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Sent:	Thursday, December 29, 2016 2:10 PM
То:	Barnes, Juliana (FRA)
Cc:	mlrule@transystems.com; Everett, Lynn (FRA); Giovinazzi, Giles@DOT; Gilliland, Barbara@HSR; Malone, Desiree@HSR
Subject:	Q4-16 Deliverables - Email 2 of 3
Attachments:	AWP FY 16.pdf; PMP 2016 Annual Update.pdf; Q4-16 Deliverables Transmittal 2.doc
Categories:	CHSRA

Hi Juliana,

As stated in the email 1 of 3 - the sum of the Q4 deliverables are too large to send in one email; therefore, I'm spreading them over 3 emails. Each email will have a separate transmittal form for the included deliverables.

This second of 3 emails includes:

- Q4-16 Deliverables Transmittal 2
- 2016 Annual Work Plan
- 2016 Program Management Plan

If you have any questions, or something fails to open for you, please let me know.

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HIGH-SPEED RAIL: CONNECTING AND TRANSFORMING CALIFORNIA







Annual Work Plan FY16/17

October 2016

www.hsr.ca.gov | (916) 324-1541 | info@hsr.ca.gov

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Background

Established in 1996, the California High-Speed Rail Authority (Authority) is the state department responsible for planning, constructing and operating the 520-mile-long high-speed rail system in California connecting San Francisco to Los Angeles/Anaheim. The high-speed rail system is ultimately envisioned to extend to Sacramento and to San Diego.

The Authority is governed by a nine-member Board of Directors (five appointed by the Governor, two appointed by the Senate Committee on Rules, and two by the Speaker of the Assembly). There are elected Chair and Vice-Chair positions within the Board of Directors. The Authority is led by the Chief Executive Officer (CEO) who reports to the Board of Directors. The CEO works with the Board on the program's direction and a broad range of issues regarding the ongoing program, establishing program policies and goals, certifying environmental documents, and entering into agreements.

Introduction

This document is the Authority's Annual Work Plan (AWP). The AWP is prepared annually for the Federal Railroad Administration and submitted in compliance with the federal American Recovery and Reinvestment Act of 2009 (ARRA) and Fiscal Year 10 (FY 10) grant agreements. The AWP is a requirement within Task 5 of Attachment 3, Statement of Work for the ARRA and FY 10 agreements.

The Authority receives federal funding through the two grants identified above. These funds contribute to the completion of environmental documentation and preliminary engineering for the Phase 1 system from San Francisco to Los Angeles/Anaheim, and construction of the First Construction Section (FCS) generally from Madera to Shafter as shown in Figure 1. The two grants fund activities that are broken out by tasks within the grant in Attachment 3, Statement of Work. The tasks include:

- Task 1: Environmental Review (San Francisco Los Angeles/Anaheim)
- Task 2: Preliminary Engineering (San Francisco Los Angeles/Anaheim)
- Task 3: Other Related Work Needed Prior to Construction
- Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP) (now complete)
- Task 5: Program, Project and FCS Construction Management
- Task 6: Real Property Acquisition and Environmental Mitigation
- Task 7: Early Work Program (closed)
- Task 8: Final Design and Construction Contract Work for the FCS
- Task 9: Interim Use Project Reserve
- Task 10: Unallocated Contingency

The ten tasks are broken down into sub-tasks as defined in the Task and Sub-Task Descriptions in Appendix A – Grant Tasks and Sub-Tasks. The AWP outlines the work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement and tracking of deliverables so that implementation of the project stays on schedule and within budget.



Figure 1 - Phase 1 and First Construction Section

This AWP provides a programmatic overview followed by a summary of specific activities related to each grant task as outlined in Attachment 3, Statement of Work, and highlights planned milestones and key activities in fiscal year July 1, 2016 to June 30, 2017 (FY16/17).

Staffing

The Authority's Board of Directors (Board) and Executive Management recognize the importance of a strong management structure and proper staffing to ensure the successful delivery of the high-speed rail program. The organizational model includes: Monitoring by multiple external agencies and federal grant funded oversight; an active Board of Directors to set policy and make environmental, contracting and financial decisions; a senior Executive management team with extensive project development experience; interagency support for many standard state administrative functions; and reliance on the private sector to deliver the project under contracts negotiated and managed by government employees and legal counsel.

The Authority Board sets direction and governs the organization through broad policies and objectives that outline the Authority's Business Plan. In addition to selecting the Chief Executive Officer (CEO), the board provides direct oversight of two key functions – internal audit and risk management.

The CEO has established an organization that provides direction and oversight for all aspects of developing and implementing the high-speed rail system. The Executive management team includes the CEO, chief counsel, chief financial officer, chief program manager and other senior management. Several key positions are specifically called out in statute [Section 185024 Public Utilities Code]. The staffing plan utilizes an integrated approach wherein the organization consists of both state employees and consultant staff from its rail delivery partner hired in 2015 and financial advisor hired in 2016.

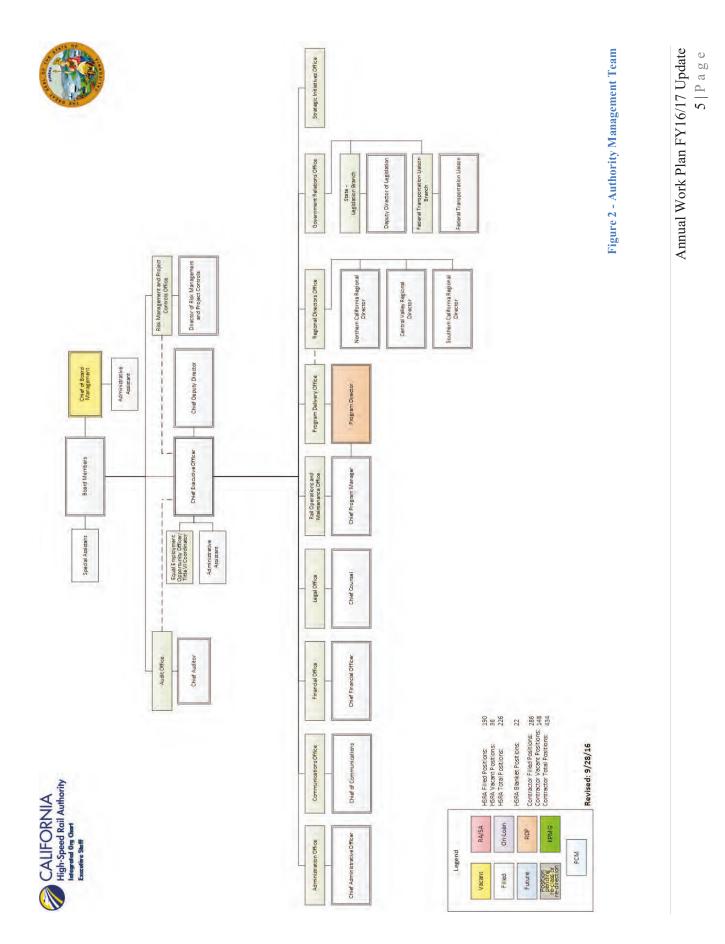
The executive leadership team spans all functional areas to ensure consistency throughout the program, and has experienced staff at the regional level to enhance outreach and service delivery within local communities. It is responsible for selecting senior management staff, establishing management plans, identifying and monitoring risks, overseeing budgetary requirements and other organizational processes. Figure 2 - Authority Management Team shows the key leadership positions, these include:

- Chief Executive Officer
- Chief Deputy Director
- Chief Administrative Officer
- Chief Counsel
- Chief of Communications
- Chief Financial Officer
- Chief Program Manager
- Regional Directors (Northern California, Central Valley, and Southern California)

The executive leadership and senior management staff oversee the architectural and engineering design professionals and the construction design-build teams including:

• Regional Consultants (RCs) – Environmental documentation and preliminary engineering deliverables

- Environmental and Engineering Consultants (EECs) Environmental assessment, mitigation monitoring and engineering support after completion of environmental documents
- Right-of-Way (ROW) Consultants Technical staff to support appraisal and acquisition of property
- Project and Construction Management (PCM) Consultants Oversee the delivery of each construction package
- Design and Construction Contractors Complete a civil construction package
- Operations and Maintenance System operator to manage and maintain the system.



High-Speed Rail Authority				S	SRA	V Pro	gra	E P	has	e 1	ž	esto	HSRA Program Phase 1 Milestone Table	able	-					
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Data Date: October 1 2016											-	Fleet 1 (Valley to Valley)	/alley!		Test Track					SEALINI LON
	(INARCO)	STB ROD	Complete PE4P	issue RTP issue NTP		Substantial Completion	Issue RFP	fissue NTP	Substantial	issue &FP	Issue NTP	Prototype Acceptance	Acceptance	Complete Static Testing	Completo Dynamic Texting	Complete Prototype Testing	Complete Static Testing	Dynamic Texting	Complete Trial Run	SERVICE
Silicon Valley to Central Valley Line (San Jose to Poplar Avenue)	se to Popl	ar Avenu	ie)																	
San Jose to FCS																				
San Jose Approach				Nov-17 Jun-18	Jun-18	Jan-22														
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CP 2-3	Q	Complete		Apr-14	Jul-15	lun-19			Dec-20			HUB-21		Jun-21	Dec-21	Dec-22				
CP 4				May 15 Apr-16	Apr-16	Apr-19					1									
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FCS to Bakersfield	Dec-17	Apr-17	Apr-17 Aug-18 Jun-17 Apr-18	Jun-17	Apr-18	Oct-21	Vov-17	Aug-18	0ct-22								Jun-23			
Merced to FCS & FCS to Burbank																				
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Palmdale to Burbank										1							-			
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Figure 3 - Authority Program Phase 1 Milestone Road Map

Annual Work Plan FY16/17 Update

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Schedule

As defined in the 2016 Business Plan, the Authority is projecting passenger service to start on the initial project segment, from the Silicon Valley to the Central Valley, in 2025 and Phase 1 completion by 2029. The milestone schedule and phasing strategy to meet these goals is shown above in Figure 3. The milestones provide a high-level summary of the key activities necessary to guide resource planning, and project scheduling and construction. It also shows the overall progression of work and how the interim use of the FCS for operations testing fits within the overall schedule for the start of high-speed rail revenue service by January 2025.

In FY 16/17 the Authority is expected to finalize work on all Phase 1 environmental documents which are scheduled to be completed by December 2017 (see Task 1 summary). In addition, construction of the FCS through Construction Package's (CP) 1-4 will continue with key construction milestones summarized in Task 8. Finally, RFP's are projected to be released for track and systems, and high-speed rail trainsets in Spring 2017.

The Authority provides the FRA with quarterly schedule updates that contain more detailed information about the current status of each grant task. The September schedule update is included in Appendix D.

Cost Estimate

The Authority updates the program cost estimate every two years as part of the business plan (a legislative statutory requirement). These costs were recently updated and included in the *Connecting and Transforming California, 2016 Business Plan* published on May 1, 2016. All cost estimates below are as of May 2016.

The updated costs to complete the environmental, preliminary engineering and planning efforts for the Phase 1 System from San Francisco to Anaheim are summarized below. The cost to complete has increased over previous budget projections due to a variety of reasons, including unanticipated additional environmental documentation and alignment variations to be studied. Project development costs are summarized in Table 1 and include spent-to-date and additional costs needed to complete work related to Tasks 1-4.

Project Development costs	Amount (\$ millions)
Environmental/Planning Spent-to-Date	\$ 643
Phase 1 Environmental/Planning Cost to	\$ 403
Complete	
Total	\$1,046

Table 1 - Project Development Costs

Task 8 covers civil infrastructure construction for the FCS. CP's 1-4 have been procured and contract amounts (including provisional sums) and contingency are summarized in Table 2 below. One additional contract remains to be released for final design and construction of FCS track work. It is anticipated that contract will be released within the FY 17/18.

Section ¹	Contractor	Current Contract (\$ millions)	Contingency (\$ millions)
SR 99	Caltrans ²	\$ 226	\$ 9
CP 1	Tutor-Perini/Zacary/Parsons (TPZP)	\$ 1,285	\$ 160
CP 2-3	Dragados/Flatiron	\$ 1,365	\$ 261
CP 4	California Rail Builders	\$ 444	\$ 62
1 Contract amount	ts as of September 2016 Finance and Audit Report		

Table 2 - Design Build Contract Costs

2 Using CMGC Delivery method, contingency split between Early Works and Main packages

A detailed capital cost estimate of all Phase I program costs can be found

at http://www.hsr.ca.gov/docs/about/business plans/2016 Business Plan Basis of Estimate.pdf

Budget Summary

Phase 1 planning and FCS construction are funded through federal grants, and state resources from Proposition (Prop) 1A and Cap and Trade. The state funds and some local resources contribute to the match required in the ARRA and FY 10 grants. Local match is allocated to station area planning work in cities along the Phase 1 system. Table 3 summarizes federal and state funding. The Authority realizes that additional state funds will be required to complete the full scope of the grant agreements. These funds are identified as additional resources to be expended as part of construction in Task 8. Appendix B – Detailed Grant Budget contains the grant Quarterly Budget Update, September 30, 2016.

