On Board Services requirements	10/2010 Draft 2/2011Final Draft	7/2011 Update	7/2012 Update

7.2.6 Train Performance Report

- Update of optimal train performance data reflecting current train performance characteristics of train technologies currently operating at 220 mph. Train performance will be generated using computer based train simulation model similar to that used during the Programmatic studies and will include:
 - Physical characteristics of the trainset (length, capacity, number of cars, etc)
 - Optimal trip times for types of service (regional, intercity, express, etc)
- Train Service Plan for testing and commissioning, initial revenue service phase and full system operating conditions based on updated ridership, operations, maintenance, and rail network.
- Optimal trip times between city pairs will be generated to confirm expected performance for the legislatively mandated trip times specified in Proposition 1A.

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.6 a	Train Performance Report	7/2010 Update (Ongoing)	7/2011 Update (Ongoing)	7/2012 Update (Ongoing)

7.2.7 Concept of Operations

- Develop and confirm operational concepts for the CHST Project including:
 - o Operational Objectives
 - o Mainline Configuration
 - o Control of Operations
 - o Rolling Stock Maintenance and Repair (interface with Task 3 Maintenance Planning)
- Confirm operating design criteria including:
 - o Operating Routes
 - o Operating Speeds and Restrictions
 - o Design Level of Service
 - o Operating Hours
 - o Operating Schedule and Station Dwell Times
 - o Normal and Contingency Modes of Operations
 - o Recovery Time
 - o Headways (as may be applicable)
 - o Trainset Length

Subtask	Deliverable	FY2010/ 11	FY2011/ 12	FY2012/ 13
7.2.7 a	Concept of Operations Report	7/2010 Draft 10/2010 Final Draft	7/2011 Update	7/2012 Update

7.2.8 Operations Report and Train Simulation Model

- The Programmatic train simulation model will be updated to reflect the current operational parameters and detailed alignment characteristics to confirm anticipated train performance on the system for initial revenue service phase and full system operating conditions.
- The model will include vehicle parameters as identified in the Train Performance Report.
 - Additional input for the simulation model will be used on an ongoing basis including:
 - Revised / updated forecasts of ridership
 - Track alignment configuration and geometrics as updated by the Regional Designers
 - Vehicle Performance
 - Vehicle Capacity
 - Operating Speed Restrictions (Turn-outs, sustained grades, tunnels, etc)
- The San Jose to San Francisco and downtown San Francisco Terminal(s) and Anaheim to LA studies will be updated based upon current information and policy decisions assuming a dedicated high-speed rail line from LA to San Jose and a shared use corridor alternative with Caltrain from San Jose to San Francisco, and Metrolink and Amtrak from Los Angeles to Anaheim.
- Key outputs from this analysis are confirmation of trip times between city pairs, assessment of the network capacity to handle the forecasted traffic, train storage requirements at the terminal stations and maintenance depots, and number of trainsets required to run the desired service.

Subtask	Deliverable	FY 2010/ 11	FY 2011/ 12	FY 2012/ 13
7.2.8 a	Train Simulation Modeling and Operations Report(s)	7/2010 Ongoing	7/2011 Ongoing	7/2012 Ongoing

7.2.9 Technical Support

- Provide technical support to the PMC Regional Managers and the Regional Consultants on an as-needed basis.

Subtask	Deliverable	FY 2010/ 11	FY 2011/ 12	FY 2012/ 13
7.2.9 a	Technical Support on an as needed basis.	7/2010 (Ongoing)	7/2011 (Ongoing)	7/2012 (Ongoing)

7.2.10 Safety and Security Planning

- Develop System Safety Program and Plan
 - General system safety requirements
 - Fire, life, safety criteria and parameters
 - Guidance for emergency actions plans
 - Guidelines for first responders
 - Training and qualifications program requirements
 - Emergency preparedness and emergency action plans (EAP)
 - Preliminary Hazard Analysis (PHA)
 - Threat & Vulnerability Assessment (TVA)

Subtask	Deliverable	FY 2010/ 11	FY 2011/ 12	FY 2012/ 13
7.2.10 a	General system safety requirements report	9/2010 Draft 1/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 b	Fire, Life, Safety Criteria and Parameters	10/2010 Draft 2/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 c	Training and Qualifications Program Requirements	8/2010 Draft 12/2010 Final Draft	7/2011 Update	7/2012 Update
7.2.10 d	Emergency Preparedness and EAF	12/2010 Draft 3/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 e	Preliminary Hazard Analysis (PHA)	10/2010 Draft 1/2011 Final	7/2011 Update	7/2012 Update

		Draft		
7.2.10 f	Threat & Vulnerability Assessment (TVA)	7/2010 Draft 9/2010 Final Draft	7/2011 Update	7/2012 update

7.3 Ridership and Revenue Forecast Updates

7.3.1 Ongoing Forecasts of Ridership and Revenue

The PB Team will prepare year 2030 and 2035 forecasts of riders and revenue, station boardings, modes of access, information on diversions of passengers from other modes, market shares, average fares, and other information as needed to support operations alternatives development, EIR/EIS work, financial planning, and other work.

Scenarios may include changes to stations served, station location, run times, levels of frequency, fare structure, and competitive mode conditions. Depending on the extent and complexity of the changes, typical costs for a set of forecasts for the full system, Phase 1, 2030 and 2035 range from \$20,000 to \$40,000. Costs for one scenario for 2030 alone range from \$10,000 to \$20,000. In FY09/10 \$400,000 was budgeted for this work and about 50 forecasts are anticipated to have been made by June 30.

For 2010-2011, a similar level of work is anticipated, spread evenly throughout the year. Since forecasts are made to order to address specific groups of issues as they arise from alternatives analysis and currently unknown concerns, the number of issue groups is not known. However, within 30 days of completing a group of related forecasts, a memorandum describing the assumptions and results will be delivered to accompany the spreadsheets and other materials for each forecast. At the end of the year, a summary of work performed will be submitted.

SUBTASK 7.3.1 DELIVERABLES		Start	Complete
7.3.1 a	Up to 50 forecasts	July 1, 2010	June 20, 2011
	Up to 37 forecasts	July 2, 2011	June 20, 2012
	Up to 25 forecasts.	July 3, 2012.	June 20, 2013.
7.3.1 b	Memoranda on results of forecast groups	Upon completion of a forecast group	30 days after completion of a forecast group
7.3.1 c	Fiscal Year End summary of forecasts	June 21, 2011; June 21, 2012; June 21, 2013.	June 30, 2011; June 30, 2012; June 30, 2013.

7.3.2 EIR/EIS & Informational Support

The PB Team will provide general support to the Authority on ridership, revenue, and travel demand questions arising from the public, State and Federal legislative and executive agencies and members, and others as directed by the Authority.

The Team will also review and update materials for the Authority website and printed information on the ridership and revenue forecasts, participate in explanatory sessions, deliver written materials, presentations, and other materials as requested by the Authority. The work will be conducted on an as needed basis and is budgeted for FY 10/ 11 at the level of activity for February and March 2010, for FY11/ 12 one-third less, and one half less for FY12/ 13.

SUBTASK 7.3.2 DELIVERABLES		Start	Complete
7.3.2 a	BR/ESSupport and Public Outreach materials as directed	July 1, 2010.. July 2, 2011.. July 3, 2012.	June 30, 2011 June 30, 2012 June 30, 2013.
7.3.2 b	Progress report 10 days after end of each month	August 1, 2010	June 10,2012
7.3.2 c	Fiscal Year End summary of Support work performed	June 21, 2011; June 21, 2012; June 21, 2013.	June 30,2011; June 30, 2012; June 30, 2013.

Task 8 Construction / Procurement Documents

8.1 Staging and Construction Planning

Under the direction of the Program Director the Construction & Procurement Manager will prepare a Construction/procurement Plan for the Construction and procurement methodology and implementation. The Plan will contain considerations for:

1. Determination of a construction staging approach detailing contract sizes that take into consideration:
 - a. Schedule requirements
 - b. Bonding considerations
 - c. Logical endpoints for tie-in to the next viable section along with staging by geographic location(s)
 - d. Early action contracts (i.e. utility relocations, ROW, test track, etc.)
2. Stage of plan development necessary to move beyond the 30% supplied by the Regional Consultants. Plan development will also include considerations for delivery system (DBB, DB, DBOMF, PPP, etc)
3. Recommendation for owner furnished early critical materials Overall Agency program management role.
4. Operations including both short term for the test track area and long term for integration of the possible combination of operating systems. Those possibilities include the various delivery systems coupled with multiple operators versus one single operator.
5. Rolling stock procurement considerations including The Federal Railroad Administration and California Public Utilities Commission (CPUC) regarding safety certification, Rule of Particular Applicability covering vehicle types, operations requirements, system concept, train controls and other safety-related issues.
6. Program Management of ROW negotiations, requirements and procurement.
7. Program Management of Utility relocation efforts
8. Work with the EMT in the production of all engineering procurement documents this includes:
 - a. Working with the EMT to ensure consistency of design standards
 - b. Working with the EMT to ensure consistency of all standard/directive drawing.
 - c. Work with the EMT, Systems Personnel and Section Managers to ensure proper Facilities location determination and uses (stations and maintenance facilities – all levels)
9. Resource availability (construction).
10. Market conditions for delivery systems and financing.
11. Review of system requirements as they relate to staging the test track, the line sections, and how to procure systems for consistency, operations, and maintenance.
 - a. Test track staging for both civil and system elements.
 - b. Overall electrification staging and contract packaging.

12. Definition of the construction documents for each contract including identification of elements (plans, specifications, and estimates) as well as the recommended development of these documents from those received from the Regional Consultants.
13. Regulatory requirements and restrictions.
14. Procurement document management and archival requirements.
15. Procurement document evaluations for compliance with standards and selection criteria.
16. Construction management contracts as they relate to the schedule and delivery methods used (DBB, DB, DBOMF, PPP, etc).
17. Construction management approach for contracting.
18. Construction document design review processes.

The Plan will be developed in coordination with all financial plans and activities.

Work with EMT to conduct constructability reviews of plans, specifications, and estimates. Reviews include assessing the viability of the design for the intended use, the applicability of the design for the site conditions, value engineering, and other matters related to means and methods of construction. Reviews will be documented with a comment matrix for resolution.

TASK 8.1 DELIVERABLES		Schedule
8.1.1	Construction Staging Plan (all phase I sections)	Dec 2010
8.1.2	Develop Staging Procurement Documents, SOW, RFP and Contractual document	Dec 2010
8.1.3	Request for Qualification development (RFQ) - Contract Requirements & Structures – Draft	Oct 2010
8.1.4	Request for Qualifications development (RFQ) - Contract Requirements & Structures – Final	Dec 2010
8.1.5	Request for Proposals (RFP) - Contract Requirements & Structures – Draft	March 2011
8.1.6	Request for Proposals (RFP) - Contract Requirements & Structures – Final	July 2011
8.1.7	Constructability Review Matrix	Dec 2010
8.1.8	Constructability Reviews	As needed
8.1.9	Detailed Recommendations for staging plans	As needed
8.1.10	Recommendations for staging specifications	As needed
8.1.11	Identification of un-programmed documents	As needed

8.2 Procurement and Bid Packages

As the program becomes more defined, it will be required to identify specifically the various ways the project can be structured and, bid packages prepared for a Design-Build delivery approach and staged to design, built and enter into revenue service.

1. Determine requirements for contract terms and conditions.
2. Coordinate legal and regulatory matters with agency staff.
3. Coordinate technical requirements with regional consultants.
4. Coordinate system requirements with systems manager.
5. Meet with domestic authorities to gather data on existing programs of similar size and nature.
6. Develop details of staging contract(s) structure.
7. Identify all documents not currently programmed for completion
8. Prepare detailed recommendations relating to the development stage for specifications for procurement documents necessary to meet the recommended staging and delivery system(s) identified herein.
9. Prepare monthly assessment documenting status of staging/ procurement efforts.

TASK 8.2 DELIVERABLES		Schedule
8.2.1	Develop Design-Build (DB) Contract documents- Draft	March 2011
8.2.2	Develop D-B Contract documents- Final	July 2011

8.3 Cost Estimating

- Prepare construction cost estimates as it pertains to each regional section in support of the staging plan.

TASK 8.3 DELIVERABLES		Schedule
8.3.1	Develop Construction Cost estimates	As needed

8.4 Procurement / Construction Inspection Support

- Provide supplier and vendor inspection support to prequalify vendors and suppliers in anticipation for procurement. Provide ongoing inspection support during procurement, manufacturing and assembly of required parts, systems and materials required for the high-speed train project.

TASK 8.4 DELIVERABLES		Schedule
8.4.1	Staffing plan and schedule of anticipated inspection support	Sept 2011

Future Project Management Activities

The following work plan activities shall be defined in advance of the work to be performed.

Task 9 Design, Construction & Manufacturing (future)

- 9.1 Construction Design Oversight
- 9.2 Track Construction
- 9.3 Station Construction
- 9.4 Rolling Stock Procurement

Task 10 Testing and Commissioning (future)

- 10.1 Track Certification
- 10.2 Electrification
- 10.3 Clearance Testing - Rolling Stock
- 10.4 Static Testing - Rolling Stock
- 10.5 Dynamic Testing - Rolling Stock
- 10.6 Maintenance Facility & Equipment
- 10.7 Operations Center and Control Systems
- 10.8 Ticketing and Reservations

Task 11 Operational Start Up (future)

- 11.1 Operational Plan
- 11.2 Staffing Management
- 11.3 Staging and Staffing Personnel
- 11.4 Training
- 11.5 Ticketing, Station and Web
- 11.6 Simulated Service
- 11.7 Revenue Service

Task 12 Consolidated Master List of Deliverables

TASK 1.1 DELIVERABLES	Schedule
1.1.1 Senior Program Management Team joint progress review with Authority staff, PM team, Regional Consultant teams	Monthly
1.1.2 PMT/ Authority staff progress/ status review	Weekly
1.1.3 Program Monthly Progress Report	Monthly
1.1.4 Update the Project Management Plan and protocols	As required
1.1.5 Year End Listing of Deliverables	June '11
1.1.6 Prepare FY2010/ 11 work scope and budget	April '11
1.1.7 Board Requested studies and Reports	As requested

TASK 1.2 DELIVERABLES	Schedule
1.2.1 Updated and revised Work Breakdown Structure	As Required
1.2.2 Resource loaded schedule for PM team FY 10/ 11 work	July '10
1.2.3 Expanded and revised ROD master schedule	August '10
1.2.4 Updates to NOD/ ROD and PMT schedules	Monthly
1.2.5 Updated Phase 1 and Full System schedule	September '10
1.2.6 Update Master Program Schedule	September '10
1.2.7 Review of Regional Consultants Monthly Progress Report and schedules	Monthly
1.2.8 Modify monthly Progress Report to address Earned Value Methodology	August '10
1.2.9 Select Document Control technology, acquire expertise in document control and create policies, procedures and protocols to implement document control system	June '11

TASK 1.3 DELIVERABLES	Schedule
1.3.1 Invoices	Monthly
1.3.2 Update Program Directory	As required
1.3.3 Special Project Assignments	As Assigned

TASK 1.4 DELIVERABLES	Schedule
1.4.1 Update Memo on change control function process	October '10
1.4.2 Report on 1 st 4 Regional Consultant QA/ QC compliance	November '10
1.4.3 Report on 2 nd 4 Regional Consultant QA/ QC compliance	February '11
1.4.4 Report on current risk register and risk management plan	April '11
1.4.5 Update the QA/ QC plan	As required

TASK 2.3 DELIVERABLES		Schedule
2.3.1	Written analysis and reports pertaining to state and federal policy, legislation and funding	as needed

DELIVERABLES	Schedule
3.1.1a Engineering Team Management Plan and Protocols	Update as required
3.1.1b Documentation of coordination and progress meetings	Monthly
3.1.1c Progress Updates to Program Progress Report and Schedule	Monthly

DELIVERABLES	Schedule
3.2.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

DELIVERABLES	Schedule
3.2.2a Technical Advisory Panel Meeting Agenda and Minutes	Within 4 weeks of meeting date
3.2.2b Technical Advisory Panel Draft and Final Report	Jan 11 Draft Apr 11 Final

DELIVERABLES	Schedule
3.2.3a Station Architecture and Design Principles	Oct 10 Draft Jan 11 Final
3.2.3b Architectural Aesthetic Guidelines	Feb 11 Draft May 11 Final
3.2.3c Preliminary Signage and Graphics Recommendations	Mar 11 Draft Jun 11 Final

DELIVERABLES	Schedule
3.3.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

DELIVERABLES	Schedule
3.3.3a Performance Specification for Traction Power Supply	Jan 11 Draft Apr 11 Final
3.3.3b Performance Specification for Overhead Contact System	Mar 11 Draft

	Jun 11 Final
3.3.3c Performance Specification for Train Control System	Mar 11 Draft Jul 11 Final
3.3.3d Performance Specification for Communications	Feb 11 Draft May 11 Final

DELIVERABLES	Schedule
3.5.1 Revised Technical Memoranda and Directive Drawings in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

DELIVERABLES	Schedule
3.5.2 a Preliminary Maintenance Plan – Rolling Stock Maintenance Plan and Facility Requirements	May 11
3.5.2b Preliminary Maintenance Plan -- MOW and Facility Requirements	Jun 11

DELIVERABLES	Schedule
3.5.3a Performance Specification -- Rolling Stock Maintenance Plan and Facility Requirements	Feb 11 Draft Jun 11 Final
3.5.3b Performance Specification – MOW Maintenance Plan and Facility	Mar 11 Draft Jun 11 Final

DELIVERABLES	Schedule
3.6.1 Revised Technical Memoranda in support of 30% Design, and CHSTP System Requirements in support of regulatory approval activities.	As Required

DELIVERABLES	Schedule
3.6.2 Performance Specification for Rolling Stock	Jun 11 Final

DELIVERABLES	Schedule
3.7.1 FRA Petition for RPA	Oct 10

DELIVERABLES	Schedule
3.7.2 CPUC Order for Instituting Rule	Mar 11 Draft Sep 11 Final

DELIVERABLES	Schedule
3.7.3 CHSTP System Requirements Management System Recommendation memo	Sep 10

DELIVERABLES	Schedule
3.7.4a EMT Memo – Definition of Principal – Functional Requirements Relationships	Oct 11
3.7.4b EMT Memo – Definition of Functional – System Requirements Relationships	Jun 11

3.7.4c EMT Memo - Verification of Principal Requirements	Dec 11

DELIVERABLES	Schedule
3.8.1 List of Standard Plans	Updated as required
3.8.2 CHSTP Standard Drawings – Infrastructure	Sep 10
Set 1 (10 Drawings estimated)	
<ul style="list-style-type: none"> ○ General ○ Access Control 	
Set 2 (20 Drawings estimated)	Dec 10
<ul style="list-style-type: none"> ○ Retaining Walls ○ Sound Walls 	
Set 3 (50 Drawings estimated)	Mar 11
<ul style="list-style-type: none"> ○ Track ○ Drainage 	
Set 4 (40 Drawings estimated)	Jun 11
<ul style="list-style-type: none"> ○ Bridges ○ Stations 	
3.8.3 CHSTP Standard Drawings – Overhead Contact System	Sep 10
Set 1 (60 Drawings estimated)	
<ul style="list-style-type: none"> ○ Train Speed up to 220 mph ○ Train Speed 125 mph or less ○ Typical Arrangements ○ OCS Schematic (LA- Ana) 	
Set 2 (10 Drawings estimated)	Dec 10
<ul style="list-style-type: none"> ○ OCS Schematic (San Francisco-San Jose) ○ OCS Schematic (Merced-Fresno) 	
Set 3 (20 Drawings estimated)	Mar 11
<ul style="list-style-type: none"> ○ OCS Schematic (San Jose-Merced) ○ OCS Schematic (Fresno-Bakersfield) ○ OCS Schematic (Palm-LA) 	
Set 4 (20 Drawings estimated)	Jun 11
<ul style="list-style-type: none"> ○ OCS Schematic (Bakersfield-Palmdale) ○ OCS Schematic (Merced-Sacramento) ○ OCS Schematic (LA-San Diego) 	
3.8.4 CHSTP Standard Drawings – Traction Power System	Sep 10
Set 1 (10 Drawings estimated)	

<ul style="list-style-type: none"> ○ General ○ Typical Duct Bank and Manhole Details 	
<p>Set 2 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Typical Power Schematics ○ Typical Auxiliary Power Supply Diagram 	Dec 10
<p>Set 3 (30 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Typical Conceptual Layouts ○ Typical Equipment Arrangements ○ Typical Relay and Metering Full Line Diagram ○ Typical Ground Grid Design 	Mar 11
<p>Set 4 (50 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Traction Power Schematics by Section ○ Typical Neutral Return Systems ○ Typical Schedule Template ○ SCADA Communications Interface by Section 	Jun 11
<p>3.8.5 CHSIP Standard Drawings – Communications</p> <p>Set 1 (20 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Symbols and Abbreviations ○ Maintenance Management Information System Overview ○ Cable Transmission System ○ Fiber Optic Cable Network 	Jan 11
<p>Set 2 (25 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Supervisory Control and Data Acquisition System ○ Telephone Systems ○ Passenger Information System ○ Video Surveillance Systems ○ Wireless Communications System 	Mar 11
<p>Set 3 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Equipment Cabinet and Interfaces ○ Typical Communications Interface Cabinet ○ Typical Fiber Optical Switching Node: Chassis Details ○ Station Communications Plans ○ Voice Radio Communications Requirement ○ Microwave Distribution System (MDS) 	Jun 11
<p>3.8.6 CHSIP Standard Drawings – Train Controls</p> <p>Set 1 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ ATC System Concept Block Diagram ○ ATC – Typical 	Sep 10

<p>Set 2 (5 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Station Interlocking Layout - Typical ○ Universal Interlocking Layout - Typical ○ Yard Transfer Track layout - Typical 	Dec 10
<p>Set 3 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ Wayside Fixed Signs - Typical ○ Signal and Aspects - Typical ○ Switch layout - Typical ○ Transponder Installation - Typical ○ Yard Power Derail - Typical 	Mar 11
<p>Set 4 (10 Drawings estimated)</p> <ul style="list-style-type: none"> ○ ATCEquipment Grounding and Bonding Arrangements - Typical ○ ATCOn-Board DMI - Typical ○ ATCATSHMI - Typical ○ ATCSystem Configuration and Interfaces ○ ATCInterfaces to Other Systems - Schematic - Typical ○ ATCSection Contract Limits 	Jun 11
<p>3.8.7 CHSIP Standard Drawings – Maintenance Facilities (20 Drawings estimated)</p> <ul style="list-style-type: none"> ○ To be determined 	Jun 11

DELIVERABLES	Schedule
3.9.1 Updated List of Standard Specifications	Quarterly
3.9.2 CHSIP Standard Specifications by Division	Sep 10 (Substantially complete)
<p>Set 1 (100 specifications estimated)</p> <ul style="list-style-type: none"> ○ Division 01 General Requirements ○ Division 22 Plumbing 	
<p>Set 2 (100 specifications estimated)</p> <ul style="list-style-type: none"> ○ Division 09 Finishes ○ Division 10 Specialties ○ Division 21 Fire Suppression ○ Division 26 Electrical ○ Division 31 Earthwork 	Dec 10 (Substantially complete)
<p>Set 3 (100 specifications estimated)</p> <ul style="list-style-type: none"> ○ Division 02 Existing Conditions ○ Division 03 Concrete ○ Division 04 Masonry ○ Division 05 Metals ○ Division 27 Communications 	Mar 11 (Substantially complete)

<ul style="list-style-type: none"> ○ Division 28 Electronic Safety and Security ○ Division 32 Exterior Improvements 	
<p>Set 4 (200 specifications estimated)</p> <ul style="list-style-type: none"> ○ Division 06 Wood, Plastics, and Composites ○ Division 07 Thermal and Moisture Protection ○ Division 08 Openings ○ Division 11 Equipment ○ Division 12 Furnishings ○ Division 13 Special Construction ○ Division 14 Conveying Equipment ○ Division 23 HVAC ○ Division 25 Integrated Automation ○ Division 33 Utilities ○ Division 34 Transportation 	Jun 11 (Substantially complete)

DELIVERABLES	Schedule
3.10.1 15% Cost Estimate Workshop and Review Comments	Within 4 weeks after a formal workshop

DELIVERABLES	Schedule
3.10.2 Cost items and Unit Prices for 30% Design Submittal	Jan 11

DELIVERABLES	Schedule
3.10.3a Program Estimate Updates	As requested

DELIVERABLES	Schedule
3.11.1 Final CHSTP Design Manual	Jun 11
<p>Set 1</p> <ul style="list-style-type: none"> ○ Section 1.0 General ○ Section 2.0 Climatic Conditions ○ Section 3.0 Design Survey and Mapping 	Sep 10 (Substantially complete)
<p>Set 2</p> <ul style="list-style-type: none"> ○ Section 4.0 Track Geometry ○ Section 5.0 Trackway Clearances ○ Section 10.0 Utilities ○ Section 17.0 Mechanical ○ Section 18.0 Traction Power Facilities 	Dec 10 (Substantially complete)
<p>Set 3</p> <ul style="list-style-type: none"> ○ Section 7.0 Station Design ○ Section 8.0 Civil Site Design 	Mar 11 (Substantially complete)

<ul style="list-style-type: none"> o Section 9.0 Drainage Design o Section 11.0 Earthwork o Section 12.0 Geotechnical Design o Section 16.0 Electrical Systems o Section 19.0 Overhead Contact System and Return System Section o 24.0 Electromagnetic Compatibility and Interference 	
<p>Set 4</p> <ul style="list-style-type: none"> o Section 6.0 Trackwork o Section 13.0 Seismic Design o Section 14.0 Structural Design o Section 15.0 Tunnel Design o Section 20.0 Grounding, Bonding and Lighting Protection System o Section 21.0 Corrosion Control o Section 22.0 Signaling o Section 23.0 Train Control o Section 25.0 SCADA o Section 26.0 Communications o Section 27.0 Rolling Stock Interface Requirements 	Jun 11 (Substantially complete)

DELIVERABLES	Schedule
3.12.1 Submittal Review Comments via Review Manager	As required

DELIVERABLES	Schedule
3.13.1 Updated Risk Register	Quarterly beginning Sep 10

DELIVERABLES	Schedule
3.14.1 TBD based on request	As required

DELIVERABLES	Schedule
3.15.1a Establish 250 Control Survey Monuments	June '11
3.15.2b Maintain Control Survey Monuments – Maintenance Report	Quarterly

DELIVERABLES	Schedule
3.16.1 System Requirement Support	As required

DELIVERABLES	Schedule
3.16.2 Design Manual Review	As required

DELIVERABLES	Schedule
3.16.3 Regional Consultant Design Submittals Review	As required

TASK 4.1 DELIVERABLES		Schedule
4.1.1	Attend 12 monthly Program Management (PM) and 12 PM/ Regional Team meetings. Provide progress reports on environmental status of Regional teams at these meetings Develop	Monthly
4.1.2	Conduct 26 bi-weekly environmental coordination conference calls with FRA, Authority, and Attorney General's Office, to review environmental progress and discuss issues. Prepare meeting agenda, action item log, and meeting minutes	Bi-Weekly
4.1.3	Conduct 26 bi-weekly conference calls with the environmental leads for each of the ten Regional teams to review progress and discuss issues Prepare meeting agenda, action item log, and meeting minutes.	Bi-Weekly
4.1.4	Attend Team meetings for each of the ten Regional teams to monitor progress and manage schedule.	As needed
4.1.5	Monitor overall environmental management schedule. Monthly progress reports will be prepared and presented to the Authority and FRA for each of the Regional teams.	Monthly
4.1.6	Prepare monthly status reports to include all of the activities listed above	Monthly
4.1.7	Provide regular briefings to FRA and Authority staff as needed	As needed
4.1.8	Prepare written materials for FRA and Authority use, as needed.	As needed

TASK 4.2 DELIVERABLES		Schedule
4.2.1	Traffic Impact Criteria Technical Memo	July 2010
4.2.2	Finalize Noise & Vibration Mitigation Policy	August 2010
4.2.3	Noise Fact Sheet / Noise Simulation Program	July 2010
4.2.4	Draft Station Oriented Development MOU	October 2010
4.2.5	Context Sensitive Solutions for Authority Website	September 2010
4.2.6	Guidance on Implementing Renewable Energy Policy	October 2010
4.2.7	Guidance on Implementing Sustainability for the CAHSIP	October 2010
4.2.8	Revised Alternatives Analysis Methods for Project-Level EIR/EIS	July 2010
4.2.9	Provide additional technical guidance memos to the Regional teams, as needed	As needed
4.2.10	Provide summaries of regional team and PMT progress and schedule for PMO. Attend monthly meetings with PMO.	Monthly
4.2.11	Provide guidance memos on protocol and legal adequacy on maintaining administrative records	As needed

TASK 4.3 DELIVERABLES		Schedule
4.3.1	Comments on each HST Section NOI and NOP	Completed
4.3.2	Comments on each HST section scoping materials as listed above	Completed
4.3.3	Comment on Draft Scoping Reports	Completed
[TASK 4.3 HAS BEEN COMPLETED]		

TASK 4.4 DELIVERABLES		Schedule
4.4.1	Notes on meetings with the environmental lead for the Regional teams on the implementation of the AA process (as needed)	As needed
4.4.2	Comments on the Preliminary and Supplemental AA reports 20 days after submittal	As submitted
4.4.3	Review & approve the Preliminary and Supplemental AA reports before submittal to Authority & FRA 10 days after submittal	As submitted

TASK 4.5 DELIVERABLES		Schedule
4.5.1	Updates of methodologies issued as needed	As needed
4.5.2	Prepare Version 4 of the Project Level Environmental Analysis Methodologies Report.	February 2011

TASK 4.6 DELIVERABLES		Schedule
4.6.1	Six month update of statewide agency participants	August 2010 & February 2011
4.6.2	Prepare agendas, presentations, and notices for Statewide Agency meetings and distribute	As needed
4.6.3	Conduct Statewide Agency meetings	Fall 2010 and , Spring 2011
4.6.4	Prepare and distribute Statewide Agency meeting minutes	Fall 2010 and Spring 2011
4.6.5	Coordinate and lead/ attend resource agency, stakeholder, public meetings in each of the ten Regional team HST Project Sections	Bi-Monthly
4.6.6	Review and comment on interagency meeting agendas, handout materials, and presentation graphics	As needed
4.6.7	Review and comment on interagency meeting notes	As needed

TASK 4.7 DELIVERABLES		Schedule
4.7.1	Log of any issues raised by the Regional teams will be prepared and maintained on ProjectSolve to be used as a reference for the preparation of environmental studies	As needed

TASK 4.8 DELIVERABLES		Schedule
4.8.1	Prepare and distribute comments to all environmental technical reports and EIR/ES sections as per the deliverable dates listed in Table 1.	As Submitted
4.8.2	Review of revised technical reports, DBR/ES sections	As Submitted
4.8.3	Review of Administrative Draft EIR/ES	As Submitted
4.8.4	Review of Draft EIR/ES	As Submitted
4.8.5	Review of Response to Comments	As Submitted
4.8.6	Review of Admin. Draft Final EIR/ES	As Submitted
4.8.7	Review of Section 404 Concurrence	As Submitted
4.8.8	Review of 106 Concurrence	As Submitted
4.8.9	Review of Section 7 Consultation	As Submitted
4.8.10	Review of Section 408/208.10 Coordination	As Submitted
4.8.11	Review of Section 401 Coordination	As Submitted
4.8.12	Review of Mitigation Monitoring Report	As Submitted
4.8.13	Review of Final EIR/EIS	As Submitted
4.8.14	Review of NOD and ROD	As Submitted

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable – 2010-11	LA- Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	S- Merced	SJ-SF	LA-SD	Merced- SAC	Altamont
Purpose & Need	Jul10	Jul10	Dec10	Jul10	Jul10	Jul10	Done	Dec11	Nov11	Feb11
Project Description	Jul10	Jul10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jun11
Technical Reports										
Transportation – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Transportation – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Air Quality – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Air Quality – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Noise & Vibration – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Noise & Vibration – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Biological Resources & Wetlands – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Biological Resources & Wetlands – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Hydrology and Water Resources – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Hydrology and Water Resources – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Geology, Soils, Seismicity – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Geology, Soils, Seismicity – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
HAZARDOUS MATERIALS/ WASTES – EXISTING CONDITIONS	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
HAZARDOUS MATERIALS/ WASTES – IMPACTS	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Community Impact Assessment – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Community Impact Assessment – Impacts	Jul10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Aesthetics & Visual Quality – Existing Conditions	Jul10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI- Merced	SI-SF	LA-SD	Merced- SAC	Altamont
Aesthetics & Visual Quality – Impacts	July 10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Cultural Resources – Existing Conditions	July 10	July 10	Jul11	Jul10	Jul10	Jul10	Jul10	Jan12	Nov11	Jul11
Cultural Resources – Impacts	July 10	Aug10	Aug11	Jul10	Jul10	Jul10	Jul10	Mar12	Jan12	Jul11
Draft Relocation Impact Report – Existing	July 10	July 10	Jul11	Jul10	Aug10	Jan11	Aug10	Jan12	Nov11	Jul11
Draft Relocation Impact Report - Impacts	July 10	Aug10	Aug11	Jul10	Sept10	Feb11	Jul10	Mar12	Jan12	Jul11
BR/ ES Sections										
Transportation – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Transportation – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Air Quality – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Air Quality – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Noise & Vibration – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Noise & Vibration – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
EMI/EMF – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
EMI/EMF – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Public Utilities and Energy – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Public Utilities and Energy – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11
Biological Resources & Wetlands – Existing Conditions	Aug10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Biological Resources & Wetlands – Impacts	Aug10	Sept10	Aug11	Jul10	Sept10	Feb11	Jul10	Apr12	Feb12	Aug11

Table 1 (cont'd)
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI- Merced	SI-SF	LA-SD	Merced- SAC	Altamont
Hydrology and Water Resources – Existing Conditions	Aug 10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Hydrology and Water Resources – Impacts	Jul 10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Geology, Soils, Seismicity – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Geology, Soils, Seismicity – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
HAZARDOUS MATERIALS/ WASTES – EXISTING CONDITIONS	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
HAZARDOUS MATERIALS/ WASTES – IMPACTS	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Safety and Security – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Safety and Security – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Socioeconomics, Communities, and Environmental Justice – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Socioeconomics, Communities, and Environmental Justice – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Local Growth, Station Planning & Land Use – Existing Conditions	July 10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Local Growth, Station Planning & Land Use – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Agricultural Land – Existing Conditions	Jul10	Sept 10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Agricultural Land – Impacts	Jul10	Sept 10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11

Table 1
Environmental Work Products to be Reviewed by PMT

Deliverable 2010-11	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SJ- Merced	SJ-SF	LA-SD	Merced- SAC	Altamont
Parks, Recreation, and Open Space – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Parks, Recreation, and Open Space – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Aesthetics & Visual Quality – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Aesthetics & Visual Quality – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Cultural Resources – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Aug10	Jan11	Aug10	Feb12	Dec11	Jul11
Cultural Resources – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Cumulative Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Section 4(f) and Section 6(f) Evaluations – Existing Conditions	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Section 4(f) and Section 6(f) Evaluations – Impacts	Aug 10	Sept10	Aug11	Jul10	Sept 10	Feb11	Jul10	Apr12	Feb12	Aug11
Administrative Draft EIR/ES	Sept 10	Oct 10	Sep11	Jul10	Oct 10	Mar11	Aug10	Jun12	Apr12	Oct 11
Draft EIR/ES for Public Circulation	Dec 10	Jan11	Dec11	Oct10	Dec10	Jul11	Nov10	Dec12	Oct12	May12
Response to Comments	Apr11	May11	Mar12	Feb11	Apr11	Nov11	Mar11	May13	Mar13	Oct 12
Administrative Final EIR/ES	May11	Jun11	May12	Mar11	May11	Dec11	Apr11	Jul13	Apr13	Jan13
Section 404 Concurrence	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
106 Concurrence	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13

Table 1
Environmental Work Products to be Reviewed by PMT

	LA-Ana	Palmdale- LA	Bakersfield- Palmdale	Merced- Fresno	Fresno- Bakersfield	SI-Merced	SI-SF	LA-SD	Merced- SAC	Altamon t
Section 7 Consultation	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Section 408/208.10 Coordination	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Section 401 Coordination	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Mitigation Monitoring Report	May11	Jun11	May12	May11	May11	Dec11	May11	Jul13	Apr13	Jan13
Final EIR/EIS	Jun 11	Aug11	Jun12	May11	Jun11	Feb12	Jun11	Aug13	Jun13	Mar13
Preparation of NOD and ROD	Aug 11	Oct11	Sep12	Aug11	Aug11	Apr12	Aug11	Dec13	Aug13	May13

TASK 4.9 DELIVERABLES		Schedule
4.9.1	Identify all state and federal environmental permits and approvals and information needed to support these permits and approvals.	August 2010
4.9.2	Preparation of coordination and schedule of permits and approvals by ARRA Regional teams	October 2010
4.9.3	Preparation of coordination plan and schedule of permits and approvals by Palmdale-LA and San Jose-Merced Regional teams	January 2011
4.9.4	Identify milestones in project schedule to obtain permits and approvals	November 2010 & February 2011
4.9.5	Monitor schedule and coordination plan activities of the four ARRA Regional Teams and Palmdale-LA and San Jose-Merced Regional teams	Monthly
4.9.6	Maintain status log of work done by the Regional teams related to obtaining needed agency permits and approvals.	Monthly

TASK 4.10 DELIVERABLES		Schedule
4.10.1	Regional Air Quality technical report to be included in each of the HST Section EIR/ EISs	August 2010

TASK 4.11 DELIVERABLES		Schedule
4.11.1	GIS work as directed	As needed

TASK 4.12 DELIVERABLES		Schedule
4.12.1	Complete NEPA/ Section 404 Integration MOU	July 2010
4.12.2	Complete Section 106 Programmatic Agreement (PA)	July 2010
4.12.3	Complete five of the remaining seven interagency funding agreements for FY2010/ 11	July 2010
4.12.4	Prepare seven interagency funding agreements for FY2011/ 12	January 2011

TASK 4.13 DELIVERABLES		Schedule
4.13.1.1	Provide technical review comments on Purpose and Need checkpoint packages	As submitted
4.13.1.2	Assist regional teams in responding to EPA and Corps comments on Purpose and Need	As submitted
4.13.1.3	Provide technical review comments on Range of Alternatives checkpoint packages	As submitted
4.13.1.4	Assist regional teams in responding to EPA and Corps comments on Range of Alternatives	As submitted
4.13.1.5	Provide technical review comments on LEDPA checkpoint packages	As submitted
4.13.1.6	Assist regional teams in responding to EPA and Corps comments on LEDPA	As submitted
4.13.1.7	Provide technical review comments on Draft Compensatory Mitigation Plan (DCMP) checkpoint packages	As submitted
4.13.1.8	Assist regional teams in responding to EPA and Corps comments on Draft Compensatory Mitigation Plan (DCMP)	As submitted

TASK 4.13.2 DELIVERABLES		Schedule
4.13.2.1	Meeting summaries for all coordination meetings	Monthly
4.13.2.2	Technical review of presentations and submittal packages	As submitted

Task 5.1 DELIVERABLES		Schedule
5.1a	RM Weekly and Monthly Progress Report including assessment of RC progress, budget and schedule	Weekly/Monthly
5.1b	Report and Memoranda as directed by Program Director	As required
5.1c	Work Plan, Budget estimate and scope changes	As required
5.1d	Assessment report on RC Invoice	Monthly
5.1e	Post responses to Public Inquiries Log on Project Solve2	As required

Task 5.2 DELIVERABLES		Schedule
5.2a	Summary / meeting report of each outreach meeting(s)	Within 3 days of meeting
5.2b	Summary / meeting report of each stakeholder, elected official and or government staff	Within 3 days of meeting (24 hours for elected official)
5.2c	Log of tasks and issues from weekly teleconferences and notes of monthly meetings with RC Project	Within 3 days of meeting

	Manager and team	
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Task 5.3.1 DELIVERABLES		Schedule
5.3.1a	Comments on Scoping Report	Completed
5.3.1b	Comments on Preliminary and Supplemental Alternatives Analysis Report	Within 10 days of receipt
5.3.1c	Review and comment on Environmental Technical Studies	Within 10 days of receipt
5.3.1d	Review and comment on 15% Design	Within 10 days of receipt
5.3.1e	Review and comment on Admin / Draft EIR/ EIS	Within 10 days of receipt

Task 5.3.2 DELIVERABLES		Schedule
5.3.2a	Comments on the NOI and NOP for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2b	Comments on scoping materials as listed above for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2c	Comment on Environmental Scoping Report for - Palmdale to Bakersfield - San Diego to Los Angeles - Altamont Corridor - Merced to Sacramento	Complete Complete Complete Complete
5.3.2d	Comments on AA Reports -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	July 2010 September 2010 June 2010 June 2010 November 2010 August 2010 June 2010 December 2010 February 2011 December 2010
5.3.2e	Comment on environmental studies for -San Francisco to San Jose	July 2010

	-San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	July 2010 July 2010 July 2010 August 2010 August 2010 July 2010 July 2012 July 2012 July 2012
5.3.2f	Preparation of the Admin Draft EIR/EIS Report for -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	September 2010 April 2011 August 2010 November 2010 September 2011 October 2010 September 2010 June 2012 April 2012 October 2011
5.3.2g	Review and Comment on environmental technical reports	Within 10 days of receipt
5.3.2h	Comments on RC deliverables for compliance with Program criteria	Within 10 days of receipt

Task 5.3.3 DELIVERABLES		Schedule
5.3.3a	Comments on Regional Consultant deliverables for compliance with Program design criteria	Within 10 days of receipt
5.3.3b	End of year section progress report, reporting on engineering and EIR/EIS progress	June 30, 2011
5.3.3c	Preparation of the 15% Design for: -San Francisco to San Jose -San Jose to Merced -Merced to Fresno -Fresno to Bakersfield -Bakersfield to Palmdale -Palmdale to Los Angeles -Los Angeles to Anaheim -Los Angeles to San Diego -Merced to Sacramento -Altamont Corridor	December 2010 December 2010 September 2010 August 2010 November 2010 October 2010 August 2010 August 2012 October 2011 April 2011

TASK 6.1 DELIVERABLES		Schedule
6.1.1	Right of Way Guidelines Manual, Draft	July '10
6.1.2	Right of Way Guidelines Manual, Final for PD release	August '10

TASK 6.2 DELIVERABLES		Schedule
6.2.1	Standard Forms & Documents, Draft	September '10

TASK 6.3 DELIVERABLES		Schedule
6.3.1	Memo on Strategy for Proactive Acquisition	August '10
6.3.2	Draft protocol for PM team and Regional team ROW acquisition responsibilities	September '11
6.3.3	Memo on ROW acquisition items and processes to include in QA/QC procedures	September '11

TASK 6.4 DELIVERABLES		Schedule
6.4.1	Memo on recommended priority acquisitions	March '11

TASK 6.5 DELIVERABLES		Schedule
6.5.1	Proposed structure, content, location of data base	June '11
6.5.2	Year-end report on database establishment	June '11

TASK 6.6 DELIVERABLES		Schedule
6.6.1	Solicitation document and related materials	June '11
6.6.2	Report on initial response	June '11
6.6.3	Initial list of screened and qualified vendors by specialty	June '11

TASK 6.7 DELIVERABLES		Schedule
6.7.1	Relocation Plan, Draft	May '11
6.7.2	Relocation Plan, Final for PD release	June '11

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.1 a	Direct coordination with railroads, operating agencies, stakeholders	Ongoing	Ongoing	Ongoing
7.1 b	Direct development of operations input for systems design elements (15% and 30% design)	Ongoing	Ongoing	Ongoing
7.1 c	Review & comment on Engineering design to ensure operational requirements are met (15% and 30% design)	Ongoing	Ongoing	Ongoing
7.1 d	Direct development of detailed HST railroad system rules & procedures, interface with current rules and regulations	2/2011 Draft 6/2011 Final Draft	7/2012 Update	6/2013 Update
7.1 e	Direct coordination with FRA on rules, procedures and regulatory issues pertaining to railroad operations and operational safety and security	Ongoing	Ongoing	Ongoing
7.1f	Direct development of operational elements of CHSTP procurement documents	1/2011 Draft 6/2011 final draft	Update as necessary	Update as necessary

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.2 a	Operations and Service Planning report(s); Service Design & Service Plan; ridership demand, system capacity, service guidelines and standards	9/2010 Draft 12/2010 Final Draft	7/2011 Update	7/2012 Update
7.2.2 b	Operations Plan report(s); computer model, trip time analysis, timetable, system capacity utilization, performance, reliability	7/2010 Update (ongoing)	7/2011 Update (ongoing)	7/2012 Update (ongoing)
7.2.2 c	Trainset equipment cycles & estimate fleet size report(s)	7/2010 Update (ongoing)	7/2011 Update (ongoing)	7/2012 Update (ongoing)
7.2.2 d	Layup, storage requirements for inspection, cleaning, maintenance facilities for rolling stock	7/2010 Update (ongoing)	7/2011 update (ongoing)	7/2012 Update (ongoing)

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.3 a	Passenger Stations planning, requirements for station guidelines, standards, ticketing, staffing	10/2010 Draft 1/2011 Final Draft	7/2011 Update	7/2012 Update

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.4 a	Operations Control Center (OCC) / System Control Center requirements	7/2010 Ongoing Refinements	7/2011 Ongoing Refinements	7/2012 Ongoing Refinements

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.5 a	On Train operations and On Board Services requirements	10/2010 Draft 2/2011 Final Draft	7/2011 Update	7/2012 Update

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.6 a	Train Performance Report	7/2010 Update (Ongoing)	7/2011 Update (Ongoing)	7/2012 Update (Ongoing)

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.7 a	Concept of Operations Report	7/2010 Draft 10/2010 Final Draft	7/2011 Update	7/2012 Update

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.8 a	Train Simulation Modeling and Operations Report(s)	7/2010 Ongoing	7/2011 Ongoing	7/2012 Ongoing

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.9 a	Technical Support on an as needed basis.	7/2010 (Ongoing)	7/2011 (Ongoing)	7/2012 (Ongoing)

Subtask	Deliverable	FY2010/11	FY2011/12	FY2012/13
7.2.10 a	General system safety requirements report	9/2010 Draft 1/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 b	Fire , Life , Safety Criteria and Parameters	10/2010 Draft 2/2011 Final Draft	7.2011 Update	7/2012 Update
7.2.10 c	Training and Qualifications Program Requirements	8/2010 Draft 12/2010 Final	7/2011	7/2012

		Draft	Update	Update
7.2.10 d	Emergency Preparedness and EAP	12/2010 Draft 3/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 e	Preliminary Hazard Analysis (PHA)	10/2010 Draft 1/2011 Final Draft	7/2011 Update	7/2012 Update
7.2.10 f	Threat & Vulnerability Assessment (TVA)	7/2010 Draft 9/2010 Final Draft	7/2011 Update	7/2012 update

SUBTASK 7.3.1 DELIVERABLES		Start	Complete
7.3.1 a	Up to 50 forecasts	July 1, 2010	June 20, 2011
	Up to 37 forecasts	July 2, 2011	June 20, 2012
	Up to 25 forecasts.	July 3, 2012.	June 20, 2013.
7.3.1 b	Memoranda on results of forecast groups	Upon completion of a forecast group	30 days after completion of a forecast group
7.3.1 c	Fiscal Year End summary of forecasts	June 21, 2011; June 21, 2012; June 21, 2013.	June 30, 2011; June 30, 2012; June 30, 2013.

SUBTASK 7.3.2 DELIVERABLES		Start	Complete
7.3.2 a	BR/BS Support and Public Outreach materials as directed	July 1, 2010..	June 30, 2011
		July 2, 2011..	June 30, 2012
		July 3, 2012.	June 30, 2013.
7.3.2 b	Progress report 10 days after end of each month	August 1, 2010	June 10, 2012
7.3.2 c	Fiscal Year End summary of Support work performed	June 21, 2011; June 21, 2012; June 21, 2013.	June 30, 2011; June 30, 2012; June 30, 2013.

Recommendation for owner furnished early critical materials Overall Agency TASK 8.1 DELIVERABLES		Schedule
8.1.1	Construction Staging Plan (all phase I sections)	Dec 2010
8.1.2	Develop Staging Procurement Documents, SOW, RFP and Contractual document	Dec 2010
8.1.3	Request for Qualification development (RFQ) - Contract Requirements & Structures – Draft	Oct 2010
8.1.4	Request for Qualifications development (RFQ) - Contract Requirements & Structures – Final	Dec 2010
8.1.5	Request for Proposals (RFP) - Contract Requirements & Structures – Draft	March 2011
8.1.6	Request for Proposals (RFP) - Contract Requirements & Structures – Final	July 2011
8.1.7	Constructability Review Matrix	Dec 2010
8.1.8	Constructability Reviews	As needed
8.1.9	Detailed Recommendations for staging plans	As needed
8.1.10	Recommendations for staging specifications	As needed
8.1.11	Identification of un-programmed documents	As needed

TASK 8.2 DELIVERABLES		Schedule
8.2.1	Develop Design-Build(DB) Contract documents- Draft	March 2011
8.2.2	Develop D-B Contract documents- Final	July 2011

TASK 8.3 DELIVERABLES		Schedule
8.3.1	Develop Construction Cost estimates	As needed

TASK 8.4 DELIVERABLES		Schedule
8.4.1	Staffing plan and schedule of anticipated inspection support	Sept 2011

Upload #9

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: Simple Pro-forma - Merced to Fresno - Supplemental.pdf

**MERCED TO FRESNO - SUPPLEMENTAL
PRO-FORMA SOURCES & USES IN THOUSANDS**

Fiscal Year End*	[Date]	30/Sep/10	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
Periodic Growth in Revenue	[%]	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	4.6%	4.4%	4.2%	4.8%
Federal Grants - Capital Investments	[\$ in '000]	0	0	285,738	513,381	670,865	479,949	308,592	151,763	5,175	0	0	0	0	0
State Grants - Capital Investments	[\$ in '000]	0	0	238,264	426,582	549,214	390,827	248,695	123,633	4,244	0	0	0	0	0
Local Grants - Capital Investments	[\$ in '000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Revenue - Supplemental	[\$ in '000]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.0	59.7	62.5	65.3	68.0	71.3
Operating Subsidies - Caltrans & Amtrak	[\$ in '000]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.6	63.6	64.7	65.7	66.8	67.8
Capital Replacement Subsidies- Caltrans & Amtrak	[\$ in '000]	0	0	0	0	0	0	0	0	16,040	16,040	16,040	16,040	16,040	16,040
Total Sources	[\$ in '000]	0.0	0.0	524,001.5	939,963.5	1,220,078.9	870,776.1	557,286.4	275,396.0	25,577.4	16,162.9	16,166.7	16,170.5	16,174.4	16,178.7
Capital Costs - revised ARRA segment	[\$ in '000]	0	0	(405,316)	(722,967)	(915,952)	(647,973)	(407,545)	(205,069)	(7,091)	0	0	0	0	0
Capital Costs - Supplemental	[\$ in '000]	0	0	(118,686)	(216,996)	(304,127)	(222,803)	(149,742)	(70,327)	(2,327)	0	0	0	0	0
Operating Costs - Supplemental	[\$ in '000]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(119.5)	(123.4)	(127.2)	(131.0)	(134.8)	(139.1)
Capital Replacement Costs - revised ARRA segment	[\$ in '000]	0	0	0	0	0	0	0	0	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)
Capital Replacement Costs - Supplemental	[\$ in '000]	0	0	0	0	0	0	0	0	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)
Total Uses	[\$ in '000]	0.0	0.0	(524,001.5)	(939,963.5)	(1,220,078.9)	(870,776.1)	(557,286.4)	(275,396.0)	(25,577.4)	(16,162.9)	(16,166.7)	(16,170.5)	(16,174.4)	(16,178.7)
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

* All projects that are funded by the ARRA monies will be complete by Federal Fiscal Year 2017. However, based on past experience, it is expected that complete funding of those projects will only occur by the early months of Federal Fiscal Year 2018 once all respective paperwork is completed.

**MERCED TO FRESNO - SUPPLEMENTAL
PRO-FORMA SOURCES & USES IN THOUSANDS**

Fiscal Year End*	[Date]	30/Sep/24	30/Sep/25	30/Sep/26	30/Sep/27	30/Sep/28	30/Sep/29	30/Sep/30	30/Sep/31	30/Sep/32	30/Sep/33	30/Sep/34	30/Sep/35	30/Sep/36	30/Sep/37
Periodic Growth in Revenue	[%]	4.6%	4.4%	4.2%	4.7%	3.6%	3.6%	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	0	0	0	0	0	0
State Grants - Capital Investments	[\$ in '000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Grants - Capital Investments	[\$ in '000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Revenue - Supplemental	[\$ in '000]	74.6	77.9	81.2	85.0	88.1	91.2	94.4	97.5	100.7	103.9	107.1	110.2	113.4	116.6
Operating Subsidies - Caltrans & Amtrak	[\$ in '000]	68.8	69.8	70.8	71.7	72.8	73.8	74.8	75.8	76.8	77.8	78.8	79.8	80.9	81.9
Capital Replacement Subsidies- Caltrans & Amtrak	[\$ in '000]	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040	16,040
Total Sources	[\$ in '000]	16,182.9	16,187.2	16,191.5	16,196.3	16,200.4	16,204.5	16,208.7	16,212.9	16,217.0	16,221.2	16,225.4	16,229.6	16,233.8	16,238.0
Capital Costs - revised ARRA segment	[\$ in '000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Costs - Supplemental	[\$ in '000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Costs - Supplemental	[\$ in '000]	(143.4)	(147.7)	(152.0)	(156.7)	(160.8)	(165.0)	(169.1)	(173.3)	(177.5)	(181.7)	(185.9)	(190.1)	(194.3)	(198.5)
Capital Replacement Costs - revised ARRA segment	[\$ in '000]	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)
Capital Replacement Costs - Supplemental	[\$ in '000]	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)	(4,083)
Total Uses	[\$ in '000]	(16,182.9)	(16,187.2)	(16,191.5)	(16,196.3)	(16,200.4)	(16,204.5)	(16,208.7)	(16,212.9)	(16,217.0)	(16,221.2)	(16,225.4)	(16,229.6)	(16,233.8)	(16,238.0)
Change in Cash	[\$ in '000]	0.0													

* All projects that are funded by the ARRA monies will be complete by Federal Fiscal Year 2017. However, based on past experience, it is expected that complete funding of those projects will only occur by the early months of Federal Fiscal Year 2018 once all respective paperwork is completed.

Upload #10

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: SSPP Approach Memo Draft.pdf

California High-Speed Train Project



DRAFT

APPROACH TO SYSTEM SAFETY PROGRAM AND PLAN

Prepared by: Lee Williams 07 May 10

Prepared by 
for the California High-Speed Rail Authority

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I. INTRODUCTION

As part of the California High-Speed Train Project (CHSTP) the California High Speed Rail Authority (Authority) will develop the following comprehensive safety and security programs, plans and procedures for the construction and operation of the system.

II. SYSTEM SAFETY PROGRAM PLAN (SSPP)

The System Safety and Security Program Plan (SSPP) will define safety and security goals and objectives, specifies safety and security related activities and indicators, including requirements for the Safety and Security Certification process, and assigns responsibilities for ensuring that the activities are conducted and objectives are met. The Authority will implement its SSPP based on the 23 elements outlined by the FRA and APTA in *The Manual for Development of System Safety Program Plans for Commuter Railroads*, including identification, development and re-evaluation of safety and security elements for high speed rail and required processes through project design, construction, testing and revenue operation. Management of this SSPP includes developing design criteria, implementing procedures and instructions, development and maintenance of associated databases and training programs, which will be an on-going review process in concert and cooperation with other agencies and/or stakeholders. Adherence to this policy will focus on providing a safe and secure environment during all phases of the Project prior to revenue service. The SSPP will be developed in accordance with the above FRA/APTA guidelines and modified as required to meet the needs of high speed rail system. The contents of the program are but not limited to the following:

A. Safety Management Administrative Requirements

1. Policy Statement and Authority
2. Purpose and Scope of the SSPP
3. Goals for SSPP
4. Objectives
5. System and Organizational Descriptions
 - This section will describe in detail the CHSTP physical plant and proposed operations.
 - Outline the Project organization and program management
 - Legislative Requirements & Policy Dissemination
6. System Planning and Integration
 - Strategic Program Planning
 - Administrative Controls
 - Interdepartmental and Interagency Coordination

7. Safety Contract Requirements for Operational Services, Facilities, Equipment, Materials and Construction Management

B. Safety Program Implementation

8. Facilities Maintenance & Inspections
9. Vehicle Maintenance Inspection and Repair
10. Rules/Procedures Review
11. Employee Training
12. Emergency Planning and Response
13. Workplace Safety Programs
 - Employee Safety Program
 - Contractor Safety Coordination
 - Fitness for Duty Program
 - Drug and Alcohol Program
 - Fatigue Program
14. Medical Monitoring Program Passenger and Public Safety Programs
15. Rail Corridor Operational Safety
 - Joint Freight Operations
 - Highway Grade Crossings
 - Trespassing and Intrusion

C. Safety Engineering Techniques and Analysis

16. Hazard Management and Resolution Process
 - Hazard Identification and Analyses, Collision Hazard Analysis, FMECA, Fault Tree Analysis Hazard documentation process
17. Loss Prevention & Control
 - Fire Safety Analysis
 - Casualty Management

D. Safety and Security Certification Program

18. Development and description of a Safety and Security Certification Program (SSCP)

E. Safety Assurance

19. Safety Organization
20. Roles and responsibilities for Management and Employees
21. Safety rules, procedures and policies relating to the day-to-day operation of CHSTP
22. Employee Observation and discipline procedures as they relate to safety and security.
23. Configuration Management
 - Standards/Design Control
 - System Modification . New Process/Equipment
 - Quality Assurance/Quality Control Interface

- Document Control
- 24. Internal Safety Management Assessment
 - Internal Safety Audits
 - Security Self Assessments
- 25. Accident/Incident reporting that complies with the requirements of the FRA

F. Construction Safety Management

- 26. Describes the Construction Management Organization
- 27. Development and description of a Construction Safety and Security Program

III. SAFETY AND SECURITY CERTIFICATION PROGRAM (SSCP)

The SSCP is part of the SSPP and the program's purpose is to ensure that design and operating hazards and security vulnerabilities are identified, evaluated, and eliminated by design or properly controlled and/or mitigated to a minimal risk level that is acceptable to the California High Speed Rail Authority prior to commencement of revenue service. It provides traceable and auditable verification that:

- Design and operating hazards and security vulnerabilities are identified, evaluated and properly controlled and/or mitigated, prior to the commencement of revenue service; Safety hazards and security vulnerabilities have been identified and their mitigating measures implemented;
- All critical system elements are evaluated for compliance with the identified safety and security requirements during the design, construction/installation, testing, and start-up phases of a project; and
- Project is operationally safe and secure for customers, employees, emergency personnel and the general public prior to revenue service.

The SSCP sets forth the program, processes and procedures which are used to verify that applicable safety and security requirements are established in the Project design criteria and ensures these requirements and applicable state, local and federal safety and security standards are incorporated into the Project specifications and drawings. Safety and security certification checklists are then developed to verify that:

- The criteria requirements have been incorporated into the design and contract specifications;
- All project equipment, facilities, plans and procedures are systematically reviewed for compliance with established system safety and security requirements;

- The systems have been manufactured, installed, and constructed in accordance with the design;
- After contractual testing is completed, system integration tests, including emergency drills are performed to assure all constructed and installed elements and planned human responses function seamlessly, safely, and securely as intended;
- All identified safety hazards and security vulnerabilities have been successfully mitigated;
- Training programs are developed and implemented, and that staff are trained and certified to perform their functions;
- Operating and maintenance procedures are developed and meet the safety and security requirements;
- An emergency preparedness program is developed and implemented; emergency response personnel and Rail Operations personnel are trained to respond to emergencies by conducting the necessary emergency training exercises and drills;
- CHSTP operations and maintenance procedures and training programs are developed as necessary.

1. DESIGN SPECIFICATION CONFORMANCE

The design section of the SSCP will detail the Project design safety and security requirements, including those in the design criteria and those resulting from the preliminary hazard analyses and TVAs will be verified by the design team at the 100% design level. During PE, preliminary hazard analysis identification will be developed, which will be further developed and documented by the design teams. The process includes development of the Certifiable Element List (CEL) and verification checklists and review of each design elements for compliance prior to formal safety and security certification of the Project final design.

2. CONSTRUCTION SPECIFICATION CONFORMANCE

The construction section of the SSCP details how the construction of individual elements will be safety and security certified that they meet the final design and any added requirements due to targeted hazard analyses or TVAs. Formal documentation from contractors, such as inspection and testing reports will be used as will witnessing of tests by contractors and manufacturers to verify requirements are met. It must be demonstrated that:

- All elements of the system provided under construction, procurement and installation contracts conform to the safety and security specification requirements.
- All required contractual testing has been satisfactorily performed and evidence submitted, if required.

- The as-built configuration contains the safety and security related requirements identified in the applicable specifications and other contract documents.
- Changes to the established design configuration meet code and regulatory compliance, have been approved by a governing Change Review Committee, and any identified safety and security issues are satisfactorily resolved.

The detailed procedure for construction certification, including delineation of authority and responsibility will be included in the SSCP.

3. TESTING/INSPECTION VERIFICATION

Verification of testing and inspection requirements will be completed in two stages, both require that all safety and security elements be adequately inspected and tested before acceptance. All contractually required inspections and tests (factory, material, and field) are overseen by construction managers, QC, and by safety and security personnel when they deem it necessary. Tests that are required to assure proper integration of systems, or are safety or security intensive, are included in the System Integration Test Plan (SITP).

The SITP identifies tests and drills required to be performed, and for each, prerequisites, required planning and materials, test success criteria, and responsibilities for performing and witnessing the test or drill. System integration testing is performed during the integration testing phase of the project, which begins after all contractual testing is done and substantial completion is given to the contractor. Each test or drill will be approved based on a detailed procedure with appropriate data sheets, and a testing schedule will be published. Contractor personnel may perform tests, however, they may be overseen and witnessed by project personnel to verify results and sign the test reports. After all system integration tests are satisfactorily completed and reports accepted and results verified, system integration tests will be safety and security certified by the procedures in the SSCP.

The SITP will contain the detailed SIT procedures and management roles and the SSCP will contain the details of SIT certification.

4. CERTIFICATES OF CONFORMANCE

After each Certifiable Element has been completed and approved by members of the Safety Certification Review Committee and Project Management, a Certificate of Conformance will then be issued for that element. At the completion of the safety certification process and prior to revenue ready any items that remain open and have not been completed must be identified and appropriate workarounds will be put in place to facilitate revenue service. These items will be carried on the Safety and Security Certification Verification Report until completed and considered closed.

IV. SYSTEM SECURITY PLAN (SSP)

The overall purpose of SSP is to optimize -- within the constraints of time, cost, and operational effectiveness -- the level of protection afforded to the CHSTP's passengers, employees, volunteers and contractors, and any other individuals who come into contact with the system, both during normal operations and under emergency conditions.

This SSP ensures a planned, documented, organized response to actual and potential security threats to the system, and to address these threats with proactive measures and response techniques that manage and minimize the outcome of security breaches or related events.

The SSP:

- Develops, documents, and communicates a comprehensive, responsive, appropriate and effective security plan;
- Documents security goals and objectives for the rail agency, as official direction to employees and department managers, and as a performance accountability basis for the agency's security plan;
- Serves as the rail agency's in-house point-of-reference for a complete and comprehensive description of its security plan;
- Supports rail agency compliance with region-wide initiatives to address requirements specified in Homeland Security Presidential Directives (HSPDs) for the National Response Plan, the National Incident Management System the National Infrastructure Protection Plan, and the National Response Goal;
- Fulfills DHS/G&T requirements for Transit Security Grant Program (TSGP) assistance; and
- Ensures compliance with TSA directive RAILPAX-04-01 issued on May 20, 2004
- Fulfills 49CFR 1580 security requirements

V. HAZARD IDENTIFICATION AND RESOLUTION

CHSP will develop a Hazard Identification and Resolution Plan and will be conducting many forms of analysis to identify and determine corrective actions/mitigations for hazards and vulnerabilities associated with the design,

construction, testing and operations of the CHSTP service. These analyses will drive the design, the development of policies and procedures with the single goal of eliminating or mitigating the risks to employees, contractors and the public.

1. PRELIMINARY HAZARD ANALYSIS (PHA)/COLLISION HAZARD ANALYSIS (CHA)

Hazard identification, analysis, assessment and resolution are extremely critical part of a successful system safety program. The PHA will closely follow the U.S. Department of Defense document "System Safety Program Plan Requirements" (MIL STD 882) and the FRA Collision Hazard Analysis (CHA) Guide dated October 27, 2007 during the preliminary design phase to ensure that all identified potential hazards and their mitigations have been incorporated in the design. Hazards will be identified, assessed and placed in a risk classification with recommended mitigating measures. It will take into consideration the following elements:

- Trackwork
- Traction power
- Electrical and Facilities Power
- Signals and Train Controls
- Stations and parking facilities
- Civil/Structures including viaducts, bridges, tunnels
- Communications
- Yard and Shop facilities
- Operations and Maintenance
- Plans and Procedures

2. VEHICLE HAZARD ANALYSIS

The purpose of this Vehicle Hazard Analysis is to identify potential collision hazards, primary causes and contributing factors that may lead to penetration or loss of occupied volume, and/or result in excessive deceleration forces inside high-speed rolling stock vehicles and systematically assess conditions which could potentially affect the safe operation of the high-speed rail system. Identifying potential hazards during the design phase will enable their elimination or control, together with their associated causes and effects, before the system is constructed and opened for revenue service.

The objectives of this analysis are based on FRA hazard analysis guidelines and are as follows:

Identify hazardous conditions, which could exist; evaluate the effects of the hazards to patrons, personnel and equipment; and define designs and criteria to eliminate or mitigate the identified hazards

Document the safety concepts and mitigation measures to be incorporated during the system development

Provide a checklist for guiding the design to identify and track hazards

Provide a basis for requiring more detailed safety analyses and testing for specific system elements and subsystems.

This analysis covers the following basic types of hazards:

- A. System Safety – Hazards resulting in accidents involving injuries, fatalities, or property damage due to system design, construction, equipment, operations and maintenance, or lack of quality assurance.
- B. Security – Hazards from acts of intentional harm, including terrorism resulting in injuries, fatalities, or property damage. This analysis does address limited security hazards, but does not include a Threat and Vulnerability Assessment.

The identified hazards, and recommended corrective actions, concern the equipment, environment, procedures, and people, which comprise the HSR system. A number of hazards identified are generic in nature and will be applied to all similar situations. Hazards that are specifically unique to CHSRTP are also identified.

Although the analysis will provide a useful checklist for guiding design reviews, formal verification that the identified hazards are closed will occur in subsequent safety analyses and during the Safety and Security Certification process.

3. THREAT AND VULNERABILITY ANALYSIS (TVA)

The TVA is an analysis of potential threats and vulnerabilities to CHSTP. This analysis identifies potential threats related to transit people and property and provides guidance in implementing protective measures through the incorporation of design features and operational tactics. This process will be in accordance with US Department of Transportation and Department of Homeland Security guidelines.

The main goal is to establish satisfactory provisions for the deterrence, detection, and response to criminal and terrorist acts in the planning, design, and operation of the high-speed rail system. Three principal goals are established for the security of the system:

- a) The security and well being of the local community, passengers, and rail employees are core values in the design and operation of the high-speed rail project.
- b) Customers and rail employees must be able to move freely throughout the system with a high level of perceived security as well as actual security.
- c) It is important to protect facilities and equipment to reduce potential criminal activity that will lead to possible system disruption and, as a result, increase maintenance and operation costs.

The TVA is intended to evaluate the CHSTP system's susceptibility to threats and to identify vulnerabilities. The assessment will form the bases for design measures to be incorporated to reduce or mitigate the risk of serious consequences.

The process for determining vulnerabilities begins with the identification and grouping of the rail agency assets critical to rail operations, their attractiveness as targets for security breaches or terrorist attack, and their vulnerability to the impacts of a successful breach or act of terrorism. Critical assets are defined as those assets most critical to provide rail services in the corridor. For this study, critical assets are defined as:

- a) People – Transit passengers, CHSTP employees, visitors, vendors, surrounding businesses and communities, and contractors working within the rail environment
- b) Property – Stations, maintenance facilities and yards, rail vehicles, tracks, park-and-ride lots, wayside facilities (traction power substations, communication rooms/cabinets, and signal rooms/cabinets), fare vending machines, equipment technology, and communication systems,

This analysis uses crime patterns, trends, and statistics from the FBI and local law enforcement departments to assist in identifying the known reported criminal activity in the communities surrounding the alignment. Criminal activity experienced by other rail systems in other cities and states will also be used.

The severity of threat and likelihood of occurrence (vulnerability) are combined into a risk level matrix to show the impact on the CHSTP alignment. The risk impact is assessed in terms of severity and consequence and probability of occurrence for a given threat. Risk categorization will be used to prioritize the risk impact and identify opportunities for changes to the design, procedures and other asset controls. Additionally, the principles of Crime Prevention through Environmental Design (CPTED) will be considered as a component of the physical environment design in order to reduce opportunities for violence and crime.

VI. EMERGENCY PREPAREDNESS

The FRA prescribes minimum Federal safety standards for the preparation, adoption, and implementation of emergency preparedness plans by railroads connected with the operation of passenger trains, and requires each affected railroad to instruct its employees on the provisions of this plan.

- Annual emergency preparedness drill (scenario and location varies each year)
- Tabletop exercises
- Emergency field training procedure exercises
- Familiarization training of Fire Department and Police personnel

Formal reviews follow each drill and lessons learned are incorporated into improvements in incident response and resolution procedures.

During the Project construction phase, specific table top exercise and emergency preparedness drills to be conducted. The procedures will identify all participants, including outside agency emergency response personnel. Policies, procedures and protocols will be evaluated and adjusted based on the results of various tabletop exercises and the preparedness drills.

CHSP will comply with the following FRA requirements for an Emergency Preparedness Plan (Sec. 239.101):

- A. Each railroad affected by this plan must have a written emergency preparedness plan approved by the FRA.
- B. The plan should include the following elements and procedures for implementation
 - 1. Communication
 - a) Initial and on-board notification
 - b) Notifications by the control center to outside emergency responders, adjacent rail modes of transportation and appropriate railroad officials
 - 2. Employee Training and qualification
 - c) Initial training and periodic training at least once every two calendar years thereafter
 - d) Control Center personnel training to include
 - i. Dispatch territory familiarization
 - ii. Protocols governing internal communications between appropriate control center personnel when an emergency situation exists.
 - e) On-board personnel training to include
 - i. Rail equipment familiarization
 - ii. Situational awareness
 - iii. Passenger evacuation
 - iv. Coordination of functions
 - v. "Hands-on" instruction concerning the location, function and operation of on-board emergency equipment

- f) Testing of on-board and control center personnel shall be conducted by the railroad
 - i. Designed to accurately measure the employee's knowledge of the plan
 - ii. Objective in nature
 - iii. Administered in written forms
 - iv. Conducted without reference material (closed book) unless the test is on the use of subject reference material
- 3. Joint Operations
 - g) Where freight railroad host passenger train operations there must be a jointly adopted/coordinated emergency response plan
- 4. Special Circumstances
 - h) Special circumstances must be addressed specifically in the emergency preparedness plan, such as:
 - i. Tunnels
 - ii. Special operating considerations when applicable like elevated structures, drawbridges etc.
 - iii. Parallel operations that could possibly have impact on the emergency response
- 5. Liaison with emergency responders
 - i) Develop and make available a training program for all on-line emergency responders
 - j) Invite emergency responders to participate in emergency simulations
 - k) Distribute applicable portions of the emergency preparedness plan at least once every three years or whenever the railroad materially changes
- 6. On-board emergency equipment
 - l) Emergency preparedness plan must state the types and locations of the emergency equipment that is kept on each passenger car, at a minimum, one fire extinguisher per car; one pry bar per passenger car; and one flashlight per on-board crew member
 - m) First aid kit (contents outlined in this part)
 - n) On-board emergency lighting
 - o) Emergency preparedness plan shall provide for scheduled maintenance and replacement of first aid kits, on-board emergency equipment and on-board emergency lighting

7. Passenger Safety Information

- p) Develop passenger safety procedures
- q) Railroad shall conspicuously and legibly post emergency instructions inside of passenger cars e.g. car bulkhead signs, seatback decals or seat cards.
- r) One or more additional methods to provide safety awareness must be used

FRA requirements for Passenger Train Emergency Simulations/Drills (Sec. 239.103) are as follows:

1. Each railroad operating passenger train service shall conduct full-scale emergency simulations
2. Simulation frequency
 - a) Any railroad that provides intercity passenger train service shall conduct a minimum of one full-scale emergency simulation during each calendar year, regardless of the number of route miles or passenger miles
3. Neither a tabletop nor the activation of the emergency plan during an actual emergency situation can be credited toward the minimum full-scale simulation. However, if the plan is activated during an emergency response the agency can postpone a scheduled full-scale simulation for up to 180 calendar days beyond the applicable calendar year, in order to evaluate the effectiveness of the plan
4. Each railroad operating passenger train service shall conduct a debriefing and critique session after each passenger train emergency or full-scale simulation to determine the effectiveness of its emergency preparedness plan, must be conducted within 60 days of the date of the incident or simulation

Requirements for Emergency Preparedness Plan; filing and approval (Sec. 239.201) are as follows:

1. Each passenger railroad to which this part applies and all railroads hosting passenger train service shall jointly adopt a single emergency preparedness plan and file one copy with FRA.
2. Emergency Preparedness Plan approval process is described in this part.

3. A copy of the Emergency Preparedness Plan and a copy of any subsequent amendment to the plan must be retained by the system and division headquarters and made available to representatives of the FRA and participating States.

VII. CONSTRUCTION SAFETY

CHSTP will develop a Construction Safety and Health Plan, the purpose of this plan is to establish the minimum safety and health guidelines for contractors of and visitors to CHSP construction projects. Each Contractor is responsible to develop site specific safety and health plans to provide safe working conditions for their employees and Subcontractors and to protect the public and all others who may come in contact with, or be exposed to, the project.

An effective Safety & Health program will contain the following elements:

1. Management Leadership and Employee Involvement
 - a) Top Management personal involvement
 - b) System to address Safety & Health concerns
2. Worksite Analysis
 - c) Hazard Analysis (SOP; JSA)
 - d) Self Inspection
3. Hazard Prevention
 - e) Hazard tracking
 - f) Medical Services
 - g) Disciplinary program for all levels
4. Safety and Health Training
 - h) New employee
 - i) Managers and Supervisors
 - j) Visitors

VIII. PUBLIC OUTREACH PROGRAMS

CHSTP will partner with local communities and lead or participate in public safety and awareness programs that will:

- Focus on educating school children on proper safety around the railroad systems.
- Public awareness of high speed rail construction and operations
- Security while on or around the rail system

Upload #11

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: All Stakeholder Agreements August 2010.pdf

AGREEMENT

This agreement is between Burlington Northern Santa Fe Corporation, including BNSF Railway Company and its other subsidiaries (together, "BNSF"), and the California High-Speed Rail Authority ("Authority"). The subject of the agreement is information which the Authority would like to obtain from BNSF.

1. In consideration for and as a condition of the furnishing by BNSF to the Authority of certain INFORMATION (as hereinafter defined) relating to BNSF and its business affairs, the parties agree as follows.

2. As used in this agreement, the term "INFORMATION" (where the word is set forth in all capital letters) means all information that has been or may hereafter be provided by BNSF to the Authority orally or in writing concerning the business and affairs of BNSF including, without limitation, matters relating to rates and tariffs or any other information regarding BNSF's freight rates, operations or business relationships. The term "INFORMATION" does not include, and the Authority is not required to keep confidential, information, if any, which (a) was or becomes generally available to the public other than as a result of a disclosure by the Authority or by the Authority's officers, employees, consultants, or agents or by any person to whom the Authority has disclosed such information in violation of the provisions of this agreement; (b) was available to the Authority on a non-confidential basis prior to its disclosure to the Authority by BNSF; (c) becomes available to the Authority on a non-confidential basis from a source other than BNSF, provided that such source is not known to the Authority to be bound by a confidentiality agreement with BNSF; or (d) is publicly disclosed by the Authority at the direction of BNSF or in a written document approved for public disclosure by BNSF. "INFORMATION" does not include the contents of this agreement, and BNSF acknowledges that this agreement is a disclosable public record under California law.

3. The INFORMATION to be provided by BNSF to the Authority is considered by BNSF to be confidential and proprietary. BNSF is not obligated to provide such information, but is willing to do so provided the use of such information is limited as provided in this agreement and provided the information is not disclosed in violation of the terms of this agreement.

4. It is in the public interest that the Authority obtain the INFORMATION as part of a cooperative relationship between BNSF and the Authority. The INFORMATION will assist the Authority to plan and to construct portions of the high-speed rail system efficiently and economically, at a reduced cost to the public.

5. In consideration for BNSF's provision of the INFORMATION, the Authority agrees as follows:

- The Authority acknowledges and agrees that the INFORMATION is being furnished to it solely for its use in planning for the California High Speed Rail Corridors as they may impact BNSF property or tracks, and agrees that, except as

provided below, in paragraph 6, it will not use the INFORMATION or any information derived therefrom for any other purpose whatsoever.

- The Authority agrees that it will keep all such INFORMATION confidential and do everything consistent with the law and its statutory duties to maintain the confidentiality of such INFORMATION pursuant to the terms of this letter agreement.
- The Authority agrees to (a) exercise all reasonable steps to safeguard, and cause its officers, employees, and consultants to safeguard, the confidentiality of the INFORMATION and (b) not to disclose any part of it or any information derived therefrom to any third person, except to such of the Authority's officers, employees, and consultants as may require access to the INFORMATION for use in planning for the California High Speed Rail Corridors as they may impact BNSF property or tracks. It is understood and agreed that such officers, employees, and consultants shall be informed by the Authority of the confidential nature of such INFORMATION and shall be directed by the Authority to treat such INFORMATION confidentially. The Authority agrees to take all reasonable action, including, if necessary, the bringing of a legal action, to prevent any disclosure of INFORMATION in violation of the provisions of this agreement by any of its employees, consultants, or agents.
- Immediately upon becoming aware of any effort by a third party to obtain some or all of the INFORMATION, and unless otherwise prohibited by law, the Authority will immediately notify BNSF of such effort, so that the parties are able to cooperate and to coordinate the response to such an effort to the extent legally appropriate.
- Promptly upon the delivery of a notice from BNSF directing it to do so or upon termination of this Agreement, and provided it is not otherwise prohibited by law from doing so, the Authority agrees (a) to return to BNSF all written material constituting INFORMATION previously furnished to the Authority together with all copies of any of the same made by it or its officers, employees, and consultants, and (b) to use its best efforts to destroy all notes of discussions or meetings and memoranda and other documents containing or reflecting any information contained in the INFORMATION and confirm to BNSF that it has utilized its best efforts to effect such destruction.

6. It is understood and recognized by the parties that the Authority may incorporate some of the INFORMATION for purposes of preparing environmental impact reports and statements, applying for permits, and developing plans and specifications prior to construction. Any INFORMATION so incorporated will be summarized or aggregated with other information so that BNSF's trade secrets will not be revealed. The INFORMATION is provided by BNSF solely for the convenience of Authority, and Authority agrees BNSF shall have no liability whatsoever concerning the accuracy or completeness of any INFORMATION.

7. BNSF represents to the Authority that all INFORMATION provided to the Authority pursuant to this agreement will be preserved by BNSF for so long as this agreement is in effect so that the Authority will not become the sole repository of any of the INFORMATION supplied to it by BNSF.

8. The conditions, terms, and restrictions of this agreement may not be altered or modified except by a written document signed by BNSF and the Authority. This agreement is for the benefit of both parties and shall be governed by and construed in accordance with the laws and in the courts of the State of California. If suit shall be brought because of the breach of any covenant herein contained on the part of the Authority, and a breach shall be established, the Authority shall pay BNSF all expenses incurred as a result thereof, including reasonable attorneys' fees.

9. Nothing in this agreement shall be construed as prohibiting the Authority from disclosing INFORMATION pursuant to a valid and enforceable order of a court. It is understood and agreed, however, that prior to compliance with such an order, and provided it is not otherwise prohibited by law from so doing, the Authority shall inform BNSF, in writing, of such order immediately upon its receipt.

10. The parties agree to consult one another prior to either party making public statements concerning discussions between the parties about the California High Speed Rail Corridors as it relates to BNSF property or tracks.

11. This agreement may be terminated by the parties by mutual consent or upon the giving of 30 days written notice by one party to the other.