Task	Federal Budget	State Match	Total	Additional Resources
1 Environmental	\$173,327,113	\$326,207,370	\$499,534,483	
2 Preliminary Engineering	\$254,362,236	\$ 82,999,427	\$337,361,663	
3 Other Related Work	\$ 83,009,008	\$106,416,974 ¹	\$189,425,982	
4 Project Administration	\$ 677,872	-	\$ 677,872	
5 Construction Management	\$221,959,777	\$197,267,290	\$419,227,067	\$139,400,000
6 Property Acquisition	\$468,304,427	\$383,970,052	\$852,274,479	\$ 91,105,000
7 Early Works	-	-	-	
8 Final Design & Construction	\$2,109,117,773	\$1,662,939,722	\$3,772,057,495	\$994,541,391
9 Project Reserves	\$161,879,645	\$ 46,267,108	\$208,146,753	
10 Unallocated Contingency	\$ 8,538,380	\$59,508,288	\$68,046,668	
Total	\$3,481,176,231	\$2,865,576,231	\$6,346,752,462	\$1,225,046,391

Table 3 - Budget Summary

1 Includes local funding

The following chapters outline the resources, plans and milestones for FY 16/17 for the tasks of the grant agreement except tasks 4, 7, 9 and 10 - Task 4 is complete; Task 7 was deleted; and use of Task 9 and 10 are detailed in separate reports (Interim Use Plan and the Unallocated Contingency Management Plan respectively).

Procurement

The power to enter into contracts necessary to carry out the functions of the Authority is provided by the statutes that created the Authority. These statutes include:

- Public Utilities Code § 185033 which gives the Authority the contracting power to enter into contracts with private or public entities for the design, construction and operation of the high-speed rail Program. The contracts may be separated into individual tasks or segments or may include all tasks and segments, including a design-build or design-build-operate contract.
- Public Utilities Code 185036(a) which allows for architecture and engineering (A&E) and other professional service procurements. The Authority issues RFQs and RFPs respectively.
 - A&E procurements are consistent with the requirements of Government Code Section 4525, et seq., and California Code of Regulations Title 21, Division 6, Chapter 1, Article 1.
 - Other professional service procurements are consistent with the requirements of Public Contract Code Sections 10295 and 10335, et seq. For design-build (DB) procurements, the Authority is currently using a two-step process consisting of a request for qualifications followed by a request for proposals.

The overall procurement strategy has been developed through an ongoing process of industry engagement, including issuance of requests for expressions of interest, industry forums and one-on-one meetings. Design-build (DB), as well as other alternative delivery strategies, are under consideration for delivery of the Silicon Valley to Central Valley initial operating segment.

Deliverables

The Authority provides FRA with an update of key deliverables once a quarter including:

- Quarterly Progress Reports
- Quarterly Budget Update
- Funding Contribution Plan
- Right-of-Way Acquisition Plan
- Summary Schedule
- Contingency Plan Update
- SF 425 Federal and State Match Expenditures

In addition, this past year the FRA and the Authority began conducting a quarterly review of all grant required deliverables' due dates and collaboratively revise the due dates as appropriate. Specific deliverables related to each task area are summarized in their respective task below.

Task 1 Environmental

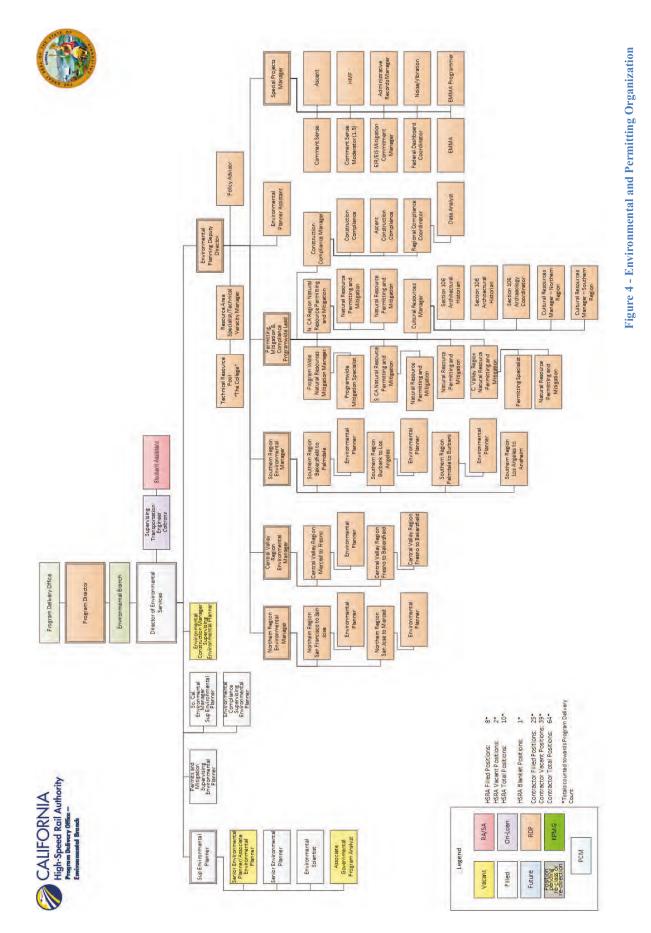
The environmental review process is conducted in accordance with the requirements of the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the Department of Transportation Act (49 U.S.C. 303), and other applicable environmental laws and regulations (collectively NEPA/CEQA).

Environmental review includes the preparation of environmental documentation for each project section, development of resource agency agreements in support of the NEPA/CEQA process and the process to obtain regulatory agency approvals and environmental permits. A mitigation monitoring system has been established to ensure contractor compliance with the environmental documentation Record of Decision (ROD) mitigation and permit conditions. Should alignment changes be proposed that affect previous clearances, staff is included in change management decision making to ensure environmental requirements are considered and documented as outlined in the Design-Build Program Plan – Project Management Plan.

Staffing

The environmental team organizational chart is on Figure 4. The Director of Environmental Services provides direction and oversight of the preparation of environmental clearance documents that are prepared in each region by regional consultants managed by the regional directors. The team is also responsible for securing the permits necessary to begin construction. The team includes the following leadership positions:

- Director of Environmental Planning
- Deputy Director of Environmental Planning
- Supervising Environmental Planner
- Regional Environmental Manager South
- Regional Environmental Manager Central
- Regional Environmental Manager North
- Special Projects Manager
- Permitting, Mitigation and Compliance Manager



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Agency Coordination

The Authority and FRA have entered into a Memorandum of Understanding with the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) to facilitate compliance with the National Environmental Policy Act (NEPA - 42 U.S.C. section 4321, et seq.), the Clean Water Act (CWA – section 404 [U.S.C. section 1344]), and the Rivers and Harbors Action section 14 (33 U.S.C section 408) processes for the project-level (Tier 2) EISs for the ten sections of the program. Three steps in the checkpoint process require concurrence from the EPA and USACE. These steps are integrated with the environmental approval process as noted below:

Checkpoint A – Purpose and need; integrated with the purpose and need definition;

Checkpoint B – Range of alternatives; integrated with the alternatives analysis that leads to the range of alternatives studied in the EIR/EISs; and,

Checkpoint C – Least environmentally damaging practicable alternative (LEDPA); integrated with the selection of the preferred alternative.

The Checkpoint A process has been completed for the Phase 1 sections. Because some sections will not require an individual Section 404 permit for project construction (e.g., San Francisco to San Jose, Burbank to Los Angeles and Los Angeles to Anaheim), it may not be necessary to submit Checkpoint B and C documentation for agency review and concurrence. An EPA and USACE agreement on this approach is anticipated later in 2016. For the remaining sections that will require Checkpoints B and C, work is underway with completion anticipated in FY16/17.

Schedule

Phase 1 environmental clearances are expected to be completed by December 2017. Major milestones are shared with the Board on a monthly basis; in the Fall of 2016, major milestones will also be submitted to FRA to post to the Federal Permitting Dashboard. As dates change, the Authority will provide FRA with revised schedule information in order to update the dashboard. The Environmental Milestone Schedule and Permitting Milestone Schedules (September 2016) are included in Appendix C – Environmental Milestone and Permits Schedules.

Budget

The Environmental Review budget is \$499,534,483 and summarized in Table 3 - Budget Summary (on page 7). All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are contained in a monthly Operations Report. The Operations Report is reviewed by the Authority's Board of Directors Finance and Audit Committee on a monthly basis. The most recent Operations Report is located on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa_committee_meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 1 by project section. Table 4 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update (updated September 30, 2016).

Section ¹	Total
San Francisco – San Jose	\$ 66,007,861
San Jose – Merced	\$161,504,942
Merced – Fresno	\$ 35,339,004
Fresno – Bakersfield	\$ 45,858,851
Bakersfield – Palmdale	\$ 75,065,146
Palmdale – Los Angeles	\$ 86,328,516
Los Angeles – Anaheim	\$ 29,430,163
Total	\$499,534,483

Table 4 - Task 1, Environmental Analysis, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Environmental documentation is governed by many laws and regulations. The Authority provides guidance to the regional consultants on preparation of the environmental documentation in order to ensure consistency across all environmental preparers. This guidance includes:

Project-Level Environmental Analysis Methodologies - Provides the methodological guidance for the preparation of technical reports and impact chapters of project-level environmental documents. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Project_E</u> IR-EIS_Environmental_Methodology_Guidelines-Version5.02.pdf;

Additional Guidance for Evaluating Impacts under NEPA – Outlines the analytical approach for identifying, evaluating and documenting environmental impacts under NEPA. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/NEPA%20Impact%20Guidance.pdf;</u>

Guidance for Preparing Environmental Reviews for Electrical Interconnections – Describes the analytical and documentation steps for evaluating project-related electrical interconnections required for obtaining electrical power for the

system. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env_Review_for_Electrical_Interconnections.pdf;</u>

Refined Guidance on Project EIR/EIS and Technical Report Content – Clarifies the content to be included in technical reports prepared in support of the

EIR/EIS. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Technical_R</u> eport_Preparation_Guidance_2016.pdf;

Alternatives Analysis Methods for Project-Level Environmental Impact Reports and Environmental Impact Statements (EIR/EIS) – Provides guidance on conducting the alternatives analysis and documenting it in an alternatives analysis

report. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Alternatives%</u> 20Analysis%20Methods.pdf;

Independent Utility/Logical Termini of HSR Sections – Outlines the requirement for establishing the logical termini for each of the HSR

sections. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Authority_In</u> <u>dependent_Utility_Letter_02102009.pdf;</u>

Multilingual Public Outreach Guidelines – Sets guidelines for public outreach to meet the Title VI requirements for multilingual

outreach. <u>https://chsra.pbid.com/pmt/Environmental/VL/07.%20Outreach%20and%20Participation%20G</u>uidance/Guidance%20for%20Multi-lingual%20Public%20Outreach%20Ver%201.pdf;

US Army Corp of Engineers Section 404/408 Memorandum of Understanding (MOU) – This document establishes the framework for integration of the Section 404/408 permit process with the environmental process. <u>https://chsra.pbid.com/pmt/Environmental/VL/06.%20Regulatory%20Permits%20and%20Guida nce/NEPA_Section%20404_Section_408%20MOU%20Ver%201.pdf;</u>

Section 106 Programmatic Agreement for the National Historic Preservation Act Programmatic Agreement – Outlines the requirements and responsibilities for the approval process for the State Historic Preservation Officer (SHPO).

(https://chsra.pbid.com/pmt/Environmental/VL/05.%20Cultural%20Resources%20Guidance/Section%20 106%20Programmatic%20Agreement%20Ver%201.pdf);

Administrative Record Guidance – Describes the steps to organize, assemble and provide the administrative record in support of each individual EIR/EIS. (<u>https://chsra.pbid.com/pmt/Environmental/VL/03.%20Environmental%20Admin%20Record%20Guidance/20160105%20Revised%20Documentation%20Guidance-%20Admin%20Record%20FINAL.pdf</u>);

Environmental Compliance Program Manual – Details the key elements of the program and lists the set of standards and procedures. https://chsra.pbid.com/pmt/Environmental/pa/compliance/Forms/AllItems.aspx

Environmental Re-examination Guidance – Describes the evaluation and documentation process for design and other changes to the high-speed rail project following environmental approval. (https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env%20Re-Exam%20Guidance_Complete%20Doc%20(April%202014).pdf).

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete the environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA for each project section:

- Notice of Intent
- Scoping Report
- Agency Coordination Plan
- Purpose and Need Statement
- Alternative Analysis Report
- Administrative Draft EIR/EIS

- Draft EIR/EIS
- Administrative Final EIR/EIS
- Final EIR/EIS
- Record of Decision
- Mitigation and Monitoring Evaluation Plan (MMEP)
- Environmental Re-examinations (as necessary)

To date, the Authority has completed all Notices of Intent, Scoping Reports, Agency Coordination Plans, Purpose and Need Statements and Alternative Analysis Reports for all Phase 1 project sections. Two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and permitting activities for commencing project construction in accordance with the project's Notice of Determination (NOD)/Record of Decision (ROD) have been completed to date. The Authority is in the process of completing supplemental documents on these completed documents.

Table 5 summarizes the deliverables expected to be completed in FY 16/17.