12. Any notices or writings provided by one party to the other shall be sent to the following:

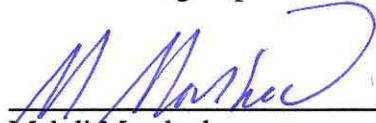
For BNSF:

Richard E. Weicher
Vice President & General Counsel - Regulatory
2500 Lou Menk Drive
Fort Worth, TX 76131

For the Authority:

Carrie Pourvahidi
Deputy Director
California High Speed Rail Authority
925 L Street, Suite 1425.
Sacramento, CA 95814

California High-Speed Rail Authority



Mehdi Morshed
Executive Director

Burlington Northern Santa Fe Corporation



Walter N. Smith, P.E.
General Director
Engineering & Construction

MASTER AGREEMENT
for
HIGH-SPEED TRAIN SYSTEM PROJECT DEVELOPMENT
WITHIN CALTRANS RIGHT OF WAY

This MASTER entered into and effective upon execution is between the California Department of Transportation, a California state agency, referred to as CALTRANS, and the California High-Speed Rail Authority, a California state agency, referred to as AUTHORITY.

Recitals

1. AUTHORITY was authorized by legislation enacted in 1996. The AUTHORITY is responsible for planning, construction and operation of high speed train systems, including without limitation an electric-powered, steel-wheel-on-steel-rail High-Speed Train System (HSTS) capable of operating speeds up to 200 mph on mostly dedicated, fully grade-separated tracks, with state-of-the-art safety, signaling, and automated train control systems. The proposed funding consists of state, federal, local and private sources.
2. HSTS is proposed to cross the CALTRANS right of way (CROW) in numerous locations. CALTRANS will perform, at AUTHORITY's expense, the necessary OVERSIGHT needed to fulfill its owner/operator responsibilities on WORK performed by AUTHORITY to ensure that WORK performed is in accordance with CALTRANS STANDARDS.
3. AUTHORITY and CALTRANS, herein after referred to as PARTIES, desire and intend to cooperate, to coordinate, to avoid duplication to the extent feasible and to streamline the project environmental review process for the portions of the HSTPS within CROW.
4. CALTRANS will perform OVERSIGHT on all work performed by the AUTHORITY for locating some portion of the HSTPS within CROW to the extent appropriate and permitted by law. It is the responsibility of AUTHORITY to submit to CALTRANS all WORK performed by AUTHORITY, in order for CALTRANS to perform OVERSIGHT on it. To initiate OVERSIGHT of WORK within CROW, AUTHORITY will submit a written notice to the appropriate District or Regional CALTRANS contact person, at least thirty (30) calendar days in advance of required services, notifying CALTRANS of the specific location where WORK will commence within CROW.
5. AUTHORITY may request CALTRANS to perform additional services beyond those of OVERSIGHT, hereinafter referred to as project development services (PDS), necessary for developing and constructing HSTPS within CROW. In all instances where AUTHORITY desires CALTRANS to perform PDS for HSTPS within CROW, PARTIES will utilize and execute SUPPLEMENT, identifying the PDS, the expense associated with it, and the mode of payment, along with other terms and

conditions necessary for the completion of PDS. In such situations, CALTRANS shall act as a consultant to AUTHORITY and shall perform the activities in accordance with the terms agreed to by PARTIES under this MASTER.

6. PARTIES agree that all direct and indirect costs resulting from CALTRANS' provision of OVERSIGHT and/or PDS will be reimbursed by AUTHORITY in the manner set forth herein or in SUPPLEMENT(S), as the case may be.
7. This MASTER is limited to WORK associated with developing and completing PA&ED. PARTIES agree to commence the development of an amendment to this MASTER or a new MASTER(S) on or before January 4, 2010, which will include the final design, right of way and construction components.
8. Capitalized words represent acronyms or terms defined under the Definitions and Acronyms section of MASTER.
9. SUPPLEMENT(S) shall identify individual activities for the performance of PDS.
10. PARTIES herein retroactively authorize, and agree to reimburse WORK activities performed up to the date of execution of MASTER.

Applicability

11. This MASTER will only apply to WORK being performed within CROW.
12. All sections of this MASTER including the Recitals are legally enforceable.
13. A SUPPLEMENT is necessary when AUTHORITY requests in writing and CALTRANS agrees to perform PDS for HSTS within CROW.
14. Upon execution of a SUPPLEMENT, all the relevant terms and conditions of MASTER will be fully incorporated into the SUPPLEMENT except as may otherwise be provided in the SUPPLEMENT.
15. In the event of a conflict between MASTER and SUPPLEMENT, SUPPLEMENT will prevail.
16. Federal Railroad Administration (FRA) will be NEPA lead agency for PROJECT.
17. AUTHORITY will be CEQA lead agency for PROJECT.
18. CALTRANS will be a CEQA responsible agency for PROJECT.
19. AUTHORITY and FRA have completed a Programmatic EIR/EIS for PROJECT. AUTHORITY and FRA are preparing appropriate project-level environmental documentation for each HSTPS, including HSTPS within CROW.

20. PARTIES agree that a Request for Proposals (RFP) for final design and construction in CROW will not be issued until there exists an executed Master Agreement addressing post NOD/ROD work.

Definitions and Acronyms

AUTHORITY- California High-Speed Rail Authority and any successor thereto pursuant to law.

AUTHORITY STANDARDS – Guidelines, policies, procedures and practices, including standard and directive drawings provided by AUTHORITY for work on HSTPS.

CALTRANS – California Department of Transportation

CALTRANS STANDARDS – CALTRANS policies, practices and procedures, including, but not limited to, the guidance provided in the *Guide to Capital Project Delivery Workplan Standards* (previously known as WBS Guide) available at <http://dot.ca.gov>

CEQA (California Environmental Quality Act) – The California Public Resources Code, sections 21000 et seq. which requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those significant impacts, if feasible.

CROW (Caltrans Right of Way) – State Right of Way for the State Highway System

EIR (Environmental Impact Report)

EIS (Environmental Impact Statement)

FHWA (Federal Highway Administration)

FHWA STANDARDS – FHWA regulations, policies and procedures, including, but not limited to, the guidance provided at <http://www.fhwa.dot.gov/programs.html>.

FRA (Federal Railroad Administration)

HM-1 – Hazardous material (including, but not limited to, hazardous waste) that requires removal and disposal pursuant to federal or state law whether or not it is disturbed by PROJECT.

HM-2 – Hazardous material (including, but not limited to, hazardous waste) that may require removal and disposal pursuant to federal or state law only if disturbed by PROJECT.

HM MANAGEMENT ACTIVITIES – Management activities related to either HM-1 or HM-2 including, without limitation, any necessary manifest requirements and disposal facility designations.

HSTS- (High Speed Train System)

HSTPS (High Speed Train Project Section) – Any high-speed train project under the jurisdiction of the AUTHORITY involving CROW along the corridors referenced in Streets and Highways Code section 2704.04 subd. (b).

MASTER – The agreement that consolidates all the general and specific terms and conditions that are applicable to WORK.

NEPA (National Environmental Policy Act) – The federal act of 1969 that established a national policy for the environment and a process to disclose the adverse impacts of projects including federal action.

OVERSIGHT – A series of necessary reviews by CALTRANS on WORK performed by AUTHORITY to ensure that it is being performed according to CALTRANS STANDARDS.

PARTY(IES) – The term that refers to one or both signatory agencies to this agreement.

PA&ED (Project Approval and Environmental Document) – Approval by CALTRANS of a PROJECT REPORT for each HSTPS in CROW that involves a related environmental document (ED) and would be issued subsequent to an AUTHORITY decision and Notice of Determination (NOD) and a related FRA Record of Decision (ROD)) for HSTPS involving CROW.

PDS (Project Development Services) – Work performed by CALTRANS for HSTS within CROW, that is requested by AUTHORITY and is beyond that of OVERSIGHT. Such services may only be performed after PARTIES execute a SUPPLEMENT.

PID (Project Initiation Document) – The document developed by AUTHORITY, to be updated annually, describing the scope, schedule, preliminary information on alternatives, impacts and potential mitigation, and any other pertinent information necessary for each HSTPS within CROW. The PID will be used by CALTRANS to determine future levels of OVERSIGHT and PDS costs necessary to support AUTHORITY'S fiscal budget requirements.

PROJECT – See HSTPS.

PROJECT REPORT – Is the authorizing document that provides AUTHORITY Project Approval (PA) by CALTRANS of HSTPS within CROW, which must be approved by CALTRANS and signed by a Civil Engineer, registered in the State of California.

SCOPE SUMMARY – The table attached to each SUPPLEMENT where PARTIES designate which specific scope activities CALTRANS will be performing as PDS.

SUPPLEMENT (Supplemental Agreement) – The agreement that establishes a CALTRANS' commitment to perform PDS for HSTS within CROW as requested by AUTHORITY and agreed to by CALTRANS. The SUPPLEMENT can document specific PDS related facts including location, scope, schedule, billing arrangements, the assignment of a unique Supplemental Agreement number, and any other pertinent commitments or expectations. PARTIES must execute a SUPPLEMENT before PDS may commence.

WORK – The effort by PARTIES to perform all scope commitments related to HSTPS within or affecting CROW under an agreement; namely, the work performed by AUTHORITY under this MASTER related to PA&ED for HSTPS within or affecting CROW and subsequent work under additional agreements to develop and construct HSTPS within or affecting CROW and PDS performed by CALTRANS for the same.

**Scope I
General**

21. WORK will be performed in accordance with applicable CALTRANS STANDARDS, AUTHORITY STANDARDS, California Public Utilities Commission and FHWA STANDARDS. In case of conflict or incompatibility between the above standards, PARTIES will meet and confer in good-faith to arrive at a resolution of such conflict.

CALTRANS retains the right to take appropriate action, or to require the AUTHORITY to take appropriate action, to protect public safety and to preserve property rights during performance of WORK, and to ensure that all work for HSTPS within and affecting CROW meets the needs of the state highway system.
22. CALTRANS STANDARDS not currently in place at the time of execution of MASTER can only be incorporated upon mutual agreement, unless mandated by law or safety.
23. AUTHORITY will provide to CALTRANS a PID for each HSTPS prior to the development of the Alternatives Analysis, or within one hundred and twenty (120) days after execution of MASTER if an Alternatives Analysis is already completed for any HSTPS.
24. CALTRANS will provide OVERSIGHT of WORK identified by a written notice as specified under Recital 4.
25. CALTRANS' funds will not be used to finance any capital or support costs for PDS and OVERSIGHT except as set forth in the MASTER and/or SUPPLEMENT.
26. Each PARTY will ensure that its staff, consultants, contractors or agents participating in WORK are appropriately qualified to perform the tasks assigned to them.
27. PARTIES will invite each other to participate in the selection of any consultants who participate in WORK.
28. AUTHORITY will make available its consultant or responsible agent to help resolve WORK-related problems resulting from WORK performed for PA&ED by said consultant or responsible agent.
29. CALTRANS will issue, upon proper application and at no cost to AUTHORITY, or its agents, an encroachment permit required for WORK within CROW.

It is understood that AUTHORITY, its agents, and any other person seeking to do work for which an encroachment permit is required, must obtain an encroachment permit issued in their name, prior to performing any WORK within CROW.

30. If unanticipated cultural, archaeological, paleontological, or other protected resources are discovered during WORK, AUTHORITY will notify CALTRANS within twenty four (24) hours. All activities in that area will stop until a qualified professional can evaluate the nature and significance of the discovery and a plan is approved by CALTRANS for its removal or protection.
31. All administrative draft and administrative final reports, studies, materials, and documentation relied upon, produced, created, or utilized for the project will be held in confidence.

PARTIES will not, without the written consent of the PARTY authorized to release them, distribute, release, or share said documents with anyone other than employees, agents, and consultants who require access to complete WORK. If one PARTY receives a subpoena that relates to the other PARTY'S records, the PARTIES will confer immediately.

32. If any PARTY receives a request pursuant to the California Public Records Act ("CPRA"; Government Code sections 6250 et seq.) pertaining to WORK, that PARTY will notify the other PARTY within five (5) business days of receipt and make the other PARTY aware of any potentially-disclosable public records. No records will be disclosed prior to the time a response is required pursuant to the CPRA in order to allow the PARTIES to consult with one another regarding the request. If a basis for doing so exists, the party receiving the request will implement the up-to-14-day extension described in Government Code section 6253, subdivision (c).

In the event a record provided by one party (the "providing party") to the other party (the "receiving party") is the subject of a CPRA request directed to the receiving party, the receiving party, following the above-referenced consultation with providing party, shall withhold the record from disclosure if the providing party determines that the record is not subject to disclosure and provided the record is one that the receiving party has agreed to treat as confidential pursuant to Government Code section 6254.5, subd. (e). In the event the requestor initiates litigation against the receiving party, the receiving party shall allow the providing party to assume the defense of the litigation, and the providing party shall assume said defense, and the providing party shall bear the costs of defense of the litigation and shall be responsible for any costs or attorney fees awarded to the requestor.

33. If HM-1 or HM-2 is found during WORK, AUTHORITY will immediately notify CALTRANS.

34. CALTRANS, independent of PROJECT, is responsible for any HM-1 found within existing CROW. CALTRANS will undertake HM-1 MANAGEMENT ACTIVITIES with minimum impact to PROJECT schedule.
35. This agreement does not impose any responsibility on CALTRANS if HM-1 is found outside of existing CROW.
36. If HM-2 is found within existing CROW affected by HSTPS as a result of WORK, AUTHORITY will perform, or have performed, necessary HM-2 MANAGEMENT ACTIVITIES. This agreement does not impose any responsibility on CALTRANS if HM-2 is found outside of existing CROW and is affected by HSTPS.
37. CALTRANS' acquisition or acceptance of title to any property on which any HM-1 or HM-2 is found will proceed in accordance with CALTRANS' policy on such acquisition.
38. PARTIES will comply with all of the commitments and conditions set forth in the environmental documentation, permits, approvals, and agreements as those commitments and conditions apply to each PARTY's responsibilities in the MASTER and, if applicable, the SUPPLEMENT.
39. PARTIES will confer on any claim that may affect WORK or PARTIES' liability or responsibility under the MASTER and/or SUPPLEMENT. No PARTY shall prejudice the rights of another PARTY until after PARTIES confer on claim.
40. PARTIES will maintain and make available to each other all WORK-related documents related to costs of performing work, including financial data (with the exception of source documentation) and retain those records for four (4) years from the completion of WORK, or three (3) years after the final federal voucher, whichever is later. Source documentation, including invoices and timesheets will be maintained for a period of no less than four (4) and no longer than five (5) years from the date of the original expenditure.
41. PARTIES agree that each has the right to audit the other in accordance with generally accepted governmental audit standards regarding performance of WORK.

CALTRANS, the State auditor, FHWA, FRA and AUTHORITY will have access to all WORK-related records of each PARTY as necessary for purposes of audit, examination, excerpt, or transaction related to the performance of WORK.

The examination of any records will take place in the offices and locations where said records are kept and will be accomplished during reasonable hours of operation.

The audited PARTY will review the preliminary audit, findings, and recommendations, and provide written comments within forty (40) business days of receipt.

- Any audit dispute not resolved by PARTIES is subject to dispute resolution. Any costs arising out of the dispute resolution process will be paid within twenty (20) business days of the final audit or dispute resolution findings.
42. If WORK stops for any reason, AUTHORITY will take such steps as are necessary to place all CALTRANS facilities within CROW impacted by WORK in a safe and operable condition acceptable to CALTRANS.
 43. If CALTRANS for any reason does not complete the PDS undertaken under a SUPPLEMENT, it shall return to AUTHORITY any unencumbered funds paid towards that PDS. This provision does not constitute a waiver by AUTHORITY of any claims it may have against CALTRANS arising from any such failure on the part of CALTRANS to complete PDS.
 44. If WORK stops for any reason at any location, and if AUTHORITY is still obligated to implement all applicable commitments and conditions included in the environmental documentation, permits, agreements, and/or approvals that are in effect at the time WORK stops, AUTHORITY will take such steps as are necessary in order to provide and maintain environmental compliance until WORK resumes.
 45. If during the performance of WORK, either PARTY determines that additional activities or environmental documentation is necessary to provide or maintain environmental compliance for the HSTPS within or affecting CROW, AUTHORITY will prepare, or cause to be prepared, the appropriate environmental documentation, including performance of any additional activities to ensure environmental compliance.
 46. AUTHORITY will prepare the applications for any required regulatory agency permits, agreements and/or approvals for each HSTPS within or affecting CROW, unless otherwise set forth in the SUPPLEMENT. AUTHORITY will request CALTRANS' review and comment on those portions of the permits, agreements and/or approvals that affect CROW or apply to HSTPS within CROW. AUTHORITY and CALTRANS will cooperate in good-faith to resolve CALTRANS comments. PARTIES acknowledge that CALTRANS, as the owner operator of CROW, has the final authority to accept the terms and conditions of the permit(s), agreement(s) and approval(s) that affect CROW. AUTHORITY, unless otherwise set forth in SUPPLEMENT, will submit the applications to the appropriate regulatory agencies.
 47. AUTHORITY will coordinate and obtain the regulatory agency permits, agreements, and/or approvals which are necessary for WORK, unless otherwise set forth in SUPPLEMENT.
 48. AUTHORITY will implement and comply with all regulatory agency permits, agreements, and/or approvals for WORK, unless otherwise set forth in the SUPPLEMENT.
 49. AUTHORITY will reimburse CALTRANS for all work necessary to modify existing CALTRANS interests, whether in the planning, environmental, design, construction

or maintenance stages, in order to accommodate HSTPS within CROW, unless otherwise set forth in the SUPPLEMENT.

**Scope II
(PA&ED)**

50. AUTHORITY, as the CEQA lead agency, will determine the type of project-level environmental documentation required, for each HSTPS.
51. For the purposes of NEPA, AUTHORITY will work with FRA to encourage FRA, as appropriate, to invite FHWA and CALTRANS to be cooperating agencies on PROJECT for purposes of the project-level environmental documentation for each HSTPS involving CROW.
52. AUTHORITY will prepare the project-level environmental documentation for each HSTPS, including the investigative studies and technical environmental reports, to meet CEQA requirements as well as any applicable federal or state environmental law(s), regulation(s), or executive order(s). In addition, AUTHORITY must address noise impacts caused by any changes in the vertical or horizontal alignment of a CALTRANS roadway due to HSTPS within or affecting CROW by following the Caltrans Traffic Noise Analysis Protocol (August 2006). To the extent that HSTPS is within or affects CROW, AUTHORITY must meet CALTRANS' Storm Water requirements as set forth in the following: CALTRANS' Construction General Permit of July 1, 2010; MS-4 NPDES; Storm Water Management Plan and Storm Water Quality Handbook – Project Planning and Design Guide, dated May 2007.
53. AUTHORITY will provide to CALTRANS for review and comment the portions of project-level environmental documentation relevant to CROW for each HSTPS, including the investigative studies and technical environmental reports, prior to the public availability of the Alternative Analysis; Draft EIR/EIS; and Final EIR/EIS.

CALTRANS will review and comment on the effects within and to CROW. The purpose of the CALTRANS review and comment is to provide for environmental documentation sufficient for CALTRANS' approval action as a CEQA responsible agency and NEPA cooperating agency (if applicable), and to ensure that the HSTPS within or affecting CROW does not conflict with CALTRANS' owner-operator responsibilities. CALTRANS will be reviewing the documents for an equivalent level of environmental analysis appropriate to the HSTPS within or affecting CROW as the CALTRANS' EIR/EIS annotated outline found on the forms and template page of the Standard Environmental Reference (<http://www.dot.ca.gov/ser/forms.htm>).

AUTHORITY and CALTRANS will cooperate in good-faith to resolve CALTRANS' substantive concerns. The AUTHORITY will allow a reasonable amount of time for CALTRANS' review. The PARTIES agree to meet and confer regarding the timing of document review and comment.

54. AUTHORITY will provide the project-level plan sheets for each HSTPS within CROW, to CALTRANS for CALTRANS' review and comment to assure compliance with applicable CALTRANS STANDARDS prior to the following scheduled milestones: 15% Design and 30% Design.
55. AUTHORITY will prepare a PROJECT REPORT prior to requesting HSTPS approval from CALTRANS.
56. AUTHORITY agrees to make available appropriate qualified personnel to help resolve environmental issues and to ensure that HSTPS to and within CROW remains in environmental compliance.
57. AUTHORITY will consult with CALTRANS regarding all relevant CEQA-related draft public notices and public meeting advertisements prior to publication. AUTHORITY will provide to CALTRANS for review and comment those draft exhibits, handouts, and materials that are prepared for CEQA-related public meetings and relate to HSTPS within or affecting CROW up to ten (10) business days prior to use in a public meeting. CALTRANS will review and provide comment on those portions of the materials that affect or pertain to HSTPS within CROW. AUTHORITY and CALTRANS will cooperate in good-faith to address CALTRANS' substantive comments. If AUTHORITY makes any changes to the materials, other than as requested by CALTRANS, AUTHORITY will allow CALTRANS an opportunity to review and comment prior to the public meeting.
58. AUTHORITY will plan, schedule, prepare and publish required CEQA-related notices, prepare materials for, and host all CEQA-related public meetings for its actions as a lead agency preparing environmental documents for HSTPS within CROW.

**Cost
General**

59. AUTHORITY will pay one hundred percent (100%) of the actual support costs required for WORK at each location, except as may be provided for in SUPPLEMENT.
60. AUTHORITY will reimburse CALTRANS for all direct and indirect costs incurred to perform PDS and OVERSIGHT required for WORK.
61. CALTRANS, independent of PROJECT, will pay all costs for HM MANAGEMENT ACTIVITIES related to HM-1 found within existing CROW.
62. This agreement does not impose on CALTRANS any costs related to HM-1 found outside of existing CROW.
63. AUTHORITY will pay all costs for HM MANAGEMENT ACTIVITIES related to HM-2 and resulting from HSTPS WORK within and to existing CROW. This agreement does not impose any responsibility on CALTRANS for HM-2 found outside of existing CROW.
64. The cost of preparing applications and of coordinating, obtaining, complying with, implementing, renewing and/or amending regulatory agency permits, agreements, and/or approvals is a WORK cost to the extent it is performed by CALTRANS.
65. The cost to comply with, and implement the commitments set forth in the environmental documentation is a WORK cost to the extent it is performed by CALTRANS.
66. The cost for the preparation of all environmental documentation and to ensure that HSTPS within CROW remains in environmental compliance is a WORK cost to the extent it is performed by CALTRANS.
67. If a legal challenge under CEQA is filed to a CALTRANS document or decision concerning HSTPS within or affecting CROW, the cost incurred by CALTRANS in that litigation challenge is a WORK cost to the extent it is permitted by law. PARTIES agree to consider a joint litigation defense agreement to the extent that a litigation challenge under CEQA is filed to a CALTRANS document or decision concerning HSTPS within or affecting CROW.
68. The cost to conform WORK to any new or changed applicable CALTRANS STANDARDS is a WORK cost to the extent it is performed by CALTRANS.
69. Fines, interest, or penalties levied against any PARTY will be paid, independent of WORK costs, by the PARTY whose actions or lack of action caused the levy. That PARTY will indemnify and defend the other PARTY.

70. The cost to place CROW in a safe and operable condition and meet all environmental commitments related to HSTPS within CROW is a WORK cost to the extent it is performed by CALTRANS.
71. AUTHORITY is responsible to fund the activities of placing CROW in a safe and operable condition to the extent such activities result from HSTPS WORK within CROW.
72. If WORK stops for any reason, AUTHORITY will continue to be responsible for funding the commitments and conditions included in the environmental documentation, permits, agreements, and/or approvals that are in effect at a time that WORK stops.
73. CALTRANS will not administer federal funds for WORK.
74. AUTHORITY will pay invoices within thirty (30) calendar days of receipt of invoice. CALTRANS may stop PDS until CALTRANS has received payments for monthly invoices. The encroachment permits issued to AUTHORITY for the performance of WORK may also be suspended until all arrears of payments for OVERSIGHT expenses are received from AUTHORITY.
75. AUTHORITY accepts responsibility to ensure that full funding for WORK and OVERSIGHT at each location is secured.
76. The cost to maintain CROW affected by HSTPS WORK, is a WORK cost to the extent it is performed by CALTRANS.
77. The cost of any support performed by CALTRANS will include all direct and applicable indirect costs. Indirect costs will be calculated based on the type of funds being used to pay for support. State and federal funds are subject to the Program Functional Rate. Local funds (Measure money, developer fees, special assessments, etc.) are subject to the Program Functional Rate and the Administration Rate. Both the Program Functional Rate and the Administration Rate are established as a result of state law and are adjusted annually by CALTRANS.
78. CALTRANS will invoice AUTHORITY for an initial deposit of \$300,000 at least thirty (30) calendar days prior to commencement of OVERSIGHT.

Thereafter, CALTRANS will submit to AUTHORITY monthly invoices for estimated monthly costs based on the prior month's actual expenditures.

After PARTIES agree that WORK is complete for any location, CALTRANS will submit a final accounting for all OVERSIGHT and/or PDS costs. Based on the final accounting, CALTRANS will refund or invoice, as necessary, in order to satisfy the obligations of this MASTER.

79. At locations where CALTRANS is providing PDS for HSTPS within CROW, a deposit will be documented on the SUPPLEMENT. CALTRANS will invoice AUTHORITY for the deposit amount at least thirty (30) calendar days prior to the commencement of PDS.

Thereafter, CALTRANS will submit to AUTHORITY monthly invoices for estimated monthly costs based on the prior month's actual expenditures.

After PARTIES agree that WORK is complete for any location, CALTRANS will submit a final accounting for all costs for WORK performed by CALTRANS. Based on the final accounting, CALTRANS will refund or invoice as necessary in order to satisfy the obligation of this MASTER and the SUPPLEMENT.

80. If OVERSIGHT and PDS are being provided at the same location, all expenses will be clearly segregated.
81. This MASTER and SUPPLEMENT(S) are valid and enforceable against the AUTHORITY only if sufficient funds are appropriated by the Legislature in the appropriate fiscal year for the purposes of this MASTER and any SUPPLEMENTS. In addition, this MASTER and SUPPLEMENTS are subject to any additional restriction, limitations, or conditions enacted by the Legislature, which may affect the provisions, terms, or funding of this MASTER or any SUPPLEMENT in any manner

SCHEDULE

82. AUTHORITY with the cooperation from CALTRANS will manage the schedule for WORK.

GENERAL CONDITIONS

83. MASTER and SUPPLEMENT will be understood in accordance with and governed by the Constitution and laws of the State of California. MASTER and SUPPLEMENT will be enforceable in the State of California. Except as provided in Public Utilities Code section 185038, any legal action arising from MASTER or SUPPLEMENT will be filed and maintained in the Superior Court of the county in which the CALTRANS district office providing the services resides or the Superior Court of the county in which the work is being performed.
84. All obligations of CALTRANS under the terms of this agreement are subject to the appropriation of resources by the Legislature and the State Budget Act authority.
85. AUTHORITY will adopt an annual budget, which includes CALTRANS estimated costs associated with OVERSIGHT and PDS for HSTPS within CROW. CALTRANS costs include all documented direct and indirect charges. Each budget will be subject to regular review and revision during the year as appropriate and will contain funds to cover unanticipated efforts to be assigned by AUTHORITY and undertaken by CALTRANS as may be required for each HSTPS.
86. AUTHORITY will prepare and provide to CALTRANS a PID(S) on or before March 1 of each year.

87. Based on the PID(S), CALTRANS will furnish AUTHORITY an estimate for all CALTRANS costs associated with OVERSIGHT and PDS for HSTS within CROW on July 1 of each year. The estimated costs provided by CALTRANS on July 1, will be utilized by AUTHORITY for their following fiscal year budget.
88. CALTRANS will perform the OVERSIGHT and any PDS activities within the budget assigned for that particular fiscal year. Should AUTHORITY fail to allocate sufficient funding, based on the estimate provided by CALTRANS, CALTRANS may stop WORK.
89. Neither AUTHORITY nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by CALTRANS under or in connection with any work, authority, or jurisdiction conferred upon CALTRANS under this MASTER or SUPPLEMENT.

It is understood and agreed that CALTRANS will fully defend, indemnify, and save harmless AUTHORITY and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by CALTRANS under this MASTER or SUPPLEMENT.

90. Neither CALTRANS nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by AUTHORITY under or in connection with any work, authority, or jurisdiction conferred upon AUTHORITY under this MASTER or SUPPLEMENT.

It is understood and agreed that, AUTHORITY will fully defend, indemnify, and save harmless CALTRANS and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by AUTHORITY under this MASTER or SUPPLEMENT.

91. Neither MASTER nor SUPPLEMENT is intended to create a third party beneficiary or define duties, obligations, or rights in parties not signatory to this agreement. Neither MASTER nor SUPPLEMENT is intended to affect the legal liability of PARTIES by imposing any standard of care for completing WORK and or OVERSIGHT different from the standards imposed by law. Neither MASTER nor SUPPLEMENT is intended to waive any statutory rights or powers of either PARTY.
92. PARTIES will not assign or attempt to assign agreement obligations to parties not signatory to this MASTER or the SUPPLEMENT without the prior written consent of the non assigning PARTY.

93. Any ambiguity contained in MASTER or SUPPLEMENT will not be interpreted against either PARTY. PARTIES waive the provisions of California Civil Code section 1654.
94. A delay or omission to exercise a right or power due to a default does not negate the use of that right or power in the future when deemed necessary.
95. If any PARTY defaults in their agreement obligations, the non-defaulting PARTY will request in writing that the default be remedied within twenty (20) business days. If the defaulting PARTY fails to do so, the non-defaulting PARTY may initiate dispute resolution.
96. PARTIES will first attempt to resolve MASTER and/or SUPPLEMENT disputes at the project team level. If they cannot resolve the dispute themselves, the CALTRANS district director and the executive officer of AUTHORITY will attempt to negotiate a resolution. If no resolution is reached, PARTIES' legal counsel will initiate mediation. PARTIES agree to participate in mediation in good faith.

Neither the dispute nor the mediation process relieves PARTIES from full and timely performance of WORK in accordance with the terms of MASTER or SUPPLEMENT. However, if any PARTY stops WORK, the other PARTY may seek equitable relief to ensure that WORK continues.

Except for equitable relief, no PARTY may file a civil complaint until after mediation, or forty five (45) calendar days after filing the written mediation request, whichever occurs first.

Should a civil complaint ensue, the prevailing PARTIES will be entitled to an award of all costs, fees, and expenses, including reasonable attorney fees as a result of litigating a dispute under MASTER or SUPPLEMENT or to enforce the provisions of this article including equitable relief.

97. PARTIES maintain the ability to pursue alternative or additional dispute remedies if a previously selected remedy does not achieve resolution.
98. If any provisions in MASTER or SUPPLEMENT are deemed to be, or are in fact, illegal, inoperative, or unenforceable, those provisions do not render any or all other agreement provisions invalid, inoperative, or unenforceable, and those provisions will be automatically severed from MASTER or SUPPLEMENT.
99. CALTRANS shall be responsible for the professional quality and technical accuracy of any services performed by it under this MASTER or any SUPPLEMENT.
100. All financial, statistical, personal, technical, or other data and information relative to the AUTHORITY's operations, which is designated confidential by the AUTHORITY and made available to CALTRANS in order to carry out this MASTER or any SUPPLEMENT, shall be protected by CALTRANS from unauthorized use and disclosure except as may be required by law. Permission to

disclose information on one occasion or public hearing held by the AUTHORITY relating to this MASTER shall not authorize CALTRANS to further disclose such information or disseminate the same on any other occasion.

CALTRANS shall not comment publicly to the press or any other media regarding this MASTER or the AUTHORITY'S work on the same without AUTHORITY'S written permission, except to the AUTHORITY'S staff, CALTRANS' own personnel involved in the performance of this MASTER or any SUPPLEMENTS, at public hearings, or in response to questions from the Legislature or Governor's office.

CALTRANS shall not issue any news release or public relations item of any nature whatsoever regarding work performed or to be performed under this MASTER or any SUPPLEMENT without prior review of the contents thereof by the AUTHORITY and receipt of the AUTHORITY'S written permission.

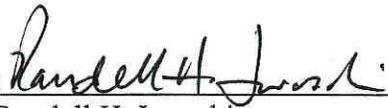
SIGNATURES

PARTIES declare that:

- 1. Each PARTY is an authorized legal entity under California state law.
- 2. Each PARTY has the authority to enter into this agreement.
- 3. The people signing this agreement have the authority to do so on behalf of their public agencies.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

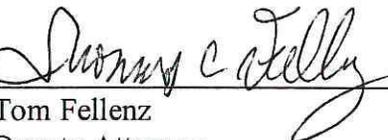
CALIFORNIA HIGH-SPEED RAIL
AUTHORITY

By:  11-23-09
 Randell H. Iwasaki Date
 Director

By:  11-9-09
 Mehdi Morshed Date
 Executive Director

Approved As To Form:

Approved As To Form:

By:  11/10/09
 Tom Fellenz
 Deputy Attorney

By:  11/9/09
 George Spanos
 Deputy Attorney General,
 Legal Counsel to the CHSRA

**AMENDMENT NO.1
TO
MASTER AGREEMENT No. 53-2009**

THIS AMENDMENT No. 1 (AMENDMENT), entered into and effective upon execution is between the State of California, a California state agency, referred to as CALTRANS, and the California High-Speed Rail Authority, a California state agency, referred to as AUTHORITY.

Recitals

1. CALTRANS and AUTHORITY, herein after referred to as PARTIES, entered into Master Agreement No. 53-2009, (AGREEMENT) on November 23, 2009.
2. PARTIES now seek to clarify the terms of reimbursement by replacing article 77.
3. PARTIES now seek to add certain nomenclature to the header that was absent from the AGREEMENT.

It is therefore mutually agreed:

4. Article 77 in the AGREEMENT is replaced in its entirety to read as follows:
Costs for this Agreement shall be computed in accordance with State Administrative Manual Sections 8752 and 8752.1.
5. Add the following information, right justified, to the header of AGREEMENT:
HSR Master Agreement No. 53-2009
Dist.-CO.-P.M.: Various Statewide
6. All other terms and conditions of the AGREEMENT shall remain in full force and effect.
7. This AMENDMENT is deemed to be included and made part of the AGREEMENT.



**CALIFORNIA
HIGH-SPEED RAIL
AUTHORITY**



**MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
CALIFORNIA HIGH SPEED RAIL AUTHORITY
AND
THE MINISTRY OF RAILWAYS OF P.R.CHINA**

The Memorandum of Understanding (MOU) is entered into by and between the California High-Speed Rail Authority (CHSRA) and the Ministry of Railways of P.R.China (referred to herein individually as a PARTY and collectively as the "PARTIES" to this MOU), regarding establishing and developing long-term cooperation in the field of high-speed rail transportation and exchange of information relative to the planning, technical standards, procurement, funding and operation, in accordance with their common interests.

Both of them, on behalf of the Administrations they represent, and with the proper authorization to do so, hereby establish this MOU between the aforementioned entities, for, among others in accordance with the following clauses:

PURPOSE AND SCOPE OF COOPERATION

The parties declare their interest in establishing and developing long-term cooperation in the field of high-speed rail transportation and exchange of information relative to the planning, technical standards, procurement, funding and operation, in accordance with their common interests.

EXCHANGE AND INFORMATION ANALYSIS

This MOU calls for the signing parties to exchange information relating to high-speed rail transportation. When considered useful to both Parties, each Party shall comment on the information provided by the other Party, subject to personnel availability and budgetary sources. In this way, each Party is expected to benefit from the exchange of information regarding the latest developments in the field of high speed rail transportation.

TERMINATION

Each Party may terminate this MOU by giving ten days of prior notice to the other Party.

LIMITATION

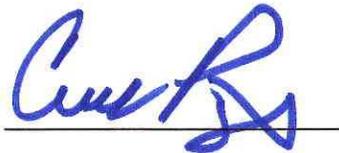
This MOU calls for a voluntary exchange of **public information that is not prohibited by law**. This MOU does not constitute an agreement for the provision of goods or services in exchange for compensation, nor does it represent any commitment for a future agreement of that sort. This MOU is not an exclusive agreement, and each Party **may** enter into similar agreements with other entities with interest and expertise in high-speed rail transportation.

CONFIDENTIALITY

No information **considered** confidential shall be released to the other Party unless the other Party is given prior notice on the confidentiality of such information and agrees beforehand to accept such information subject to the assertion of confidentiality. This provision is intended to give the receiving Party an opportunity to determine whether its internal laws allow to maintain the confidentiality of such information.

Done at Sacramento of California on December 3, 2009 in two originals, each in English and Chinese language, each text being equally authentic.

Curt Pringle



Chairman

California High-Speed Rail Authority

Liu Lianqing



Group Leader, US Railway Project Working Group

The Ministry of Railways, P.R.China

MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
&
GATEWAY CITIES COUNCIL OF GOVERNMENTS

FOR COORDINATION AND TECHNICAL ANALYSIS FOR
THE PROPOSED HIGH-SPEED PASSENGER RAIL CORRIDOR
THROUGH LOS ANGELES COUNTY

This Memorandum of Understanding (MOU) is entered into by and between the California High-Speed Rail Authority (CHSRA) and the Gateway Cities Council of Governments (GCCOG) (referred to herein individually as a PARTY and collectively as the "PARTIES" to this MOU), regarding the preparation of technical studies and coordination for the High-Speed Passenger Rail Corridor between the City of Los Angeles and the City of Anaheim (the "PROJECT") with regard to the following matters:

RECITALS:

WHEREAS, CHSRA in partnership with the Federal Railroad Administration (FRA) has completed and on November 2, 2005 certified a Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for a proposed California High-Speed Train (HST) network linking the major metropolitan areas of the State of California and the HST system approved by CHSRA includes a corridor between Los Angeles County and Orange County defined as the LOSSAN Corridor – HST (Los Angeles to Anaheim) (referred to herein as the "Corridor"); and

WHEREAS, the certified Program Environmental Impact Report carried forward a single HST train technology which is electrified steel-wheel-on-steel-rail dedicated service, with a maximum speed of 220 mph or 350 kph; and

WHEREAS, the authority and responsibility for the planning, construction, and operation of high-speed passenger train service at speeds exceeding 125 miles per hour in California is exclusively granted to CHSRA by Public Utilities Code Section 185032.a.2; and

WHEREAS, CHSRA has the authority to accept grants, fees, and allocations from the state, from political subdivisions of the state and from the federal government, foreign governments, and private sources (Public Utilities Code section 185034(4); and

WHEREAS, the Southern California Association of Governments (SCAG) adopted the 2008 RTP to identify the facilities, services and programs necessary to meet the SCAG's region's travel needs through the year 2035, and that document recognizes the need for high-speed ground transportation to serve these needs; and

WHEREAS, GCCOG is involved and represents Cities in the Corridor in the planning and coordination of development and operation of transportation and transit services in the Gateway Cities region of Los Angeles County; and

WHEREAS, Los Angeles County Metropolitan Transportation Authority (LACMTA) although it is not a signatory party to this MOU, it too has an MOU with CHSRA. This MOU between CHSRA and GCCOG acknowledges by reference the critical role the LACMTA has accepted for the facilitation and implementation of this MOU.

WHEREAS, it is the intent and purpose of this MOU to demonstrate the continuing desire of the PARTIES to cooperate, to coordinate, and to share the results of their studies and to share their respective views on the subject of all proposed improvements and enhancements to the HST Corridor in a manner which best enhances state and regional transportation networks, and which reduces or eliminates unnecessary impacts on surrounding jurisdictions and communities.

WHEREAS, the Orange County Transportation Authority (OCTA), although it is not a signatory party to this MOU, it too has a cooperative agreement with the CHSRA. This MOU between the CHSRA and GCCOG acknowledges by reference the critical role that that OCTA has accepted for the development of the Corridor between the Anaheim Regional Transportation Intermodal Center and the Los Angeles County Line on the LOSSAN Corridor.

NOW, THEREFORE, it is mutually understood and agreed to by the PARTIES as follows:

1. The PARTIES intend to work together in the development of an Alternatives Analysis and selection of a Locally Preferred Alternative (LPA) for Corridor development by no later than September 1, 2010 that will utilize, as appropriate, all the initial phases of work in the preparation and completion of required planning and technical studies and environmental analysis for the establishment of HST service in the Corridor. Such analysis may include an Economic Impact Study as part of the Environmental Analysis.

2. The PARTIES agree to form a project technical working group composed of City Engineers and Community Development Directors (and others as deemed appropriate by the City Managers and MTA Management) including staff members from LACMTA, OCTA, CHSRA, and GCCOG for the purpose of providing technical, land-use, and policy input, including, but not limited to, impact mitigation recommendations, reviewing deliverables and providing comments that facilitate completion of the necessary technical work related to determining the feasibility and environmental evaluation of the PROJECT.

3. The GCCOG will form an Administrative Committee composed of City Managers and including staff members from LACMTA, OCTA and GCCOG for the purpose of assisting the Authority with regard to policy and to provide policy direction and oversight of the technical working group.

4. The PARTIES agree that any CHSRA right of way design or utilization plan in or for land over which any member of the GCCOG has jurisdiction will be developed in a process that solicits and permits participation, consultation and advice of the City Managers, or designees, having jurisdiction over that land prior to adoption by CHSRA of a relocation plan or land and ROW utilization plan. CHSRA shall make reasonable efforts to minimize the impact to or relocation of businesses, residents and institutions within the LOSSAN corridor jurisdictions. Where disruption does occur, CHSRA will work with local City agencies to identify opportunities to relocate displaced businesses, residents and/or institutions in the City affected by the relocation plan and CHSRA shall solely bear the cost of the preparation of any studies, conceptual designs or engineering and design related to execution of the relocation plan in accordance with legal requirements applicable to CHSRA and the high speed rail project.

5. Unless otherwise agreed in writing in this MOU, and as an amendment to this MOU, and authorized by competent authority,

- a) The CHSRA will be the lead agency and bear the cost of the preparation and adoption of the Corridor HST System Environmental/Engineering Work (including the cost of the public involvement program and project EIR/EIS documents and related technical studies for the Corridor defined in the CHSRA's certified Final Program EIR/EIS for the Proposed HST System). CHSRA will make acceptable staff available to the GCCOG and will provide all previous work and analyses that have been prepared and provide staff to provide presentations and assistance to fulfill the terms of this MOU.
- b) GCCOG will assist the development of the HST Corridor by providing to and advising the CHSRA of GCCOG member Cities adopted and proposed plans, redevelopment plans, relocation opportunities, various environmental impacts, options for designs and other land use-related policy or decisions that affect or may be affected by development of the HST in the Corridor to evaluate and communicate to the Authority if development of the PROJECT within the LOSSAN corridor can be designed and developed acceptable to the local communities as communicated through the Administrative Committee.
- c) CHSRA will reimburse the GCCOG for PROJECT related tasks as identified in this MOU up to and not to exceed a total of \$700,000. The scope of work shall be established and agreed upon by the Executive Directors of the CHSRA and GCCOG prior to the incurring of reimbursable costs. GCCOG will submit invoices, records, and documentation in a form and frequency determined by CHSRA. CHSRA will reimburse GCCOG within 30-days receipt of the invoices.

6. The PARTIES recognize that realistic planning for the future of the Corridor requires recognition of existing constraints along this Corridor including community, agency or political constraints, and also requires recognition of the need for cooperation and coordination among all of the interested agencies which have responsibilities to address public transportation needs in and along that Corridor.

7. Each PARTY will provide technical and policy input and technical support, review and comment on documents in a timely manner, and staff of each PARTY will actively work together with other PARTIES for Corridor improvement.

8. Each PARTY agrees to encourage public awareness of and involvement in the PROJECT and decision processes concerning the Corridor in which the PARTIES are engaged. CHSRA agrees to assist GCCOG in developing future public outreach programs for each community and, to the extent practical, coordinate with, and seek the input and consent of each City for all CHSRA outreach efforts within that Community.

9. Each PARTY agrees that the primary purpose, intent and spirit of this MOU is to expand cooperation and coordination among the PARTIES. To this end, the PARTIES agree to share the results of their work, including technical studies, and to confer at regular and frequent intervals, but not less than once each calendar month.

10. Each PARTY intends to use the products of the technical studies as it determines is appropriate, consistent with its respective authority and to the maximum extent possible.

11. Each PARTY to this MOU is responsible for making its own determination as to the usefulness or as to the propriety of its use of or reliance upon the work product of any other PARTY to this MOU. It is not intended by this MOU that either PARTY to this MOU represents or warrants that its work product is sufficient for the purposes to which the other PARTY may wish to apply that work product.

This MOU does not reduce, expand, transfer, or alter in any way, any of the statutory or regulatory authorities and responsibilities of any of the signatories, including the Member Cities of the GCCOG.

12. The CHSRA, GCCOG, its Member Cities and all other cities along the Corridor retain all decision-making authority and rights otherwise granted with regard to the Project, unconstrained by this MOU.

13. It is noted that there may be differences in the nature of what CHSRA is studying and that which the other PARTY will be considering. This MOU is not intended to constitute and does not constitute any limitation on the CHSRA's decision making or that of either PARTY.

14. Each PARTY agrees to work diligently together and in good faith, cooperate and coordinate with each other PARTY, its staff, contractors, consultants, and vendors, providing services required under this MOU to the extent practicable in the performance of the PROJECT and in conjunction with each PARTY's other respective responsibilities in the Corridor under this MOU.

15. Each party agrees to indemnify, defend and save harmless the other party, its officers, agents and employees from any and all claims and losses accruing or resulting from any act or failure to act on the part of the indemnifying party or its officers, agents or employees in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by the indemnifying party in the performance of this agreement.

16. This MOU may only be modified or amended in writing. All modifications, amendments, changes, and revisions of this MOU from time to time, in whole or in part, and from time to time, shall be binding upon the PARTIES, so long as the same shall be in writing and executed by each of the PARTIES.

17. This MOU shall be governed by and construed in accordance with applicable federal, state of California, and local laws. The PARTIES each shall comply with all applicable federal, state of California, and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated hereunder.

18. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the MOU between the PARTIES and it supersedes all prior representations, understandings, and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of other term(s) or condition(s).

19. Each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any relevant incidence of fire, flood or other emergency; acts of God; commandeering of material, products, plants or facilities by federal, state or local government; or a material act or omission by any PARTY, when satisfactory evidence of such cause is presented to the other PARTIES, and provided further such nonperformance is unforeseeable, beyond the PARTY'S control and is not due to the fault or negligence of the PARTY not performing, and does not impair the PARTY's continued participation in the MOU. Additionally, each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by reason of the lack of an adopted State Budget or the lack of sufficient appropriation in the adopted State Budget for work under this MOU, or the lack of sufficient appropriation of funds for the continuation of this MOU from a PARTY's applicable funding agencies.

20. Any notice sent by first class mail, postage paid, to the addresses and addressees listed below shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of each PARTY who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are listed below:

California High-Speed Rail Authority

925 L Street, Suite 1425
Sacramento, CA 95814
Attention: Dan Leavitt, Deputy Director
(916) 324-1541, dleavitt@hsr.ca.gov

Gateway Cities Council of Governments

16401 Paramount Boulevard
Paramount, CA 90723
Attention: Richard Powers, Executive Director, Gateway Cities Council of Governments
(562) 663-6850, rpowers@gatewaycog.org

If any of the names and/or information listed above should change, the PARTY making such changes shall notify the other PARTY in writing of the changes within five (5) days of effective date of such changes.

In addition, courtesy copies of notices shall be provided to the following:

Los Angeles County Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952
Attention: Alex Clifford, Executive Officer – High Speed Rail
(213) 922-7491, clifforda@metro.net

Orange County Transportation Authority

600 S. Main Street
Orange, CA 92868
Attention: Darrell Johnson, Executive Director – Rail Programs
(714) 560-5343, DJohnson@octa.net

If any of the names and/or information listed above should change, the PARTY making such changes shall notify each other PARTY in writing of the changes within five (5) days of effective date of such changes.

21. The obligation of the CHSRA to make any payment hereunder is valid and enforceable against CHSRA only if sufficient funds are made available by appropriation in the appropriate fiscal year for the purposes of this MOU. In addition, this MOU is subject to any restrictions, limitations or conditions enacted by the Legislature, which may affect the provisions, terms, or funding of this MOU in any manner.

22. This MOU may be executed in counterparts. This MOU shall be effective upon the date of full execution of this MOU by the PARTIES. This MOU shall continue in full force and effect through December 31, 2011, unless terminated earlier by mutual written consent of the PARTIES. Either PARTY may withdraw from and terminate its participation in the MOU upon providing 30 days written notice to

the other PARTY hereto, provided that the terminating PARTY shall bear the reasonable costs of terminating work it has requested under this MOU through the date of its withdrawal from the MOU. The term of this MOU may only be extended upon mutual written agreement by the PARTIES.

IN WITNESS WHEREOF, the PARTIES hereto have caused this Memorandum of Understanding to be executed as to the date opposite their signatures.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY:



MEDHI MORSHED
Executive Director

11-17-09

Date

GATEWAY CITIES COUNCIL OF
GOVERNMENTS:



Richard Powers
Executive Director

2/12/2010

Date



고속철도 협력 증진을 위한 대한민국 국토해양부와 캘리포니아 고속철도공단간 양해각서

대한민국 국토해양부와 캘리포니아 고속철도공단(이하 개별적으로 '당사자'로 집합적으로 '양당사자'로 칭함)은 미국 캘리포니아 주의 환경 친화적이고 지속가능한 고속철도교통 개발을 위한 장기적인 협력을 추구하고자 본 양해각서를 체결한다.

I. 협력의 목적과 범위

양당사자는 기획, 기술 표준, 조달, 자금, 운영 및 유지와 관련한 정보 교환을 통해 고속철도 교통 분야에서 장기적 협력관계를 구축하고 발전시킨다.

II. 협력 방법

양당사자는 상호 협력의 틀 안에서 고속철도 교통을 위한 최적의 기획 및 집행을 하기위해 노력할 것이다. 이를 위해, 양당사자는 정부당국, 연구기관 및 기업 등 기획, 기술 표준, 조달, 자금, 운영 및 유지 등의 분야에서 경험을 가지고 있는 관련 기관들을 통해 정보와 의견을 교환할 수 있다. 각 당사자는 협력 활동에서 발생하는 비용을 스스로 부담한다.

III. 해지

각 당사자는 상대방당사자에게 10일 전에 서면으로 사전 통보를 통해 본 양해각서를 해지할 수 있다.

IV. 협력의 제한

본 양해각서는 개별법 및 규제에 의해 금지되어 있지 않은 공공 정보의 자발적 교환을 요구한다. 본 양해각서는 보상에 대한 대가로 상품이나 서비스의 제공에 대한 합의를 구성하지 않으며, 장래에 그러한 종류의 합의에 대한 어떤 약속도 나타내지 않는다. 본 양해각서는 배타적인 합의가 아니며, 각 당사자는 고속철도 교통에 대한 이해와 전문성을 가진 다른 주체들과도 유사한 협약을 체결할 수 있다.

V. 기밀유지

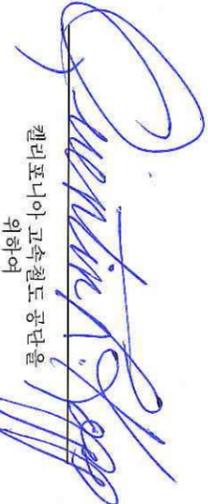
만일 정보의 기밀 유지가 사전에 통보되고 상대 당사자가 정보에 대한 기밀을 유지하는 조건으로 정보를 받기로 사전에 동의하지 않는다면, 각 당사자가 비밀로 간주하는 그 어떤 정보도 상대 당사자에게 공개되어서는 안 된다. 이 조항은 수신 당사자의 국내법에 의해 그러한 정보에 대한 비밀성 유지가 가능한지 여부에 대한 판단의 기회를 주기 위해 마련되었다.

2010년 2월 11일 새크라멘토에서 한글본과 영문본으로 작성되었으며, 각각 동등하게 유효하다.


캘리포니아 고속철도 공단을
위하여

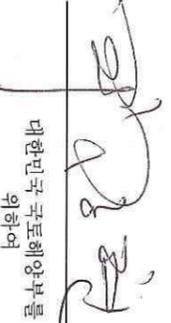
CURT PRINGLE, CHAIRMAN




캘리포니아 고속철도 공단을
위하여

THE HONORABLE QUENTIN L. KOPP,
BOARD MEMBER




대한민국 국토해양부를
위하여

최 장관
차관
대한민국 국토해양부



MEMORANDUM OF AGREEMENT
Between the
THE TRANSBAY JOINT POWERS AUTHORITY
And
THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Regarding
DESIGN OF THE TRANSBAY TRANSIT CENTER
AND THE CALTRAIN DOWNTOWN EXTENSION

The Parties to this agreement (“parties”) are the Transbay Joint Powers Authority (“TJPA”) and the California High-Speed Rail Authority (“CHSRA”). The TJPA is a joint powers agency responsible for the planning, design, construction, operation and management of the Transbay Transit Center Program ("Transbay Program") in San Francisco, including a new Transbay Transit Center and an underground rail connection providing access to the new Transbay Transit Center from the existing Caltrain 4th/King northern terminus ("DTX"); The CHSRA is the state entity responsible for planning, constructing and operating a high-speed train system serving California's major metropolitan areas.

On November 4, 2008 the voters of California approved Proposition 1A, a state general obligation bond measure to provide a portion of the costs of construction of a high-speed train system that connects the State's major population centers consistent with the CHSRA's certified program environmental documents and stating that the legislative intent is to initiate construction of a high-speed train project that connects the San Francisco Transbay Terminal to Los Angeles Union Station and Anaheim.

The CHSRA's Program EIR/EIS for the Bay Area to Central Valley portion of the high-speed rail system, certified on July 9, 2008, identifies the Transbay Transit Center as the preferred San Francisco terminus for the high-speed rail system. The CHSRA has commenced preparation of a project engineering design and EIR/EIS for the San Francisco to San Jose section of the high-speed rail system.

The TJPA is actively engaged in Preliminary Engineering Design for the DTX and the Transbay Transit Center.

The parties recognize that cooperation respecting the project of each party is desirable and appropriate. The parties, therefore, agree as follows:

1. The parties will establish a mutually beneficial and productive working relationship to help these agencies meet the problems of establishing the Transbay Transit Center as a terminus station of the high-speed rail system, and to develop a process and mechanisms that will encourage and facilitate communications and collaboration between them and allow them efficiently to address short-term, medium-term, and long-term problems in an effective manner.

2. The parties will establish several working groups to assist the agencies in doing so, including those described below, recognizing that, as planning, design and environmental work progress, additional issues may become the subjects of collaboration.

3. The parties will establish a technical working group through which technical information will be exchanged by the parties. This group shall also serve the following purposes:

a. As a means by which each party will be kept informed of progress being made by the other party in development of technical information, including information developed in the environmental review process.

b. As a means by which each party will have the opportunity to make suggestions regarding the scope of on-going and future technical work and studies.

c. As a means by which each party will be able to comment on or to seek clarification of information provided by the other party. This provision does not alter, replace, or otherwise affect provisions of law, such as those in the California Environmental Quality Act, providing for comment during the environmental review process.

4. Each agency understands that documents provided by one party to the other may be subject to disclosure by the other party pursuant to the Public Records Act or the San Francisco Sunshine Ordinance. In the event one party ("first party") wishes to share documents or information with the other party ("second party") that the first party considers to be confidential or not subject to public disclosure, the first party will first notify the second party of that fact, thus giving the second party an opportunity to determine if it is in a position to receive the documents or information in confidence and to assert that they are not subject to disclosure. In the event either party receives a request for public records pertaining to documents it has received from the other party, it will immediately notify the other party of the request and refrain from responding to the request until the other party has had an opportunity to assert its position concerning whether the requested documents are subject to disclosure. Such provision does not require any party to delay a response to a request for public records beyond the time provided in applicable law, which shall control. Furthermore, this memorandum does not require one party to provide to the other party any documents or information which it deems confidential.

5. The parties will establish a working group to examine issues surrounding potential rights and interests, including ownership interests in the facilities to be used for high-speed rail purposes at and near the Transit Center and the proposed right of way between the Transbay Transit Center and the current terminus of the Caltrain line at Fourth and King Streets in San Francisco.

6. The working group shall also examine issues pertaining to funding for construction and operation of facilities at and near the Transit Center, including the proposed right of way between the Transbay Transit Center and the current terminus of the Caltrain line at Fourth and King Streets, to be used by or for the high-speed rail system.

7. The parties recognize that under state and federal law, any party preparing an environmental document has certain obligations and responsibilities with respect to the preparation of that document, and with respect to intermediate decisions which must be made in the course of preparation of the document. The parties further recognize that there are obligations and responsibilities which cannot be delegated or assigned by the preparing party to someone else or to another agency. Nothing in this agreement is intended to affect those obligations and responsibilities or the decision-making responsibilities of any party to this agreement in any way contrary to law. Each party is responsible for making its own determination as to the usefulness or propriety of its use of, or reliance upon, the work product of the other party. It is not intended by this agreement that either party represents or warrants that its work product is sufficient for the purposes to which another party may wish to apply that work product. This MOA does not reduce, expand, transfer, or alter in any way any statutory or regulatory authority or responsibility of either of the parties.

8. The structure of the relationship between the TJPA and the CHSRA as described in this MOA is not intended to remain unchanged, but may evolve in the future and as the parties confront various problems. All or portions of this memorandum may be modified to accommodate the needs of the parties as planning work progresses, either through direct amendment of this memorandum or through supplemental memoranda, as deemed appropriate by the parties.

9. The needs of the Peninsula Corridor Joint Powers Board ("Caltrain") must be considered in all planning activities pertaining to extending Caltrain services to downtown San Francisco and to the use of the Transit Center as a rail station. CHSRA can consult directly with Caltrain.

10. The parties will attempt to cooperate in the presentation of information to the media concerning the rail component of the Transbay Program and California High-Speed Rail.

11. This agreement is effective upon execution by both parties and shall continue in effect until and unless terminated by both parties through mutual agreement or upon 30 days' written notice delivered by the party seeking to terminate the agreement to the other party.

12. Nothing in this agreement is to be construed as acceptance of the imposition of any surcharge on high-speed train passengers. Any such surcharge would require the approval of the board of each party to this agreement.

TRANSBAY JOINT POWERS AUTHORITY

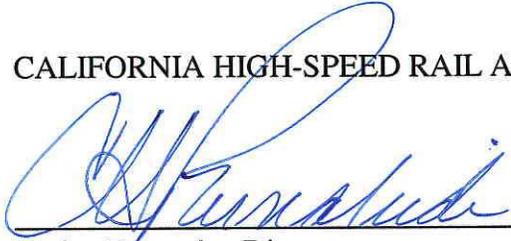


Executive Director

AUTHORIZED BY:
TJPA BOARD OF DIRECTORS

Resolution No.: 09-005

CALIFORNIA HIGH-SPEED RAIL AUTHORITY



Acting Executive Director

AUTHORIZED BY:
CHSRA BOARD OF DIRECTORS

Resolution No.: HSRA 09-005

**Memorandum concerning Cooperation in the Field of High-Speed Rail
Transportation
between
the High Speed Rail Authority of the Government of the State of California of the
United States of America
and
the Ministry of Land, Infrastructure and Transport of Japan**

The High Speed Rail Authority of the Government of the State of California of the United States of America (hereinafter referred to as the "CHSRA") and the Ministry of Land, Infrastructure and Transport of Japan (hereinafter referred to as the "MLIT");

with awareness of the potential economic, social and environmental benefits to be derived from the development of rail transportation;

express here their intention to promote a cooperative relationship as follows:

1. Purpose

The CHSRA and the MLIT intend to enter into a co-operative relationship with regard to:

- 1) establishing and developing a collaborative relationship in the field of high-speed rail transportation, and;
- 2) sharing publicly available information related to the planning, technical standards, procurement, funding, operation and maintenance of high-speed rail transportation systems, which will be exchanged on a voluntary basis, and where such exchange is neither prohibited by the respective laws and regulations nor against public policy.

2. The Technical Investigation Committee

The CHSRA and the MLIT confirm a mutual intention to launch a Technical Investigation Committee (hereinafter referred to as the "Committee") headed by each member from the CHSRA and the MLIT with extensive experience and technical expertise in the field of high-speed rail transportation.

The Committee's purpose will be the mutual exchange of information on topics and trends considered to be of common interest in the field of high-speed rail transportation, as well as on any relevant topics which are considered to be useful and helpful for participants.

Signed in duplicate at San Francisco on September 28, 2005.



For the High Speed Rail Authority of the
Government of the State of California of the
United States of America



For the Ministry of Land, Infrastructure and
Transport of Japan



Memorandum of Understanding

between

THE FEDERAL MINISTRY OF TRANSPORT, BUILDING AND URBAN AFFAIRS
OF THE FEDERAL REPUBLIC OF GERMANY

and

THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY
(AUTHORITY FOR HIGH-SPEED RAIL TRANSPORTATION OF THE STATE OF CALIFORNIA)

on

**the Establishment and Development of Long-Term Cooperation in the Field
of High-Speed Rail Transportation**

THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY
(hereinafter referred to as the “Authority”),

and

THE FEDERAL MINISTRY OF TRANSPORT, BUILDING AND URBAN AFFAIRS OF THE FEDERAL REPUBLIC OF GERMANY
(hereinafter referred to as the “Federal Ministry”)

Take into account shared aims and policies between Germany and the State of California in the field of sustainable development and struggle against global warming and share the wish to promote the potential economic, social and environmental benefits to be derived from the development of rail transportation.

I. Purpose and Scope of the Cooperation

The Authority and the Federal Ministry intend to establish and develop long-term cooperation in the field of high-speed rail transportation, with regard to exchanging publicly available information relative to the planning, technical standards, procurement methods, funding options, operation and maintenance of high-speed rail transportation systems, in accordance with their common interests.



II. Coordination of the Cooperation

Each side declares its willingness to designate a coordinator who will implement the exchange of information contemplated by this Memorandum of Understanding. Both sides can include into this exchange of information authorities, institutions and companies which in the framework of their functions and competencies have experience in the areas mentioned under I.

III. Limitation of the Cooperation and Confidentiality

Information will be exchanged on a voluntary basis, and where such exchange is neither prohibited by the respective laws and regulations nor contravenes public policy. No right of enforcement is created by this Memorandum of Understanding. This Memorandum of Understanding does not constitute an agreement for the provision of goods or services in exchange for compensation, nor does it represent any commitment for a future agreement of that sort. This Memorandum of Understanding is not an exclusive agreement, and each party is free to enter into similar Memoranda of Understanding with other entities with an interest and technical knowledge in high-speed rail transportation.

Both sides share the view that information considered being confidential by one side shall not be released to the other side unless the latter is given prior notice of the confidentiality of such information and agrees beforehand that it will accept such information subject to the assertion of confidentiality. This provision is intended to give the receiving party an opportunity to determine whether the laws which govern it permit it to maintain the confidentiality of such information.

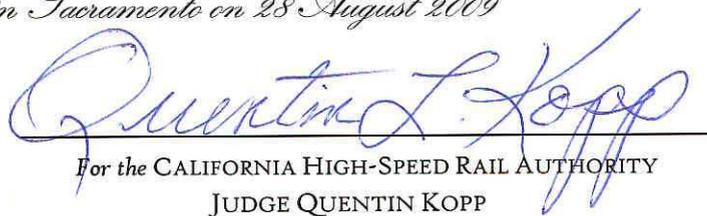
IV. Cost

Both sides declare that, as a principle, each side will itself bear the costs which occur through its individual activities in the framework of this cooperation.

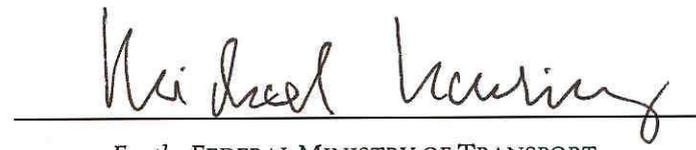
V. Final Clause

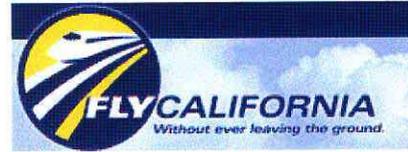
This Memorandum of Understanding is signed in duplicate in the English language.

Signed in Sacramento on 28 August 2009


 For the CALIFORNIA HIGH-SPEED RAIL AUTHORITY
 JUDGE QUENTIN KOPP




 For the FEDERAL MINISTRY OF TRANSPORT,
 BUILDING AND URBAN AFFAIRS
 MICHAEL HARTING
 DEPUTY DIRECTOR-GENERAL



Cooperation agreement between the California Government and the French Ministry for Ecology, Energy, Sustainable Development and Land Planning

The High-Speed Rail Authority of the Government of California of the United States of America (hereinafter referred to as the CHSRA),
Represented by its elected **Chairman,**
The Honorable Judge Quentin KOPP

and

The Ministry for Ecology, Energy, Sustainable Development and Land Planning (Ministère de l'Écologie, de l'Énergie, du Développement Durable et de
l'Aménagement du Territoire, hereinafter referred to as MEEDDAT),
Represented by the **Ambassador of France to the United States of America,**
H.E. Pierre VIMONT

With awareness of the potential economic, social and environmental benefits to be derived from the development of rail transportation, and taking into
account shared aims and policies between France and the State of California in the field of sustainable development and struggle against global warming,

Express here their intention to promote a cooperative relationship as follows:

Purpose and scope of cooperation

The CHSRA and the MEEDDAT intend to establish and develop a long-term cooperation in the field of high-speed rail transportation, with regard to
exchanging publicly available information relative to the planning, technical standards, procurement methods, funding options, operation and maintenance
of high-speed rail transportation systems, in accordance with their common interests.

As to be determined, this agreement could be extended to issues of common interest related to the planning and development of transportation systems, as
soon as these issues derive from the implementation of a new high-speed rail line.

Consistency of the cooperation program

The abovementioned exchange of information includes:

- preparation of and attendance to meetings, technical conferences and any event able to constitute an appropriate framework to reach the abovementioned goals;
- technical visits and related experiences;
- exchange of public administrative and technical documents and studies within the limits hereinafter mentioned.

Cooperation program management

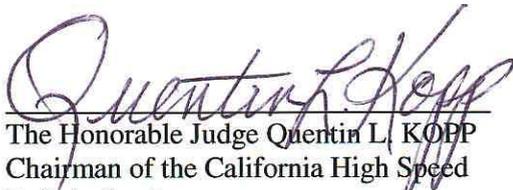
The two parties allow their representatives to yearly define and implement a suited program of cooperation, proportioned to the current stage and progress of the project.

Limitation and confidentiality

Information will be exchanged on a voluntary basis, and where such exchange is neither prohibited by the respective laws and regulations nor against public policy. No right of enforcement is created by this agreement. This agreement does not constitute an agreement for the provision of goods or services in exchange for compensation, nor does it represent any commitment for a future agreement of that sort. This agreement is not an exclusive agreement, and each party is free to enter into similar agreements with other entities with an interest and expertise in high-speed rail transportation.

No information which one party considers being confidential shall be released to the other party unless the other party is given priori notice of the confidentiality of such information and agrees beforehand that it will accept such information subject to the assertion of confidentiality. This provision is intended to give the receiving party an opportunity to determine whether the laws which govern it permit it to maintain the confidentiality of such information.

Signed in two copies in San Francisco, California, on April 7, 2008
Entering into force on this day.


The Honorable Judge Quentin L. KOPP
Chairman of the California High Speed
Rail Authority


His Excellency Pierre VIMONT
Ambassador of France to the
United States of America

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA



**COOPERATION AGREEMENT BETWEEN THE CALIFORNIA
GOVERNMENT AND THE SPANISH MINISTRY OF DEVELOPMENT**

In Sacramento, on the 9 day of July, 2003, by and between Mr. JOSEPH PETRILLO, Chairman of the California High Speed Rail Authority with headquarters at 925 L Street, Suite 1425, Sacramento, CA 94814, and the remaining party, Mr. BENIGNO BLANCO RODRÍGUEZ, Secretary of State for Infrastructures of the Spanish Government with headquarters at Ministerio de Fomento, Paseo de la Castellana, 67, Madrid 28071, in representation of the Ministry of Development.

Both of them, on behalf of the Administrations they represent, and with the proper authorization to do so, hereby establish this Cooperation Agreement between the aforementioned entities, for, among others in accordance with the following clauses:

PURPOSE AND SCOPE OF COOPERATION

The two Administrations declare their interest in establishing and developing long-term cooperation in the field of high-speed rail transportation and exchange of information relative to the planning, technical standards, procurement, funding and operation, in accordance with their common interests.

THE COORDINATING COMMITTEE

The two parties agree to create a Coordinating Committee headed by a Coordinator from each Administration, with wide experience in high-speed railroad techniques. In the case of Spain, the coordinator shall be an official representative designed by the Ministry of Development.

DUTIES OF THE COORDINATION COMMITTEE

The Coordinating Committee's initial duty shall be the reciprocal exchange of information on topics considered to be of common interest in the field of railroad activities, as well as of any other topics which allow for reciprocal knowledge to be gained by both parties.

The Committee shall meet, as convenient, either in person in the site agreed by the parties, or in any other way considered convenient and cost effective.

EXCHANGE AND INFORMATION ANALYSIS

This agreement calls for the signing parties to information exchanges relating to high-speed rail transportation. When it is considered useful to both parties each party shall comment on the information provided by the other party, subject to personnel availability and budgetary sources. In this way, each party is expected to benefit from the exchange of information regarding the latest developments in the field of high-speed rail transportation.

TERMINATION

Either party may terminate this agreement upon the giving of 10 days notice to the other party.

LIMITATION

This agreement calls for the voluntary exchange of information which is otherwise public information, and the exchange of which is not prohibited by law or against public policy. No right of enforcement is created by this agreement. This agreement does not constitute an agreement for the provision of goods or services in exchange for compensation, nor does it represent any commitment for a future agreement of that sort. This agreement is not an exclusive agreement, and each party is free to enter into similar agreements with other entities with an interest and expertise in high-speed rail transportation.

CONFIDENTIALITY

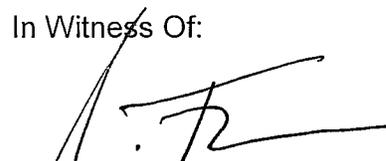
No information which one party considers to be confidential shall be released to the other party unless the other party is given prior notice of the confidentiality of such information and agrees beforehand that it will accept such information subject to the assertion of confidentiality. This provision is intended to give the receiving party an opportunity to determine whether the laws which govern it permit to maintain the confidentiality of such information.

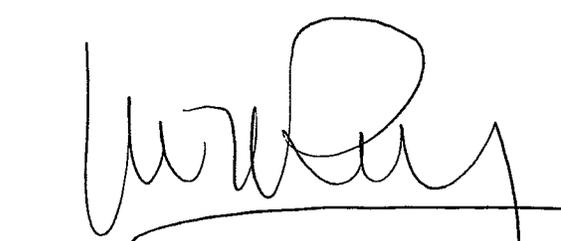
Signed in the Governor's Council Room on July 9, 2003 in presence of Mr. Michael Flores, Secretary of Foreign Affairs for the State of California and Mr. Francisco Javier Ruperez, Ambassador of Spain to the United States.


Mr. JOSEPH PETRILLO
Chairman of the California High Speed
Rail Authority


Mr. BENIGNO BLANCO RODRÍGUEZ
Secretary of State for Infrastructures

In Witness Of:


Mr. MICHAEL FLORES
Secretary of Foreign Affairs


Mr. FRANCISCO JAVIER RUPEREZ
Ambassador of Spain to the United
States

Memorandum of Understanding

Between

U.S. Department of Transportation

The Federal Railroad Administration

And

The California High-Speed Rail Authority

For the Preparation of Combined CEQA/NEPA

Environmental Documentation of the

California High-Speed Train System

1.0 PURPOSE

This Memorandum of Understanding (MOU) is entered into jointly by the Federal Railroad Administration (FRA), an agency of the U.S. Department of Transportation (USDOT), and the California High-Speed Rail Authority (CHSRA), an agency of the State of California. The purpose of this MOU is to provide for coordination between these two agencies and to document each agency's respective roles and responsibilities in the preparation of combined CEQA/NEPA project-level environmental documents, including Environmental Impact Reports / Environmental Impact Statements (EIR/EIS), to support implementation of the CHSRA's proposed California High-Speed Train (HST) System and ensure full compliance with the requirements of the California Environmental Quality Act (CEQA), as amended (California Public Resources Code, section 21000 et seq.), the requirements of the National Environmental Policy Act of 1969 (NEPA), as

CHSRA/FRA CEQA/NEPA MOU

amended (42 USC 4321, et seq.), and applicable related statutes, regulations, and orders.

2.0 BACKGROUND

- A. The CHSRA is pursuing the development of a proposed California HST system as directed by statute (California Public Utilities Code section 185000 et seq.) and in accordance with other applicable state laws, regulations, and orders, including CEQA.

The proposed California HST system would provide intercity train service at speeds in excess of 200 mph (320 km/h) between the San Francisco Bay Area and Sacramento in Northern California and Los Angeles and San Diego in Southern California, via the Central Valley, as described in the CHSRA's Final Business Plan, June 2000 (Business Plan), and CHSRA resolutions describing proposed corridors (Resolution No. 99-5, July 21, 1999) and performance criteria (Resolution No. 00-03, December 14, 2000). In 2001, the CHSRA and FRA executed a MOU for the joint preparation of program-level environmental documentation for the proposed California HST system. The 2005 Final Program EIR/EIS for the Proposed California High-Speed Train System extensively described and examined the overall environmental effects of the proposed system and was followed by the CHSRA's November 2005 resolution of approval certifying the Final Program EIR/EIS and adopting findings for the High-Speed Train System (Resolution No. 05-01, adopted November 2, 2005) and the FRA's

CHSRA/FRA CEQA/NEPA MOU

Record of Decision approving the Final Program EIR/EIS for the California High-Speed Train System. CHSRA and FRA are continuing program-level environmental review in Northern California with the preparation of the Bay Area to Central Valley HST Program EIR/EIS.

The Governor and the California Legislature have allocated state funds to the CHSRA for fiscal year (FY) 2006/2007 for commencing the preparation of project-level environmental documents for segments of the proposed California HST system as described in the 2005 Final Program EIR/EIS. The CHSRA intends to seek such additional allocations of state funds as may be needed for the completion of project-level environmental documents for the proposed HST system in future fiscal years, including FY 2007/2008 and FY 2008/2009.

The CHSRA is governed by a multi-member body, which is subject to such laws as the Bagley-Keene Open Meeting Act (California Government Code section 11120 et seq.) and the California Public Records Act (California Government Code section 6250 et seq.), and must comply with the notice, agenda, and other requirements set forth in state law.

- B. Actions and approvals by FRA concerning the proposed California HST may be necessary in the future, including potentially action in the form of the adoption of a rule of particular applicability addressing safety of HST operations or the issuance of regulatory waivers related to the proposed HST system. In addition,

CHSRA/FRA CEQA/NEPA MOU

opportunities may develop in the future for federal funding for the proposed system, or some portion thereof, consistent with program environmental review documents and subsequent project-level environmental documents, through programs administered by FRA, or other U.S. Department of Transportation agencies. Thus, it is expected that the FRA may take a major federal action, or actions, within the meaning of NEPA concerning the CHSRA's proposed HST system.

- C. The parties are interested in assuring that appropriate environmental and related analyses of the proposed HST system in compliance with the applicable requirements of both state and federal law are completed in a timely, coordinated and effective manner through the cooperative efforts of the parties.

3.0 ROLES OF THE PARTIES

- A. The FRA will serve as the Federal lead agency for purposes of compliance with NEPA and related requirements, in accordance with 40 CFR section 1501.5 of the President's Council on Environmental Quality's (CEQ) regulations implementing NEPA and FRA's procedures for considering environmental Impacts (64 Fed. Reg. 28545, May 26, 1999). The CHSRA will serve as the State lead agency for purposes of compliance with CEQA and related requirements, in accordance with 14 CCR section 15367 of the State's regulations implementing CEQA.

As co-lead agencies, the parties intend to prepare combined project environmental

CHSRA/FRA CEQA/NEPA MOU

documents, including site-specific project EIR/EISs, to address portions or segments of the proposed California HST system for purposes of compliance with state and federal environmental statutes and regulations, in accordance with 40 CFR sections 1501.5(b), 1506.2, and 1506.4 for purposes of NEPA and 14 CCR sections 15222 and 15226 for purposes of CEQA.

- B. The FRA will be responsible for: determining the level of documentation required, the scope of study, and the significant issues to be addressed in each project-level environmental document in order to satisfy NEPA requirements. The CHSRA will be responsible for determining the level of documentation required, the scope of study, and the significant issues to be addressed in each project-level environmental document in order to satisfy CEQA requirements. In making these determinations, the parties agree to confer in order to reach agreement on the methodologies to be used in undertaking impact assessments, in order to assure that efforts to achieve compliance with NEPA and CEQA requirements are coordinated to the greatest extent possible, and to assure that the overall scope of each document is mutually satisfactory.
- C. The CHSRA will be responsible for: aspects of scoping including meetings, involvement of agencies and the public, the preparation of the purpose and need statements, the development of alternatives, the assessment and summary of potential impacts associated with each alternative, the preparation of documents pursuant to this MOU, and holding public meetings and hearings. For the purpose

CHSRA/FRA CEQA/NEPA MOU

of developing each EIR/EIS, the CHSRA will confer with FRA regarding these activities and the reasonable assumptions which may be made concerning the regulatory environment in which the proposed HST system would be likely to be operated.

- D. The FRA and the CHSRA will be jointly responsible for identifying appropriate federal cooperating agencies for this process generally and for each document (40 CFR sections 1501.6 and 1508.5). The CHSRA will be responsible for identifying appropriate state and local responsible and trustee agencies for this process generally and for each document (14 CCR sections 15381 and 15386).
- E. As a co-lead state agency with statewide jurisdiction, CHSRA in consultation with FRA will be responsible for preparing environmental documents pursuant to this MOU that satisfy applicable requirements of both CEQA and NEPA and other related requirements, and for the initial preparation of all notices required for compliance with CEQA and NEPA. The FRA will provide guidance and technical assistance to the CHSRA, and will participate in agency consultations along with CHSRA related to the preparation of environmental documents pursuant to this MOU.
- F. The CHSRA will be responsible for assuring that the documents prepared pursuant to this MOU meet the standards of CEQA and for approving all notices and documents required for compliance with CEQA. The CHSRA will be

CHSRA/FRA CEQA/NEPA MOU

responsible for providing necessary information to FRA about the proposed HST system to support the adoption of any necessary rule(s) of particular applicability addressing safety and/or FRA rule waivers.

- G. The FRA will be responsible for assuring that the documents prepared pursuant to this MOU meet the standards of NEPA and for approving all notices and documents required for compliance with NEPA. The FRA will be responsible for the adoption of any necessary rule(s) of particular applicability addressing safety and/or rule waivers related to the proposed California HST System.
- H. Following a competitive review process the CHSRA hired contractors to provide assistance in preparing needed technical analyses and environmental documents, conducting public meetings, hearings and other public outreach activities, coordinating input from federal, state and local agencies, and satisfying all applicable procedural and other requirements of CEQA and NEPA for environmental analysis of the proposed HST system. In consultation with FRA, the CHSRA, as the contracting entity, shall require that these contractors satisfy applicable provisions of NEPA, including but not limited to requiring as necessary conflict disclosure statements (40 CFR section 1506.5(c)).
- I. The CHSRA will be responsible for managing and funding the contractors it retains to provide assistance in environmental reviews. The FRA and the CHSRA recognize and agree that the FRA does not currently have funding

CHSRA/FRA CEQA/NEPA MOU

available to fund consultant or related costs of preparing environmental documents for the California HST system. FRA will fund its own staff, travel and related costs, and the performance of FRA functions related to the adoption of rule(s) of particular applicability or rule waivers pertaining to the California HST system.

- J. The FRA and the CHSRA agree, to the extent possible, to expedite the review and approval of the environmental documents. It is anticipated that final scoping reports, draft EIR/EIS documents (or environmental assessments), and final EIR/EIS documents (or findings of no significant impact) will be formally released on behalf of both parties. The parties agree that neither party will issue such documents on behalf of both parties without the other party's written approval.

4.0 TERMINATION

This MOU may be terminated by either party after providing 30 days written notice to the other party.

5.0 RESERVATION OF AUTHORITIES

This MOU does not modify existing agency authorities by reducing, expanding, otherwise altering or transferring any of the statutory or regulatory authorities and responsibilities of any of the Signatories. The parties recognize that the Legislature and the Governor of California may impose additional requirements on the CHSRA by enacting new laws or

CHSRA/FRA CEQA/NEPA MOU

enacting changes in existing California laws, that Congress and the President of the United States may impose additional requirements on FRA by enacting new laws or enacting changes in existing laws, and that such new requirements may affect the preparation of the environmental documents being prepared to comply with both CEQA and NEPA. No Signatory to this MOU waives any administrative claims, positions, or interpretations it may have with respect to the applicability or enforceability of any law or regulation.