Deliverable/Section¹ Schedule **Administrative Draft EIR/EIS** San Francisco – San Jose 4th Qtr 2016 San Jose – Merced TBD **Bakersfield – Palmdale** TBD Palmdale – Burbank TBD **Burbank – Los Angeles** TBD Los Angeles – Anaheim TBD Supplemental Documents **Bakersfield F Street** 4th Qtr 2016 **Central Valley Wye** 4th Otr 2016 **Draft EIR/EIS** San Francisco – San Jose TBD San Jose - Merced 1st Qtr 2017 **Bakersfield – Palmdale** 2nd Qtr 2017 Palmdale – Burbank 2nd Qtr 2017 **Burbank – Los Angeles** 3rd Qtr 2017 Los Angeles – Anaheim 3rd Otr 2017 Supplemental Documents **Bakersfield F Street** 4th Otr 2016 **Central Valley Wye** 1st Qtr 2017

Table 5 - FY 16/17 Environmental Deliverables

Administrative Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Draft Agency Decision Documents (NOD/ROD)	
Supplemental Documents	
Bakersfield F Street	TBD
ММЕР	
Supplemental Documents	
Bakersfield F Street	TBD

1 September 2016

The Authority will continue the permitting process, the acquisition and securing of off-site mitigation parcels, and compliance oversight of design-build work. Permitting milestones are summarized in Appendix C – Environmental Milestone and Permits Schedules. These are updated on a monthly basis and shared with FRA Environmental Management staff through standing agency briefings.

Task 2 Preliminary Engineering

The Authority follows a standard design development process for each segment. Work has focused on the development of design standards, development of preliminary engineering to support environmental documentation and contract procurement and review of contractor submittals and requests for design variances and/or alternative technical concepts. The phases include:

- **Preliminary Engineering** The Authority provides ongoing oversight of regional consultant developed plans for design consistency across the system. This work supports alternatives development of the various sections in the Phase 1 system.
- **Preliminary Engineering for Project Development (PE4PD) Design** These plans support draft and final EIR/EIS alternatives, provides an itemized construction cost estimate and conforms with all requirements and commitments included in decision documents (FRA ROD; Authority Board Resolution, CEQA findings, and Mitigation Monitoring and Report Plan). The level of engineering detail in PE4PD design plans is sufficient to determine the required footprint for the high-speed rail program facilities and identify environmental impacts.
- **Preliminary Engineering for Procurement (PE4P) Design** These plans support procurement of final design and construction services and provide a more detailed construction cost estimate.

The Authority updates the Design Criteria Manual with new information gathered during preliminary engineering on the various project sections as well as with new information identified through the design-builders. During this fiscal year, the design manual will be updated to include elements of design for stations as well as more refined criteria related to tunneling.

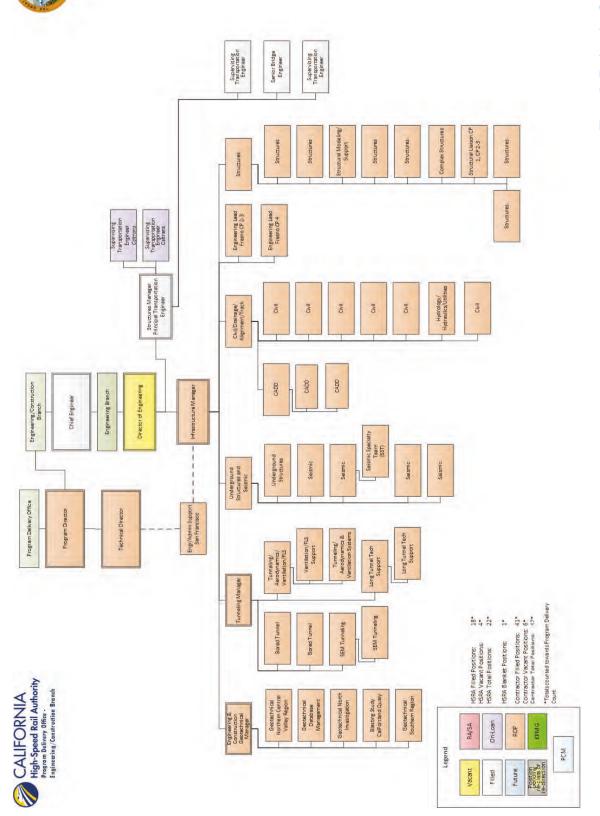
Engineering staff also support the review of various DB contractor proposals related to design refinements and/or variations. This work includes: final design submittal review, design variance requests, constructability reviews, and value engineering.

Staffing

The organizational chart is highlighted on Figure 5. Serving under the Chief Engineer, the Director of Engineering provides direction and oversight of preliminary engineering policy and guidance for the development of plans associated with alignment development for environmental clearance documents. The plans are prepared in each region by regional consultants managed by the regional directors. The team consists of primarily RDP staff that prepares standards and oversees plans prepared by regional consultants and design-build teams for compliance with directed standards. Management roles cover the following engineering areas and include regional lead coordinators in Fresno:

- Infrastructure Manager
- Structures Manager
- Geotechnical Manager
- Tunneling Manager
- Underground Structures and Seismic Manager
- Civil/Drainage/Alignment/Track Manager

Figure 5 - Engineering Organization



Schedule

Phase 1 preliminary engineering for environmental clearances is expected to be completed during FY 16/17. The Authority shares major milestones with the Board on a monthly basis and provides regular updates to FRA. The Environmental Milestone Schedule (September 2016) provided in Appendix B highlights when preliminary engineering for project definition, and preliminary engineering for procurement will be completed. This schedule is updated monthly and provided to FRA during monthly resource planning meetings.

Budget

The preliminary engineering budget is \$337,361,663 and summarized in Table 6. All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are included in the Operations Report, and reviewed by the Authority's Board of Directors Finance and Audit Committee monthly. These costs include preliminary engineering costs for project definition. The most recent Operations Report can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa_committee_meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 2 by project section. Table 6 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update.

Section ¹	Total
San Francisco – San Jose	\$26,484,517
San Jose – Merced	\$85,582,423
Merced – Fresno	\$16,090,509
Fresno – Bakersfield	\$43,482,519
Bakersfield – Palmdale	\$78,192,522
Palmdale – Los Angeles	\$66,485,509
Los Angeles – Anaheim	\$21,043,664
Total	\$337,361,663

Table 6 - Task 2, Preliminary Engineering, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Planning and conceptual design supports the development of alternatives to be evaluated during the environmental review. Design development is based on performance criteria in the legislation governing the high-speed railprogram, and outlined in the business plan. The general performance requirements for the system are described in Technical Memorandum 0.3 - Basis of Design Policy, which is a foundation document for the development of design standards and criteria. The technical memorandum defines the major components and performance objectives that support the development of the engineering and regulatory basis for the high-speed rail program, including its components, objectives, processes, requirements and assumptions which are governed by the Authority. The Authority's policies that determine the processes, standards, and subsystems of the high-speed rail system are generally divided to address:

• Program implementation

- Performance requirements
- Infrastructure
- Systems (electrification, train controls and communications)
- Rolling stock
- Maintenance
- Operations

Conceptual engineering in support of programmatic environmental studies was developed based on a review and compilation of existing high-speed rail standards. The standards and criteria reflected the best practices at the time of the program-level studies and serve to support the development of conceptual alternatives applicable to the California environment and terrain.

Through the alignment and station screening evaluation process, a number of alignment and station options were identified, evaluated and defined for further study in the programmatic EIR/EIS. These alignment and station options are developed based on engineering criteria and parameters established for the screening evaluation. The regional teams complete the definition of the alignment and station options and provide the definitions to the environmental teams as the basis of their analyses.

Technical Memorandum 0.1 - Preliminary Engineering for Project Definition Guidelines: Presents design guidance for a minimum level of engineering, referred to as preliminary engineering for project definition (PEPD), required to support the project-specific environmental impact report/environmental impact statement process. It defines design elements, development level and engineering outputs with the objective of providing a consistent approach in developing preliminary engineering documents to a level that supports the identification of an inclusive environmental

envelope. http://www.hsr.ca.gov/docs/programs/eir_memos/Proj_Guidelines_TM0_1_PE_for_Project_De f_Guidelines_R4_021815.pdf

Technical Memorandum 0.3 - Basis of Design: Defines the major components and performance objectives of the high-speed rail system as envisioned by the Authority, outlining the objectives, requirements, and assumptions for the continuing development of the high-speed rail system. Specifically, it focuses on components, objectives, processes, requirements, and assumptions, which are governed by Authority policy. The policies are divided into program implementation, performance requirements, infrastructure, systems (electrification, train controls and communications), rolling stock and operations. http://www.hsr.ca.gov/docs/programs/eir_memos/TM%200.3%20Basis%20of%20Design%20R3%20120

Design Criteria Manual – Compilation of all the technical memorandum for individual elements of design. <u>http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_EX_IIIA_01_Design_Criteria_Manual.pdf</u>

Technical Memorandum 0.1.1 Preliminary Engineering for Procurement (PE4P) – provides guidance on elements of design and process to inform bidders on construction packages. <u>http://hsr.ca.gov/docs/programs/eir_memos/Proj_Guidelines_TM_01_1_Preliminary_Engineering for Procurement Scope R3 131224 no sigs.pdf</u>

Technical Memorandum 100.07 Value Engineering Implementation Plan -

https://chsra.pbid.com/pmt/eng/SitePages/hs-tm.aspx?View={90E58D02-D2C4-4D7E-B64B-7C8176BB6023}&FilterField1=LinkTitle&FilterValue1=TM%20100%2E07%20Value%20Engineering%20Implementation%20Plan

Design Variance Request Policy -

http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_05_IVE_02_Design_Varianc e_Request_Procedure.pdf

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA related to Task 2:

- PE to Support Environmental Review
- Design Manual (Technical Memorandums)
- CONOPS for the FCS
- Rolling Stock Performance Specifications
- System Safety and Security Management Plan (SSMP)

To date, two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and have been completed. In addition, in progress drafts of the Design Manual, FCS CONOPS Plan, Rolling Stock Performance Specifications and SSMP have been provided. The Authority will complete preliminary engineering and update all plans in FY 16/17.

Table 7 - FY 16/17 Engineering Deliverables

Deliverable/Section ¹	Schedule
PE to Support Environmental Review	
San Francisco – San Jose	1 st Qtr 2017
San Jose – Merced	2 nd Qtr 2017
Bakersfield – Palmdale	2 nd Qtr 2017
Palmdale – Burbank	2 nd Qtr 2017
Burbank – Los Angeles	3 rd Qtr 2017
Los Angeles – Anaheim	3 rd Qtr 2017
Supplemental Documents	
Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	1 st Qtr 2017
Design Manual Update	4 th Qtr 2016
CONOPS for the FCS and any other operating segments	4 th Qtr 2016 (update)
Rolling Stock Performance Specifications	3 rd Qtr 2016
Systems Safety and Security Management Plan (SSMP)	3 rd Qtr 2016

Task 3 Other Related Work

The Authority performs additional work required prior to the start of construction for each section. The areas covered under this task include:

- Station Area Planning Work completed by the RC's to support the environmental documentation phase as well as support to local jurisdictions to evaluate land use and access planning around stations
- **Right-of-Way (ROW) Work** Work to support the identification of properties for environmental evaluation that establishes the footprint for environmental analysis and identification of the acquisition and relocation plan
- **Ridership Forecasting** Updates to ridership forecasts to support financial planning and operational development needs related to concessionaire planning
- LAUS/SoCal Investments ROW preservation

Staffing

Station Area Planning: Over the past year, planning staff has put a substantial emphasis on executing its station area planning contracts and developing working relationships with Phase 1 station cities. This work ensures coordinated infrastructure planning for the future high-speed rail stations. The Authority's planning team has provided technical assistance to the station cities helping with procurements, public involvement, and district scale planning (coordinating infrastructure investments, high-speed rail's high-performance station design criteria, and access planning at the station with the station area). Civic Spark Fellows (an AmeriCorps program) are also being provided as additional support to station cities. The Director of Planning and Integration reports to the Chief Program Manager and is made up of a mix of Authority and RDP staff. The staff develop policies and procedures for station planning, design standards for stations and coordinates with station cities on station area planning. Management roles cover the following primary areas:

- Transportation Planning and Local Support
- Station Development and Design
- Sustainability

Right-of-Way: To construct the various segments of California's high-speed rail system in the Central Valley, the Authority must acquire nearly 1,200 properties and land parcels. Accordingly, the Authority has a standard government transportation ROW function to conduct land surveys, prepare maps, prepare deeds, appraise property, acquire property, plan for utility relocation, and provide relocation assistance to homeowners and businesses. The right-of-way function also provides other property-related services such as managing encroachments, addressing damage to private property, coordinating permits, and providing escrow and title services. Efforts related to this task are focused on support for the environmental documentation phase. For more detailed information related to the ROW program staffing see Chapter 5, Real Property Acquisition and Environmental Mitigation.

Ridership Forecasting: The ridership forecasting team is part of the Financial Office, Commercial Division. It is led by the Deputy Director Commercial and focuses on modeling to support the Authority's financial planning efforts. The work is primarily overseen by RDP staff and conducted by Cambridge Systematics, an RDP sub-consultant.