6.0 OBLIGATION OF FUNDS, COMMITMENT OF RESOURCES

Nothing in this MOU shall be construed as obligating any of the Signatories to the expenditure of funds in excess of appropriations authorized by law or as committing any of the Signatories to any action or actions for which it lacks statutory authority, now or in the future.

7.0 NATURE OF UNDERSTANDING

This MOU is not intended to, and does not, create any other right or benefit, substantive or procedural, enforceable at law or equity by any person against the United States, the State of California, any agencies thereof, any officers or employees thereof, or any other person.

By signing this MOU the parties are not committing to any particular action other than the joint preparation and completion of combined project environmental documents for portions or segments of the proposed California HST system as described herein.

CHSRA/FRA CEQA/NEPA MOU

8.0 AMENDMENTS

The parties may mutually agree in writing to amend this MOU and to develop such additional provisions and procedures as they determine to be necessary in order to pursue the development of combined CEQA/NEPA documents for the proposed California HST system.

9.0 CONCLUSION

In signing this MOU, the undersigned understand and accept the roles and responsibilities assigned to each of the parties. Each of the parties agrees to cooperate to the maximum extent possible to ensure that the project is developed in full compliance with Federal and State requirements and to ensure that there is maximum communication and minimum duplication of effort.

Joseph H. Boardman
Administrator, Federal Railroad Administration

Date

Mehdi Morshed
Executive Director, California High-Speed Rail Authority

Date

AGREEMENT

This agreement is between Burlington Northern Santa Fe Corporation, including BNSF Railway Company and its other subsidiaries (together, "BNSF"), and the California High-Speed Rail Authority ("Authority"). The subject of the agreement is information which the Authority would like to obtain from BNSF.

1. In consideration for and as a condition of the furnishing by BNSF to the Authority of certain INFORMATION (as hereinafter defined) relating to BNSF and its business affairs, the parties agree as follows.

2. As used in this agreement, the term "INFORMATION" (where the word is set forth in all capital letters) means all information that has been or may hereafter be provided by BNSF to the Authority orally or in writing concerning the business and affairs of BNSF including, without limitation, matters relating to rates and tariffs or any other information regarding BNSF's freight rates, operations or business relationships. The term "INFORMATION" does not include, and the Authority is not required to keep confidential, information, if any, which (a) was or becomes generally available to the public other than as a result of a disclosure by the Authority or by the Authority's officers, employees, consultants, or agents or by any person to whom the Authority has disclosed such information in violation of the provisions of this agreement; (b) was available to the Authority on a non-confidential basis prior to its disclosure to the Authority by BNSF; (c) becomes available to the Authority on a non-confidential basis from a source other than BNSF, provided that such source is not known to the Authority to be bound by a confidentiality agreement with BNSF; or (d) is publicly disclosed by the Authority at the direction of BNSF or in a written document approved for public disclosure by BNSF. "INFORMATION" does not include the contents of this agreement, and BNSF acknowledges that this agreement is a disclosable public record under California law.

3. The INFORMATION to be provided by BNSF to the Authority is considered by BNSF to be confidential and proprietary. BNSF is not obligated to provide such information, but is willing to do so provided the use of such information is limited as provided in this agreement and provided the information is not disclosed in violation of the terms of this agreement.

4. It is in the public interest that the Authority obtain the INFORMATION as part of a cooperative relationship between BNSF and the Authority. The INFORMATION will assist the Authority to plan and to construct portions of the high-speed rail system efficiently and economically, at a reduced cost to the public.

5. In consideration for BNSF's provision of the INFORMATION, the Authority agrees as follows:

- The Authority acknowledges and agrees that the INFORMATION is being furnished to it solely for its use in planning for the California High Speed Rail Corridors as they may impact BNSF property or tracks, and agrees that, except as

provided below, in paragraph 6, it will not use the INFORMATION or any information derived therefrom for any other purpose whatsoever.

- The Authority agrees that it will keep all such INFORMATION confidential and do everything consistent with the law and its statutory duties to maintain the confidentiality of such INFORMATION pursuant to the terms of this letter agreement.
- The Authority agrees to (a) exercise all reasonable steps to safeguard, and cause its officers, employees, and consultants to safeguard, the confidentiality of the INFORMATION and (b) not to disclose any part of it or any information derived therefrom to any third person, except to such of the Authority's officers, employees, and consultants as may require access to the INFORMATION for use in planning for the California High Speed Rail Corridors as they may impact BNSF property or tracks. It is understood and agreed that such officers, employees, and consultants shall be informed by the Authority of the confidential nature of such INFORMATION and shall be directed by the Authority to treat such INFORMATION confidentially. The Authority agrees to take all reasonable action, including, if necessary, the bringing of a legal action, to prevent any disclosure of INFORMATION in violation of the provisions of this agreement by any of its employees, consultants, or agents.
- Immediately upon becoming aware of any effort by a third party to obtain some or all of the INFORMATION, and unless otherwise prohibited by law, the Authority will immediately notify BNSF of such effort, so that the parties are able to cooperate and to coordinate the response to such an effort to the extent legally appropriate.
- Promptly upon the delivery of a notice from BNSF directing it to do so or upon termination of this Agreement, and provided it is not otherwise prohibited by law from doing so, the Authority agrees (a) to return to BNSF all written material constituting INFORMATION previously furnished to the Authority together with all copies of any of the same made by it or its officers, employees, and consultants, and (b) to use its best efforts to destroy all notes of discussions or meetings and memoranda and other documents containing or reflecting any information contained in the INFORMATION and confirm to BNSF that it has utilized its best efforts to effect such destruction.

6. It is understood and recognized by the parties that the Authority may incorporate some of the INFORMATION for purposes of preparing environmental impact reports and statements, applying for permits, and developing plans and specifications prior to construction. Any INFORMATION so incorporated will be summarized or aggregated with other information so that BNSF's trade secrets will not be revealed. The INFORMATION is provided by BNSF solely for the convenience of Authority, and Authority agrees BNSF shall have no liability whatsoever concerning the accuracy or completeness of any INFORMATION.

7. BNSF represents to the Authority that all INFORMATION provided to the Authority pursuant to this agreement will be preserved by BNSF for so long as this agreement is in effect so that the Authority will not become the sole repository of any of the INFORMATION supplied to it by BNSF.

8. The conditions, terms, and restrictions of this agreement may not be altered or modified except by a written document signed by BNSF and the Authority. This agreement is for the benefit of both parties and shall be governed by and construed in accordance with the laws and in the courts of the State of California. If suit shall be brought because of the breach of any covenant herein contained on the part of the Authority, and a breach shall be established, the Authority shall pay BNSF all expenses incurred as a result thereof, including reasonable attorneys' fees.

9. Nothing in this agreement shall be construed as prohibiting the Authority from disclosing INFORMATION pursuant to a valid and enforceable order of a court. It is understood and agreed, however, that prior to compliance with such an order, and provided it is not otherwise prohibited by law from so doing, the Authority shall inform BNSF, in writing, of such order immediately upon its receipt.

10. The parties agree to consult one another prior to either party making public statements concerning discussions between the parties about the California High Speed Rail Corridors as it relates to BNSF property or tracks.

11. This agreement may be terminated by the parties by mutual consent or upon the giving of 30 days written notice by one party to the other.

12. Any notices or writings provided by one party to the other shall be sent to the following:

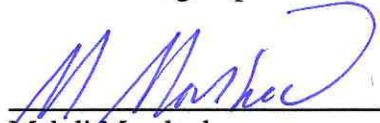
For BNSF:

Richard E. Weicher
Vice President & General Counsel - Regulatory
2500 Lou Menk Drive
Fort Worth, TX 76131

For the Authority:

Carrie Pourvahidi
Deputy Director
California High Speed Rail Authority
925 L Street, Suite 1425.
Sacramento, CA 95814

California High-Speed Rail Authority



Mehdi Morshed
Executive Director

Burlington Northern Santa Fe Corporation



Walter N. Smith, P.E.
General Director
Engineering & Construction

**COOPERATIVE AGREEMENT HSR08-12
BETWEEN
COUNCIL OF FRESNO COUNTY GOVERNMENTS
AND
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
FOR
PREPARATION OF THE FRESNO HIGH-SPEED TRAIN/FREIGHT RAIL CONSOLIDATION STUDY**

I. INTRODUCTION:

1. THIS COOPERATIVE AGREEMENT, is entered into by and between the Council of Fresno County Governments (Fresno COG) and the California High-Speed Rail Authority (CHSRA). The purpose of this Cooperative Agreement is to provide for funding to the CHSRA which is intended to enhance the CHSRA's study of possible rail consolidation and its impacts on the proposed high-speed rail system, and to benefit both the CHSRA and the Fresno COG with information which will allow each of the parties to consider rail consolidation in the context of high-speed rail and high-speed rail in the context of rail consolidation.
2. The CHSRA in partnership with the Federal Railroad Administration (FRA) has completed and certified a Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for a proposed California High-Speed Train (HST) network linking the major metropolitan areas of the State of California. The HST system approved by the Authority includes a BNSF alignment option with a new alignment transition just north of Fresno and combines with the UPRR alignment through Fresno as the preferred alignment through Fresno.
3. In November 2006, Fresno County voters approved a ½ cent local sales tax (Measure C) for transportation purposes. The Measure C Expenditure Plan includes an estimated \$102.5 million for the Rail Consolidation Subprogram of the Alternative Transportation Program. The Rail Consolidation Subprogram as envisioned by Fresno COG, could have an impact on, and could be affected by, the proposed high-speed train system. A potential rail consolidation alignment through the Fresno Metropolitan Area is adjacent to the UPRR, as is a portion of the proposed HST alignment in this area.
4. The parties agree that enhanced study which takes into account each party's proposed project in the context of that of the other party will assist in determining such things as the right-of-way needed to accommodate both projects along the UPRR corridor, and other factors, and will assist in allowing those determinations to be made more quickly, particularly given the fact that there are projects currently submitted and under review by the City of Fresno which may be affected by the right-of-way needs of either or both of the parties' proposed or contemplated projects.

II. LIAISON BETWEEN THE CHSRA AND FRESNO COG:

For the purpose of implementing this Agreement and providing a means of communication between the CHSRA and the Fresno COG regarding the study, each agency shall appoint a representative. The CHSRA representative is Carrie Pourvahidi, Deputy Director (916)322-1422. Clark Thompson,

Planning Coordinator (559) 233-4148 is the representative of the Fresno COG. Each agency may change representatives, in which case the agency changing its representative will notify the other agency in writing of the change and its effective date.

III. SCOPE OF SERVICES

This Agreement specifies the procedures that Fresno COG and CHSRA will follow in connection to work to be performed. CHSRA agrees to provide all services identified in Exhibit A, "Scope of Services", which is attached hereto and by this reference is incorporated into this Agreement. All work will be performed at the times and location specified therein. Both Fresno COG and CHSRA agree that each will cooperate with the other in all activities covered by this Agreement and any other supplemental agreements, provided that it is also understood that this agreement does not affect the exercise by either party of any obligations placed on it by law, including the obligations imposed on a lead agency when it conducts environmental studies and prepares environmental impact reports or studies.

The parties recognize that under state and federal law, any party preparing an environmental document has certain obligations and responsibilities with respect to the preparation of that document, and with respect to intermediate decisions which must be made in the course of preparation of the document. The parties further recognize that these are obligations and responsibilities which cannot be delegated or assigned by the preparing party to someone else or to another agency. Nothing in this agreement is intended to affect those obligations and responsibilities, nor to proscribe in any way future decisions on or related to such documents by any party to this agreement, nor to affect in any way which is contrary to the law the decision-making responsibilities of any party to this agreement. Each party to this agreement is responsible for making its own determination as to the usefulness or as to the propriety of its use of or reliance upon the work product of any other party to this agreement. It is not intended by this agreement that any party to this agreement represents or warrants that its work product is sufficient for the purposes to which another party may wish to apply that work product. This MOU does not reduce, expand, transfer, or alter in any way, any of the statutory or regulatory authorities or responsibilities of any of the Signatories.

IV. CONTRACT ADMINISTRATION

1. The Contractor(s) who will be conducting the study have been selected and retained by the CHSRA which shall direct and review the progress of these contractor(s) and will be responsible for evaluating and accepting or rejecting studies.
2. Regular coordination meetings will be held between CHSRA staff and the contractors. Representatives of the Fresno COG will be invited to attend such coordination meetings as pertain to work performed under this Agreement.
3. The CHSRA will ensure that study deliverables will be provided in an electronic format. The CHSRA will provide the Fresno COG all final reports, and summaries of those reports, as well as other pertinent information, including drawings, maps, report outlines, graphic formats, meeting minutes and other information, both in electronic and hard copy.

V. RESPONSIBILITIES OF THE FRESNO COG

1. The Fresno COG agrees to reimburse the CHSRA for the costs associated with the study which fall within the "Scope of Services". Such reimbursements shall cover costs for Task 3520 (Rail Consolidation Benefits Analysis) and Task 3530 (Rail Consolidation Implementation Issues) in their entirety (\$160,287), as well as Fresno COG's pro rata share (11.87% or \$89,713) of costs associated with other study tasks that include development and analysis of both freight rail consolidation and HST alternatives, specifically:
 - Task 3410 – Alternatives Definition
 - Task 3420 – Alignment Development
 - Task 3430 – Impacts Analysis
 - Task 3440 – Cost Estimates
 - Task 3510 – Alternatives
2. The Fresno COG shall reimburse CHSRA in the amount Not to Exceed two-hundred fifty thousand dollars, (\$250,000.00).
3. The Fresno COG agrees that the Not to Exceed amount may be adjusted either up or down by written amendment to this Agreement.
4. Fresno COG shall reimburse CHSRA within 30 calendar days of receipt of an invoice in compliance with paragraph VI. 4. below.

VI. RESPONSIBILITIES OF THE CHSRA

1. CHSRA shall be responsible for maintaining records and documentation related to work performed under this Agreement.
2. CHSRA agrees to cooperate fully with the Fresno COG and its representatives during the term of this Agreement, consistent with its legal and statutory duties and obligations.
3. CHSRA shall conduct its activities related to the Scope of Services in a good and competent manner and in compliance with all applicable federal, state and local rules and regulations.
4. CHSRA shall invoice Fresno COG on a monthly basis for payments corresponding to the work performed as specifically detailed in the Scope of Services. CHSRA shall also furnish such other information as may be requested by the Fresno COG to substantiate the invoice. Invoices shall be submitted by CHSRA on a monthly basis to the Fresno COG. The invoice containing the CHSRA's final billing under this MOU shall note that it is the final billing for purposes of paragraph VIII below. Each invoice shall include the following information:
 - a. Agreement Number;
 - b. Specify the task number for which payment is being requested;
 - c. The time period covered by the invoice;
 - d. Total monthly invoice (including project-to-date cumulative invoice amount);
 - e. The backup information included with the invoice is true, complete and correct in all material respects; and

- f. Any other information as agreed or requested by the Fresno COG to substantiate the costs listed on an invoice.
5. CHSRA shall be responsible for reviewing the consultant's invoices for accuracy, terms and completeness prior to seeking reimbursement from Fresno COG.

VII. FUNDING REQUIREMENTS

1. This Agreement is valid and enforceable only if sufficient funds are made available to CHSRA by the California State Legislature for the purpose of this study. In addition, this Agreement is subject to any additional restrictions, limitation, conditions, or any statute enacted by the State Legislature that may affect the provisions, terms or funding of this Agreement in any manner.
2. It is mutually agreed that if the State Legislature does not appropriate sufficient funds for this study, this Agreement shall be amended to reflect any reduction in funds. In the alternative, in the event sufficient funds are not appropriated, either party may terminate this Agreement in the manner described.

VIII. AUDIT AND INSPECTION

CHSRA shall maintain its records related to work performed under this Agreement in accordance with generally accepted accounting principles. Upon reasonable notice, CHSRA shall permit the authorized representatives of the Fresno COG to inspect and audit all work, materials, payroll, books, accounts and other data and records of CHSRA related to this Agreement for a period of four (4) years after the final payment, or until any on-going audit is completed. For purposes of audit, the date of completion of this Agreement shall be the date of the Fresno COG's payment for CHSRA's final billing (so noted on the invoice) under the Agreement.

IX. ADDITIONAL PROVISIONS

The Fresno COG and CHSRA agree to the following mutual responsibilities:

1. Term of Agreement – This Agreement shall continue in full force and effect through September 30, 2009, unless extended by mutual written agreement or terminated earlier by mutual written consent by both parties or by either party pursuant to paragraph VII. 2 or paragraph IX. 2 hereof.
2. Termination – Either party may withdraw from this Agreement upon giving to the representative of the other party 30-days notice, or immediately in the event of a material breach. In the event of early termination, the Fresno COG shall reimburse the CHSRA for all allowable project expenses incurred up to the date of termination, including any uncancellable obligations and reasonable costs to wind up ongoing tasks.
3. Amendment – This Agreement may be amended or modified only by mutual written agreement by both parties.
4. Notices – Any notices, requests or demands made between the parties pursuant to this Agreement are to be directed as follows

To CHSRA:
 California High-Speed Rail
 Authority
 925 L Street, Suite 1425
 Sacramento, CA 95814
 Attn: Carrie Pourvahidi
 916-322-1422
cpourvahidi@hsr.ca.gov

To Fresno COG:
 Council of Fresno County
 Governments
 2035 Tulare Street, Suite 201
 Fresno, CA 93721
 Attn: Clark Thompson
 559-233-4148
clarkt@fresnocog.org

5. Indemnification –The CHSRA shall indemnify, defend and hold harmless the Fresno COG, its officers, directors, employees and agents from and against any and all claims (not including attorney’s fees and expenses for litigation or settlement) for any loss or damages, bodily injuries, including death, damage to or loss of use of property caused by the negligent acts, omissions or willful misconduct by CHSRA, its officers, directors, employees or agents in connection with or arising out of the performance of this Agreement.
6. Counterparts of Agreement – This Agreement may be executed and delivered in any number of counterparts, each of which, when executed and delivered shall be deemed an original and all of which together shall constitute the same agreement. Facsimile signatures will be permitted.
7. Assignment – Neither this Agreement, nor any of the parties rights, obligations, duties, or authority hereunder may be assigned in whole or in part by either party without the written consent of the other party in its sole and absolute discretion. Any such attempt of assignment shall be deemed void and of no force and effect. Consent to one assignment shall not be deemed consent to any subsequent assignment, nor the waiver of any right to consent to such subsequent assignment. Notwithstanding this provision, it is understood that the work called for by this agreement in no way restricts the CHSRA’s ability to select the consultants whom it will retain to perform any of the work described in this Agreement.

This Agreement shall be effective upon execution by both parties.

IN WITNESS WHEREOF, the parties hereto have caused this Co-Operative Agreement to be executed on the date first written above.

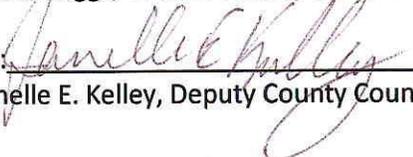
Fresno Council of Governments

California High-Speed Rail Authority

By: 
 Tony Boren, Executive Director

By: 
 Mehdi Morshed, Executive Director

Approved as to Legal Form
 Kevin Briggs, Interim County Counsel

By: 
 Janelle E. Kelley, Deputy County Counsel



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Curt Pringle
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Miguel Pulido
Director

Mark Rosen
Director

Gregory T. Winterbottom
Director

Cindy Quon
Governor's
Ex-Officio Member

June 4, 2008

Mr. Dan Leavitt
Deputy Director
California High Speed Rail Authority
925 L Street
Suite 1425
Sacramento, CA 95814

SUBJECT: OCTA'S AMENDMENT NO. 1 TO AGREEMENT NO. C-7-0860

Dear Mr. Leavitt:

Enclosed please find one original copy of the above referenced subject for your records.

Should you have any contractual related questions, please feel free to contact David Christianson at (714) 560-5006 or by e-mail at dchristianson@octa.net.

Sincerely,

Julie Smith
Office Specialist
Contract Administration and Materials Management

Enclosure(s)

CHIEF EXECUTIVE OFFICE

Arthur T. Leahy
Chief Executive Officer

AMENDMENT NO. 1 TO
COOPERATIVE AGREEMENT NO. C-7-0860
BETWEEN
ORANGE COUNTY TRANSPORTATION AUTHORITY
AND
CALIFORNIA HIGH SPEED RAIL AUTHORITY

THIS AMENDMENT NO. 1 is effective this 30~~4~~ day of JUNE, 2008, by and between the Orange County Transportation Authority, (hereinafter referred to as "AUTHORITY") and California High Speed Rail Authority, (hereinafter referred to as "CHSRA").

WITNESSETH:

WHEREAS, by Cooperative Agreement No. C-7-0860 dated January 18, 2007, AUTHORITY and CHSRA entered into an agreement for the preparation of a Project-Level High-Speed Train Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for the LOSSAN Rail Corridor between Los Angeles and Anaheim; and

WHEREAS, both parties agree to amend this Cooperative Agreement to correct the effective date of the Cooperative Agreement with no increase in the maximum cumulative payment obligation;

NOW, THEREFORE, it is mutually understood and agreed by AUTHORITY and CHSRA that Cooperative Agreement No. C-7-0860 is hereby amended in the following particulars only:

1. Amend Page 1 of 8, lines 8 and 9 to delete "January 18, 2008" and in lieu thereof insert "October 5, 2007".

The balance of said Cooperative Agreement remains unchanged.

This Amendment No. 1 shall be made effective upon execution by both parties.

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AMENDMENT NO. 1 TO
COOPERATIVE AGREEMENT NO. C-7-0860

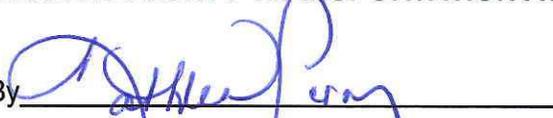
1 **IN WITNESS WHEREOF**, the parties hereto have caused this Amendment No. 1 to
2 Cooperative Agreement No. C-7-0860 to be executed on the effective date above written.

3 **CALIFORNIA HIGH SPEED RAIL**
4 **AUTHORITY**

5 By 

6 Medhi Morshed
Executive Director

ORANGE COUNTY TRANSPORTATION AUTHORITY

By 

Kathleen Perez
Manager
Contracts Administration & Procurement

8 APPROVED AS TO FORM:

9
10 By 

11 Kennard R. Smart, Jr.
12 General Counsel

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FEB 20 2007

AFFILIATED AGENCIES

Orange County
Transit District

Local Transportation
Authority

Service Authority for
Freeway Emergencies

Consolidated Transportation
Service Agency

Congestion Management
Agency

Service Authority for
Abandoned Vehicles

February 14, 2007

Mr. Dan Leavitt
Deputy Director
California High Speed Rail Authority
925 L Street
Suite 1425
Sacramento, CA 95814

SUBJECT: OCTA'S MEMORANDUM OF UNDERSTANDING NO. C-6-0732

Dear Mr. Leavitt:

Enclosed please find one original copy of the above referenced subject for your records.

Should you have any contractual related questions, please feel free to contact Kathleen Perez at (714) 560-5743 or by e-mail at kperez@octa.net.

Sincerely,

Julie Smith
Office Specialist
Contract Administration and Materials Management

Enclosure(s)

1 **MEMORANDUM OF UNDERSTANDING C-6-0732**
2 **BY AND BETWEEN**
3 **ORANGE COUNTY TRANSPORTATION AUTHORITY**
4 **AND**
5 **CALIFORNIA HIGH SPEED RAIL AUTHORITY**
6 **FOR**
7 **PREPARATION OF AN EIR/EIS REPORT AND AN ENVIROMENTAL ASSESSMENT**

8 **RECITALS:**

9 **THIS MEMORANDUM OF UNDERSTANDING (MOU)** is made and entered into on this
10 *25th day of September* of 2006, by and between the Orange County Transportation Authority
11 ("AUTHORITY") and the California High Speed Rail Authority (CHSRA), (AUTHORITY and CHSRA
12 collectively referred to herein as "PARTIES" and "PARTY" means one of the PARTIES to this
13 MOU), regarding the preparation of a Project-Level High-Speed Train (HST) Environmental Impact
14 Report (EIR)/Environmental Impact Statement (EIS) for the LOSSAN Rail Corridor between Los
15 Angeles and Anaheim, and an Environmental/Feasibility Assessment for a potential HST feeder
16 service in the Anaheim to Ontario corridor (collectively hereinafter referred to as "PROJECTS," and
17 "PROJECT" means one of the PROJECTS to this MOU) with regard to the following matters:

18 **WHEREAS**, CHSRA in partnership with the Federal Railroad Administration (FRA) has
19 completed and certified a Program EIR/EIS for a proposed California High-Speed Train (HST)
20 network linking the major metropolitan areas of the State of California. The HST system approved
21 by CHSRA includes the "LOSSAN" rail corridor as the preferred alignment linking Los Angeles to
22 Orange County; and

23 **WHEREAS**, within the LOSSAN rail corridor, the California Department of Transportation
24 currently operates intercity passenger rail service, the "Surfliner", and the Southern California
25 Regional Rail Authority (SCRRA) operates the Metrolink commuter rail service. AUTHORITY is
26 considering proposing to enhance portions of the rail line over which existing services operate to

1 enhance services in a manner that would plan for, preserve the right-of-way, and lay the foundation
2 for future HST service in this corridor. In the course of considering these enhancements,
3 AUTHORITY believes it will benefit from the preparation of a Project-Level EIR/EIS document
4 between Los Angeles and Anaheim by CHSRA and some of the technical studies which will be
5 generated in the course of preparation of this Project-Level EIR/EIS; and

6 **WHEREAS**, the LOSSAN rail corridor Project-Level EIR/EIS studies will examine options for
7 developing the LOSSAN corridor to accommodate HST, as well as Metrolink, Amtrak, and
8 conventional freight. The Project-Level EIR/EIS document will evaluate in detail the alternatives for
9 incremental phased implementation and will address site specific environmental impacts, in a
10 manner which takes into account all existing rail services as well as incremental phases of
11 development; and

12 **WHEREAS**, the authority and responsibility for the planning, construction, and operation of
13 high-speed passenger train service at speeds exceeding 125 miles per hour in California is
14 exclusively granted to CHSRA by Public Utilities Code Section 185032.a.2; and

15 **WHEREAS**, CHSRA has the authority to accept grants, fees, and allocations from the state,
16 from political subdivisions of the state or from the federal government, foreign governments, and
17 private sources (Public Utilities Code section 185034(4); and

18 **WHEREAS**, AUTHORITY adopted the 2006 Long-Range Transportation Plan (LRTP) to
19 identify the facilities, services and programs necessary to meet the Orange County region's travel
20 needs through the year 2030, and that document recognizes the need for high-speed ground
21 transportation to serve these needs; and

22 **WHEREAS**, AUTHORITY is considering pursuing a high-speed passenger train service
23 between Anaheim (ARTIC Station) and the Ontario Airport. The Anaheim to Ontario service is not
24 included as part of CHSRA's preferred alignment. However, such a potential service could
25 complement the statewide HST system and help to integrate it with other transit services as a
26 "feeder" service with potential multi-modal connections to the statewide system at both ARTIC

1 Station in Anaheim and at the Ontario Airport. CHSRA involvement in assessing the feasibility of
2 an Anaheim to Ontario Airport link will foster and ensure coordination in the design of the multi-
3 modal hub stations to accommodate HST service and other transit services. AUTHORITY believes
4 it will benefit from the preparation of an environmental/feasibility assessment between Anaheim
5 (ARTIC Station) and the Ontario Airport by CHSRA and the technical studies which will be
6 generated in the course of preparation of an environmental/feasibility assessment. Preparation of a
7 feasibility assessment by CHSRA is an initial step in planning for high-speed train service; and

8 **WHEREAS**, it is the intent and purpose of this MOU to demonstrate the continuing desire of
9 the PARTIES to cooperate and to share the results of their studies and to share their respective
10 views on the subject of improvements and enhancements to the LOSSAN Rail Corridor (between
11 Los Angeles and Anaheim), and the Anaheim to Ontario corridor in a manner which best
12 contributes to the public good, and in a manner which reduces or eliminates unnecessary
13 duplicative effort; and

14 **NOW, THEREFORE**, it is mutually understood and agreed to by the PARTIES as follows:

15 1. The PARTIES agree to continue to work cooperatively throughout the preparation of
16 CHSRA's Project-Level EIR/EIS for the Los Angeles to Anaheim segment of the LOSSAN Rail
17 Corridor and a potential HST environmental/feasibility assessment by CHSRA of the Anaheim to
18 Ontario corridor.

19 2. CHSRA will manage the Project-Level EIR/EIS process between Los Angeles and
20 Anaheim and obtain funding for the non Orange County (Los Angeles County) portion of the
21 process estimated at up to \$13 million, and expend these funds over three fiscal years starting
22 Fiscal Year 2006/2007, subject to state budget allocations and spending authorization and
23 consistent with statutory authority. CHSRA will prepare, or contract for the preparation of, the
24 EIR/EIS, supporting documentation (all required reports, presentations, and deliverables), and
25 public noticing, and furnish all personnel, facilities, and equipment necessary to complete and
26 certify the EIR/EIS. CHSRA will maintain and retain all records associated with the EIR/EIS.

1 3. AUTHORITY will fund the Orange County portion of the Los Angeles to Anaheim
2 Project-Level EIR/EIS (estimated at up to \$7 million) in local funds over two fiscal years starting
3 Fiscal year 2007/2008 (\$3.5 million each year) with details of the funding subject to a future
4 Agreement. AUTHORITY will provide technical and policy input in the preparation of the Project-
5 Level EIR/EIS including providing reviews, comments and technical support in a timely manner.
6 AUTHORITY will support CHSRA in seeking such additional state funding as may be needed to
7 complete these studies.

8 4. In preparing its Project-Level EIR/EIS, CHSRA will take into account and coordinate
9 with, to the extent it is appropriate to do so, the other technical studies and proposed improvements
10 which have been prepared and will be prepared with reference to the greater LOSSAN Corridor
11 (including AUTHORITY's planned Metrolink expansion). CHSRA will be responsible for obtaining
12 the necessary documents to do such.

13 5. The PARTIES recognize that realistic planning for the future of the LOSSAN Rail
14 Corridor requires recognition of existing constraints along this corridor and also requires recognition
15 of the need for cooperation and coordination among all of the agencies which have responsibilities
16 to address public transportation needs along that corridor. Staff of CHSRA and AUTHORITY, will
17 cooperate fully in the exchange of information and will work together, under the oversight of CHSRA,
18 in order to satisfy this need.

19 6. Contingent on federal and/or future state funding, CHSRA will actively manage and
20 contract for an environmental/feasibility assessment for the Anaheim to Ontario corridor, estimated
21 to cost up to \$3 million and to take two years to complete. CHSRA will seek \$3 million in federal
22 funds starting in Fiscal Year 2006/2007 for the work effort, and will seek state funding for the portion
23 of federal funds, up to \$3 million, if not available. If adequate funding is provided, CHSRA will
24 prepare the environmental/feasibility assessment and supporting documentation, furnish all
25 personnel, facilities, equipment necessary to perform scope, all required reports, presentations and
26 deliverables, and maintain and retain all records associated with the studies. CHSRA staff will meet
regularly with OCTA staff and with the staff of local and regional agencies with regard to the

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Anaheim to Ontario corridor to discuss technical matters related to this project.

7. AUTHORITY will actively participate in the Anaheim to Ontario environmental/feasibility assessment effort and support CHSRA in seeking federal and state funding. AUTHORITY will provide technical and policy input and technical support, review and comment on documents in a timely manner, and its staff will actively work with CHSRA's staff for this corridor.

8. Each PARTY agrees to encourage public awareness of and involvement in the environmental review processes in which the agencies are engaged.

9. The PARTIES agree that the primary purpose, intent and spirit of this MOU are to continue and to expand cooperation among the PARTIES and to develop the framework for future Cooperative Agreements. To this end, the PARTIES agree to share the results of their work, including technical studies, and to confer at regular and frequent intervals.

10. Each PARTY intends to use the products of the technical studies consistent with its respective authority and to the maximum extent possible.

11. The PARTIES recognize that under state and federal law, any PARTY preparing an environmental document has certain obligations and responsibilities with respect to the preparation of that document, and with respect to intermediate decisions which must be made in the course of preparation of the document. The PARTIES further recognize that there are obligations and responsibilities which cannot be delegated or assigned by the preparing PARTY to someone else or to another agency. Nothing in this MOU is intended to affect those obligations and responsibilities, nor to affect in any way which is contrary to the law the decision-making responsibilities of either PARTY to this MOU. Each PARTY to this MOU is responsible for making its own determination as to the usefulness or as to the propriety of its use of or reliance upon the work product of the other PARTY to this MOU. It is not intended by this MOU that either PARTY to this MOU represents or warrants that its work product is sufficient for the purposes to which the other PARTY may wish to apply that work product. This MOU does not reduce, expand, transfer, or alter in any way, any of the statutory or regulatory authorities and responsibilities of any of the signatories.

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3 12. It is noted that there may be differences in the nature of what CHSRA is studying and
4 that which AUTHORITY will be considering. This MOU does not constitute a decision by CHSRA or
5 by its staff regarding the selection, timing or phasing of one HST corridor or segment over another
6 as part of the system defined in the certified Program EIR/EIS and approved by CHSRA. This MOU
7 is not intended to constitute and does not constitute any limitation on the CHSRA's decision making.

8 13. Each PARTY shall provide a technical lead to exchange information between each
9 other concerning the PROJECTS.

10 14. Each PARTY agrees to cooperate and coordinate with the other PARTY, its staff,
11 contractors, consultants, vendors, etc. providing services required under this MOU to the extent
12 practicable in the performance of the PROJECTS and in their other respective responsibilities under
13 this MOU.

14 15. The PARTIES agree to work diligently together and in good faith, using their best
15 efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

16 16. This MOU may only be modified or amended in writing. All modifications,
17 amendments, changes and revisions of this MOU in whole or part, and from time to time, shall be
18 binding upon the PARTIES, so long as the same shall be in writing and executed by the PARTIES.

19 17. This MOU shall be governed by and construed with the Federal, State and Local
20 laws. The PARTIES warrant that in the performance of this MOU, each shall comply with all
21 applicable Federal, State and Local laws, statutes and ordinances and all lawful orders, rules and
22 regulations promulgated thereunder.

23 18. This MOU, including all exhibits and documents incorporated herein and made
24 applicable by reference, constitutes the complete and exclusive statement of the term(s) and
25 condition(s) of the MOU between the PARTIES and it supersedes all prior representations,
26 understandings and communications. The invalidity in whole or part of any term or condition of this
MOU shall not affect the validity of other term(s) or condition(s).

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2 19. Each PARTY shall be excused from performing its obligations under this MOU during
3 the time and to the extent that it is prevented from performing by an unforeseeable cause beyond
4 its control, including but not limited to: any incidence of fire, flood; acts of God; commandeering of
5 material, products, plants or facilities by federal, state or local government; national fuel shortage;
6 or a material act or omission by any PARTY; when satisfactory evidence of such cause is presented
7 to the other PARTY, and provided further such nonperformance is unforeseeable, beyond the
8 control and is not due to the fault or negligence of the PARTY not performing.

9 20. Any notice sent by first class mail, postage paid, to the address and addressee, shall
10 be deemed to have been given when in the ordinary course it would be delivered. The
11 representatives of the PARTIES who are primarily responsible for the administration of this MOU,
12 and to whom notices, demands and communications shall be given are as detailed as follows:

13 To CHSRA:

14 California High Speed Rail Authority

15 925 L Street

16 Suite 1425

17 Sacramento, CA 95814

18 Attention: Dan Leavitt, Deputy Director

19 (916/324-1541), dleavitt@hsr.ca.gov

20 c:

 To AUTHORITY:

 Orange County Transportation Authority

 550 South Main Street

 P. O. Box 14184

 Orange, CA 92863-1584

 Attention: Kathleen Perez, Section Manager

 Capital Projects (714/560-5643), kperez@octa.net

 c: Paul Taylor, Executive Director, Development

21 If there are any changes in the names and/or addresses listed above, the PARTY desiring to
22 make such changes shall give a written notice to the other PARTY within five (5) days of such
23 change.

24 21. This MOU shall continue in full force and effect through December 31, 2011, unless
25 terminated earlier by mutual written consent by the PARTIES, or terminated by either Party for its
26 convenience on 30 days written notice. The term of this MOU may only be extended upon mutual
written agreement by the PARTIES.

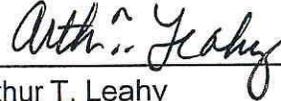
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IN WITNESS WHEREOF, the PARTIES hereto have caused this Memorandum of Understanding No. C-6-0732 to be executed on the date first above written.

CALIFORNIA HIGH SPEED RAIL AUTHORITY

ORANGE COUNTY TRANSPORTATION AUTHORITY

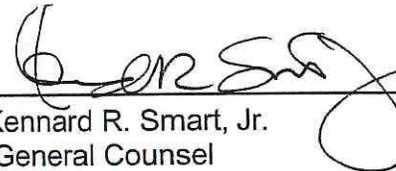
By: 
Medhi Morshed
Executive Director

By: 
Arthur T. Leahy
Chief Executive Officer

APPROVED AS TO FORM:

APPROVED AS TO FORM:

By: _____
Name:
Title:

By: 
Kennard R. Smart, Jr.
General Counsel

APPROVAL RECOMMENDED:

APPROVAL RECOMMENDED:

By: _____
Name:
Title:

By: 
Paul C. Taylor, Executive Director,
Development

Date: _____

Date: 1/16/07



MEMORANDUM OF AGREEMENT
Between the
THE TRANSBAY JOINT POWERS AUTHORITY
And
THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Regarding
DESIGN OF THE TRANSBAY TRANSIT CENTER
AND THE CALTRAIN DOWNTOWN EXTENSION

The Parties to this agreement (“parties”) are the Transbay Joint Powers Authority (“TJPA”) and the California High-Speed Rail Authority (“CHSRA”). The TJPA is a joint powers agency responsible for the planning, design, construction, operation and management of the Transbay Transit Center Program ("Transbay Program") in San Francisco, including a new Transbay Transit Center and an underground rail connection providing access to the new Transbay Transit Center from the existing Caltrain 4th/King northern terminus ("DTX"); The CHSRA is the state entity responsible for planning, constructing and operating a high-speed train system serving California's major metropolitan areas.

On November 4, 2008 the voters of California approved Proposition 1A, a state general obligation bond measure to provide a portion of the costs of construction of a high-speed train system that connects the State's major population centers consistent with the CHSRA's certified program environmental documents and stating that the legislative intent is to initiate construction of a high-speed train project that connects the San Francisco Transbay Terminal to Los Angeles Union Station and Anaheim.

The CHSRA's Program EIR/EIS for the Bay Area to Central Valley portion of the high-speed rail system, certified on July 9, 2008, identifies the Transbay Transit Center as the preferred San Francisco terminus for the high-speed rail system. The CHSRA has commenced preparation of a project engineering design and EIR/EIS for the San Francisco to San Jose section of the high-speed rail system.

The TJPA is actively engaged in Preliminary Engineering Design for the DTX and the Transbay Transit Center.

The parties recognize that cooperation respecting the project of each party is desirable and appropriate. The parties, therefore, agree as follows:

1. The parties will establish a mutually beneficial and productive working relationship to help these agencies meet the problems of establishing the Transbay Transit Center as a terminus station of the high-speed rail system, and to develop a process and mechanisms that will encourage and facilitate communications and collaboration between them and allow them efficiently to address short-term, medium-term, and long-term problems in an effective manner.

2. The parties will establish several working groups to assist the agencies in doing so, including those described below, recognizing that, as planning, design and environmental work progress, additional issues may become the subjects of collaboration.

3. The parties will establish a technical working group through which technical information will be exchanged by the parties. This group shall also serve the following purposes:

a. As a means by which each party will be kept informed of progress being made by the other party in development of technical information, including information developed in the environmental review process.

b. As a means by which each party will have the opportunity to make suggestions regarding the scope of on-going and future technical work and studies.

c. As a means by which each party will be able to comment on or to seek clarification of information provided by the other party. This provision does not alter, replace, or otherwise affect provisions of law, such as those in the California Environmental Quality Act, providing for comment during the environmental review process.

4. Each agency understands that documents provided by one party to the other may be subject to disclosure by the other party pursuant to the Public Records Act or the San Francisco Sunshine Ordinance. In the event one party ("first party") wishes to share documents or information with the other party ("second party") that the first party considers to be confidential or not subject to public disclosure, the first party will first notify the second party of that fact, thus giving the second party an opportunity to determine if it is in a position to receive the documents or information in confidence and to assert that they are not subject to disclosure. In the event either party receives a request for public records pertaining to documents it has received from the other party, it will immediately notify the other party of the request and refrain from responding to the request until the other party has had an opportunity to assert its position concerning whether the requested documents are subject to disclosure. Such provision does not require any party to delay a response to a request for public records beyond the time provided in applicable law, which shall control. Furthermore, this memorandum does not require one party to provide to the other party any documents or information which it deems confidential.

5. The parties will establish a working group to examine issues surrounding potential rights and interests, including ownership interests in the facilities to be used for high-speed rail purposes at and near the Transit Center and the proposed right of way between the Transbay Transit Center and the current terminus of the Caltrain line at Fourth and King Streets in San Francisco.

6. The working group shall also examine issues pertaining to funding for construction and operation of facilities at and near the Transit Center, including the proposed right of way between the Transbay Transit Center and the current terminus of the Caltrain line at Fourth and King Streets, to be used by or for the high-speed rail system.

7. The parties recognize that under state and federal law, any party preparing an environmental document has certain obligations and responsibilities with respect to the preparation of that document, and with respect to intermediate decisions which must be made in the course of preparation of the document. The parties further recognize that there are obligations and responsibilities which cannot be delegated or assigned by the preparing party to someone else or to another agency. Nothing in this agreement is intended to affect those obligations and responsibilities or the decision-making responsibilities of any party to this agreement in any way contrary to law. Each party is responsible for making its own determination as to the usefulness or propriety of its use of, or reliance upon, the work product of the other party. It is not intended by this agreement that either party represents or warrants that its work product is sufficient for the purposes to which another party may wish to apply that work product. This MOA does not reduce, expand, transfer, or alter in any way any statutory or regulatory authority or responsibility of either of the parties.

8. The structure of the relationship between the TJPA and the CHSRA as described in this MOA is not intended to remain unchanged, but may evolve in the future and as the parties confront various problems. All or portions of this memorandum may be modified to accommodate the needs of the parties as planning work progresses, either through direct amendment of this memorandum or through supplemental memoranda, as deemed appropriate by the parties.

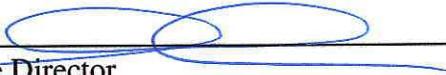
9. The needs of the Peninsula Corridor Joint Powers Board ("Caltrain") must be considered in all planning activities pertaining to extending Caltrain services to downtown San Francisco and to the use of the Transit Center as a rail station. CHSRA can consult directly with Caltrain.

10. The parties will attempt to cooperate in the presentation of information to the media concerning the rail component of the Transbay Program and California High-Speed Rail.

11. This agreement is effective upon execution by both parties and shall continue in effect until and unless terminated by both parties through mutual agreement or upon 30 days' written notice delivered by the party seeking to terminate the agreement to the other party.

12. Nothing in this agreement is to be construed as acceptance of the imposition of any surcharge on high-speed train passengers. Any such surcharge would require the approval of the board of each party to this agreement.

TRANSBAY JOINT POWERS AUTHORITY

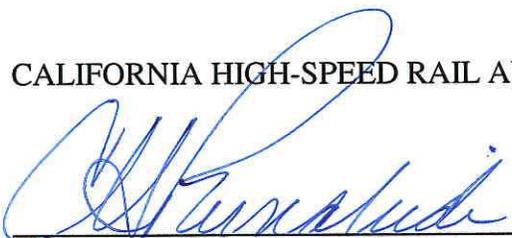


Executive Director

AUTHORIZED BY:
TJPA BOARD OF DIRECTORS

Resolution No.: 09-005

CALIFORNIA HIGH-SPEED RAIL AUTHORITY



Acting Executive Director

AUTHORIZED BY:
CHSRA BOARD OF DIRECTORS

Resolution No.: HSRA 09-005

**MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
&
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

FOR PREPARATION OF STUDIES FOR
THE PROPOSED HIGH-SPEED PASSENGER RAIL CORRIDORS
THROUGH LOS ANGELES COUNTY**

The Memorandum of Understanding (MOU) is entered into by and between the California High-Speed Rail Authority (CHSRA) and the Los Angeles County Metropolitan Transportation Authority (LACMTA) (referred to herein individually as a PARTY and collectively as the "PARTIES" to this MOU), regarding the preparation of technical studies for the High-Speed Passenger Rail Corridors through Los Angeles County (the "PROJECT") with regard to the following matters:

RECITALS:

WHEREAS, CHSRA in partnership with the Federal Railroad Administration (FRA) has completed and certified a Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for a proposed California High-Speed Train (HST) network linking the major metropolitan areas of the State of California and the HST system approved by CHSRA includes a corridor into and through Los Angeles County (referred to herein as the "Corridor"); and

WHEREAS, the authority has responsibility for the planning, construction, and operation of high-speed passenger train service at speeds exceeding 125 miles per hour in California is exclusively granted to CHSRA by Public Utilities Code Section 185032.a.2; and

WHEREAS, CHSRA has the authority to accept grants, fees, and allocations from the state, from political subdivisions of the state and from the federal government, foreign governments, and private sources (Public Utilities Code section 185034(4)); and

WHEREAS, the Southern California Association of Governments (SCAG) adopted the 2008 RTP to identify the facilities, services and programs necessary to meet the SCAG's region's travel needs through the year 2035, and that document recognizes the need for high-speed ground transportation to serve these needs; and

WHEREAS, LACMTA is involved in the planning, funding, construction and/or operation of heavy and light rail transit, buses and/or commuter train services in Los Angeles County and is considering inter-modal service integration, including linkages to the proposed HST service; and

WHEREAS, it is the intent and purpose of this MOU to demonstrate the continuing desire of the PARTIES to cooperate, to coordinate, and to share the results of their studies and to share their respective views on the subject of proposed improvements and enhancements to the Los Angeles HST Corridor in a manner which best enhances state and regional transportation networks, and in a manner which reduces or eliminates unnecessary duplicative efforts.

NOW, THEREFORE, it is mutually understood and agreed to by the PARTIES as follows:

1. The Authority will consult with the LACMTA in the development of an Alternatives Analysis and identification of a Preferred Alternative (PA) in each HST Corridor located entirely or partly within Los Angeles County, and the Parties will work together in the preparation and completion of required planning and technical studies, engineering and environmental analysis for the construction and operation of California's HST system in Los Angeles County.

2. The PARTIES agree to form a technical working group including staff and consultants of the CHSRA and LACMTA for the purpose of sharing information, providing technical and policy input, reviewing deliverables and providing comments that facilitate completion of the necessary technical work related to the project environmental review process for the sections of the HST system within Los Angeles County. The PARTIES agree that staff for each PARTY will cooperate fully in the exchange of information and will work together to assist in the identification of the PA in each HST corridor.

3. The PARTIES agree that any CHSRA proposal to use of any LACMTA-owned Rights-of-Way, property and/or facilities in the HST Corridor will require LACMTA Board of Directors approval. . In addition, CHSRA will solely bear the cost of the preparation of any studies, conceptual designs or engineering and design related to the use of existing LACMTA facilities by the HST system. LACMTA agrees to provide to the CHSRA "as built" drawings of LACMTA facilities, as well as existing engineering, right of way and environmental information in its possession pertinent to the HST studies.

4. Unless otherwise agreed in writing in this and as an amendment to this MOU, and authorized by competent authority, each PARTY shall bear any costs it incurs in relation to this MOU without expectation of reimbursement or subsidization by any other PARTY, subject to the following understanding:

(a) The CHSRA will be the lead agency and bear the cost of the preparation and adoption of the Los Angeles Corridor HST System Environmental/Engineering Work (including the cost of the public involvement program and project EIR/EIS documents and related technical studies for the Corridor defined in the CHSRA's certified Final Program EIR/EIS for the Proposed HST System).

(b) LACMTA will be a responsible agency concerning the Project and will assist in the development of plans and studies that provide for dedicated connection to existing, planned, and proposed transit facilities under the control of LACMTA or funded and supported by LACMTA in Los Angeles County. LACMTA will participate in development of planning studies that propose a physical connection between the HST System to existing, planned, and proposed transit facilities or from such transit facilities to the HST System, utilization of LACMTA-owned Rights-of-Way, and other analysis and development planning that establishes or strengthens a clear nexus of the Los Angeles County regional transportation system and the HST System that directly and substantially improves inter-modal connectivity and serviceability for the transportation of passengers or property. Such good faith efforts do not imply acceptance or authorization to use LACMTA owned facilities or right of ways and any such use is subject to LACMTA Board approval.

(c) LACMTA and CHSRA will jointly study and determine the feasibility and practicality of developing and/or sharing joint use facilities such as stations, rail yards, storage and maintenance facilities, and repair facilities, and will share the costs related to study and planning of such joint use facilities.

(d) If additional tasks are requested by more than one PARTY, those PARTIES agree to pay an equal share of the costs of such additional work, unless they agree to a different allocation of costs among or between them for such work.

5. CHSRA will take into account and coordinate with, to the extent it is appropriate to do so, the other technical studies and proposed improvements which have been prepared, and will be prepared, by other PARTY or other agencies with reference to the HST corridors within Los Angeles County. CHSRA will be responsible for obtaining the necessary documents to do such tasks. Each other PARTY hereto shall inform CHSRA of such studies and proposed improvements of which it has knowledge during the term of this MOU and make available to the CHSRA information it has concerning such studies and proposed improvements.

6. The PARTIES recognize that realistic planning for the future of the Corridor requires recognition of existing constraints along this Corridor including community and agency constraints, and also requires recognition of the need for cooperation and coordination among all of the interested agencies which have responsibilities to address public transportation needs in and along that Corridor.

7. All PARTIES will provide technical and policy input and technical support, review and comment on documents in a timely manner, and staff of each PARTY will actively work together with other PARTY for Corridor improvement.

8. Each PARTY agrees to encourage public awareness of and involvement in the PROJECT and decision processes concerning the Corridor in which the PARTIES, or any of them, are engaged.

9. Each PARTY agrees that the primary purpose, intent and spirit of this MOU are to continue and to expand cooperation and coordination among the PARTIES and to develop the framework for future Cooperative Agreements. To this end, the PARTIES agree to share the results of their work, including technical studies, and to confer at regular and frequent intervals.

10. Each PARTY intends to use the products of the technical studies as it determines is appropriate, consistent with its respective authority.

11. Each PARTY to this MOU is responsible for making its own determination as to the usefulness or as to the propriety of its use of or reliance upon the work product of any other PARTY to this MOU in a manner consistent with the law. It is not intended by this MOU that any PARTY to this MOU represents or warrants that its work product is sufficient for the purposes to which any other PARTY may wish to apply that work product. This MOU does not reduce, expand, transfer, or alter in any way, any of the statutory or regulatory authorities and responsibilities of any of the signatories.

12. It is noted that there may be differences in the nature of what CHSRA is studying and that which the other PARTY will be considering. This MOU does not constitute a decision by CHSRA or by its staff regarding the selection, timing, or phasing of one HST corridor or segment, or any part of such a segment, over another as part of the HST system defined in the certified Program EIR/EIS and approved by CHSRA. This MOU is not intended to constitute and does not constitute any limitation on the CHSRA's decision making authority or that of any PARTY.

13. Each PARTY shall identify and inform each other PARTY of the name of and contact information for a technical lead person to exchange information between the PARTIES concerning the PROJECT.

14. Each PARTY agrees to cooperate and coordinate with each other PARTY, its staff, contractors, consultants, and vendors, providing services required under this MOU to the extent practicable in the performance of the PROJECT and in conjunction with each PARTY's other respective responsibilities in the Corridor under this MOU.

15. Pursuant to Government Code Section 895.4, each party shall indemnify, defend and hold each of the other parties, and their respective officers, agents and employees harmless from and against any liability and expenses, including defense costs, any costs or liability on account of bodily injury, death or personal injury of any person or for damage to or loss of risk of property, any legal fees and any claims for damages of any nature whatsoever arising out of or in connection with any work performed by and or service provided by the indemnifying party or its officers, agents employees, contractors and subcontractors under this MOU.

16. The PARTIES agree to work diligently together and in good faith, using their best efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

17. This MOU may only be modified or amended in writing. All modifications, amendments, changes, and revisions of this MOU from time to time, in whole or in part, and from time to time, shall be binding upon the PARTIES, so long as the same shall be in writing and executed by each of the PARTIES.

18. This MOU shall be governed by and construed in accordance with applicable federal, state of California, and local laws. Each party shall comply with all applicable federal, state of California, and local laws, statutes and ordinances and all lawful applicable orders, rules and regulations in performing pursuant to this MOU.

19. This MOU constitutes the complete and exclusive statement of the term(s) and condition(s) of the MOU between the PARTIES and it supersedes all prior representations, understandings, and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of other term(s) or condition(s).

20. Each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any relevant incidence of fire, flood or other emergency; acts of God; commandeering of material, products, plants or facilities by federal, state or local government; or a material act or omission by any PARTY, when satisfactory evidence of such cause is presented to the other PARTIES, and provided further such nonperformance is unforeseeable, beyond the PARTY'S control and is not due to the fault or negligence of the PARTY not performing, and does not impair the PARTY's continued participation in the MOU. Additionally, each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by reason of the lack of an adopted State Budget or the lack of sufficient appropriation in the adopted State Budget for work under this MOU, or the lack of sufficient appropriation of funds for the continuation of this MOU from a PARTY's applicable funding agencies.

21. Any notice sent by first class mail, postage paid, to the addresses and addressees listed below shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the PARTIES who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are listed below:

California High-Speed Rail Authority

925 L Street, Suite 1425

Sacramento, CA 95814

Attention: Carrie Pourvahidi, Chief Deputy Director

(916) 324-1541, cpourvahidi@hsr.ca.gov

Los Angeles County Metropolitan Transportation Authority

One Gateway Plaza

Los Angeles, CA 90012-2952

Attention: Robin Blair, Director of Transportation Planning

(213) 922-3074, blairr@metro.net

If any of the names and/or information listed above should change, the PARTY making such changes shall notify each other PARTY in writing of the changes within five (5) days of effective date of such changes.

22. This MOU may be executed in counterparts. This MOU shall be effective upon the date of full execution of this MOU by all the PARTIES. This MOU shall continue in full force and effect through December 31, 2011, unless terminated earlier by mutual written consent of all the PARTIES. Any PARTY may withdraw from and terminate its participation in the MOU upon providing 30 days written notice to each other PARTY hereto, provided that the terminating PARTY shall bear the reasonable costs of terminating work it has requested under this MOU through the date of its withdrawal from the MOU. The term of this MOU may only be extended upon mutual written agreement by the PARTIES.

IN WITNESS WHEREOF, the PARTIES hereto have caused this Memorandum of Understanding to be executed as to the date opposite their signatures.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY:

APPROVED AS TO FORM

MEHDI MORSHED
Executive Director

General Counsel

Date

LOS ANGELES COUNTY METROPOLITAN
TRANSPORTATION AUTHORITY:

APPROVED AS TO FORM

ARTHUR T. LEAHY
Chief Executive Officer

Deputy

Date

AGREEMENT

THIS AGREEMENT is by and between the California High Speed Rail Authority (hereinafter referred to as "CHSRA") and the Peninsula Corridor Joint Powers Board (hereinafter referred to as "PCJPB").

RECITALS

WHEREAS, in January, 2004, the California High Speed Rail Authority and the Peninsula Corridor Joint Powers Board entered into a Memorandum of Understanding, the purpose of which was to establish a framework for future cooperation between the agencies relative to the proposed development of a high speed train system for California that would share the rail corridor between the City of San Jose and the City and County of San Francisco owned by PCJPB (the "Caltrain Rail Corridor") to the mutual benefit of the parties; and

WHEREAS, that agreement provided that any future implementation of the shared corridor concept would require the preparation of a comprehensive agreement setting forth the roles and responsibilities of each party and addressing design, construction and operation issues; and

WHEREAS, since the execution of the Memorandum of Understanding in 2004, several actions have been taken and developments have transpired that have served to confirm the wisdom and propriety of establishing a long-term partnership between CHSRA and PCJPB to coordinate and harmonize the planning, design and implementation of their respective inter-city high speed and commuter rail programs in a manner that provides for shared use of the Caltrain Rail Corridor. More specifically, among the key planning decisions and actions undertaken by each agency are the following:

A. CHSRA has designated as preferred and selected the San Jose to San Francisco corridor along the Caltrain Rail Corridor as part of the route for the California High Speed Train System ("HST System") based on its Final Program Environmental Impact Report for the Bay Area to the Central Valley portion of the system, certified in July 2008; CHSRA issued an updated California High Speed Rail Business Plan in November, 2008 indicating that the system would share the existing rail corridor with the Caltrain commuter rail system between San Francisco and San Jose; the CHSRA endorsed a phasing plan to implement sections of the HST system in and around the Los Angeles basin and in the San Francisco Bay Area in order to provide immediate benefit to local commuter rail service; and Proposition 1A, as passed by the voters of California in November 2008, authorizes bond financing for Phase One of the HST System from San Francisco to Los Angeles/Anaheim.

B. PCJPB has planned for and implemented various improvements which are consistent with accommodation of high speed rail in the Caltrain Rail Corridor, including implementation of its Baby Bullet program, environmental study and preliminary design of electrification program, formulation of Project 2015, pursuit of Federal Railroad Administration approval of mixed rail operations that will fully integrate Caltrain and high speed rail systems; and

WHEREAS, recent events have created an opportunity to establish a new and unprecedented level of cooperation and partnership between the PCJPB and the CHSRA predicated on the assumption of shared use of the existing Caltrain Rail Corridor for both Caltrain commuter rail rapid transit services and inter-city high speed train service; and

WHEREAS, the PCJPB's readiness to proceed to electrify the Caltrain Rail Corridor and to implement various other state-of-the-art improvements, including signal and control system improvements (CBOSS) and the acquisition of new state-of-the-art electric motorized unit rolling stock, creates an immediate opportunity for phased implementation of the high speed rail system utilizing the Caltrain Rail Corridor in keeping with CHSRA's decisions and adopted business plan; and

WHEREAS, the benefits associated with the partnership and the sharing of personnel resources as described herein include, but are not limited to, the promotion of efficiency and economy in the formulation and implementation of actions to achieve integrated high speed inter-city train service and Caltrain commuter rail rapid transit service, including enhanced signaling and train control equipment; the promotion of efficiency and economy in working with federal agencies to achieve such integrated rail service in the Caltrain Rail Corridor; and the promotion of early action steps for the HST system to the benefit of the Caltrain Corridor;

WHEREAS, based upon the foregoing, the parties desire to coordinate and to the extent appropriate to consolidate their separate organizations, to share resources and information, and otherwise to concentrate and to direct their joint efforts to effectuate as a joint project fully compatible inter-city high speed rail and commuter rail rapid transit systems utilizing the Caltrain Rail Corridor and to memorialize their joint objectives and understandings in a new Agreement.

NOW, THEREFORE, in consideration of the foregoing, the parties hereby agree as follows:

I. PURPOSE OF AGREEMENT

The purpose of this agreement is to establish an initial organizational framework whereby CHSRA and PCJPB engage as partners in the planning, design and construction of improvements in the Caltrain Rail Corridor that will accommodate and serve both the near-term and long-term needs of CHSRA inter-city high speed rail service and PCJPB commuter rail rapid transit service. As the parties embark upon this partnership and begin working together more closely, it is expected that their experience will illustrate ways in which this agreement should be amended or replaced in order better to address specific roles and responsibilities of the parties and other terms and conditions necessary to assure successful achievement of the goals of each party, that have motivated the parties to enter into this initial agreement.

II. ORGANIZATIONAL STRUCTURE AND GOVERNANCE

To enable CHSRA and PCJPB programs to be planned, designed and implemented to the extent possible as a joint project, it is the objective of the parties effectively to share, to coordinate, and/or jointly to direct their resources toward the implementation of a single joint program/project, including various personnel resources.

At the outset, the Executive Director of CHSRA and the Executive Director of the PCJPB (hereafter "Executive Officers") shall jointly designate an individual to serve as the Program Director. The Program Director shall report to each of the Executive Officers. Independent consultants engaged by CHSRA and PCJPB and the respective staffs of each of the parties, as designated by that party's Executive Officer, will report to the Program Director. The Executive Officers will also determine the manner in which the CHSRA's Program Manager will coordinate and oversee the work of the consultants.

The Executive Officers shall create one or more working groups to initiate work under this agreement on the tasks listed below in Section IV and elsewhere in this Agreement.

III. **PARTNERSHIP PRINCIPLES**

A. To enable CHSRA and PCJPB programs to be planned, designed and implemented to the extent possible as a joint project, it is the objective of the parties to incorporate high speed rail in the Caltrain Rail Corridor on a phased basis.

B. It is recognized that construction of the high speed rail system will have to take place while PCJPB rail service remains in regular operation. The customers of the PCJPB must continue to be served throughout the high speed rail construction program. In furtherance of this principle, the parties acknowledge that some alterations or improvements in the Caltrain corridor will be required before construction of many of the high speed rail components can occur.

C. High speed rail must be designed, constructed and operated in a manner fully consistent with the operational requirements of the Caltrain commuter rail rapid transit service and with consideration of the cities on the Peninsula through which the high speed rail system will be constructed and operated.

D. Ultimate configuration of the Caltrain corridor will consist of a multiple track, grade separated high speed rail system, with mixed traffic from Caltrain commuter rail and the high speed train service capable of operation on all tracks to enable Caltrain to achieve service levels of no less than eight trains per hour in each direction. Track configuration analyses will consider both horizontal and vertical alignments in the Caltrain corridor.

E. The parties recognize the investments already made by PCJPB, including the intrinsic value of the rail corridor owned by PCJPB and expenditures made by PCJPB in pursuit of signal and control center, electrification and related projects. The parties further recognize that the existing right of way and existing improvements are solely owned by PCJPB.

IV. **ACTIONS**

It is the intention of the parties to incorporate high speed rail in the Caltrain Rail Corridor on a phased basis. At the outset, various PCJPB projects, sized and designed to facilitate eventual construction of high speed rail, will be undertaken. Accordingly, both initial and longer term action plans will be developed by one or more working groups established by the Executive Officers to implement the objectives of the parties. Study of both the initial actions and tasks and of the longer term actions and tasks will begin as soon as possible.

A. Initial Actions and Tasks

- Formulation of a detailed organizational structure for the joint program, including the designation or alteration of position titles, reporting relationships, and the manner in which decisions shall be made.
- Formulation of a plan for community outreach to the affected community, counties and governmental and regulatory agencies, and other operating entities in the corridor;

- Development of a systems engineering integration plan for the joint program;
- Determination of fundamental conceptual design of track alignments, elevations, station platform configuration and associated issues;
- Aggressively planning the implementation, in a manner consistent with the eventual shared use of the corridor, of various PCJPB projects currently under design or otherwise nearly ready for implementation, including but not limited to a new signal and control system, electrification of the Caltrain Rail Corridor, grade separations, and rolling stock acquisition, necessary to maximize system resilience during future high speed rail construction in the Caltrain corridor; including determinations as to the extent to which these projects will be pursued jointly or will be pursued separately by PCJPB. This planning will include determining which party is the appropriate lead agency for purposes of environmental review.
- Development of financial systems and a detailed financial plan for pursuit of the projects in the initial action plan.

B. Longer Term Actions and Tasks

- Development of a phased implementation plan which supports both Caltrain operations and HST operations;
- Determination of the proper means of pursuing environmental clearance for the various projects in the corridor based, to the extent feasible, on a comprehensive service assessment and conforming design requirements;
- Completion of designs based on the combined technical requirements for interoperability with all users and mixed traffic assurance other than freight;
- Determination of construction sequencing that equally represents the most efficient and cost effective execution of the work while making every effort to preserve and improve current levels of service.
- Development of financial systems, budget processes, and a detailed financial plan for pursuit of the projects in the longer term action plan.
- Assessment of liability risks and means to address those risks.

V. OWNERSHIP OF ASSETS

The Executive Officers shall establish a working group to examine issues surrounding potential rights and interests of the parties, including ownership interests, in the facilities in the corridor after the overall project is completed.

VI. DUMBARTON SERVICE

The parties also agree to the establishment by the Executive Officers of a working or technical group to share information concerning the possibility of Caltrain service over the Dumbarton Bridge and possible interconnections between such service and high-speed rail service on the east side of the San Francisco Bay.

VII. THIS AGREEMENT IS SUBJECT TO REVISION AS CONDITIONS WARRANT

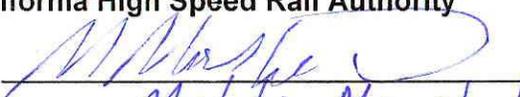
The parties agree that the structure of the relationship between the PCJPB and the CHSRA as described in this agreement is not intended to remain static, but that it will evolve as time goes on and as the parties confront various challenges. Consequently, it is understood that all or portions of this memorandum will be modified to accommodate the needs of the parties as planning work progresses, either through direct amendment of this memorandum or through supplemental memoranda, as suits the convenience of the parties.

VIII. EFFECTIVE DATE AND TERMINATION

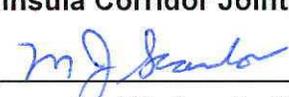
This agreement is effective upon execution by both parties' Executive Officers and shall continue in effect until and unless terminated by both parties through mutual agreement or upon 30 days' written notice delivered by the party seeking to terminate the agreement to the other party.

IN WITNESS WHEREOF, CHSRA and PCJPB have executed this Agreement.

California High Speed Rail Authority

BY: 
Name: Mehdi Morshed
Title: Executive Director
Date: 4/17/09
Resolution No.: HSRA 09-004

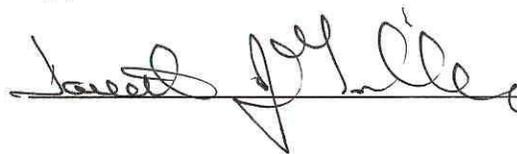
Peninsula Corridor Joint Powers Board

BY: 
Name: Michael J. Scanlon
Title: Executive Director
Date: April 2, 2009
Resolution No.: 2009-14

Approved as to form:



Approved as to form:



MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
CALIFORNIA HIGH-SPEED RAIL AUTHORITY
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
SAN DIEGO ASSOCIATION OF GOVERNMENTS
SAN BERNARDINO ASSOCIATED GOVERNMENTS
RIVERSIDE COUNTY TRANSPORTATION COMMISSION &
SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

FOR PREPARATION OF STUDIES FOR
THE LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE PROPOSED HIGH-SPEED
PASSENGER RAIL CORRIDOR AND THE REGIONAL AIR-RAIL NETWORK

The Memorandum of Understanding (MOU) is entered into by and between the California High-Speed Rail Authority (CHSRA), Southern California Association Of Governments (SCAG), San Diego Association Of Governments (SANDAG), San Bernardino Associated Governments (SANBAG), Riverside County Transportation Commission (RCTC), and San Diego Regional Airport Authority (SDCRAA), (referred to herein individually as a PARTY and collectively as the "PARTIES" to this MOU), regarding the preparation of technical studies for the Los Angeles to San Diego via Inland Empire High-Speed Passenger Rail Corridor and a Regional Air-Rail Network Study (collectively hereinafter referred to as "PROJECTS," and individually as "PROJECT") with regard to the following matters:

RECITALS:

WHEREAS, CHSRA in partnership with the Federal Railroad Administration (FRA) has completed and certified a Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for a proposed California High-Speed Train (HST) network linking the major metropolitan areas of the State of California and the HST system approved by CHSRA includes the Los Angeles to San Diego via Inland Empire corridor (referred to herein as the "Corridor"); and

WHEREAS, the authority and responsibility for the planning, construction, and operation of high-speed passenger train service at speeds exceeding 125 miles per hour in California is exclusively granted to CHSRA by Public Utilities Code Section 185032.a.2; and

WHEREAS, CHSRA has the authority to accept grants, fees, and allocations from the state, from political subdivisions of the state and from the federal government, foreign governments, and private sources (Public Utilities Code section 185034(4)); and

WHEREAS, SANDAG adopted the 2007 Regional Transportation Plan (RTP) to identify the facilities, services and programs necessary to meet the San Diego County region's travel needs through

the year 2030, and that document recognizes the need for high-speed ground transportation to serve these needs; and

WHEREAS, SCAG adopted the 2008 RTP to identify the facilities, services and programs necessary to meet the SCAG's region's travel needs through the year 2035, and that document recognizes the need for high-speed ground transportation to serve these needs; and

WHEREAS, SANDAG is considering pursuing a high-speed passenger train service between San Diego and facilities with forecast aviation capacity in neighboring regions including the international border. These services are not included as part of CHSRA's preferred alignment but would be part of a Regional Air-Rail Network Study. Such a potential service could complement the statewide HST system and help to integrate it with other transit services, such as by providing a "feeder" service with potential multi-modal connections in the Corridor to the statewide system. CHSRA involvement in assessing the feasibility of these services will foster and facilitate coordination in design and planning, and review of potential environmental impacts for these different rail services; and

WHEREAS, SANDAG, SCAG, RCTC, and SANBAG are involved in the planning for, or operation of and/or considering pursuing commuter train services as well as HST service; and

WHEREAS, SANDAG and the SDCRAA are required by state law (SB10 (2007)) to develop an Airport Multimodal Accessibility Plan and Regional Aviation Strategic Plan by 2013 and 2011 respectively and the Regional Air-Rail Network Study will be Phase 1 of the Airport Multimodal Accessibility Plan; and

WHEREAS, it is the intent and purpose of this MOU to demonstrate the continuing desire of the PARTIES to cooperate, to coordinate, and to share the results of their studies and to share their respective views on the subject of proposed improvements and enhancements to the Los Angeles to San Diego via Inland Empire HST Corridor in a manner which best enhances state and regional transportation networks, and in a manner which reduces or eliminates unnecessary duplicative efforts.

NOW, THEREFORE, it is mutually understood and agreed to by the PARTIES as follows:

1. The PARTIES intend to work together for Corridor improvement and to build upon the initial phases of work to complete planning and technical studies, and environmental review, for HST service in the Corridor.

2. The PARTIES agree to form a project working group administered by the CHSRA to complete the necessary work related to the PROJECTS, including providing technical and policy input, reviewing deliverables and providing comments and approvals and providing technical support in a timely manner. The PARTIES agree that staff for each PARTY will cooperate fully in the exchange of information and will work together, under the oversight of CHSRA.

3. Unless otherwise agreed in writing as an amendment to this MOU, and authorized by competent authority, each PARTY shall bear any costs it incurs in relation to this MOU without expectation of reimbursement or subsidization by any other PARTY, subject to the following understanding:

(1) The CHSRA will be the lead agency and bear the cost of the preparation and adoption of the Los Angeles to San Diego via Inland Empire Region HST System Environmental/Engineering Work (including the cost of the public involvement program and project EIR/EIS documents and

related technical studies for the Corridor defined in the CHSRA's certified Final Program EIR/EIS for the Proposed HST System).

(2) SANDAG will be the lead agency for the Regional Air-Rail Network Study, the costs of which are set forth in Section VI of a previous and separate Memorandum of Agreement (MOA) between SANDAG and the SDCRAA dated June 2008. SDCRAA operated under revenue diversion parameters as set forth in Section VI (E) of this previous and separate MOA dated June 2008 for plans and studies that provide for a dedicated connection to airports under the control of the SDCRAA or whose proposed facilities are located on property controlled by the SDCRAA. SDCRAA will only participate in planning or funding the studies with a physical connection to airport facilities or a clear nexus to regional airport planning and directly and substantially related to air transportation of passengers or property.

(3) The SDCRAA and SCAG will develop the regional aviation demand forecast, regional aviation capacity analysis, and regional aviation facilities requirements tasks as such are related to the Regional Air-Rail Network Study and will bear the proportional costs of these tasks.

(4) All PARTIES will have the option of requesting additional tasks related to the PROJECT and each PARTY agrees to bear the costs of the additional work it has requested.

(5) If additional tasks are requested by more than one PARTY, those PARTIES agree to pay an equal share of the costs of such additional work, unless they agree to a different allocation of costs among or between them for such work.

4. CHSRA will take into account and coordinate with, to the extent it is appropriate to do so, the other technical studies and proposed improvements which have been prepared, and will be prepared, by other PARTIES or other agencies with reference to the Los Angeles to San Diego via Inland Empire Corridor. CHSRA will be responsible for obtaining the necessary documents to do such tasks. Each other PARTY hereto shall inform CHSRA of such studies and proposed improvements of which it has knowledge during the term of this MOU.

5. The PARTIES recognize that realistic planning for the future of the Corridor requires recognition of existing constraints along this Corridor and also requires recognition of the need for cooperation and coordination among all of the interested agencies which have responsibilities to address public transportation needs in and along that Corridor.

6. All PARTIES will participate and support CHSRA, as appropriate, in seeking federal and state funding for HST studies and environmental and engineering work within the Corridor. All PARTIES will provide technical and policy input and technical support, review and comment on documents in a timely manner, and staff of each PARTY will actively work together with other PARTIES for Corridor improvement.

7. Each PARTY agrees to encourage public awareness of and involvement in the PROJECTS and decision processes concerning the Corridor in which the PARTIES, or any of them, are engaged.

8. Each PARTY agrees that the primary purpose, intent and spirit of this MOU are to continue and to expand cooperation and coordination among the PARTIES and to develop the framework for future Cooperative Agreements. To this end, the PARTIES agree to share the results of their work, including technical studies, and to confer at regular and frequent intervals.

9. Each PARTY intends to use the products of the technical studies as it determines is appropriate, consistent with its respective authority and to the maximum extent possible.

10. Each PARTY to this MOU is responsible for making its own determination as to the usefulness or as to the propriety of its use of or reliance upon the work product of any other PARTY to this MOU. It is not intended by this MOU that any PARTY to this MOU represents or warrants that its work product is sufficient for the purposes to which any other PARTY may wish to apply that work product. This MOU does not reduce, expand, transfer, or alter in any way, any of the statutory or regulatory authorities and responsibilities of any of the signatories.

11. It is noted that there may be differences in the nature of what CHSRA is studying and that which other PARTIES will be considering. This MOU does not constitute a decision by CHSRA or by its staff regarding the selection, timing, or phasing of one HST corridor or segment, or any part of such a segment, over another as part of the HST system defined in the certified Program EIR/EIS and approved by CHSRA. This MOU is not intended to constitute and does not constitute any limitation on the CHSRA's decision making or that of any PARTY.

12. Each PARTY shall identify and inform each other PARTY of the name of and contact information for a technical lead person to exchange information between the PARTIES concerning the PROJECTS.

13. Each PARTY agrees to cooperate and coordinate with each other PARTY, its staff, contractors, consultants, and vendors, providing services required under this MOU to the extent practicable in the performance of the PROJECTS and in conjunction with each PARTY's other respective responsibilities in the Corridor under this MOU.

14. The PARTIES agree to work diligently together and in good faith, using their best efforts to resolve any unforeseen issues and disputes arising out of the performance of this MOU.

15. This MOU may only be modified or amended in writing. All modifications, amendments, changes, and revisions of this MOU from time to time, in whole or in part, and from time to time, shall be binding upon the PARTIES, so long as the same shall be in writing and executed by each of the PARTIES.

16. This MOU shall be governed by and construed in accordance with applicable federal, state of California, and local laws. The PARTIES warrant that in the performance of this MOU, each shall comply with all applicable federal, state of California, and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated thereunder.

17. This MOU, including all exhibits and documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the term(s) and condition(s) of the MOU between the PARTIES and it supersedes all prior representations, understandings, and communications. The invalidity in whole or part of any term or condition of this MOU shall not affect the validity of other term(s) or condition(s).

18. Each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any relevant incidence of fire, flood or other emergency; acts of God; commandeering of material, products, plants or facilities by federal, state or local government; or a material act or omission by any PARTY, when satisfactory evidence of such cause is presented to the other PARTIES, and provided further such nonperformance is unforeseeable, beyond the PARTY'S control and is not due to the fault or negligence of the PARTY not performing, and does not impair the PARTY's continued participation in the MOU. Additionally, each PARTY shall be excused from performing its obligations under this MOU during the time and to the extent that it is prevented from performing by reason of the lack of an adopted State Budget or the lack of sufficient appropriation in the adopted State Budget for work under this MOU, or the lack of sufficient appropriation of funds for the continuation of this MOU from a PARTY's applicable funding agencies.

19. Any notice sent by first class mail, postage paid, to the addresses and addressees listed below shall be deemed to have been given when in the ordinary course it would be delivered. The representatives of the PARTIES who are primarily responsible for the administration of this MOU, and to whom notices, demands and communications shall be given are listed below:

California High-Speed Rail Authority

925 L Street, Suite 1425
Sacramento, CA 95814
Attention: Dan Leavitt, Deputy Director
(916) 324-1541, dleavitt@hsr.ca.gov

San Bernardino Associated Governments

1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1715
Attention: Michael Bair, Director of Transit/Rail Programs
(909) 884-8276, mbair@sanbag.ca.gov

Southern California Association of Governments

818 W. Seventh Street, 12th Floor
Los Angeles, CA 90017
Attention: Naresh Amatya, Transportation Planning Manager
(213) 236-1800, amatya@scag.ca.gov

San Diego Association of Governments

401 B Street, Suite 800
San Diego, CA 92101
Attention: Linda Culp, Senior Transportation Planner
(619) 699-6957, lcu@sandag.org

Riverside County Transportation Commission

4080 Lemon Street, 3rd Floor
Riverside, CA 92501
Attention: Sheldon Peterson, Rail Manager
(951) 787-7928, speterson@rctc.org

San Diego County Regional Airport Authority

P.O. Box 82776

San Diego, CA 92138-2776

Attention: Ted Anasis, Manager, Airport Planning

(619) 400-2400, tanasis@san.org

If any of the names and/or information listed above should change, the PARTY making such changes shall notify each other PARTY in writing of the changes within five (5) days of effective date of such changes.

20. This MOU may be executed in counterparts. This MOU shall be effective upon the date of full execution of this MOU by all the PARTIES. This MOU shall continue in full force and effect through December 31, 2011, unless terminated earlier by mutual written consent of all the PARTIES. Any PARTY may withdraw from and terminate its participation in the MOU upon providing 30 days written notice to each other PARTY hereto, provided that the terminating PARTY shall bear the reasonable costs of terminating work it has requested under this MOU through the date of its withdrawal from the MOU. The term of this MOU may only be extended upon mutual written agreement by the PARTIES.

IN WITNESS WHEREOF, the PARTIES hereto have caused this Memorandum of Understanding to be executed as to the date opposite their signatures.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY:

MEHDI MORSHED
Executive Director

Date

SAN BERNARDINO ASSOCIATED
GOVERNMENTS:

APPROVED AS TO FORM

GARY OVITT
Board President

JEAN-RENE BASEL
SANBAG Counsel

Date

SOUTHERN CALIFORNIA ASSOCIATION OF
GOVERNMENTS:

APPROVED AS TO FORM

HASSAN IKHRATA
Executive Director

JOANNA AFRICA
Acting Chief Counsel

Date

SAN DIEGO ASSOCIATION OF GOVERNMENTS:

APPROVED AS TO FORM

GARY L. GALLEGOS
Executive Director

JULIE D. WILEY
General Counsel

Date

RIVERSIDE COUNTY TRANSPORTATION
COMMISSION:

Date

APPROVED AS TO FORM

General Counsel

SAN DIEGO COUNTY REGIONAL AIRPORT
AUTHORITY:

APPROVED AS TO FORM

THELLA BOWEN
President/CEO

BRETON K. LOBNER
General Counsel

Date

Upload #12

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: Transmittal Letter.pdf



**CALIFORNIA
HIGH-SPEED RAIL
AUTHORITY**

August 5, 2010

U.S. Department of Transportation
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

**Attention: Marianne McNamara, RDP-10 Room 38-302
HSIPR Program Information**

**RE: California High-Speed Rail Authority FY10 Service Development Program
Grant Application Supporting Documentation submitted via FedEx**

Dear Ms. McNamara:

The following documentation is transmitted herewith in two boxes via FedEx overnight delivery in support of the California High-Speed Rail Authority's four FY10 Service Development Program Grant Applications that are being submitted on August 6, 2010.