LAUS ROW Preservation: ARRA funding has been identified to purchase ROW in and adjacent to LAUS, including dedicated platforms and tracks within LAUS, and land to accommodate up to ten runthrough tracks for future use. Since February 2011, staff is working closely with Metro on planning, environmental, and preliminary engineering activities in order to accommodate these purchases. This effort is managed by the Southern California Regional Director.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the Task 4 activities. The next year will focus on the completion of station area planning in Phase 1 station cities and completion of the LAUS ROW procurement.

Station Area Planning: Although the Authority as actively engaged with station cities advance station area planning activities within the ARRA expenditure period, the station cities have taken and/or needed more time than anticipated to procure contractors and initiate their station area planning activities. The station cities could not reach the projected ARRA budget level or timeline to fully expend this line-item allocation. Therefore, on October 28, 2016, the Authority submitted a GARF to transfer \$2,800,000 of the Station Area Planning allocation to construction activities (Task 8). The schedule for each station area plan can be found on the Summary Schedule Update under Task 3 for each project section.

Right-of-Way: In order to accelerate ROW purchases, FRA has granted the Authority the use of a Working Capital Advance (WCA). This has helped accelerate the purchase of high value properties. Specific properties are identified and the Authority provides the FRA an update on the status of expenditures on a monthly basis. The Authority with continue with the WCA process throughout FY 16/17. In addition to the Quarterly Schedule Update identified above, the Authority also provides FRA with a quarterly ROW acquisition update. The latest update can be found at <u>https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx</u> by sorting on the deliverables pull down menu for ROW Acquisition Plan.

Ridership Forecasting: Work over FY 16/17 the model will support the efforts of the environmental team to complete the Phase 1 documentation. The model will also be evaluated for possible updates to support financial modeling needs. No major updates are planned this FY.

LAUS ROW Preservation: The Quarterly Schedule update includes the schedules for the Burbank-LA and LA-Anaheim project sections which will incorporate improvements at Los Angeles Union Station (LAUS). The Authority is actively coordinating with LA Metro to incorporate high-speed rail into the LAUS. As LA Metro advances plans and environmental clearance, the Authority is reviewing technical and engineering concepts as LA Metro identifies a preferred alternative and publishes the draft EIR/EIS for LinkUS. All grant-associated LAUS ROW acquisitions are expected to be finalized by the Spring of 2017.

Budget

The budget for Task 3 Other Related Work is \$189,425,982 summarized in Table 8 below. All federal expenditures related to this task are from the ARRA grant. The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 3 by project section. Table 8 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update. This task also includes other local funding as part of the anticipated state match for the station area planning and LAUS

sub-tasks. In addition, a separate sub-task has also been created for pre-construction planning and legal services related to pre-construction efforts.

ARRA	State	Local	Total
\$4,681,420	\$4,856,623		\$9,538,043
\$5,719,426	\$5,933,475		\$11,652,901
\$237,231	\$246,109		\$483,340
\$1,662,521	\$1,724,741		\$3,387,262
\$2,009,773	\$2,084,989		\$4,094,762
\$2,700,000	\$4,200,000	\$4,100,000	\$11,000,000
\$32,000,000		\$48,000,000	\$80,000,000
\$33,998,637	\$35,271,037		\$69,269,674
\$83,009,008	\$54,316,974	\$52,100,000	\$189,425,982
	\$4,681,420 \$5,719,426 \$237,231 \$1,662,521 \$2,009,773 \$2,700,000 \$32,000,000 \$33,998,637	\$4,681,420 \$4,856,623 \$5,719,426 \$5,933,475 \$237,231 \$246,109 \$1,662,521 \$1,724,741 \$2,009,773 \$2,084,989 \$2,700,000 \$4,200,000 \$32,000,000 \$35,271,037	\$4,681,420 \$4,856,623 \$5,719,426 \$5,933,475 \$237,231 \$246,109 \$1,662,521 \$1,724,741 \$2,009,773 \$2,084,989 \$2,700,000 \$4,200,000 \$32,000,000 \$48,000,000 \$33,998,637 \$35,271,037

Table 8 - Task 3, Other Related Work, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016 2 Includes local funding

Regulatory Documentation and Guidelines

Station Area Planning: The Authority works with stakeholders on station design and station area plans. This work begins with siting and defining the environmental footprint and sizing of the station. In addition, staff is also working collaboratively with each Phase 1 station city to address transportation access planning, identify land use changes, and developing community transportation hubs.

The station cities are key stakeholders for the program. Federal and state funding is allocated toward the development of station areas. The funding is dedicated to support station area planning and local land use decisions related to transit-oriented development, joint development and other transit-supportive enhancement opportunities. Interagency agreements have been executed with all but one station city (Millbrae). The agreements outline the station access and development plan partnership between the city and the Authority.

The Authority has developed a variety of guidelines, plans and procedures for use by designers, local jurisdictions and other stakeholders in initiating and carrying out this process:

- High-Speed Train Station Area Development: General Principals and Guidelines Outline of the Authority's general principles and guidelines for station area development. <u>https://chsra.pbid.com/sites/ao/pm_pub/pf/POLI-PLAN-</u> 01%20HST Station Area Development General Principles and Guidelines.pdf

• Station Deliverables for PEPD and Environmental Documents Memorandum - Defines station planning deliverables for use in preliminary engineering for project definition deliverables and project-level draft environmental documents. This memorandum clarifies how to develop conceptual station plans.

https://chsra.pbid.com/pmt/pln/plndocs/Station%20Deliverable%20Memo%2005.27.16.pdf

• Project Design Criteria Manual Chapter 14 Stations – Presents station design principles and goals as well as space requirements, passenger amenities, station performance, circulation, connections and safety and security for high-speed rail preliminary and final station design. The intended use of this chapter relates to high-speed rail dedicated stations as well as facilities shared in existing stations with other transportation agencies, owners and operators. Because high-speed rail station ridership is expected to increase over time, not all functions referenced in this document will be included in all initial station programs; instead, construction will occur in a staged or phased manner as the high-speed rail system expands.

https://chsra.pbid.com/pmt/pln/plndocs/Des%20Crit%20Manual%20Chap14%20Stations%20%2031 Mar2016_Submittal%20Issued.pdf

 Station Area Parking Guidance Technical Memorandum – Defines appropriate station area parking to be evaluated for the draft project-level environmental documents. As such, this technical memorandum defines the maximum possible footprint without taking into account how changes in local land use and transit connectivity can influence parking demand. This technical memorandum explains the desired parking approach, including cost and layout, along with the process for implementation including Authority, local and private-sector responsibilities. <u>https://chsra.pbid.com/pmt/pln/plndocs/Revised%20Station%20Area%20Parking%20Guidance%20w</u> <u>ith%20signatures.pdf</u>

Vision California – An effort to explore the critical role of land use and transportation investments in meeting the environmental, fiscal and public health challenges facing California today and in the future. New modeling tools are applied to formulate and compare scenarios for how California can accommodate growth based on policy decisions and development patterns. http://www.hsr.ca.gov/Programs/Green Practices/sustainability.html

• UC Berkeley Research on the Potential for Transit-Oriented Development in the Central Valley -These reports, prepared with the support of the Authority, examine the potential for transit-oriented development around high-speed rail stations in the Central Valley. They focus on proposed stations sites in the cities of Stockton, Merced, and Fresno and presents planning approaches and design concepts for land use, urban design and multimodal access and circulation in and around the proposed high-speed rail station areas. <u>http://www.hsr.ca.gov/Programs/Green_Practices/sustainability.html</u>

Right-of-Way: For more detailed information related to the ROW program see Task 6, Real Property Acquisition and Environmental Mitigation.

Ridership Forecasting: Documentation related to the development of the Authority's ridership and revenue forecasting can be found on the Authority's website

at <u>http://www.hsr.ca.gov/About/ridership_and_revenue.html</u>. Information can be found on the California High-Speed Rail Ridership and Revenue Model, Version 3 Model Documentation completed by Cambridge Systematics, February 17, 2016. In addition, reports from the Authority's Ridership Technical Advisory Panel can also be found.

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete station area planning or ROW planning activities. No other major procurements are anticipated.

Deliverables

The following deliverables scheduled for FY16/17 are below. To date, in progress drafts of the ROW Procedures Manual and FCS Contingency Plan have been provided to FRA. ROW Acquisition Plans for the FCS are provided quarterly.

Table 9 - FY 16/17 Other Related Work Deliverables

Deliverable ¹	Schedule
Station Area plans	2 nd Qtr 2017
ROW Procedures Manual	2 nd Qtr 2017
ROW Acquisition Plan for the FCS	Quarterly
FCS Contingency Plan (Update)	4 th Qtr 2016
1 September 2016	

September 2016

Task 5 Program, Project and FCS Construction Management

This task focuses on the overall management of the program and construction oversight of the designbuilders. Deliverables in this area focus on the overall program and project management and construction oversight provided by the Project Construction Managers (PCM).

Staffing

Together, the Authority and RDP form an integrated organization. The Authority provides overarching program oversight and policy direction, and the RDP manages, monitors and oversees the program's operations and progress. The organization is broken down into four primary areas which include:

Program Management: Program management is overseen by the Director of Program Operations and a Program Controls Manager. They are responsible to provide recommendations and support related to program delivery approach and master program planning such as oversight of program controls including program scope, cost, and schedule.

Program Delivery: This area is overseen by Program Director who oversees both Program and Project Delivery to ensure coordination between Program technical expertise as well as individual construction project support. This area is supported by Regional Directors responsible for project and community coordination and delivery in the Northern, Southern and Central Valley regions. On-site functional teams are assigned responsibility for program delivery. Each team oversees and monitors the performance of associated work packages under their assigned disciplines (environmental, engineering, ROW, and etc.) Part of program delivery includes providing the specialized technical resources which may include, but not be limited to, tunneling, seismic design, high-speed rail systems (track electrification, train control, signaling, and communications), trainsets, track work, heavy maintenance facilities, high-speed rail system testing and commissioning, and facility operations and maintenance.

Project Delivery: Project Delivery includes the overall planning, coordination, and control of construction. The Program Director and Chief Engineer have overall responsibility for the execution of the construction work program. The construction project manager is responsible for managing both the construction team and the functional resources needed for the construction project, including the DB contractor. Assigning the project manager the responsibility of managing both the personnel and resources required for a specific project results in creating a single point of contact and accountability for each project as well as program wide consistency across each of the projects comprising the high-speed rail program. For more information on the construction organization see Task 8, Final Design and Construction Contract Work.

Project & Construction Management: The Chief Engineer and Construction Branch Manager oversee the overall organization with support from Authority construction contract managers and the PCM's. The Authority has also retained the services of specialty project and construction management (PCM) firms to provide on-site management expertise and staff to oversee the DB contracts. The PCM oversees and directs field inspectors, and work closely with the design-builder to assist in coordination with agencies and utility companies. PCM's also assist the design-builder in making field decisions to address conditions and/or activities that could impact budget or schedule. The PCM's for each construction project are:

- CP 1 PGH Wong Engineering
- CP 2-3 ARCADIS U.S. Inc.
- CP 4 HNTB Corporation

The Authority primarily manages oversight activities from its headquarters program offices in Sacramento; project managers, project staff, the PCM and the DB are located in local construction project offices. This co-location enhances communication between all parties, expedites the DB approach and provides onsite oversight and coordination.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the PCM schedule for each construction project. All other activities and deliverables related to this task will be performed over the ARRA and FY10 period of performance as required.

Budget

The Task 5 budget is \$419,227,067 and is summarized in Table 10 below. Expenditures related to Program Management and Legal Services are covered only in the ARRA and State funds budget. The budget below reflects the executed amounts for PCM contracts for CP 1 through CP 4.

Sub Task ¹	ARRA	State	FY10	State	Total	Additional
						State
5.1 Program	\$126,599,146	\$132,202,936	0	0	\$258,802,082	\$139,400,000
Management						
5.2 Project	\$48,748,955	\$50,906,782	\$44,500,052	\$11,952,478	\$156,108,267	
Construction						
Management						
(PCM)						
5.3 Legal	\$2,111,624	\$2,205,094	0	0	\$4,316,718	
Services						
Total	\$177,459,725	\$185,314,812	\$44,500,052	\$11,952,478	\$419,227,067	

Table 10 - Task 5, Program, Project and FCS Construction Management Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Management and Program/Project Controls: Program management policies, procedures and tools are utilized to manage and control the delivery of the scope, budget and schedule commitments of the overall program. The program controls plan provides a functional overview of the control processes for managing the scope, budget and schedule at the program-level, whereas the regional project management plans address the specific control processes for managing scope, budget and schedule for each project. More detailed information is included in the Chapter 5, Management and Program/Project Controls of the Program Management Plan.