1. The following documents apply to all four grant applications:

Type	Title	Description	Date	# of Copies
CD	Technical Memoranda and Directive Drawings Released as of 8/3/10	1 CD with full copies of Tech Memos and Directive Drawings released 3 August 2010 (one CD submitted for all 4 applications)	August 3, 2010	1
CD	System Requirements Database Reports as of 8/3/2010	1 CD with System Requirements Database Reports released 3 August 2010 (one CD submitted for all 4 applications)	August 3, 2010	1

California High-Speed Rail Authority FY10 Service Development Program Applications

2. The following documents support grant request: CA-SF/SANJOSEHSR-FY10-SDPIMPROVEMENTS

Type	Title	Description	Date	# of Copies
CD	CA HST San Francisco-San Jose ARRA Exhibits	Contains plan set listed below	August 3, 2010	1
Plan Set	CA HST San Francisco-San Jose Design Option A	ARRA Exhibit Plan Sets	August 3, 2010	2

3. The following documents support grant request: CA-MERCED/FRESNOHSR-FY10-SDPIMPROVEMENTS

Type	Title	Description	Date	# of Copies
CD	CA HST In Progress 15% Design Submittal Merced to Fresno: Track Alignment Plans UPRR/SR99 – BNSF West Chowchilla Design Option	Contains plan set listed below	August 2010	1
Plan Set	CA HST In Progress 15% Design Submittal Merced to Fresno: Track Alignment Plans UPRR/SR99 – BNSF West Chowchilla Design Option	Plan and Profile; Typical Sections	August 2010	2

4. The following documents support grant request: CA-FRESNO/BAKERSFIELDHSR-FY10-SDPIMPROVEMENTS

Type	Title	Description	Date	# of Copies
CD	CA HST Fresno-Bakersfield Section Alignment, Structure, and Station Plans: In Progress 15% Design Submittal	Contains 3 plan sets listed below	August 2010	1
Plan Set	CA HST Fresno-Bakersfield Section Alignment Plans: In Progress 15% Design Submittal	Alignments – in progress 15% design	May 12, 2010	2
Plan Set	CA HST Fresno-Bakersfield Section Structural Plans: In Progress 15% Design Submittal	Structures – in progress 15% design	June 2010	2 (2 volumes each)
Plan Set	CA HST Fresno-Bakersfield Section Station Plans: In Progress 15% Design Submittal	Stations – in progress 15 % design	July 2010	2

California High-Speed Rail Authority FY10 Service Development Program Applications

5. The following documents support grant request: CA-LA/ANAHEIMHSR-FY10-SDPIMPROVEMENTS

Type	Title	Description	Date	# of Copies
CD	CA HST LA-Anaheim Section 5% Shared Track and 15% Dedicated Track: Alignment, Structures, Grade Separations	Contains 2 plan sets listed below	July 2010	1
Plan Set	CA HST LA-Anaheim Section Consolidated Shared Track Alternative: 5% Design Final Submittal	Shared Track Alternative Package	June 30, 2010	2
Plan Set	CA HST LA-Anaheim Section: 15% Design Submittal; Track Alignment, Structures and Grade Separations	Dedicated Track Alternative Package	December 31, 2009	2

If there are any questions about the accompanying documents, please contact:

John Harrison
Deputy Program Director
California High-Speed Train Project
925 L Street, Suite 1425
Sacramento, CA 95814
(916) 384-1469

Upload #13

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: Risk Management Plan

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

**RISK IDENTIFICATION AND MITIGATION FACTORS
(CAPITAL FINANCIAL PLANNING REQUIREMENTS APPENDIX 3.1.1 AND OPERATING FINANCIAL
PLANNING REQUIREMENTS APPENDIX 3.1.2)**

OVERVIEW

There are a number of capital and operating financial planning risks that the California High-Speed Train Project (Phase I from Anaheim to San Francisco) (CHSTP) may likely face. These include risks related to:

- Capital costs
- Project Delivery
- Ridership and revenues
- Operating costs.

This section describes the measures the Authority has in place or expects to implement to mitigate these risks.

CAPITAL COST RISKS**Risks**

One of the major risks of any major capital program is the risk of cost overruns due to unforeseen factors, mismanagement of the capital program or the addition of new project scope without an increase in funding sources. Especially in a project as large as the CHSTP, these risks could be a significant challenge since the Authority does not have cash flows from on-going operations from which it can cover such unplanned costs.

Risk Mitigation Measures

The Authority's capital cost estimates take the standard construction cost practice to guard against overruns of adding contingencies to cover unknown risks. The capital cost estimates of all segments included in this application and all other segments of the CHSTP include contingencies of approximately \$8.3 billion or 27% of the pre-contingency construction-related cost.

Specifically, contingencies on construction-related items ranged from 20% to 30% depending on the estimated uncertainties in each category. For example structures, whose extent and designs are more liable to change as the design progresses, were assigned 30% contingency. Items such as track, electrification, and systems, which are relatively standardized, and whose length has little potential for variation, were assigned 20% contingency. Only trainsets, whose cost was based on recent procurements, were not assigned a contingency because it is usual bid practice to include contingencies in the price.

Furthermore, the Authority's program management team (PMT) has implemented a formal risk management program (RMP) as a systematic process for identifying, assessing, evaluating, managing, and documenting risks that could jeopardize the success of the CHSTP. The RMP'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.

PROJECT DELIVERY

Risks

In addition to the above risk of cost overruns, cost delays and poor project delivery can be major risks for large projects and are another cause significant project overruns. These risks include:

- Performance, managerial or completion failure – such as failure of the supporting infrastructure due to others; design failure or complexity of the project; inadequate project management; inadequate planning and unrealistic completion schedule; scope changes
- Market Risks – availability of materials; material escalation; demand on critical elements
- Regulatory and legal – delays due to environmental issues or site selection; difficulties arising from outsider suits; contractual issues due to misinterpretation
- Natural hazards – storms; floods; earthquakes; unforeseen conditions
- Other – vandalism; sabotage; failure to provide financial support through the end of the project; lack of final project acceptance by the Authority.

Risk Mitigation Measures

To reduce and limit the Authority's exposure to these risks, the Authority will take the necessary steps to share and/or transfer this risk with private partners through innovative procurement and contracting methods. These contracting methods should ensure on-time delivery at a high level of performance by linking a large amount of their compensation to meeting project completion and performance standards, to cost overruns and delays in completion subject to significant penalties.

With different project delivery options at its disposal, the Authority will develop and employ the optimal strategies to evaluate and select the appropriate procurement methodology and approach. While many of the traditional evaluation criteria for procurement of engineering services still apply, the ability to evaluate contractors on more than a "reasonable and responsive bid" will introduce myriad new challenges to the procurement process. To facilitate a smooth procurement process, and ultimately successful delivery, it is important to maintain two closely linked processes moving forward: the ideal project delivery method and procurement strategy should result in a **high quality facility** at the earliest possible time for the **lowest overall lifecycle** cost (construction and operations and maintenance). The Authority is considering a variety of procurement methods to achieve these goals, including some of the more innovative ones that include:

- Design-Build – the contractor performing the design has a better feel for the construction cost of various alternatives, i.e., value engineering occurs throughout the proposal process
- Progressive Design-Build — the design and construction of the project are procured from a single entity primarily based on qualifications. The selected design builder completes the design to between 30 to 60 percent and then submits a lump sum or guaranteed maximum price for the project to the Authority for approval
- Performance-Based Delivery – Defining the purpose of the work to be performed, as opposed to either the manner in which the contractor must perform the work or the means and methods that must be used by the contractor, holding the Authority accountable for establishing clear performance expectations and the contractor accountable for achieving those expectations.

The appropriate design and construction procurement strategy selection depends on the type of project, its particular emphasis on scope, quality, time and cost, and the degree of uncertainty associated with each. Therefore, the selection of the right project delivery method will depend on:

- The identification of specific risks
- Determination of how they should be shared between parties, and
- The insertion of clear language in the contract documents to put it into effect.

RIDERSHIP AND REVENUE RISKS**Risks**

Changes in ridership and revenue cost may affect the CHSTP's projected cash flow and thus the planned financing. This may include slower or less favorable patterns of growth, more attractive conditions for air and auto travel than anticipated, less traveler willingness than expected to pay the assumed fares, and less attractive HST service.

Risk Mitigation Measures

Ridership and revenue risk mitigation consists of two major components:

- the reasonableness of the ridership and revenue forecasts, and
- other measures that the Authority may take in respond to weaker than expected forecasts.

Ridership and Revenue Forecast Reasonableness

Ridership and revenue forecasts have been prepared using a state-of-the-practice transportation demand model that was developed in a joint effort of the Authority and the Metropolitan Transportation Commission (MTC). Model development occurred in a peer-reviewed process that followed industry standards. The resulting forecasts are based on consensus assumptions by outside experts about future economic conditions, population, employment, land use patterns, and highway and transit investments. The forecasts also rely on observed routes, schedules and fares for in-state air travel. Travel demand was first predicted without a high-speed train, and then with a high-speed train under various initial assumptions of alignments, station locations, fares, and operating plans. This model has been used consistently to prepare ridership and revenue forecasts since early 2007.

The model and results have been repeatedly scrutinized and shown to consistently produce reasonable results that have appropriate sensitivity to changes in input variables. During the alternatives analysis conducted for the Bay Area to Central Valley Program EIR/EIS, ridership forecasts for the full statewide system were shown to range between 80 million and 96 million (depending upon the alternative) under base assumptions.¹ Continued forecasting work since that time has produced consistent results when the same assumptions are used. When assumptions are changed, such as increasing the HST fare to 83% of the comparable economy class airfare in preparation of the 2009 Business Plan, ridership and revenue forecast results changed in a reasonable manner.

Importantly, results have shown that HST revenue tends to vary within a relatively small range under the assumptions that have been analyzed to date. In some cases, higher HST fares have

¹ Forecasts up to 117 million annual riders were obtained under assumptions of higher airfares and auto operating costs.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
RISK IDENTIFICATION AND MITIGATION FACTORS

been shown to generate larger system wide revenue even while ridership decreases. This result, which indicates the potential for pricing power in HST's key markets, was exhibited in results presented in the 2009 Business Plan as well in various sensitivity tests conducted in past years.

The ridership and revenue forecasts reflect in-state travel by California residents for typical work and non-work reasons. As such, the forecasts reflect the vast majority of travel that occurs in California. Nonetheless, there may be additional niche traveler markets for which HST might compete strongly. Some examples of these markets include:

- Business and recreational travel by non-residents of California
- Travel to special tourist destinations or to major sporting events and festivals, and
- Patronage of HST in lieu of short-haul flights for connections to transcontinental and international flights.

Accordingly, the forecasts developed to-date by the Authority may not be fully reflective of HST's ultimate upside ridership and revenue potential.

The following list recaps the assumptions for several key variables used in the Authority's latest forecasts, which were included in the 2009 Business Plan:

- **Population growth** - forecasts from federal, State, regional and private economists. Statewide population in 2030 at 48 million, up 30% from 2009, or average growth of 1.1% per year. Growth of last 10 years 1.4% per year.
- **Fare levels at 83% of air** - in the middle of a range for similar-length markets outside of California including NY – DC (60-100% of air, depending on day of week), London – Paris (80% of air), Madrid – Seville (70% of air), Tokyo-Osaka (108%).
- **Future auto cost & congestion** – all-in driving costs at 27 cents per mile per person in 2009\$, tolls at 2005 levels and no new high-occupancy-toll or other toll lanes. Construction of new high-occupancy vehicle (HOV) and mixed flow lane miles in accordance with adopted 2030 long-range plans, offset by growth in traffic. Broadly, congestion remains at today's levels.
- **Future air service and fares** – air fares assumed to remain at 2008 real levels, parking costs at 2005 real levels. Air service continues at 2005 frequencies.
- **Ridership and revenue during initial years of operation** – the first full year of HST service In 2020 is assumed to generate only 33% of the year 2035 riders and revenue, due to the

newness of service and difference in economic and demographic projections between 2020 and 2035; 2021 is assumed to grow to 50%, 2022 to 68%, 2023 to 86%. From there to 2030 HST growth is 1.5% per year, slowing to 0.75% per year from 2030 to 2035.

California HST is projected to generate substantial ridership and, especially, revenue in some key intercity markets. For example, HST is forecast to carry a third (33%) of intercity travel on the approximately 400-mile LA Basin and Bay Area route in 2035 in the 83% of airfare scenario, or 8 million trips,² sharing the market with auto and air roughly in equal shares. This is similar to the shorter, 226 mile, NY – DC market where Amtrak (Acela and conventional trains) carries roughly the same share as air, albeit with much slower average speeds (80 mph Acela vs. over 150 mph CA HST).

In like-distance European and Asian markets, HST attracts generally larger shares than is projected for LA Basin – Bay Area, because of higher urban densities and government policies favoring rail (driving distances except as noted)³:

- Spain's AVE has 53% of total air/rail/road traffic on the Madrid-Seville route (335 miles)
- The Thalys between Paris and Brussels (183 miles) holds 52% of the total market; after the high-speed rail line went into service, airlines discontinued locally oriented-flights, with the road the only remaining competition
- The Japanese Shinkansen, even though more expensive than air, carries seven times the passengers as air, (86%) of the air and rail market, Osaka – Tokyo (322 miles)
- Eurostar has more than 70% of London - Paris air and rail market (244 miles), 64% on London-Brussels (204 miles)
- Madrid – Barcelona now carries more than 45% of the travel market, more than air (around 400 miles)⁴
- Taipei – Kaohsiung (225 miles) now has air service only on Friday & Sunday, peak travel days, whereas peak period hourly shuttle service was the norm every day prior to HST (Aircraft shifted to longer cross-straits service to mainland China).

Other Mitigation Measures

² Currently in 2009/2010 trips in this market are estimated at 16 million, 9 million by air, 7 million by auto, growing to 22 million in 2035.

³ Brand, N., "HSR diversion of traffic from air", working paper, July 5, 2009

⁴ "High Speed Rail Gains Traction in Spain", Elizabeth Rosenthal, NY Times, March 16, 2010,

The projected cash flows for the CHSTP include several contingencies helping to broadly mitigate downside revenue and ridership risks:

- Gross ridership revenue could be 14% lower than currently projected and still be sufficient to attract the private sector funding anticipated in the plan.
- The revenue could be 50% of the projection and not create a need for operating subsidy. If shorter distance trips were the major source of the reduction, an even greater ridership drop would still not require operating subsidy.
- The ridership and revenue forecasts do not include the full potential of several niche travel markets, the positive effects of yield management, nor ancillary revenues from sources such as on-board advertising, naming rights, or small package carriage. These could add 10% in revenue.
- The Authority can also establish policies and practices, such as its policy on procuring electricity from renewable energy sources that could partially mitigate ridership and revenue risks from large energy cost increases; in so doing, the Authority may be able to create a competitive advantage over air and auto travel options.
- In the Authority's current forecast, this risk is further mitigated partially by the current forecast approach of testing a single fare for each trip. In the real world, yield management techniques have evolved in the last 30 years that vary the price charged by the class of service, time of day, express vs. stopping trains, season of the year, time in advance of purchase, and other factors. Yield management techniques have been reported to add 5% to revenues compared to more traditional pricing practices.⁵
- Certain other assumptions about the HST service are less controllable and may change in the future, such as not requiring HST traveler security screening, short times to reach the platform, large amounts of parking at the station, or provision of transit to the station. Mitigating these risks that could lower ridership and revenue can be achieved by reducing the operating plan to properly serve the actual traffic. Sustainable actions that would not have a major impact to service quality include reducing the number of trains with double sets of cars to single sets, operating fewer trains at times of low ridership, and reducing staffing and management to match ridership needs. These actions would reduce operating costs, as would the accompanying reductions in operating crews, maintenance of trains, and electric power consumption. The percent of cost saved would be less than the percent of revenue loss, but would reduce the loss in operating cash flow. As discussed above,

⁵ E.g. Metzler, Jean Marie, SNCF Consulting Director TGV Developments, "Testimony" a presentation to the Committee on Transportation and Infrastructure, Sub Committee on Railroads, Pipelines and Hazardous Materials, US House of Representatives, Washington, DC, April 19, 2007.

break-even operations could be possible even with actual passengers only 50% of the forecast in the year 2030.

Finally, the Authority has initiated a substantial effort to more quantitatively understand the magnitude and nature of ridership and revenue risk. Completion of the entire ridership and revenue risk analysis effort will take another 15 to 18 months, although initial products from this effort may be available as early as December 2010.

OPERATING COST RISKS**Risks**

Cash flows that support the financing plan could be affected by operating costs that were higher than forecast. This could be created by uncertainty over future prices for labor and materials, the possibility of unexpected difficulties in operation or maintenance of the system requiring more personnel or work than anticipated, unexpected regulatory requirements, or other unknowns.

Risk Mitigation Measures

The Authority's operating costs include a program contingency of 5%, equal to \$100 million in YOES\$ for 2030 cost.

In addition, the Authority has initiated a substantial effort to more quantitatively understand the magnitude and nature of operating cost risks, in addition to continuing the usual practice of adding contingencies to cover *unforeseen* costs and risks that was followed for the business plan.

Finally, the start-up of service also assume a significant learning curve in operation, resulting in 2020 costs twice as high per dollar of revenue as in 2030. Trains will therefore early on not have the same optimal load factors as in 2030, and more staff will be needed for a given level of activity. After 2030, no further efficiencies are assumed, and costs rise proportionally to the increases in activity.

In addition to the contingency approach, it will be possible to more quantitatively understand the risk profile of the forecasts. Probabilities can be assigned to a range of possible variations for each of many variables, e.g. higher or lower labor costs, different power costs, or different levels of activity, and the cumulative likelihood of changes in the forecast can be calculated. This can be included in the next report to the Legislature.

However, ultimately the mitigation for over-runs in operations cost is for the Authority to continue its current practice of providing contingencies in the financing plan to allow it to work with less cash flow than forecast.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY
RISK IDENTIFICATION AND MITIGATION FACTORS

FUNDING RISKS

The CHSTP will likely face three major types of financial risks which are typical to projects of this size and of any financing that seeks capital in the U.S. and international markets. These include the risks that:

- The Authority will face **financial market risk** when the CHSTP goes into procurement for the first phases of construction
- the CHSTP will not receive **credit approval** from respective public and private funding institutions
- The Authority plans to avoid the risk that governments are not able to **follow through on their commitments**.

Overall Market Funding Risk

Risks

Overall market funding risk is something that every project in the U.S. faces. The Authority will begin to face overall market risk when the CHSTP goes into procurement for the first phases of construction. This risk is what was experienced in the financial markets in 2008 where lending and typical sources of credit and debt were shut down for projects like this one. The level of this risk will depend on how each segment is procured. In the early segments, the CHSTP could face this type of risk in two ways: 1) if the CHSTP is procured with public funds and the State cannot issue GO bonds; or 2) if the CHSTP is procured as a public-private partnership (P3) when a contractor tries to obtain financing for construction of a segment. However, in this case, that particular segment would face market risk if financial markets collapse.

Mitigation Measures

To mitigate this risk, the Authority has to continually monitor the market and develop strong back-up strategies such as CHSTP segmentation. For example, if a segment is slated to begin construction, but financial markets collapse and the State cannot issue GO bonds to cover a portion of the CHSTP costs, that segment may be funded through other sources or be temporarily disrupted.

Furthermore, the Authority may need to:

- segment the project, including reducing the segment sizes needed to receive market funding
- delay certain segment financing until the markets recover

- use public grant funding sources, where possible, instead of capital market dependent sources during this period of financial disruption
- where possible, fund certain segments ahead of actual CHSTP start, keeping the funds in low-interest money-market style accounts, until they are deployed.

Credit Approval Risk

Risk

To overcome the risk that the CHSTP will not receive credit approval from public and private financial institutions, the Authority needs to be in a continuous dialogue with market players to understand their needs and communicate the Authority's project and financial objectives. The CHSTP will face this risk when the first segment seeks capital market financing outside of the State GO bond proceeds and federal funds.

Mitigation Measures

The Authority will work through an iterative process with the market to ensure the CHSTP wins credit approval. This iterative process includes open communication with commercial and investment banks, bond underwriters, credit rating agencies and other financial intermediaries, discussing the factors that contribute to credit approval which are expected to include project development plans, passenger and ridership forecasts, construction and operating contracts, environmental approvals and permitting, technological risks, among others. This dialogue will provide guidance to the Authority in how it approaches the development of CHSTP1 segments, including how these segments are bundled and the procurement process is managed.

Government Funding Risk

Risks

The financial conditions of the federal, State of California and local California governments are not positive, given the recession and large deficits. On the federal side, the key risks are that budget pressures reduce future grant funding, including for 2010 grant funding and the transportation funding re-authorization. A lesser risk is that current commitments in the ARRA program are not fulfilled. On the California side, this includes California's ability to issue state GO bonds as authorized under Proposition 1A. Additionally, there is a risk that local funding may not come through.

Mitigation Measures

The Authority plans to avoid the risk that governments are not able to follow through on their commitments by carefully assessing how each government funding source affects the build-out

of each segment. To mitigate the federal risk, the Authority needs to continue to monitor the federal budget process and adapt the CHSTP as discussed above, through segmentation or delay segment implementation as needed. To mitigate the state and local risks, the Authority needs to monitor both the state's overall financial situation and its continued ability to sell GO bonds as well as the financial situation of the local funding entities.

Upload #14

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: OPERATING COST METHODOLOGY for CV &LOSSAN.doc

OPERATING COST METHODOLOGY for
ARRA GRANT REVISION & HSIPR SUPPLEMENTAL
FRESNO-BAKERSFIELD, MERCED-FRESNO, & LOS ANGELES-ANAHEIM

Note on Spreadsheet Entry

The instructions direct that if the O&M costs are not developed with the category detail presented in the spreadsheet, as is the case for these corridors, the total O&M cost is to be entered into the “red cells”. Because our version of the sheet does not have red cells for entry, the formatting cannot not be changed, and the total cost cannot be entered into the total cost line because the cells are protected, the total O&M cost for each post-project year was entered into the line marked Sales & Marketing.

Year 2009

The San Joaquins’ fully allocated cost for FFY2009 was taken from Amtrak’s “Monthly Performance Report for September 2009”, p. C-1, Table September 2009 YTD, column “Total Costs (Excl. Dep & Int.)”, and used without change.

Year 2010

The San Joaquins’ fully allocated cost for May 2010 YTD was taken from Amtrak’s “Monthly Performance Report for May 2010”, p. C-1, Table September 2009 YTD, column “Total Costs excl.OPEB's, Capital Charge and Other Costs”, and multiplied by the ratio of the full FY2009 cost explained above to the equivalent cost for May 2009 YTD.

Out years: 2017, 2021, 2026

The 2010 fully allocated cost per train mile was applied to the higher train miles forecast for each year’s frequencies, inflated at 3% per annum. For the Central Valley projects only, a savings of \$5/TM in access, maintenance, and other host RR-related costs was assumed for the train miles run on the new HS alignment instead of the host RR.

Upload #15

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: Cover Letter



**CALIFORNIA
HIGH-SPEED RAIL
AUTHORITY**

August 6, 2010

Joseph C. Szabo, Administrator
U.S. Department of Transportation
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

RE: FY10 Service Development Program Applications

Dear Administrator Szabo:

The California High-Speed Rail Authority (Authority) is herewith submitting four applications for the FY10 Service Development Program (SDP) funding announced in the Federal Railroad Administration's (FRA's) June 28, 2010 Notice of Funding Availability.

In January 2010 FRA notified the Authority that we had been selected to receive an American Recovery and Reinvestment Act of 2009 (ARRA) Track 2 grant award of up to \$2.25 billion (B) upon satisfaction of certain grant conditions and requirements. From that amount \$400 million (M) has been allocated by USDOT to the Transbay Transit Center. Additionally, \$194 M of the ARRA funds are earmarked for the completion of the Preliminary Engineering/National Environmental Protection Act/California Environmental Quality Act (PE/NEPA/CEQA) activities for Phase 1 of the California High-Speed Train Project (CHSTP). Hence the remaining funds available for the final design and construction are \$1.656 B, and when matched with California Proposition 1A Bond funds, total \$3.312 B.

Four Design/Build (D/B) Program sections were proposed by the Authority for ARRA Track 2 funding in October 2009, as follows:

- San Francisco to San Jose
- Merced to Fresno
- Fresno to Bakersfield
- Los Angeles to Anaheim.

In applying for funding under the FY10 SDP solicitation, the Authority, at the FRA's request, has:

- Re-assessed the original ARRA Track 2 grant scope, identified needed refinements to optimize use of the \$3.312 B available funding (while meeting the FRA's "operational independence" criteria), and
- Developed potential additional scope for this year's round of HSIPR funding, which would complement or enhance the ARRA Track 2 section scope and help advance the Project.

However, since no decision has yet been made as to which of the four ARRA-eligible projects would ultimately be funded, the Authority has redefined the scope of each of these four project sections, describing how operational independence could be achieved, defined the measurable benefits of each, and additional scope for each section.

Due to funding constraints, potentially one ARRA-eligible project/section, enhanced by its associated FY10 SDP grant scope, would ultimately be funded. While the FRA would prefer the Authority to prioritize the sections, this is not currently possible, so four new grant requests are being submitted to complement and enhance the four ARRA-eligible project sections. The Authority proposes to combine any FY10 SDP funding awarded under the current solicitation with the available ARRA Track 2 funding to construct an enhanced project section of the CHSTP.

The ARRA-eligible scope in each project section needs to be clearly defined since one of the conditions of the current solicitation is that projects that have received HSIPR program funding under previous solicitations (e.g., ARRA Track 2 grants) are not eligible for new funding (i.e., the identical projects cannot be re-submitted). Therefore, as part of preparing new grant requests, the Authority has refined the four ARRA-eligible project sections.

It should be clearly understood that in all cases the route alternatives used in the redefined ARRA-funded project descriptions below and in our applications are for purposes of developing cost estimates to apply for funding. This identification of route alternatives for costing purposes does not prejudice nor influence the final Locally Preferred Alternative still to be determined through the EIR/EIS process in each of these four sections.

Summarized below are (A) the original ARRA Track 2 grant request scopes/budgets, (B) the redefined ARRA Track 2 grant scopes/budgets, and (C) the new proposed SDP grant scopes/budgets for each of the four sections.

1A. Original San Francisco-San Jose ARRA Track 2 D/B Scope

- The Authority applied for \$1.960 B for electrification (\$741 M), communication and signaling/positive train control (PTC) (\$213 M), stations (\$392 M), grade separations (\$327 M), and associated professional services and contingency.

1B. Refinements and re-scoping of the San Francisco-San Jose ARRA Section

- The total available ARRA D/B funding (\$3.312 B) will not suffice to build this complete section. Program developments have further increased the costs of certain design options that remain applicable.

- The refined scope, within a revised budget of \$3.312 B (\$YOE), focuses on rebuilding the north end of the Caltrain corridor and installing PTC, providing capacity improvements (four tracks between Brisbane-Redwood Jct.), and implementing safety improvements, which include removing 16 at-grade crossings (a third of the 46 total crossings on the corridor) and installing PTC.
- The new four-track infrastructure is proposed based on the more economical aerial structure cross-section (as opposed to the trench solution in some areas such as Burlingame, San Mateo, which would be more expensive)¹.
- PTC (possibly CBOSS or ERTMS) is included to enhance safety and to allow for the significant number of traffic diversions, which will be required during construction and the 2015 installation deadline.
- New infrastructure must meet FRA's operational independence criteria.

1C. New San Francisco-San Jose SDP Grant Application

- The new SDP grant application scope includes electrifying the Caltrain system from San Francisco to San Jose, grade-separating the southern portion of the line between Mountain View and Sunnyvale (and expanding the railroad from two to four tracks in this section), and constructing an HST station at Millbrae to facilitate intermodal connections to Caltrain, Samtrans, BART and San Francisco International Airport. The Authority is applying for \$1.0 B (federal share) with a 30% state and local match to fund the total estimated cost of this section of \$1.43 B (\$YOE).

2A. Original Merced-Fresno ARRA Track 2 D/B Scope

- The Authority applied for \$931.9 M for track and structures (\$603 M), right-of-way and sitework (\$208.4 M) and associated professional services and contingency for the rural HST civil infrastructure. The latter included track from approximately 3 miles south of Merced to approximately 3 miles north of Fresno with interconnection to the existing BNSF track, thus allowing operation from the Amtrak stations in Merced to the Amtrak station in Fresno.

2B. Refinements and re-scoping of the Merced-Fresno ARRA Section

- The total available ARRA D/B funding (\$3.312 B) would be sufficient to build the complete Merced to Fresno section as originally scoped; however, the Authority would prefer to include the new Merced HST Station in the scope of the refined ARRA (extending the length of the new high-speed track through Merced) and maintaining the originally planned connection into the Amtrak station in Fresno. (The new SDP grant funding applied for under this solicitation would enable the new HST Fresno station to be added to the scope and the track extended south to reconnect with the BNSF alignment at Bowles, eliminating the need for connection into the Amtrak Fresno station.)
- The refined ARRA Track 2 scope described in our application redefines the project beginning with a connection to the BNSF at Castle Commerce Center in Atwater, continuing south through and including the new Merced HST Station, then south past Chowchilla and Madera, crossing over the San Joaquin River and terminating with a connection into the Amtrak Fresno Station

¹ If the trench solution is selected then less infrastructure could be implemented.

- In the interim, use by Amtrak's San Joaquin service would provide operational independence from the northern connection to the BNSF at Castle Commerce Center, through Merced and into the Amtrak Station in Fresno.
- A signaling system (PTC) for operation of Amtrak trains on the new alignment would be needed and is included in the estimate.
- The ARRA-funded alignment would be approximately 67 miles in length and not only completes the section from Merced to Fresno, but provides for the adjoining future mainline connection from Fresno to San Jose in the vicinity of West Chowchilla.

2C. **New Merced-Fresno SDP Grant Application**

- The last sub-section of the redefined Merced-Fresno ARRA Track 2 scope (from West Clinton Avenue to Fresno Amtrak Station) would be eliminated and replaced with the new sub-section from West Clinton Avenue E. Conejo Avenue about 10 miles south of Bowles, California.
- The alignment would transition from the west side of the UPRR to the east side of the UPRR south of West Clinton Ave and run along the UPRR corridor through downtown Fresno to the new Fresno HST Station. On the south side of Fresno the alignment would transition from elevated to at-grade and rejoin the BNSF alignment near the community of Bowles. The total alignment length is approximately 20 miles of which about 12 miles would be at grade at the southern end.
- Interconnection to the BNSF line about ten miles south of the new Fresno station.
- The operation of Amtrak's San Joaquin service on this section would offer operational independence from Merced through the new HST station in Fresno and reconnect to the existing BNSF mainline south of Bowles.
- With this addition, the ARRA-funded plus the new SDP-grant-funded alignment would be approximately 84 miles in length.
- The Authority is applying for \$755 M (federal share) with a 30% state match to fund the total estimated cost of this section of \$1.078 B (\$YOE).

3A. **Original Fresno-Bakersfield ARRA Track 2 D/B Scope**

- The Authority applied for \$1.639 B for track and structures (\$749.3 M), right-of-way and sitework (\$689.7 M), and associated professional services and contingency for the rural HST civil infrastructure. The latter included track from just south of the Fresno metropolitan area to an area just north of the Bakersfield metropolitan area. This section is approximately 109 miles long, beginning at the community of Bowles in Fresno County, approximately 8 miles south of downtown Fresno, to Hageman Road in Kern County, approximately 8 miles northwest of downtown Bakersfield. The work included interconnection with the existing BNSF track at each end, thus allowing Amtrak operation from the existing Amtrak station in Fresno to the existing Amtrak station in Bakersfield.

3B. **Refinements and re-scoping of the Fresno-Bakersfield ARRA Section**

- The total available ARRA Track 2 D/B funding (\$3.312 B) would be sufficient to build the complete Fresno to Bakersfield section as originally scoped; however, the Authority would prefer to include the new Fresno HST station in the scope of the redefined ARRA grant (shortening the length of new high-speed track that could be built between Fresno

and Bakersfield) and then use the new SDP grant funding applied for under this solicitation to extend the HST infrastructure south towards Bakersfield.

- The ARRA Track 2 scope discussed in our application describes the redefined project beginning with a connection to BNSF north of Fresno in Madera County² continuing south through and including the new Fresno HST Station, then south through Bowles, the Hanford By-Pass down to Corcoran, connecting to the BNSF in Corcoran using an at-grade connection following the C1 alignment.
- A signaling system (PTC) is included as required for operational independence.
- In the interim, use by Amtrak's San Joaquin service would offer operational independence from Merced on the existing BNSF tracks, connecting to the new alignment at Borden in Madera County, leaving the new alignment at Corcoran in Kings County and continuing on to Bakersfield. A temporary Amtrak station platform would be constructed in Hanford.
- The ARRA-funded alignment would be approximately 66 miles in length and lead to a practical interface with the WYE, which would (as part of Phase 1) connect in a westerly direction with San Jose.

3C. New Fresno-Bakersfield SDP Grant Application

- The new SDP-funded work would start at the south end of the Hanford bypass (deducting the at-grade connection to the BNSF at Corcoran) and continue south on the C2, P and A2 alignments through Allensworth and Wasco on the WS2 alignment to the point where the WS2 alignment re-joins the BNSF just south of Shafter.
- A signaling system (PTC) is included as required for operational independence.
- Interconnection to the BNSF mainline just south of Shafter in Kern County.
- In the interim, use by Amtrak's San Joaquin service would offer operational independence from Merced on the existing BNSF tracks, connecting to the new alignment at Borden (part of the redefined ARRA Track 2 scope for this section), leaving the new alignment south of Shafter and continuing on to Bakersfield. Temporary Amtrak station platforms would be constructed at Hanford, Corcoran, and Wasco.
- The ARRA-funded plus new SDP-grant-funded alignment would be approximately 129 miles in length and lead to a practical interface with the WYE, which would eventually connect in a westerly direction with San Jose.
- The Authority is applying for \$1.0 B (federal share) with a 30% state match to fund a total estimated cost of this section of \$1.43 B (\$YOE).

4A. Original Los Angeles-Anaheim ARRA Track 2 D/B Scope

- The Authority applied for \$4.375 B for track and structures (\$1,126 M), stations (\$555.6 M), right-of-way and sitework (\$2,119 M) and associated professional services and contingency for the HST civil infrastructure (including track) from LA to Anaheim based on the Dedicated Track Alternative. Operation of Amtrak's *Surfliner* service on this

² The reason for beginning this refined ARRA D/B section so far north of the proposed Fresno HST Station is that there is no location to connect with the BNSF south of the San Joaquin River. The proposed A1 (BNSF) to A2 (UPRR) route connection between Borden and Irrigosa would use the HST alignment being studied as one of the alternatives in the DEIR/EIS.

section would meet FRA's operational independence requirement, but requires signaling.

4B. Refinements and re-scoping of the Los Angeles-Anaheim ARRA Section

- The total available ARRA D/B funding (\$3.312 B) will not suffice to build this complete section. Program developments have further increased the costs of certain alternatives which remain applicable.
- The refined scope focuses on infrastructure improvements common to both current alternatives (Dedicated and Shared-Track Alternatives), to the extent possible, and particularly those with the biggest near-term benefits to intercity passenger service, and will stretch from east of the LA River to west of Carmenita Road, namely:
 - Commerce/Vernon to Santa Fe Springs (SFS) aerial structure - All passenger trains, except Riverside and San Bernardino County, would diverge onto the new aerial structure east of the LA River and converge back onto the BNSF freight tracks just east of Carmenita Road.
 - Amtrak/freight operator interactions - The refined scope removes all San Diego and Orange County passenger and Amtrak long distance train operations from interactions with freight operators in the highly congested BNSF Railway Hobart Yard area. Riverside and San Bernardino County passenger operations would continue to use BNSF freight tracks to serve the Commerce station.
 - Aerial structure over the San Gabriel River area - Removes passenger operations from two at-grade freight rail-rail crossings and three at-grade rail-road crossings.
 - Norwalk/Santa Fe Springs station - A new Norwalk/Santa Fe Springs train station is included in the estimate to provide current passenger operations the ability to serve the Norwalk/Santa Fe Springs station area, a highly utilized station. (No decision has been made yet as to possible intermediate high-speed rail station locations in this section. Both Norwalk/Santa Fe Springs and Fullerton are currently being considered and evaluated in the DEIR/DEIS.)
 - A signaling/PTC system is required for operational independence and has been added to the refined ARRA grant scope.
- The aforementioned work would complete more than 50% of the civil/infrastructure work, which would ultimately be needed in this corridor (excluding Los Angeles Union Station and ARTIC Station and electrification). It would include construction of two new tracks for future high-speed and shared passenger service, in addition to the existing three mainline BNSF freight/passenger shared tracks between Redondo Jct. and Fullerton Jct. Under the initial ARRA Track 2 grant, the new 2-track passenger track alignment could be built from just east of the LA River to east Santa Fe Springs (about 15 miles).
- With the correct phased implementation, including PTC, operation of the Amtrak *Surfliner* service on this section would meet FRA's operational independence criteria.

4C. New Los Angeles-Anaheim SDP Grant Application

- The new SDP grant would extend the civil infrastructure and trackwork not completed with the ARRA funding from just west of Carmenita Road to Fullerton Jct. All passenger trains, except Riverside and San Bernardino County and long-distance Amtrak trains would diverge onto the new aerial structure east of the LA River and remain separated

from the BNSF freight tracks through to Fullerton Jct. These trains would converge onto the OCTA tracks south of the Fullerton Jct., effectively eliminating approximately 55 passenger trains from freight interaction on BNSF tracks between Hobart Yard and Fullerton Jct. on the three mainline BNSF tracks in this section. The following improvements would be included:

- Construct the Rosecrans/Marquardt Grade Separation, a high-priority project that improves safety and is needed under all scenarios.
- Relocate Buena Park Metrolink station to allow for construction of a “duck-under” of the freight tracks to separate passenger trains from freight trains. (A duck-under is needed, rather than a flyover, to avoid interfering with FAA flight paths into Fullerton Airport.)
- Close grade crossings, install four-quadrant gates at remaining grade crossings, and install PTC in the La Mirada to Anaheim alignment.
- The operation of Amtrak’s *Surfliner* service on this section would meet FRA’s operational independence requirement.
- The total cost of this added scope is estimated to be \$1.43 B (\$YOE). A proposed 70% federal share of \$1.0 B would be matched by a 30% state share (\$432 M). The refined ARRA Track 2 grant augmented by the new FY SDP funds would fund the complete HST civil infrastructure and trackwork required from just east of the LA River to Fullerton, extending the two dedicated (passenger-only) track system to about 28 miles.

Our vision for an improved transportation system in California includes as a backbone an 800-mile true high-speed rail system traveling up to 220 miles per hour and linking our state’s major economic centers from Los Angeles to San Francisco via our growing Central Valley, and then up to Sacramento and down to San Diego. The system – sure to be the first of its kind on our continent – will provide connections to airports, regional passenger rail systems, bus lines and bike paths so that an integrated web of transit systems makes it easy to move any Californian across the state seamlessly, efficiently and in a way that improves our environment, our quality of life and our state’s overall productivity.

We ask the FRA to (1) confirm their agreement with the manner in which we have applied the initial amount of ARRA funds to the four project sections, and (2) to consider the substantial long-term benefits to the State of California and the Nation from the investments proposed in the attached new FY10 grant applications. We look forward to taking the next step with the FRA in advancing the California High-Speed Train Project with the award of the next round of federal High-Speed Intercity Rail funding.

Sincerely,



Roelof van Ark

Chief Executive Officer

Upload #16

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: Redefined Merced - Fresno Design-Build Section ARRA Track 2
Scope.pdf

**Redefined
Merced-Fresno Design-Build Section
ARRA Track 2 Scope**

Table of Contents

Introduction	3
A. Original Merced-Fresno ARRA D/B Grant Scope	4
B. Refinements and Re-scoping of the Merced-Fresno D/B ARRA section	4
Figure 1: Original Merced-Fresno ARRA D/B Grant Scope	5
Figure 2: Revised Merced-Fresno ARRA D/B Grant Scope	6
C. Merced-Fresno FY10 SDP Grant Application Scope	8
Figure 3: Revised ARRA D/B + New Grant Scopes	9
Attachments:	
1. Revised Budget and Schedule Forms (OMB No. 2130-0684)	
2. Transportation Benefits of Redefined ARRA grant	
3. Pro-Forma Financial Plan	

Introduction

In January 2010 the Federal Railroad Administration (FRA) notified the California High-Speed Rail Authority (Authority) that it had been selected to receive an American Recovery and Reinvestment Act of 2009 (ARRA) Track 2 grant award of up to \$2.25 billion (B) upon satisfaction of certain grant conditions and requirements. From that amount \$400 million (M) has been allocated by USDOT to the Transbay Transit Center. Additionally, \$194 M of the ARRA funds is earmarked for the completion of the Preliminary Engineering/National Environmental Protection Act/California Environmental Quality Act (PE/NEPA/CEQA) activities for Phase 1 of the California High-Speed Train Project (CHSTP). Hence the remaining funds available for the final design and construction are \$1.656 B, and when matched with California Proposition 1A Bond funds are up to \$3.312 B. Four design/build (D/B) program sections, including the Merced-Fresno Section discussed here, were proposed by the Authority for ARRA Track 2 funding in October 2009, and all four are still considered eligible. Presumably, one of these four eligible sections will ultimately be funded, but which one is not currently known.