Project Construction Management Manual (PCMM): Establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work, dealing with

various situations that may arise. The PCMM can be found on the Authority's web site at: <u>https://www.hsr.ca.gov/docs/programs/construction/PCM_Manual_Rev_0.pdf</u>. Various procedures and policies provide a framework for:

- Program structure and organization
- Contract administration
- Communication/documentation/reports
- DB contract submittals
- Verification, validation and self-certification
- Interface management and coordination
- Quality management
- Safety and security
- Schedule control
- Changes and claims
- Right-of-way
- Public involvement
- Completion and closeout

Design-Build Program Plan: The design-build program plan (DBPP) outlines the Authority's approach to project delivery and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery. FRA approved the final plan in April 2016 and it is located on the FRA sharepoint site at: <u>https://chsra.pbid.com/pmt/gm/Deliverables/DBPP-PMP%20FCS%20CHSRA%20Final%20042016.pdf</u>

Procurement

No significant procurements to complete the deliverables associated with this Task are anticipated.

Deliverables

The following deliverables are scheduled for FY16/17.

Deliverable ¹	Schedule
Annual Work Plan	4 th Qtr 2016
Program Management Plan	4 th Qtr 2016
Central Valley Project Financial Plan	4 th Qtr 2016
Phase 1 Program Financial Plan	4 th Qtr 2016
RFP's/NTP's for Design/Construction Services	
CP 5 RFP	4 th Qtr 2016
Network Integration Plan	3 rd Qtr 2016
Updated Service Development Plan	2 nd Qtr 2017
Infrastructure Maintenance Plan (update)	2 nd Qtr 2017
Rolling Stock Maintenance plan (update)	2 nd Qtr 2017

1 September 2016

Task 6 Real Property Acquisition and Environmental Mitigation

Task 6 focuses on ROW delivery for construction and property associated with environmental mitigation. The ROW team maps, appraises, and acquires parcels and provides relocation assistance (associated with ROW) needed for CP1, CP2-3 and CP4. Emphasis in FY 16/17 is to continue to acquire property for construction and begin to focus on future property management activities. ROW schedules and costs are reported on a quarterly basis.

Staffing

ROW is managed by the Director of Real Property and reports to the Program Director. The Director is supported by a manager of ROW information, and a Deputy Director of Real Property that oversees Authority agents who oversee the work of ROW consultants. The Authority's ROW division managers are located in the Sacramento headquarters office, in the Central Valley regional office in Fresno, the Southern California regional office in Los Angeles and the Northern California regional office in San Jose. The organization is shown on Figure 6. ROW consultants are responsible for performing ROW appraisal and acquisition services, including:

- Issuing initial letters to the property owners (Notice of Determination to Appraise [NODA]
- Conducting appraisals
- Issuing the first written offers
- Conducting negotiations
- Preparing the administrative settlement memo
- Issuing revised offers
- Establishing and providing relocation benefits and educating affected property owners about the benefits
- Preparing the acquisition quality checklist
- Preparing the memorandum of appraisal updates, the declaration of value and close escrow and the resolutions of necessity (RONs) needed for the condemnation process

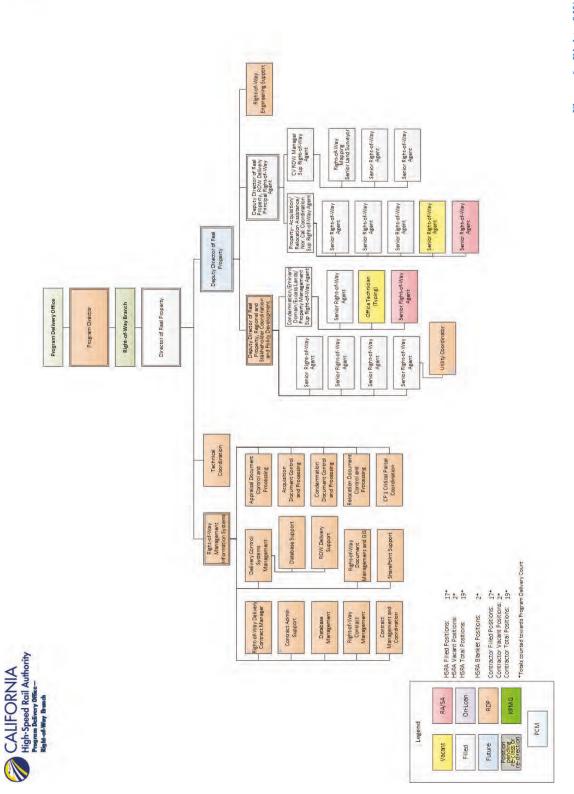
Agency Coordination

The ROW process involves extensive coordination with other agencies which include:

- California State Public Works Board (PWB): This independent agency of the state was created to oversee fiscal matters associated with construction of projects for state agencies. Under the California Property Acquisition Law, the PWB is authorized to approve real estate transactions. Before an offer of just compensation is approved, the PWB reviews the project and its budget and makes an initial determination that the state has the legal authority to purchase the property in question.
- California Department of General Services (DGS): The Real Property Services Section (RPSS) reviews and approves each parcel appraisal for just compensation prior to a written offer for acquisition. Upon execution of the parcel's ROW contract, the Real Property Services Section reviews and recommends approval.
- California Department of Finance (DOF): The Capital Program Branch reviews and executes ROW agreements for compliance with budgetary and project authority for the parcel acquisition.



Figure 6 - Right-of-Way Organization



• California Department of Transportation: The Legal Division provides legal review and representation for ROW contracts, and performs legal services for cases of eminent domain through the Effective Order of Possession.

Schedule

The Authority shares major milestones and the current status of ROW procurement with the Board on a monthly basis and provides quarterly updates to FRA. This information about the work in progress is shared in a monthly operations report. The most updated version can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa_committee_meeting.html

Information is also shared quarterly with FRA. The latest update can be found at <u>https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx</u> by sorting on the deliverables pull down menu for ROW Acq Plan.

In July 2016, the FRA approved the Authority's request for the use of a \$60,000,000 working capital advance (WCA). Access to the WCA allowed the Authority to expedite several critical-path property acquisitions in CP 1 and CP 2-3. The Authority fully expended the initial \$60,000,000 WCA by the September 28, 2016 due date. In October 2015, the Authority requested a second WCA of \$65,000,000 to expedite the ROW acquisition process and correlative construction activities.

Budget

The Task 6 budget is \$852,274,479 and is summarized in Table 12. Currently ARRA federal funding for preliminary ROW and environmental mitigation is through the ARRA grant. These activities will continue beyond the ARRA September 2017 performance period, with future funding covered by state resources.

The Authority executed a WCA in August 2016 and fully expended the initial \$60 million requested within August-September. The second WCA request of \$65,000,000 (approval pending at the time of this report) will enable an expedited ROW acquisition process and completion.

Sub Task ¹	ARRA	State	FY10	State	Total	Additional State
6.1 Real Property – Preliminary ROW	\$13,311,325	\$11,016,061	0	0	\$24,327,386	
6.2 Real Property – ROW Services and Relocation	\$93,438,986	\$77,327,358	\$3,092,482	\$3,850,622	\$177,709,448	\$ 9,987,112
6.3 Real Property – Environmental Mitigation	\$29,489,968	\$24,405,032	0	0	\$53,895,000	\$46,313,298
6.4 Real Property – ROW Acquisition	\$323,079,364	\$267,370,979	\$5,892,302	0	\$596,342,645	\$34,804,590
Total 1 Quarterly Budget Update Septem	\$459,319,643 ber 30, 2016	\$380,119,430	\$8,984,784	\$3,850,622	\$852,274,479	\$91,105,000

Table 12 - Task 6, Real Property Acquisition and Environmental Mitigation Budget

Regulatory Documentation and Guidelines

ROW Manual: In support of the high-speed rail program and in compliance with federal and state mandates required by the California Property Acquisition Law and the Federal Uniform Relocation Assistance and Real Estate Property Acquisition for Federal and Federally Funded Policies Act of 1970, the Authority has developed policies and procedures for the appraisal, acquisition and management of real property. The Authority also developed the program's right-of-way manual, which includes policies and procedures for acquiring and managing property rights through purchase, easement, lease or other legal instruments including, when necessary, condemnation. These policies and procedures are being utilized consistently throughout the program.

Property Management Plan: Maintenance and protection of property interests acquired in the name of the State of California are provided by the property acquisition agent until control of the property is transferred to the contractor. The property acquisition agent is required to maintain an inventory of real property and improvements acquired for the project. Additional responsibilities assigned to the property acquisition agent include protecting the property from vandalism, encroachment or other misuse prior to turnover to the contractor.

Right-of-Way Data Exchange System (ROWDES): In addition to the right-of-way manual, the Authority uses this internal reporting system to track right-of-way acquisition and management. This database is used to manage every parcel acquired by the Authority. ROWDES contains modules for each step of the acquisition/management process, including appraisals, acquisition, condemnation, costs, etc. The data generated by ROWDES enables the generation of weekly reports on ROW status and is used to produce the Board monthly and FRA Quarterly reports.

Procurement

In FY16/17 the Authority expects to award two additional contracts. The additional contracts include:

- ROW Services: Work related to environmental assessments, appraisals, acquisition and relocation services. (Anticipate awarding multiple contracts.)
- ROW Engineering: Work related to boundary surveys, appraisal maps, legal descriptions, title research for the San Jose to Madera section. (Expect to award up to four contracts.)
- ROW Property Management Services: Management of parcels once acquired, transfer to the DB for construction and final overall disposition of excess properties. (Will award up to four contracts.)

In addition, minor contract amendments may also be necessary to existing contracts to ensure the timely delivery of ROW for construction.

Deliverables

The Authority provides FRA an update on ROW acquisition as part of its quarterly reporting. In addition, monthly reports will continue related to WCA ROW activities and expenditures. The latest acquisition update can be found by sorting on the deliverables pull down menu for ROW Acq Plan at the following link: <u>https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx</u>

Task 8 Final Design and Construction Contract Work

The First Construction Segment (FCS) is approximately 118 miles traversing the Central Valley from northern Madera County to Shafter. The alignment is broken into four civil construction packages and one track work construction package (Figure 7). The five construction packages include:

- SR 99 Civil Infrastructure Caltrans is designing and constructing roadway improvements to support the high speed train infrastructure from Ashlan Avenue to Clinton Avenue in Fresno
- CP 1 Civil Infrastructure Avenue 19 (Madera) to East American Avenue (Fresno), 31 miles
- **CP 2-3 Civil Infrastructure** East American Ave (Fresno) to one mile north of Tulare/Kern County line, 65 miles
- **CP 4 Civil Infrastructure** One mile north of Tulare/Kern County line to Poplar Avenue north of Bakersfield, 22 miles
- **CP 5 Track** (also known as Rail Infrastructure, RI1) including systems, communications, signaling, and overhead power for CP1, CP2-3 and CP4

The following contractors have been procured to date:

- CP 1 was awarded to Tutor Perini/Zachry/Parsons (TPZP) Joint Venture in 2013
- CP 2-3 was awarded to the Dragados/Flatiron Joint Venture in 2015
- CP 4 was awarded to California Rail Builders: Farrovial Agroman US Corp in 2016

Staffing

Chapter 3 of the DBPP outlines the roles and responsibilities of the Authority and the various contractors and consultant resources used to manage the DB construction. The plan was approved by FRA in April 2016 and can be found at https://chsra.pbid.com/pmt/gm/Deliverables/DBPP-PMP%20FCS%20CHSRA%20Final%20042016.pdf

The project director leads each construction section and has the overall responsibility for all construction elements including design, construction, ROW, third parties, project delivery, etc. The project director is supported by a project manager whose primary responsibility is to coordinate all the external and third party elements. A design and construction manager is the contract manager for each DB and PCM contract (Figure 8). They ensure effective coordination between the project team and the DB contractor. The project director is the Authority's lead representative for each construction project and the design and construction manager is the lead representative for DB and PCM contract issues.

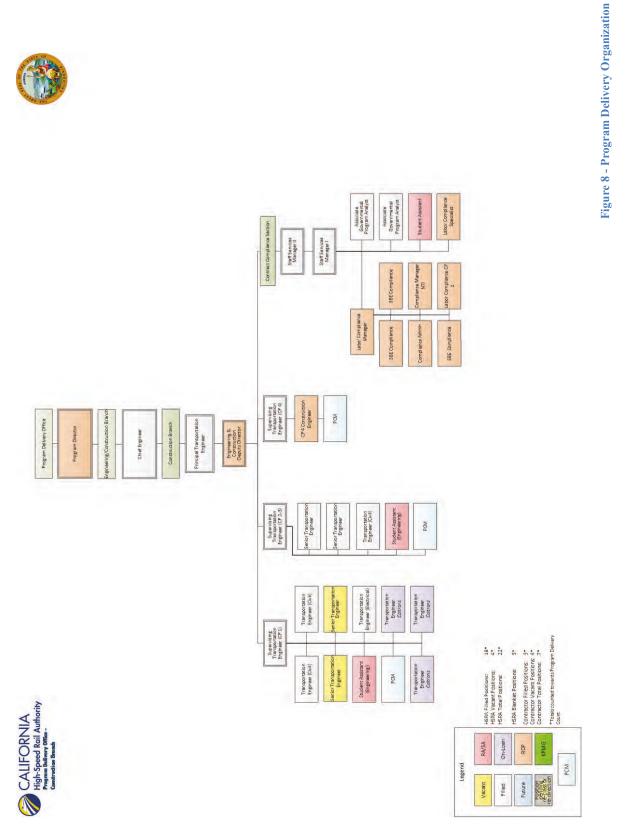
The Authority has hired Project and Construction Management (PCM) firms (discussed in Task 5, Program, Project and FCS Construction Management) to oversee DB contract compliance. These firms provide on-site project and construction management services covering areas such as project pre-planning and programming; procurement, design and construction support; commissioning; testing; claims; and post construction services.

- Wong+Harris provides on-site oversight for CP 1
- Arcadis was procured for CP 2-3
- HNTB was procured for CP 4



Figure 7 - First Construction Section





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Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the construction schedules for each construction project. In addition, FRA is provided the baseline schedules for each construction project as they are approved by the Authority. Baseline schedules have been provided for CP1 and CP 2-3. The CP 4 baseline schedule will be available 4th Quarter 2016.

Budget

The Task 8 budget is summarized in Table 13. It reflects the grant agreement budget of \$3,772,057,495 for civil and track construction of the FCS. It also identifies the additional resources required of \$660,294,844 to complete the project as outlined in Attachment 3, Statement of Work of the grant agreements. Currently, funding for SR 99 is through the ARRA grant. The FCS Track Work Construction is currently under development. A budget will be identified prior to any proposal being released and the budget below will reflect only the federally funded portion of track work for the FCS.

Sub Task ¹	ARRA	State	FY10	State	Total
8.1 SR 99	\$101,889,294	\$124,010,706	0	0	\$ 225,900,000
8.2 Civil	\$479,871,360	\$367,440,832	\$541,762,788	\$58,956,469	\$1,448,031,449
Construction					
Package 1 (CP 1)					
8.3 Civil	\$706,738,379	\$857,745,697	\$93,048,378	\$138,235,436	\$1,795,767,890
Construction					
Package 2 (CP 2-3)					
8.4 Civil	\$62,045,209	\$75,515,983	\$123,762,365	\$41,034,599	\$302,358,156
Construction					
Package 4 (CP 4)					
8.5 FCS Track	0	0	0	0	0
Work Construction					
(CP 5)					
Total	\$1,350,544,242	\$1,424,713,218	\$758,573,531	\$238,226,504	\$3,772,057,495
1 Quarterly Budget Update Septem	ber 30, 2016				

Table 13 - Task 8, Final Design and FCS Construction Budget

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Table 14 - Task 8, Additional Resources Budget

Sub Task ¹	Additional Resources
8.1 SR 99	\$ 35,000,000
8.2 Civil Construction Package 1 (CP 1)	\$ 235,246,547
8.3 Civil Construction Package 2 (CP 2-3)	\$ 27,000,000
8.4 Civil Construction Package 4 (CP 4)	\$ 251,198,844
8.5 FCS Track Work Construction (CP 5)	\$ 446,096,000
Tota	\$ 994,541,391

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Design-Build Program Plan (DBPP): This plan outlines the Authority's approach to project delivery for the initial operating segment and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery.

Project and Construction Management Manual (PCMM): This manual describes how the Authority will execute the design-build projects through an integrated staffing approach that uses Authority staff, PCM, RDP and other consultants. The PCMM establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work in dealing with various situations that may arise.

Procurement

Several procurements are expected in FY16/17. These include:

- Procurement of rail infrastructure CP 5, also known as Rail Infrastructure 1 (RI 1)
- Rolling Stock

Other procurements under discussion include small traditional design-bid-build contracts for specific upfront work including small civil construction packages or contracts for such activities as utility relocations, hazardous materials removal/remediation, site demolition, and clearing and grubbing.

Deliverables

The deliverables identified in the grant agreement are noted below. The next fiscal year will see a dramatic increase in construction progress now that the three primary civil DB contracts have been executed. The following are some of the general activities that will occur:

SR 99

- Complete the Early Works package and begin Main package construction
- Complete remaining UPRR easements and eminent domain parcel acquisitions

CP 1

- Tuolumne Street overcrossing will be completed and Stanislaus bridge demolition will begin
- Work will continue on several structures including
 - Fresno River Viaduct
 - Cottonwood Creek Bridge
 - San Joaquin River Bridge
 - Fresno Trench and intrusion barrier construction
 - SR 180 undercrossing
 - o Cedar Viaduct
- Work will begin in the following locations
 - Avenue 8 Bridge overpass
 - Avenue 12 overpass and road widening
 - American Avenue, Avenue 15 and Avenue 15¹/₂ overpasses

CP 2-3

- North nine miles and south six miles complete clearing and grubbing, begin utility relocation, relocation of irrigation crossings and construction of floodplain crossings
- Begin BNSF relocations at Bowles and Monmouth
- Begin grade separations at Adams, Floral, Elkhorn, Kent, Kansas and Nevada avenues and at Avenue 56

CP 4

- Complete environmental re-examinations
- Begin clearing and grubbing activities where ROW is available
- Complete utility agreements and final designs
- Prepare type selection reports and begin final design

The following deliverables are scheduled for FY16/17. The date noted below represents the last date a deliverable of that type is expected and that phase would be complete.

Table 15 - FY 16/17 Final Design and Construction Contract Deliverables

Deliverable ¹	Schedule
Construction Package 1	
Type Selection Reports	4 th Qtr 2016
60 % Design	4 th Qtr 2016
90% Design	1 st Qtr 2017
Ready for Construction Design	2 nd Qtr 2017
Construction Package 2-3	
Type Selection Reports	2 nd Qtr 2017
Construction Package 4	
Detailed Baseline Schedule	4 th Qtr 2016

1 September 2016

Appendix A – Grant Tasks and Sub-Tasks (Grant Work Breakdown Structure)

Task 1: Environmental Review

- Task 1.1. Regional Consultant Project Management (RC): Development of RC Project Management Plan.
- Task 1.2. Regional Consultant Public/Agency Participation (RC): Developing and implementing a public involvement program focused on identifying regional and local issues and concerns of the potential impacts of HST system and for proposing necessary mitigation measures.
- Task 1.3. Alternatives Analysis (RC): Project Definition including a segment-by-segment alignment description of the HST design options to be investigated in the Project EIR/EIS process(s).
- Task 1.4. EIR/EIS Analysis (RC): Technical studies necessary to evaluate and assess impacts of the HST Alternatives and No Project Alternative as part of the EIR/EIS process(s), addressing both alignments and proposed station locations.
- Task 1.5. Draft and Final EIR/EIS (RC): Preparation of the Draft EIR/EIS document(s) and Final EIR/EIS document(s), including necessary administrative review versions. The site-specific EIR/EIS document(s) must satisfy all the requirements of CEQA and NEPA.
- Task 1.6. Certification of EIR/EIS and ROD (RC): Preparation of other related environmental documents that are required as part of the certification of the Project EIR/EIS document(s), including Findings and a Statement of Overriding Considerations, the Record of Decision/Notice of Determination, and the Mitigation Monitoring and Reporting Plan.
- Task 1.7. Program Management (RDP): Project Management, Controls and communication related to environmental review and permitting for Rail Delivery Partners Team and Regional Consultants toward the goal of the Notice of Determination and Record of Decision.
- Task 1.8 Non-federal Resource and Other Agencies for Environmental Review (Multiple agencies): State agencies support of environmental permitting processes.

Task 2: Preliminary Engineering (PE)

- Task 2.1. Regional Consultant PE (RC): Development of HST design concepts at a sufficient level of detail to develop accurate capital cost estimates, right-of-way requirements, construction staging, traffic and environmental impacts to satisfy CEQA and NEPA requirements.
- Task 2.2. Program Management (RDP): Project Management, controls and communication related to preliminary engineering for Rail Delivery Partner Team and Regional Consultants.
- Task 2.3. RDP Engineering (RDP): Engineering support to establish master standards for the project and establish procedures and systems to provide compliance and coordination between all sections.

Task 3: Other Related Work Needed Prior to Start of Construction

- Task 3.1. Regional Consultant Station Area Planning (RC): RC-supported work with the local jurisdictions and public in developing HST station area plans.
- Task 3.2. Regional Consultant ROW Work (RC): Conduct assessments to identify segments at risk of imminent development or other changes in use that could significantly increase implementation costs and difficulty.

- Task 3.3. RDP ROW Work (RDP): Development of a Right-of-Way assessment and acquisition program.
- Task 3.4. Ridership Forecasting (RDP): Ridership work, ridership & revenue forecasts and station boarding's to support HST System phases of development.
- Task 3.5. Construction Planning / Procurement Support (RDP): Services to procure other services, equipment and construction for the total project implementation. Including possible staging options to best serve the project.
- Task 3.6. Station Area Planning: Development of a station area plan or equivalent incorporating a transit-oriented development (TOD) development code and/or specific plan (or equivalent) to the local comprehensive plan.
- Task 3.7. LAUS/So California Investments: Preservation and acquisition of property, rights-of way, and the related environmental clearances and engineering activities that will enable HST to operate at Los Angeles Union Station (LAUS).
- Task 3.8. Legal Services Pre-construction: Legal assistance in negotiations pertaining to federal and state laws with freight and passenger rail companies that may be impacted by the HSR project.

Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP, Complete)

Task 5: Program, Project and FCS Construction Management

- Task 5.1. Program Management (RDP): Program Management activities may include program and project management and controls, engineering due diligence reviews, commercial and procurement support, program wide planning, implementation planning, system electrification and testing and commissioning, design/build support (as applicable), network integration and system assurance.
- Task 5.2 Project Construction Management (PCM): FCS project construction management activities may include contract administration, submittal review, quality assurance oversight inspection for work in place and materials, management of claims and change orders, and review and approval of progress payment requests and final acceptance of the work.
- Task 5.3 Legal Services Construction: Legal assistance for issues that impact construction.

Task 6: Real Property Acquisition and Environmental Mitigation

- Task 6.1. Real Property Preliminary ROW: Work performed in preparation for procurement up to, but not including, the first written offer to purchase
- Task 6.2. Real Property ROW Services & Relocation: On-the-ground real property activities which may include parcel identification, survey and mapping, appraisals, offers of just compensation, negotiations and relocation benefits.
- Task 6.3 Real Property Environmental Mitigation: Grantee-implemented environmental mitigation.
- Task 6.4 Real Property ROW Acquisition: Capital costs of obtaining any real property interest necessary for the FCS. And, with FRA prior written approval, outside of the FCS.

Task 7: Early Work Program (Deleted)

Task 8: Final Design and Construction Contract Work for the FCS

- Task 8.1: SR-99: Final design and construction for highway relocations (State Route-99) as well as interface reviews and civil infrastructure. This work will be completed by Caltrans working as a contractor to CHSRA.
- Task 8.2: Civil Infrastructure Construction Package 1 (CP1): Civil and structural infrastructure from approximately Avenue 19 in Madera County to approximately East American Avenue in Fresno County.
- Task 8.3: Civil Infrastructure Construction Package 2-3 (CP2-3): Civil and structural infrastructure between approximately East American Avenue in Fresno County to approximately one mile north of the Tulare-Kern County Line.
- Task 8.4: Civil Infrastructure Construction Package 4 (CP4): Final design and construction of civil and structural infrastructure from one mile north of the Tulare-Kern County Line southward to North of Bakersfield, currently near Poplar Ave.
- Task 8.5: FCS Track Work Construction (CP5): Final design and construction of track work for the civil and structural infrastructure construction in Construction Packages 1 through 4.

Task 9: Interim Use Project Reserve

- Task 9.1 Project Reserves: Funds over and above the Unallocated Contingency that have been budgeted but not yet allocated to specific tasks.
- Task 9.2 Interim Use Reserve: Infrastructure necessary to initiate independent utility on the FCS funded under this Agreement which may include track, signal and communications elements, stations, and a limited maintenance facility.

Task 10: Unallocated Contingency – Contingency that is not allocated to a specific task or sub-task.