In applying for funding under the FY10 Service Development Programs solicitation, the Authority has decided to re-assess the original ARRA Track 2 grant scope, identify needed refinements to optimize use of the \$3.312B available funding (while meeting the FRA's "independent utility" criteria), and develop potential additional scope for this year's round of HSIPR funding, which would complement or enhance the ARRA Track 2 section scope and help advance the CHSTP. However, since no decision has yet been made as to which of the four ARRA-eligible projects would ultimately be funded, the Authority has redefined the scope of each of these four project sections, describing how operational independence could be achieved, and defined the measurable benefits of each.

Due to funding constraints only one ARRA-eligible project/section potentially augmented by its associated FY10 SDP grant scope will ultimately be funded. While the FRA would prefer the Authority to prioritize the sections, this is not currently possible, so four new grant requests are being submitted to complement and enhance the four ARRA-eligible project sections. The Authority proposes to combine any FY10 HSIPR Service Development Program funding awarded under the current solicitation with the available ARRA Track 2 funding to construct an enhanced project section of the CHSTP.

The ARRA-eligible scope in each project section needs to be clearly defined since one of the conditions of the current solicitation is that projects that have received HSIPR program funding under previous solicitations (e.g., ARRA Track 2 grants) are not eligible for new funding (i.e., the identical projects cannot be re-submitted). Therefore, as part of preparing new grant requests, the Authority has redefined the four ARRA-eligible project sections.

Projects funded with ARRA Track 2 funds must retain "operational independence" as defined in Sec. 3.5.2 of the Notice of Funding Availability (NOFA), without considering any new funds. As the Authority was awarded only approximately 50% of its original ARRA application value, the FRA requires clarity on how this funding would be applied in case of award, to meet the "operational independence" criteria. Therefore, the Authority has redefined or refined the scope of each of these projects, described how operational independence would be achieved, and identified the measurable benefits of each.

The refined ARRA-eligible project sections remain subject to the schedule constraints (NOD/ROD by Sept 2011). It is understood that while the FY10 HSIPR applications for the enhancements of the ARRA corridors are not subject to the ARRA timelines, the use of these funds is contingent on the completion of the NOD/ROD for the ARRA sections to be on schedule.

Following is a redefinition of the scope of the Merced-Fresno ARRA D/B Program Section.

A. Original Merced-Fresno ARRA D/B Grant Scope (see Figure 1):

- The Authority applied for \$931.9 M for track and Structures (\$603 M), Right-of-Way and Sitework (\$208.4 M) and associated professional services and contingency for the rural HST civil infrastructure including track from approx. 3 miles south of Merced to approximately 3 miles north of Fresno with interconnection to the existing BNSF track, thus allowing operation from the Amtrak stations in Merced to the Amtrak station in Fresno.
- Amtrak's San Joaquin service would meet the operational independence requirement, but requires signaling.

B. Refinements and re-scoping of the Merced-Fresno D/B ARRA section (see Figure 2)

- The total available ARRA D/B funding (\$3.312B) would be sufficient to build the complete Merced to Fresno section as originally scoped; however the Authority would prefer to include the new Merced HST Station in the scope of the refined ARRA (extending the length of the new high-speed track through Merced) and maintaining the originally planned connection into the Amtrak station in Fresno. The new SDP grant funding applied for under this solicitation would enable the new HST Fresno station to be added to the scope and the track extended south approx 20 miles to reconnect with the BNSF alignment at the north end of the Hanford section. This would eliminate the need for connection from the HST mainline into the Amtrak Fresno station.
- The ARRA Track 2 scope discussed below describes the re-defined project beginning with connection to the BNSF at Castle Commerce Center in Atwater, continuing south through and including the new Merced HST Station, then south past Chowchilla and Madera, crossing over the San Joaquin River and terminating with a connection into the Amtrak Fresno Station.
- The route alternatives used in the refined project described herein were selected only for the purposes of developing a cost estimate to apply for funding. This identification of route alternatives for costing purposes does not prejudice or influence the final Locally Preferred Alternative still to be determined through the EIR/EIS process.
- In the interim, Amtrak San Joaquin service could provide operational independence from the northern connection to the BNSF at Castle Commerce Center, through Merced and into the Amtrak Station in Fresno.
- A signaling system (Positive Train Control) for operation of Amtrak trains on the new alignment would be needed and is included in the estimate.
- The ARRA funded alignment would be approximately 67 miles in length and not only completes the section from Merced to Fresno, but provides for the adjoining future mainline connection from Fresno to San Jose in the vicinity of West Chowchilla.
- For the \$3.312B (\$YOE) available funding, the Authority recommends constructing the following revised Project Scope:

Castle Commerce to Merced HST Station

This is the connection from the BNSF line at Atwater, leaving the alignment on the west side of the BNSF and running between and parallel to Trindale Road and Franklin Road towards the UPRR alignment. The alignment will transition from at grade to an aerial structure to cross over the SR 99 and the UPRR. The alignment will stay elevated and adjacent to the west side of the UPRR and connect into the elevated Merced HST Station. The total length is approximately 5 miles.

Figure 1. Original Merced-Fresno ARRA Design/Build Grant Scope

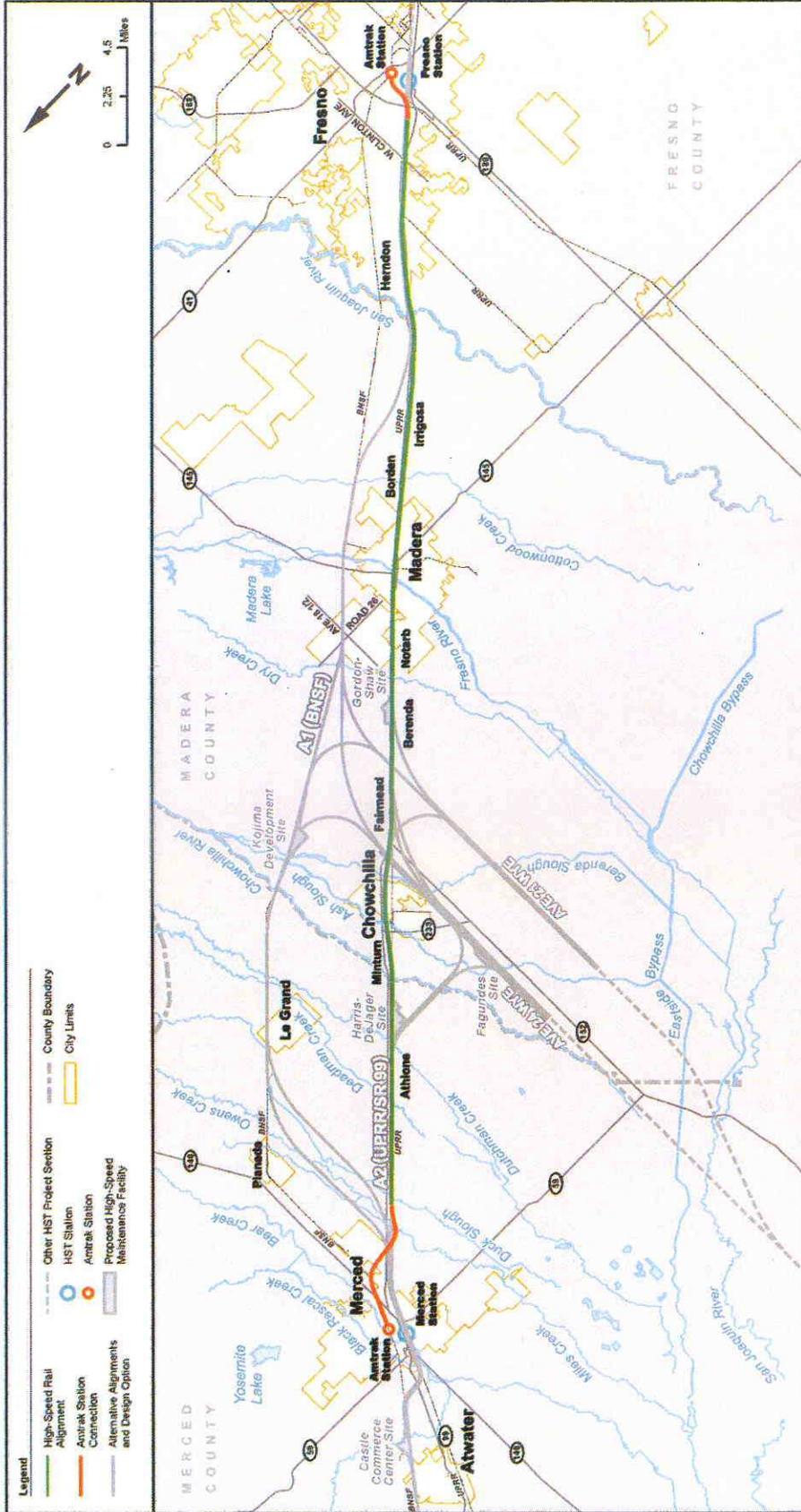
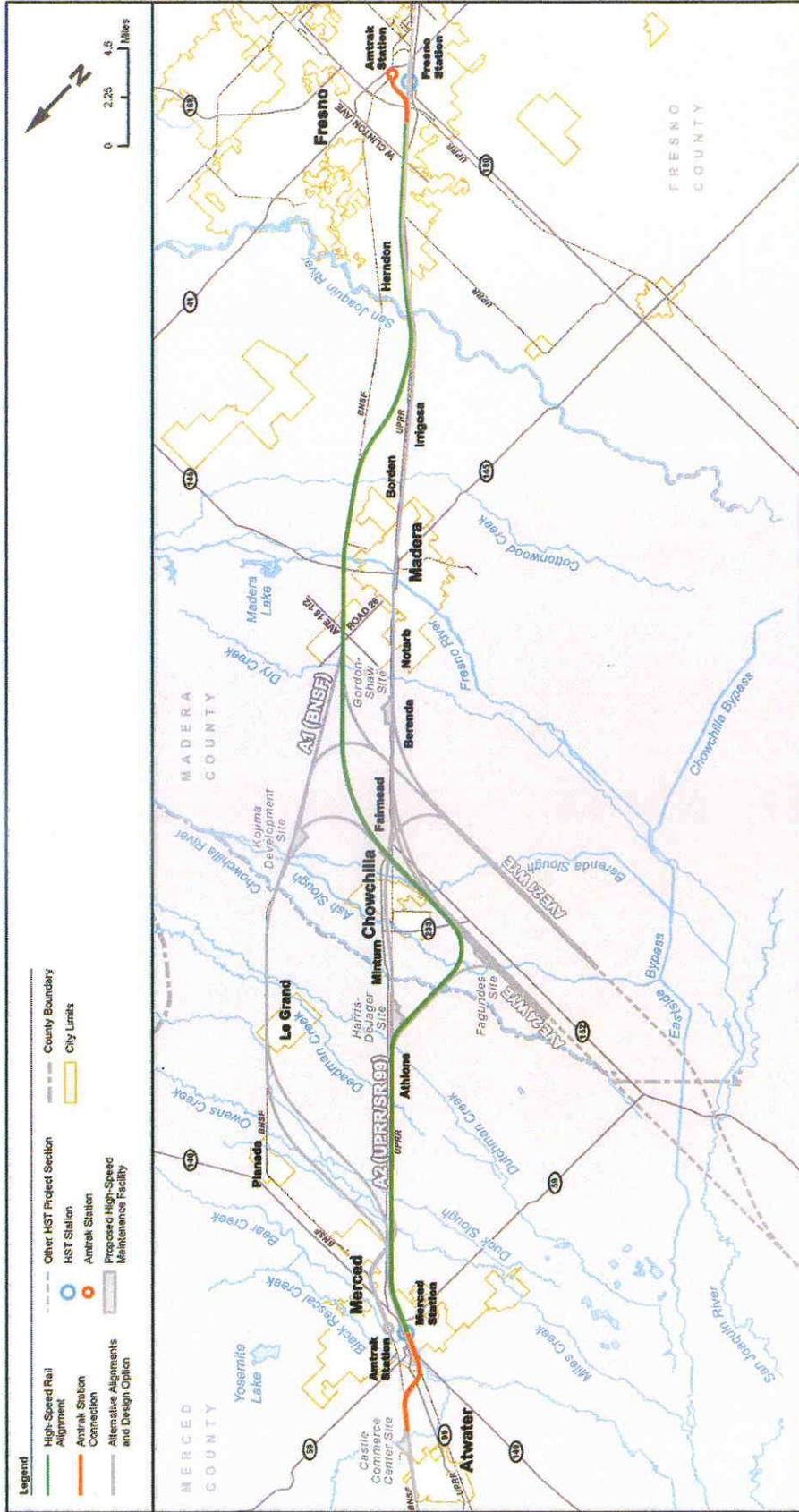


Figure 2. Revised Merced-Fresno ARRA Design/Build Grant Scope



Merced HST Station to Athlone

From the elevated HST Merced station the alignment transitions down to grade over a distance of approximately 3 miles, the alignment then continues south, running adjacent to and on the west side of the UPRR to Athlone, where it starts to move away from the UPRR moving to the west side of the City of Chowchilla. The total length is approximately 13 miles.

Athlone to Avenue 24 Wye Connection, (San Jose to Fresno connection)

The alignment curves to the west from the UPRR at Athlone and runs in proximity and parallel to Road 12 before reversing the curve to connect into the San Jose to Fresno alignment running adjacent to Avenue 24. The alignment will be at grade, except for where the HST tracks cross over themselves to complete the Wye connection. The total length is approximately 8 miles.

Avenue 24 Wye Connection, (San Jose to Fresno connection) to BNSF near the intersection of Road 26/Ave 18 ½ in Madera

The alignment runs adjacent to the south side of Ave 24 in a south easterly direction. The alignment transitions from at grade to an elevated structure to cross over the UPRR and continues elevated to cross SR99 and then transitions back down to grade before reaching then BNSF alignment at Road 26 / Ave 18 ½ where it starts to run parallel to the west side of the BNSF. The total alignment length is approximately 14 miles including approximately 1.5 miles of elevated structure.

Road 26/Ave 18 ½ intersection to the San Joaquin River

The alignment runs adjacent to the west side of the BNSF for approximately 7 miles before turning away to the west back towards the UPRR alignment on the south side of Madera where the alignment becomes adjacent to the east side of the UPRR and transitions from at grade to elevated to cross over the San Joaquin River. The total alignment length is approximately 15 miles.

San Joaquin River to West Clinton Avenue (Fresno)

After crossing the San Joaquin River on the east side of the UPRR, the alignment stays elevated to cross over the UPRR and Golden State Boulevard, the alignment then transitions down to be at grade for approx. 2.5 miles between Herndon and Shaw and the transitions back to an elevated structure to fit between to UPRR on the East and a re-aligned SR 99 on the west. The alignment is elevated over West Clinton Avenue. The total alignment length is approximately 8 miles.

West Clinton Ave to the Fresno Amtrak Station

The alignment transitions from the west side of the UPRR to the east side of the UPRR south of West Clinton Ave and runs parallel to the UPRR to Divisadero St.. The alignment then starts to leave the HST alignment to travel in the vicinity of Divisadero St until connecting into the BNSF alignment on the north side of the Amtrak Fresno Station. The total alignment length is approximately 4 miles.

Note: The attached budget form shows a revised total of \$3,311,749,000 for this section. The intent is to apply the full amount of available ARRA Track 2 grant funding (\$3.312 B) to whichever ARRA-eligible section is funded. The difference between the attached revised estimate and the total available budget would be retained as additional Unallocated Contingency.

C. Merced-Fresno FY10 SDP Grant Application Scope

To differentiate between the refined Merced to Fresno ARRA D/B scope above and the new grant application scope, a brief description of the changes follows:

- The last sub-section from West Clinton Ave to Fresno Amtrak Station would be eliminated and replaced with the following new sub-section from West Clinton Ave to E Conejo Avenue, approximately 20 miles south of Fresno.

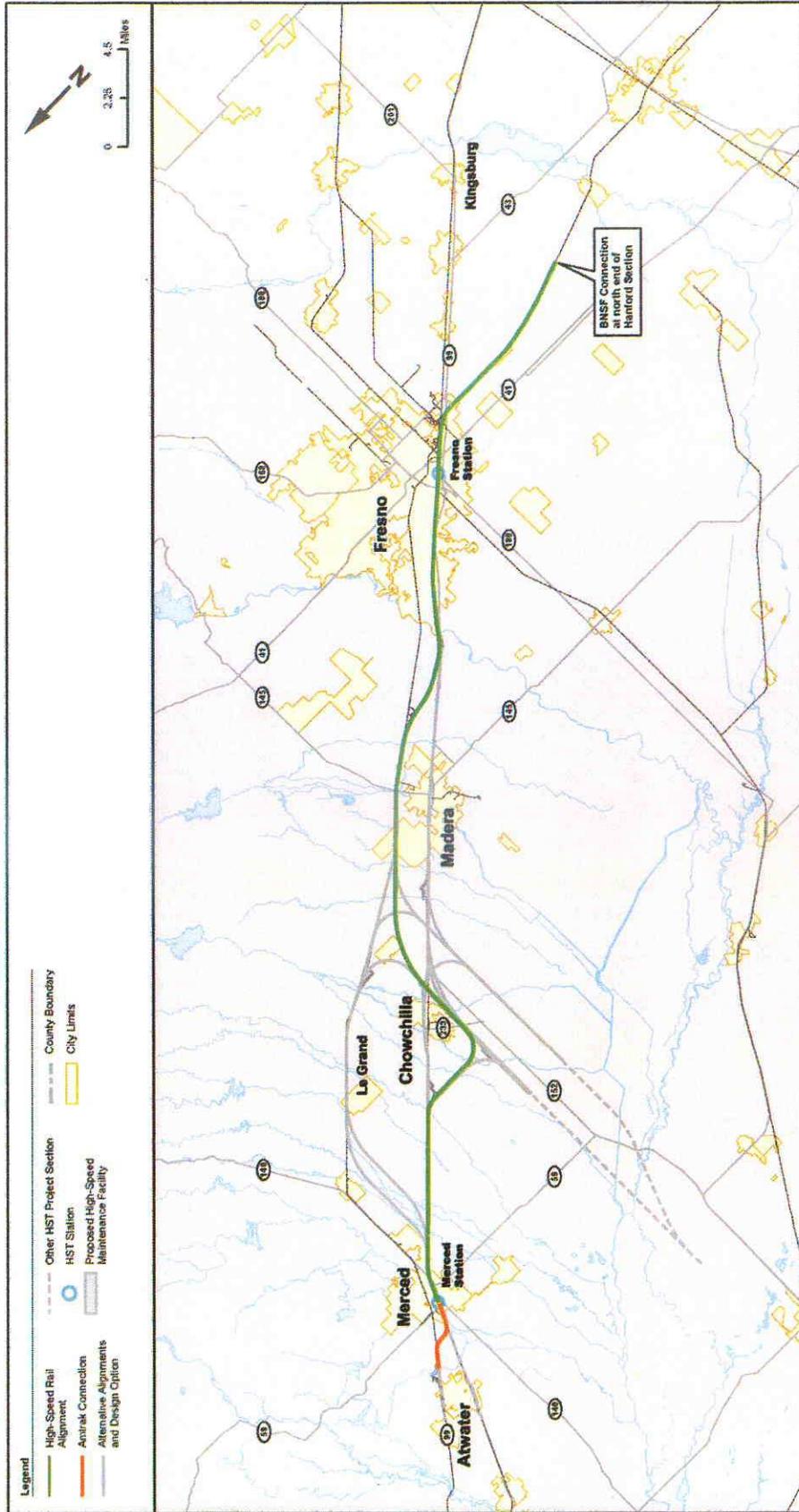
West Clinton Avenue to E Conejo Avenue

- The alignment transitions from the west side of the UPRR to the east side of the UPRR south of West Clinton Ave and runs along the UPRR corridor through downtown Fresno to the new Fresno HST Station, on the south side of Fresno the alignment transitions from elevated to at grade and rejoins the BNSF alignment approx. 20 miles south of Fresno at E Conejo Ave. The total alignment length is approximately 24 miles, of which 12 miles will be at grade at the southern end of the sub-section.

With this addition, the ARRA Track 2 grant-funded plus new SDP grant-funded alignment would be 84 miles in length (see Figure 3). Amtrak's San Joaquins would offer operational independence from the connection to the existing BNSF north of Merced at Castle Commerce Center, passing through the new HST stations at both Merced and Fresno and reconnecting to the existing BNSF south of Fresno to the north end of the Hanford section in the vicinity of E Conejo Avenue.

The total cost of the proposed added scope is estimated to be \$1,077,955,000 (\$YOE). The proposed 70% federal share of \$754,570,000 would be matched by a 30% state share (\$323,385,000).

Figure 3. Revised Merced-Fresno ARRA Design/Build Grant Scope with New Grant Scope Added



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 "1. General Info."

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
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General Info (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 & 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. Limited to 50 characters, the name must consist of the following elements, each separated by a hyphen: (1) the State abbreviation of the State submitting this application; (2) the route or corridor name that is the subject of the related Corridor Service Overview; and (3) a descriptor that will concisely identify the Corridor Program's focus (e.g., HI-Fast Corridor-Main Stem)

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-MERCED/FRESNOHSR-DESIGN/BUILD

Application Assumptions

1. Please use this section to capture two separate sets of assumptions that will enter 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 2010 and 2011. Inflation rates for 2010 and 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 (%)									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
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		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019**
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 "Capital Cost Info." for definitions and explanations of the Standard Capital Cost (SCC) Categories.

** For 2019 Operating, Financial, and Sustainability Inflation Assumptions, enter a single annual inflation rate for 2019 that will be used for 2019 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.

(Empty space for methodology and supporting documentation)

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 others 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 xxxx [location], x.x 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.

		Applicant Inputs		Program Name: CA-MERCED/FRESNOHSR-DESIGN/BUILD				
	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								
10.01	Track structure: Viaduct	Miles	27.01	\$ 51,133	\$ 1,381,091	\$ 261,412	\$ 1,588,255	
10.02	Track structure: Major/Movable bridge				\$ -	\$ -	\$ -	
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			\$ -	\$ -	\$ -	
10.06	Track structure: At-grade (grading and subgrade stabilization)	Miles	44.28	\$ 2,431	\$ 107,629	\$ 16,144	\$ 123,773	
10.07	Track structure: Tunnel				\$ -	\$ -	\$ -	
10.08	Track structure: Retaining walls and systems	Miles			\$ -	\$ -	\$ -	
10.09	Track new construction: Conventional ballasted			\$ 189,456	\$ 189,456	\$ 28,418	\$ 217,874	
10.10	Track new construction: Non-ballasted			\$ 9,053	\$ 9,053	\$ 1,358	\$ 10,411	
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)			\$ 26,492	\$ 26,492	\$ 3,974	\$ 30,466	
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	22.31	\$ 1,301	\$ 29,026	\$ 4,354	\$ 33,380	
20 STATIONS, TERMINALS, INTERMODAL								
20.01	Station buildings: Intercity passenger rail only			\$ 43,396	\$ 43,396	\$ 10,849	\$ 54,245	
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				\$ -	\$ -	\$ -	
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								
40.01	Demolition, clearing, site preparation				\$ -	\$ -	\$ -	
40.02	Site utilities, utility relocation			\$ 37,103	\$ 37,103	\$ 5,565	\$ 42,668	
40.03	Hazardous material, contaminated soil removal/mitigation, ground water treatments				\$ -	\$ -	\$ -	
40.04	Environmental mitigation: wetlands, historic/archeology, parks			\$ 25,373	\$ 25,373	\$ 3,806	\$ 29,179	
40.05	Site structures including retaining walls, sound walls			\$ 1,718	\$ 1,718	\$ 258	\$ 1,975	
40.06	Temporary facilities and other indirect costs during construction				\$ -	\$ -	\$ -	
40.07	Purchase or lease of real estate			\$ 89,196	\$ 89,196	\$ 13,379	\$ 102,576	
40.08	Highway/pedestrian overpass/grade separations			\$ 155,562	\$ 155,562	\$ 23,334	\$ 178,896	
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					\$ 91,617	\$ 13,743	\$ 105,359	
50.01					\$ -	\$ -	\$ -	
50.02					\$ -	\$ -	\$ -	
50.03					\$ -	\$ -	\$ -	
50.04				\$ 91,617	\$ 91,617	\$ 13,743	\$ 105,359	
50.05					\$ -	\$ -	\$ -	
50.06					\$ -	\$ -	\$ -	
50.07					\$ -	\$ -	\$ -	
50.08					\$ -	\$ -	\$ -	
60 ELECTRIC TRACTION					\$ -	\$ -	\$ -	
60.01					\$ -	\$ -	\$ -	
60.02	#				\$ -	\$ -	\$ -	
60.03	#				\$ -	\$ -	\$ -	
60.04					\$ -	\$ -	\$ -	
Construction Subtotal (10-60)					\$ 2,186,711	\$ 332,346	\$ 2,519,057	
70 VEHICLES					\$ -	\$ -	\$ -	
70.00	#				\$ -	\$ -	\$ -	
70.01	#				\$ -	\$ -	\$ -	
70.02	#				\$ -	\$ -	\$ -	
70.03	#				\$ -	\$ -	\$ -	
70.04	#				\$ -	\$ -	\$ -	
70.05	#				\$ -	\$ -	\$ -	
70.06	#				\$ -	\$ -	\$ -	
70.07	#				\$ -	\$ -	\$ -	
70.08	#				\$ -	\$ -	\$ -	
70.09	#				\$ -	\$ -	\$ -	
70.10	#				\$ -	\$ -	\$ -	
70.11	#				\$ -	\$ -	\$ -	
70.12	#				\$ -	\$ -	\$ -	
70.13	#				\$ -	\$ -	\$ -	
70.14	#				\$ -	\$ -	\$ -	
70.15	#				\$ -	\$ -	\$ -	
80 PROFESSIONAL SERVICES					\$ 294,063	\$ -	\$ 294,063	
80.01					\$ -	\$ -	\$ -	
80.02					\$ -	\$ -	\$ -	
80.03				\$ 133,774	\$ 133,774	\$ -	\$ 133,774	
80.04				\$ 78,286	\$ 78,286	\$ -	\$ 78,286	
80.05				\$ 82,003	\$ 82,003	\$ -	\$ 82,003	
80.06					\$ -	\$ -	\$ -	
80.07					\$ -	\$ -	\$ -	
80.08					\$ -	\$ -	\$ -	
80.09					\$ -	\$ -	\$ -	
80.10					\$ -	\$ -	\$ -	
Subtotal (10-80)					\$ 2,480,774	\$ 332,346	\$ 2,813,120	
90 UNALLOCATED CONTINGENCY							\$ 202,000	
Subtotal (10-90)							\$ 3,015,120	
100 FINANCE CHARGES								
TOTAL CAPITAL COSTS (10-100)							\$ 3,015,120	

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 analysis 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. If you have allowable 2010 expenditures, record those in the 2011 cost category fields.

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 Year/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 Category. If the entries in the "Double Check Total" column are not identical, 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-MERCED/FRESNOHSR-DESIGN/BUILD											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total in Base Year/FY 11 Dollars*	Check Figures Taken from Detailed Budget:	
BASE YEAR FY 2011 DOLLARS (Thousands)												
10 TRACK STRUCTURES & TRACK	\$ 200,746	\$ 401,493	\$ 700,551	\$ 400,760	\$ 200,546	\$ 100,173	\$ 5,637	\$ 2,004,249	\$ 54,245	\$ 2,004,159	\$ 2,004,159	
20 STATIONS, TERMINALS, INTERMODAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS	\$ -	\$ 143,891	\$ 193,453	\$ 17,950	\$ 42,144	\$ 36,875	\$ -	\$ -	\$ -	\$ 355,294	\$ 355,294	
50 COMMUNICATIONS & SIGNALING	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 105,359	\$ 105,359	
60 ELECTRIC TRACTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
70 VEHICLES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
80 PROFESSIONAL SERVICES (applies to Cat. 10-60)	\$ 29,424	\$ 49,136	\$ 59,848	\$ 73,561	\$ 52,840	\$ 29,254	\$ -	\$ -	\$ -	\$ 294,063	\$ 294,063	
90 UNALLOCATED CONTINGENCY	\$ 20,575	\$ 39,825	\$ 50,300	\$ 50,300	\$ 41,000	\$ -	\$ -	\$ -	\$ -	\$ 202,000	\$ 202,000	
100 FINANCE CHARGES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Program Cost (10-100)	\$ 250,745	\$ 634,345	\$ 1,009,756	\$ 569,897	\$ 358,528	\$ 171,939	\$ -	\$ -	\$ -	\$ 3,015,210	\$ 3,015,120	

Program Name:	CA-MERCED/FRESNOHSR-DESIGN/BUILD											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total in Base Year/FY 11 Dollars*	Check Figures Taken from Detailed Budget:	
YEAR OF EXPENDITURE (YOE) DOLLARS												
10 TRACK STRUCTURES & TRACK	\$ -	\$ 205,765	\$ 423,876	\$ 765,471	\$ 453,238	\$ 234,745	\$ 121,359	\$ -	\$ -	\$ 2,204,454	\$ 2,204,454	
20 STATIONS, TERMINALS, INTERMODAL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
30 SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
40 SITEWORK, RIGHT OF WAY, LAND, EXISTING IMPROVEMENTS	\$ -	\$ -	\$ 149,704	\$ 205,294	\$ 19,430	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
50 COMMUNICATIONS & SIGNALING	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
60 ELECTRIC TRACTION	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
70 VEHICLES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
80 PROFESSIONAL SERVICES (applies to Cat. 10-60)	\$ -	\$ 30,012	\$ 51,622	\$ 64,763	\$ 81,590	\$ 60,661	\$ 34,592	\$ -	\$ -	\$ 323,640	\$ 323,640	
90 UNALLOCATED CONTINGENCY	\$ -	\$ 21,089	\$ 42,045	\$ 54,963	\$ 56,887	\$ 47,992	\$ -	\$ -	\$ -	\$ 222,976	\$ 222,976	
100 FINANCE CHARGES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Program Cost (10-100)	\$ -	\$ 256,867	\$ 667,248	\$ 1,096,638	\$ 665,067	\$ 418,478	\$ 207,454	\$ -	\$ -	\$ 3,311,749	\$ 3,311,749	

* 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 Cost" 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.

Return to the Main Page

Schedule - Service Development Program

Instructions:

- 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). Shade all cells in the corresponding row in which activity will take place. Enter an 'X' in a cell to shade that cell.
- Illustrate the anticipated timing and duration of each task item on the chart below. Shade the quarters or months for each corresponding year in which work will take place on a task. Shade all cells in the corresponding row in which activity will take place. Enter an 'X' in a cell to shade that cell.
- 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-MERCED/FRESNOHSR-DESIGN/BUILD

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
Service Development Plan																				
Develop Service Development Plan																				
Develop Service Selection NEPA documentation																				
Receive environmental determination for Service Selection NEPA																				
Submit request / receive FRA approval for Letter of Intent (if applicable)																				
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																				
FD Drawings; and cost estimate, schedule refinement																				
Acquisition of real estate, relocation of households and businesses																				
Conduct reviews																				
Issue requests for bids																				
Submit request / receive FRA approval for Construction																				
Construction																				
Make awards of construction contracts																				
Construct Infrastructure																				
Finalize real estate acquisitions and relocations																				
Acquire and test vehicles																				
Service Operations - Project/Program Close Date																				
Service Operations																				
Completion of project/program close-out, resolution of claims																				

Attachment 2: Summary of Transportation Benefits of the Redefined ARRA Track 2 grant for the Merced-Fresno Section

The Merced-Fresno ARRA base project is an integral part of the State-wide HST program to develop a new intercity passenger rail (IPR) service not provided today, with over 200 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.

In and of itself the project 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 project 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 project will fully grade separate this line, and reduce rail and road exposure to accidents at grade crossings. The project will install positive train control technology on the new line to allow safe and efficient operation.

OPERATIONAL INDEPENDENCE AND UTILITY -- IMPROVED SAN JOAQUINS TRANSPORTATION BENEFITS

The San Joaquins running on the project's infrastructure would provide the State's first true 125 mph high-speed intercity rail service with the potential for speeds up to 150 mph should today's prototype locomotives advance into commercial production. At the 125 mph speeds, and assuming the express operation of two new round trips in the State Rail Plan, the San Joaquins could save as much as twenty-one minutes compared to current trip times between Fresno and Merced, Sacramento, and the Bay Area. The existing local trains would also save around 15 minutes, stopping at a new station on the new line to serve Madera. Time savings to the Bay Area and Sacramento will be larger still as a result of other investments in the State Rail Plan.

As a result of the State Rail Plan improvements and forecast growth in the State, riders are anticipated to increase by 200,000 in the year 2018. The additional improvements from the ARRA base project will generate another 122,000 passengers in the same year. Thus the improvements from this project will result in 10% more San Joaquin riders than in the State Rail Plan, and 34% more than currently riding the San Joaquins. Ridership will grow to 1.49 million passengers by the tenth year of operation, a 53% increase. The faster services are expected to be more attractive for the longer distance trips and trip length will increase, resulting in an increase over today of 62 million passenger miles in 2018, growing to a 91 million passenger mile increase by the tenth year of operation in 2027, a 65% increase from today. On time performance of the San Joaquins is reasonably good, at around 90%, with trains delays equal to 3% of total time according to the Amtrak Monthly Report for May 2010. Freight and passenger train interference and host railroad delays accounted for roughly 1/2 of the total minutes of delay. The project's construction of a full double track alignment separated from freight trains will improve this component of delay, although interference and slow orders on the remainder of the route will still continue to impose some delay. The full grade separation of the alignment from crossing road traffic is the most important safety improvement to the transportation system growing from this investment. It will improve safety for road users and rail passengers and personnel alike.

The per-train-mile cost of operations to the State and Federal governments will be slightly lower, since the payments that Amtrak makes to the host railroad are based on train miles, and some 511,000 train miles per year will be transferred to the State-owned facility. In conjunction with the higher revenues, this will increase the proportion of operations cost covered by passenger fares to 53% from 43% today.

**MERCED TO FRESNO - Revised ARRA Segment
PRO-FORMA SOURCES & USES IN THOUSANDS**

Fiscal Year End*	30/Sep/10	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
[Date]	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	4.6%	4.4%	4.2%	4.8%
Periodic Growth in Revenue	[%]	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%
Federal Grants - Capital Investments	0	0	202,658	361,484	457,976	323,987	203,772	102,534	3,546	0	0	0	0	0
State Grants - Capital Investments	0	0	202,658	361,484	457,976	323,987	203,772	102,534	3,546	0	0	0	0	0
Local Grants - Capital Investments	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Revenue - revised ARRA segment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.2	58.9	61.7	64.4	67.1	70.4
Operating Subsidies - Caltrans & Federal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.8	64.9	65.9	67.0	68.1	69.2
Capital Replacement Subsidies- Caltrans & Amtrak	0	0	0	0	0	0	0	0	11,956	11,956	11,956	11,956	11,956	11,956
Total Sources	0.0	0.0	405,315.9	722,967.1	915,952.1	647,973.1	407,544.7	205,068.8	19,167.4	12,080.0	12,083.8	12,087.6	12,091.5	12,095.7
Capital Costs - revised ARRA segment	0	0	(405,316)	(722,967)	(915,952)	(647,973)	(407,545)	(205,069)	(7,091)	0	0	0	0	0
Operating Costs - revised ARRA segment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(120.0)	(123.8)	(127.6)	(131.5)	(135.3)	(139.6)
Capital Replacement Costs - revised ARRA segment	0	0	0	0	0	0	0	0	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)
Total Uses	0.0	0.0	(405,315.9)	(722,967.1)	(915,952.1)	(647,973.1)	(407,544.7)	(205,068.8)	(19,167.4)	(12,080.0)	(12,083.8)	(12,087.6)	(12,091.5)	(12,095.7)
Change in Cash	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

* All projects that are funded by the ARRA monies will be completed by Federal Fiscal Year 2017. However, based on past experience, it is expected that complete funding of those projects will only occur by the early months of Federal Fiscal Year 2018 once all respective paperwork is completed.

MERCED TO FRESNO - Revised ARRA Segment
 PRO-FORMA SOURCES & USES IN THOUSANDS

Fiscal Year End*	30/Sep/24	30/Sep/25	30/Sep/26	30/Sep/27	30/Sep/28	30/Sep/29	30/Sep/30	30/Sep/31	30/Sep/32	30/Sep/33	30/Sep/34	30/Sep/35	30/Sep/36	30/Sep/37
[Date]	4.6%	4.4%	4.2%	4.7%	3.6%	3.6%	3.5%	3.4%	3.3%	3.2%	3.1%	3.0%	2.9%	2.8%
Periodic Growth in Revenue	[%]													
Federal Grants - Capital Investments	\$ in '000	0	0	0	0	0	0	0	0	0	0	0	0	0
State Grants - Capital Investments	\$ in '000	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Grants - Capital Investments	\$ in '000	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Revenue - revised ARRA segment	\$ in '000	73.6	76.9	80.1	83.9	86.9	93.1	96.2	99.4	102.5	105.6	108.8	111.9	115.1
Operating Subsidies - Caltrans & Federal	\$ in '000	70.2	71.3	72.3	73.3	74.4	75.4	77.5	78.6	79.6	80.7	81.7	82.8	83.8
Capital Replacement Subsidies- Caltrans & Amtrak	\$ in '000	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956	11,956
Total Sources	\$ in '000	12,100.0	12,104.3	12,108.6	12,113.3	12,117.4	12,121.6	12,125.8	12,130.1	12,134.3	12,138.5	12,142.7	12,150.9	12,155.1
Capital Costs - revised ARRA segment	\$ in '000	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating Costs - revised ARRA segment	\$ in '000	(143.8)	(148.1)	(152.4)	(157.2)	(161.3)	(165.4)	(173.8)	(177.9)	(182.1)	(186.3)	(190.5)	(194.7)	(198.9)
Capital Replacement Costs - revised ARRA segment	\$ in '000	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)	(11,956)
Total Uses	\$ in '000	(12,100.0)	(12,104.3)	(12,108.6)	(12,113.3)	(12,117.4)	(12,121.6)	(12,125.8)	(12,130.1)	(12,134.3)	(12,138.5)	(12,142.7)	(12,150.9)	(12,155.1)
Change in Cash	\$ in '000	0.0												

* All projects that are funded by the ARRA monies will be complete by Federal Fiscal Year 2017. However, based on past experience, it is expected that complete funding of those projects will only occur by the early months of Federal Fiscal Year 2018 once all respective paperwork is completed.

Upload #17

Applicant: CALIFORNIA HIGH-SPEED RAIL AUTHORITY
Application Number: HSR2010000378
Project Title: California High-Speed Train Project FY2010 Service Development
Program between Merced and Fresno
Status: Awarded
Document Title: SF424C M-F.pdf

FY10 Merced-Fresno		BUDGET INFORMATION - Construction Programs		
NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.				
COST CLASSIFICATION	a. Total Cost (thousands)	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b) (thousands)	
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
2. Land, structures, rights-of-way, appraisals, etc.	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
4. Architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
5. Other architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
6. Project inspection fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
7. Site work	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
8. Demolition and removal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
9. Construction	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
10. Equipment	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
11. Miscellaneous Design-Build contracts	\$ <input type="text" value="1,024,979.00"/>	\$ <input type="text"/>	\$ <input type="text" value="1,024,979.00"/>	
12. SUBTOTAL (sum of lines 1-11)	\$ <input type="text" value="1,024,979.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,024,979.00"/>	
13. Contingencies (unallocated)	\$ <input type="text" value="52,976.00"/>	\$ <input type="text"/>	\$ <input type="text" value="52,976.00"/>	
14. SUBTOTAL	\$ <input type="text" value="1,077,955.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,077,955.00"/>	
15. Project (program) income	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text" value="0.00"/>	
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="1,077,955.00"/>	\$ <input type="text" value="0.00"/>	\$ <input type="text" value="1,077,955.00"/>	
FEDERAL FUNDING				
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.			Enter eligible costs from line 16c Multiply X <input type="text" value="70"/> %	\$ <input type="text" value="754,570.00"/>