Appendix B – Detailed Grant Budget (September 2016)



Budget Summary

Odditional State	Pudicional state	DOUGEL	•							139,400,000		91,105,000				004,541,301			\$ 1,225,046,331	
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(and (Other)	Didot (uner)	ouger	. 8			52,100,000				•									282 089,188 \$ 52,100,000 \$	
State Emended to	Detail	Late	\$ 72,554,237	64,952,362		15,449,931				21 023 596		68,700,362				50,408,700				
	Ct to Distant		\$ 326,207,370 \$	82,999,427		54,316,974				185,314,812		380,119,430				1,424,713,218			\$ 2,463,671,231	
ederal Ortlans to	The 2	Late	: 144029,194 \$	128,504,951		31,453,400		677,872		172,400,637		496,000,258				588,984,947	53,856,392		: 1,616,006,651	
Federal Emended Federal Outlans to		TO UBLE	\$ 144,029,194 \$	128,504,961		31,453,400		677,872		172,409,637		496,000,258				588,984,947	53,856,392		\$ 5058,227,462 \$ 2,562,556 231 \$ 1,616,006,661 \$ 1,516,006,561 \$ 2,453,571,231 \$	
	Endored Distant	reueral puquer	\$ 173,327,113	254,362,236		8006008		677,872		177,469,725		469,319,643				1,350,544,242	53,856,392		\$ 2,552,556,231	
	Total D. Montool	i dai pudgeed	\$ 499,534,483 \$	337,361,663		189,425,982		677,872		362,774,537		839,439,073				2,775,257,460	53,856,392		\$ 5,058,327,462	
	0000 C 011H +0 0 C 0	AKKA GRAM # HSK-UUUS	Task 1: Environmental Review	Task 2: Preliminary Engineering	Task3: Other Related Work Needed	Prior to Start of Construction	Stateside Cost Allocation Plan	(SWCAP)	Task6: Program, Project and FCS	Construction Management	Task6: Real Property Acquisition and	Environmental Mitigation	Task 7: Early Work Program	Task 8: Final Design and	Construction Contract Work for the	FCS	Task 9: Project Reserves	Task 10: Uralboated Contingenov	Total	

V42 4					· · · · · · · · · · · · · · · · · · ·	A and an lan A an land and a		l			
			Federal Expended	Federal Expended Federal Outlays to		State Expended to	Local (Other)	Local (Other) Expended to	Total Budgeted	Local (0ther) Detta State Expended to Local (0ther) Expended to Local (0ther)	Additional State
2	Total Budgeted F	Federal Budget	to Date `	Date ²	State Budget	Date	Budget	Date	(Prior Quarter)	Prior Quarter)	Budget
	•	بە	•	•	•	•	\$	\$	•	•	\$
											•
	56,462,530	44,500,052			11,952,478				56,462,530		
	\vdash										
	12,835,406	8,984,784			3,850,622				12,835,406		
	996, 200 0 35	768,573,531			238,226,504				996,200,035		
	154,290,361	108 023 253			46,267,108				154,290,361		
ω	68,046,668	8,538,380			59,508,288				68,046,668		
200	\$ 1288,425,000 \$	\$ 928,620,000 \$	•	•	\$ 329,805,000 \$	•	\$	\$	\$ 1288,425,000	•	\$

¹ Federal Expendent to Date represents payments the FRAhas made to The Authority.as reported on the SF 425 and identified within draw 16-033.
² Federal Outlays to Date represents payments The Authority.has made to their vendors.
³ State Expendent to Date represents draw 16-033.

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Budget Summary

	01							_			0		0							-
	Additional State	Budget	\$	•					•		\$ 139,400,000		\$ 91,105,000	\$			\$ 994,541,301	\$	\$	\$ 1,225,046,301
Delta	State Expended to Local (Other.) Expended to Total Budgeted [Total Budgeted vs.	Prior Quarter)																		
	Total Budgeted	(Prior Quarter)	\$ 499534.483	337,361,663		188.420.862			677,872		419,227,067		852274,479				3,772,057,495	208,146,753	68,046,668	\$ 6,346,752,462
Local (Other)	Expended to	Date	. \$																	•
	Local (Other)	Budget	. 8			52.1UUUUU														233,089,188 \$ 52,100,000 \$
	State Expended to	Date	\$ 72.554237	64952,362		10.448.831					21,023,596		68,700,362				50,408,700			
	<u></u>	State Budget	326 207 370	82,989,427		04.316.9/4					197,267,290		383,970,052				1,662,939,722	46,267,108	69,508,288	1,616,006,651 \$ 2,813,476,231 \$
	ederal Outlaysto	Date ²	144.029.194	128.504.951		31.403.401			677,872		172,499,637		496,000,258				588,984,947	53,856,392		
	Federal Expended Federal Outlaysto	toDate `	E 144029.194 \$	128.504.951		31.463.400			677,872		172,499,637		496,000,258				588,984,947	53,856,392		3,481,176,231 \$ 1,616,006,661 \$
	<u></u>	Total Budgeted Federal Budget	\$ 173.327.113 \$	254362236		83.008.0081			677,872		221,959,777		468,304,427				2,109,117,773	161,879,645	8,538,380	3,481,176,231 5
		Total Budgeted	\$ 499,534,483 \$	337,361,663		188.629.881			677,872		419,227,067		862,274,479				3,772,067,495	208,146,753	68,046,968	\$ 6,346,752,462
		Contined Project Funding	Task 1: Environmental Review	Task2: Preliminary Engineering	Task 3: Other Related Work Needed	Prior to start of Construction	Task 4: Project Administration &	Stateside Cost Alocation Plan	(SWCAP)	Task6: Program, Project and FCS	Construction Management	Task6: Real Property Acquisition and	Environmental Mitigation	Task 7: Early Work Program	Task8: Final Designand	Construction Contract Work for the	FCS	Task9: Project Reserves	Task 10: Unalboated Contingency	Total

. Federal Expended to Date represents payments the FRAhas made to The Authority as reported on the SF 425 and identified within draw 16-033. ² Federal Outlays to Date represents payments The Authorityhas made to their vendors. ³ State Expended to Date represents draw 16-003.

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Draft Quarterly Budget for the period end September 30, 2016 v3.6

Appendix C – Environmental Milestone and Permits Schedules (September 2016)

Activation Activat	Type Type <th< th=""><th>Tippedfield Tippedfield <thtippedfield< th=""> <thtippedfield< th=""></thtippedfield<></thtippedfield<></th><th>Section</th><th></th><th>Positish Native of Incent</th><th>Intities Scoping</th><th>Camplete Project Purpose & Nerd (Checkpoint A) *</th><th>Complete Alternatives Analysis</th><th>Lenuty Ronge of Alternatives (Clockpoint B)</th><th>Complete Profaminary Engineering for Project Defination</th><th>Complete Technical Repairs</th><th>Board Selection of Preferred Alternatives</th><th>Publish Administrative Draft Savierumental</th><th>Printer & Croutate Draft Environmental Document</th><th>Respond to Public Convents</th><th>Mentify Prolineinary Dreferred Alternative (Checkpont C)</th><th>Pabits Administrative Field Environmental</th><th>Publich Final Environmental Decument / FRA ROD</th><th></th><th>Obtain JEA ROD</th><th>Board Obtain JRA Contines ROD Environmental Decontent</th><th>Board Certines Obtain Environmental NOD</th><th>Board Contines Experimental NOD ROD Decumental</th><th>Board Certifies Obtain Environmental NOD</th></th<>	Tippedfield Tippedfield <thtippedfield< th=""> <thtippedfield< th=""></thtippedfield<></thtippedfield<>	Section		Positish Native of Incent	Intities Scoping	Camplete Project Purpose & Nerd (Checkpoint A) *	Complete Alternatives Analysis	Lenuty Ronge of Alternatives (Clockpoint B)	Complete Profaminary Engineering for Project Defination	Complete Technical Repairs	Board Selection of Preferred Alternatives	Publish Administrative Draft Savierumental	Printer & Croutate Draft Environmental Document	Respond to Public Convents	Mentify Prolineinary Dreferred Alternative (Checkpont C)	Pabits Administrative Field Environmental	Publich Final Environmental Decument / FRA ROD		Obtain JEA ROD	Board Obtain JRA Contines ROD Environmental Decontent	Board Certines Obtain Environmental NOD	Board Contines Experimental NOD ROD Decumental	Board Certifies Obtain Environmental NOD
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Section	Submit Biological Assessment	Obtalu Biological Opinion	Submit Section 106 Report	Obtain Executed Section 106 MOA	Submit Section 401 Permit Application	Obtain Section 401 Water QIIy Certification	Submit Preliminary 408 Determination ⁷	Receive Prediminary 408 Determination ⁸	Submit Section 404 Permit Amblication	Obtain Section 404 Permit	Draft Final Compensatory Compensatory Miligation Miligation Plan	Final Compensatory Mitigation Plan	Submit CDFW 1602 Application	Obtain CDFW 1602 Permit	Submit CDFW 2081 Permit Application	Obtain CDFW 2081 Permit	Submit 408 Permit Application ⁹	Obtain 408 Permit ¹⁰
	Section 7	100	Section	12		m 401	Í	408 Determination	Section	Section 404	CMP		CDFM	CDFW 1602	CDFW 2081	V 2081	40S Permit	ermit
Merced - Fresno (M.F)	Déc-11	Mar-14	Sep-11	Aug-12	Apr-13	Apr-14	NN.	NA	Auri-1.1	Mir-14	Mar-12	Mar-14	Apr-13	Mar-14	Mar-13	Már-14	Mar-17	Sup-17
Fresso - Bakersfield (F-B)	Aul-12	Apr-14	A00-13	May-14	Mar-14	Nov-16	Nov-13	Jan-14	Jan-(4	Nov-16	Dec-13	Apr-15	Mar-15	Apr-16	Mar-15	Jun-1.5	Apr-17	11-150
San Francisco- San Jose (F-J)	filmel 7	Aug-17	Nov-16	Sep-17	Sep-17	Apr-18	NA	N/N	Sqn-17	Mar-18	Sep-17	May-18	Sep-17	Apr-18	Sep-17	May-18	May-18	Nov-18
San Jose - Merced (J-M)	Mar-17	Aug-17	Nov-16	Sep-17	Dec-17	Mn-18	Mar-17	April 7	Dec-17	Ann-18	Dec-17	4)m-18	Dec-17	Jun-18	Decel7	Jun-1%	May-18	Nov-18
Central Valley Wye (M-P) ⁵	Mar-16	10-011	Dec-16	Sep-17	Sep-17	Jan-15	71-mut	Nov-17	Det-16	Apr-18	May-17	Nov-17	Sep-17	Feb-18	Sep-16	Jun-18	Jun-18	Dec-18
CV Electrical Interconnect (CVI)	A(1-1)5	00-16	Mar-17	May-17	N/N	NVA	Sep-16	N/N	New-16	Nov-16	0617	Nov-17	NIN	N/N	Sep-16	Jun-18	N/N	NIA
Heavy Maintenance Facility (HMF)	Mat-16	71-mW	Apr-16	Mar-17	Mar-17	TI-VON	N/A	Y/N.	Mar-17	TI-VON'	Mar-17	Sep-17	Mar-17	Sep-17	Mar-17	71-qa8	N'A.	N/A
Locally Generated Alternative $\left(F.B \right)^{6}$	Mar-16	Sep-16	May-16	Sep-16	Aun-17	71-guA	May-16	Aug-16	May-17	Sep-17	Feb-16	TBD	Aug-17	04-17	Apr-16	04-17	Nov-17	May-18
Bakersfield - Palmdale (B.P) ³	May-17	04-12	Nov-16	T)-mil.	Dec17	Jun-18	N/N	N/N	Dec-17	Ang-18	May-17	Sep-17	Jul-17	Mar-18	201-17	May-18	Jun-18	Dec-18
Palmdale Burbank (P.B) ^{5,4}	Viay-17	21-120	Mar-17	Odel1	Dec-17	Na-IS	Auto 7	Aug-17	Dec.17	May-18	71-mil.	Feb-18	Dec-17	Mar-18	Aug-17	31-1nf	Jun-18	Dec-18
Burhank - Los Angeles (B-LA) ³	Nov-16	Dec-17	Dec-16	Dec-17	Aug-17	Jan-18	N/A	N/N	Aug-17	Jan-18	Mar-17	Apr:17	3ab-1.7	Dec-17	Apr-17	Dec-17	Jun-18	Dec-18
Los Angeles - Anahelm (LAA) ³	Nov-16	Dec.17	Dec-16	Dec.12	Aug-17	Jan-18	NA	N/N	Aug.17	Jan-18	Mar.17	Apr.17	71-10	Dec-17	Apr-17	Dec 17	\$un+18	Dec-18

Environmental Permits 1.2

DRAFT Proposition of Steptomerk 1, 2016 Schedule analysis are available by information from prediminary engineering and estimation for alignment currently under study or in development. Limits of the work represent for alignment currently under study or in development in the control of the study prediment of frain foreign.

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votes:		
	The schedule assumes two cycles of concurrent: Authority, Attenney General, and FRA, review of technical documents. Cycle One is ten days, acring with the RCS initial submittai. Review as have five days for review before an RC/reviewer workshop to discuss comments, then five days to complete and submit comments to	yele One is ten days starting with the RCs ays to complete and submit comments to
	the Authority. The RC then his five easys to revise and resident. Cycle Two is five days, starting with reasonatial and a RC/reviewer workshop. Reviewers complete days assume and starting that, druck reviews to the Authority within five days of the workshop. The RC that has five days to revise produce and satirity event excert events a non-non-non-non-non-non-non-non-non-non	RC/reviewer workshop. Reviewers as five days to revise, produce, and submit
	Text identified in red indicates a change from the previous month.	
	Discussions ungoing with USFWS regarding Regional BO approach.	
	Consultation with USFS ongoong regarding permutiting approach (East Corridor Alternatives).	
	Represent forecast trends as a result of the deforred identification of the initial preferred alternative and additional effort in scope definition	in scope definition
	USFWS has indicated no need to reinitiate Section 7 consultation.	
	Filed with Submittal of Checkpoint C	
	With Checkpoint C Concurrence	
	6 months after FRA ROD is published	
10	6 months after 408 application submitted	

Annual Work Plan FY16/17 Update 48 | P a g e

Appendix D – Summary Schedule (September 2016)

2	Activity Name	Uuration (months)	Lagy	C Usur	03 04 01	2016 201/ 2017 2018 2019 2020 11 02 03 04 01 02 03 04 01 02 03 04 01 02 03 04 01 02
PLANNING		98	01-40-104	15-Aug-18		PLANNING
San Francisc	San Francisco to San Jose	86	01-Jul-10A	15-Aug-18		San Francisco lo San Jose
Environmental Review	i Review	22	24-Aug-15A	04-May-18		Environmental Review
	F2J. Froject Management	40		04-May-18		F2J. Project Management.
	F2J: Public/Agency Participation	40		30-Mar-18		
	F2U: Frepare Project Description	14		01-Jul 16A		F.U. Frephre Project Description
		01		No-Apr-16A		
1.00.1 F.20	r dur Environmentar Jask Management 201 Ebenart Technical Benedic		Adi-Jan-16 A	04-1m-16 A		E2 Bressin Eachdreal Records
	F24: Precision and Submit Section 108 Reports to SHPO/Review and Concurrence		1	24-Jun-16A		
1.	F2U: Frecare and Submit Booolical Assessment to USFW SAIMFS	14	1.	28-Cet-16		F2U: Prepare and Submit Biological Assessment to USFWSNMFS
	F2J: Identity initial Preferred Atternative, Obtain Authorty Approval *	- 20		24-Nov-16		F2U: Identity Initial Prefered Alternative, Obtain Authority Approval
1.05.3 F2J	F2J: ElR/EIS Sections	14		01-Nov-16		F F2/ BR/EIS Sections
1.07.1 F2J	F2J: Prepare Administrative Draft Environmental Document and Circulate to Cooperating Agencies	4	05-Jun-16.A	02-Sep-16	-	F24: Prepare Administrative Draft Environmental Document and Circulate to Cooperating A
	F2J: Prepare Draft Environmental Document and Circulate for Public Review and Comment	40	03-Sep-16	03-Jan-17	-	F2J: Prepare Draft Environmental Document and Circulate for Public Review and d
	F2J: Respond to Public Comments on Draft Environmental Document	0	71-Jan-17	05-May-17		F2J: Respond to Public Comments on Draft Environmental Document
	F2J. Obtain Section / Boograal Opinion from USE WSMMES	0 1	29-Oct-16	28-Apr-1/		F.20 Obtain Section / Biological Optimon from USFWSIMMES
1.01.4 F2.1	r za, ruceniny ucasi tany commaniary uamaging macusatione ditermente (unexpoint to, it.tur.M) 1921: Phenare and Orthilate Attimistrative Final Environmental Dorument to Concertation Atemnère	4 6	05-Mav-17	02-Sec-17		F.24. Identity ceast connectativ vameging tradicative Atemative (Uneck pol
	F2J. Prepare and Publish Final Environmental Document (Includes FRAROD)	8	1	29-Dec-17		F2J. Prepare and Publish Final Environmental Document (
	F2J: Findings & Statement of Overriding Considerations	10		05-Jan-18		F2U: Findings & Statement of Overricing Considerations
	F2U: Authorry Board Certifies Environmental Document	P4	01-Dec-17	13-Jan-18		F2J: Authorty Board Certifies Environmental Document
	F2J: Authority Prepares and Files Notice of Determination	2		13-Jan-18		F2J: Authority Prepares and Files Notice of Determination
	Surface Transporation Board (STB) issues ROD - San Francisco to San Jose	0		24-Mar-18		 Surface Transporation Board (STB) Issues ROD - St
	F2J.: Migation Montoring & Reporting Plan	0	1	06-May-17		I F2J: Milgation Monitoring & Reporting Plan
11	F2J: Octain Fully Executed Section 106 MOA	23	1	27-Oct-17		F2U: Obtain Fully Executed Section 106 MOA
1.005.2 F.24	r 24. i regere end Submit Lifen Geologi 401 and 404 i formit Approximits Breat-france Decision for Breatmanness	71	13-FCP-17	00-110-10		P. Gui, Propero and outwin Uran coolion 401 and 404 Formin App
2.04 F2J	2 04 F2J. Conduct Preiminary Design of Townships	17		21-Now-16	-	F2J: Concuct Preiminary Encineering for Protect Development (PE4PD)
Ī	F2J: Conduct Freimnary Engineering for Procurement (PE4P)	11		24-Jul-17		F24. Conduct Preiminary Engineering for Procurement (PE4P)
	RDP Programwide Engineering (FJ)	93		06-Jun-18		RDP Programwide Engineering (FJ)
Relat	Work	98		15-Aug-18		Other Related Work
3,06 F2J	F2J: Station Area Planning	12	11-Jan-16 A	16-Sep-16		E F24: Station Area Planning
	F2J: ROW EIR/EIS Process	22	24-Dec-15A	03-Apr-17		F2J. ROW EIRIES Process
	PIMT/RD/P ROV/ Work (FJ)	88		15-Aug-18		PMT/RDP ROW Work (Fu)
	Ridership Forecasting - Fu	23		29-Jun-12 A		
3.14 Stat	Station Area Flanning (SJ Diridun)	22	21-Jan-16A	07-Dec-17		Stalico Area Planning (SJ Diridon)

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23-Sep-14.A ject Descrip 22-Sep-14.A ng Transpot 06-Mar-16.A 55-Mar-16. 25-Mar-16. 29-U4-16.4 29-U4-16.4 29-Mar-17 12-Mar-17	
22: Sep 14 A Ing Transpo 08: Mar-16 A 25: Mar-16 A 07: Mar-16 A 29: Juf-16 A 29: Juf-16 A 25: Mar-17 12: Mar-1	
08-Mar-16 A 25-Mar-17 07-Nov-16 29-Jul-16 A 29-Mar-17 12-Mar-17	J2Y NEP4404 in gration (Cneckpoint B) 2X Env contrettal Task Management 2Y Prepare Technical Reports
	J2Y. Environmental Task Management
	J2Y Prepare Technical Reports
	U2Y. Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence
	J2Y: Prepare and Submit Bological Assessment to USFWSAMMFS
ł	Jar. Identity must breterreu Andrhauve, Udan Authorty Approval
-	J2Y, Prepare Administrative Draft Environmental Document and Circluste to Co
-	 J2Y: Prepare Draft Environmental Document and Circulate for Public Review
	U2Y Respond to Public Comments on Draft Environmental Document
-	
75. http://www.com.etc	2Y Identify Least Environmentally Damaging Practicable Attention (C)
	15Y Decision & Dublish Final HRIES Final HRIES (Included FPA RDD
	J2Y. Findings & Statement of Overright Considerations
1	J2Y. Authority Board Certifies Environmental Documen
12-Jan-18 17-Jan-18	 J2Y: Authority Frepares and Files Notice of Determination
25-Jun-17 20-Feb-18	JZY: Milgation Monitoring & Reporting Plan
1	J2Y; Cbtain Fully Executed Section 106 MDA
	J2Y: Prepare and Submit Draft Section 401 and 404 Pe
	I 2V Conduct Pointing Engineer for Protect Development (Edition
	J2Y. Conduct Preliminary Engineering for Procurement (PE4P
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2 (Task 7.6.2) Prepare & Publish Final EIR/EIS (Includes FRA/ROD) 5 01: Sep 16	
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1 BFS Obtain Fully Executed Section 103 MOA	1 BFS: Obtain Fully Executed
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(Task 8.4.2) Prepare & Submit 2061 & 1602 Applications	
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	 This Schedule is for the FRA ARRA Grant Amendment. Data Date Sectember 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline Schedule dates by the Regional Consultants.

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101	B2P. Project Management	25	20-Feb-14 A	26-Apr-16A	B2P Broject	roject Management	
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1.03.4.1	B2P. Conduct Alternative Analysis	30	07-May-14 A	01-Dec-16		B2P. Conduct Attentive Analysis	-
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1.03.6	B2P Define Existing Transportation Conditions	. 10	02-Mar-15.A	31-Jul-15A	B2P Define Existing Transpor	nsportation Conditions	
1.03.7	B2P NEPA404 Integration (Creckpoint B)	19	08-Sep-15A	01-May-17		B2P. NEPA/404 Integration (Checkpool B)	
1.05.1	B2P. Environmental Task Management	35	05-May-14 A	17-May-17		B2P. Environmental Task Management	
1.05.2.1	B2P: Prepare Technical Reports	35	05-May-14 A	17-May-17		B2P, Prepare Technical Reports	
1.05.2.2		21	30-Mar-15.A	29-Dec-16		B2P Prepare and Suthmt Section 106 Reports to SHPD/Review and Concurrence	Review and Concurren
1.05.2.3		11	17-Dec-15A	17-May-17		B2P. Prepare & Submit Biological Assessments to USFWSNMFS	to USEWS/NMES
1.05.2.4	B2P. Identity Initial Preferred Alternative, Obtain Authority Approval	\$	30-Dec-16	19-Jun-17		B2P Identify Initial Preferred Alternative, Obtain Authority Approval	in Authority Approval
1.053	BZP EIRAPIS Sections	5 9	Actender	18-Nov-16		HZP HIM/EIS Sections	a la constantina de la constante
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1.072	B2P. Prepare Draft Ervironmental Document and Criculate for Public Review and Comment - Draft EIR - Public Agnesy Review		03-Oct-16	24-May-17		B2P Prepare Draft Environmental Document and Circulate for Public Re	d Circulate for Public
1.07.3.1	B2P. Respond to Public Comments on Draft EIS	n	13-Jul-17	18-Oct-17		B2P. Respond to Public Comments on Draft EIS	I Draft EIS
1.0/32	B2P-Identity Preiminary Preferred Atenative	2	17-Pung-17	23-Oct-17		B2P- Identity Preliminary Preferred Alternative	ernative
1.0733	B2P. Octain Section 7 BO from USFWS/M/FS	# 1	18-May-17	28-Apr-18		B2P; Obtain Section 7 BO from USFWSNMFS	D from USFWS/NMFS
1.07.5	DZF (lotinity Least cityr officially Datinghity Practicative Aretinative (Liteoxpont Cr. LCDPA) PDP //A Devi of Fish & Game (CDEC) (Consistence, Datacementer)	a	10-001-10	71-Jap-16		DZF. IOENNY LEEST ENVIOLIMENTARY DEMONITY HEURIGENE AREINE	CDEG Consistency
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1.07.6.2	B2P. Prepare & Publish Final EIS (includes FRA ROD)	4	18-Aug-17	29-Dec-17			(includes FRAROD)
1 08 1	B2P Findings & Statement of Overnising Considerations	2	20-Sep-17	07-Nov-17		EDP Findings & Statement of Overriding Considerations	ding Considerations
1.08.2.1	82P. Authority Board Certifies Environmental Document	01	20-Sep-17	07-Nov-17		B2P. Authority Board Certifies Environmental Document	ermental Document
1.08.2.2	B2P: Authority Prepares and Files Notice of Determination	P3 1	25-Oct 17	17-Jan-18		B2P. Authority Prepares and Files Notice of Determination	as Notice of Determine
1.08.2.3	Surface Transportation Board (STB) Issues ROD - Bakersheld to Paimdale	0	05-Apr-18	05-Apr-18		I Surface Transportation Board (STB) Issues ROD-	ard (STB) issues RO
1.08.3	B2P. Mugation Monitoring & Reporting Plan	2	30-Dec-15 A	28-Nov-17		B2P. Milgation Monitoring & Reporting Plan	Ing Plan
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1.08.4.3	T	36	01-Dep-16	08-Jan-20			B2P. Pre
1.08.4.4	T.	0	01-Sep-16	01-Sep-16	B2P.	P. Prepare & Submit Section 408 Applications (TBD)	
1.08.4.5		0	18-May-17	18-May-17			
1.08.5	B2P. Administrative Record	6	29-Dec-17	07-Mar-18		B2P: Administrative Record	
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2.04	B2P. Condit PENPU - BP D2D. Preside DC4P BP	91	02-Uec-15 A	11-30c-17		B2P. Conduct PE4PU - BP	PDD Con
2.13	RDP Programmide Engineering (BP)	115	01-Jul-10A	08-Mav-20			
Other Re	Other Related Work	80	A01-JUL-10	16-Nov 18		Other Related Work	ed Work
3.06	B2P. Station Area Planning	11	01-Jul-15A	29-Nov-16		B2P: Station Area Planning	
3.09	B2P: ROW EIR/EIS Process	31	01-Apr-16A	16-Nov-18		B2P-ROW I	B2P. ROW EIR/EIS Process
3.11	PMTTRDP ROW Work (BP)	8.1	03-Jan-11 A	04-Sep-18		PMT/RDP ROW Work (BP)	Work (BP).
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Eurorementation frequence 1.01 P2X: Project Management	38	24-Apr-15A	29-Jun-18	P2K: Pto ect Management
P-K: Regonal Consultant Public / Agency Participation	2	24-Apr-15 A	20-Jun-18	P-K: Regional Consultant Public / Agency Participation
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1,03.4.1 P2K. Conduct Alternatives Analysis	0	01-Jun-15A	1.1	P2K. Conduct Alternatives Analysis
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1.05.2.1 P2K Prepare Technical Reports	8	01 Jul 15A	10-Nev-17	P2K Prepare Technical Reports
I.	18	29-Dec-16	14-Jun-18	P2K Supril Section 106 Reports to SHPO/Review and Concurn
1.05.2.3 P2K. Prepare and Submit Biological Assessment to USFWSNMFS	33	01-Jul-15A	12-May-17	P2K. Prepare and Submit Bological Assessment to USFWSNIMFS
1.05.2.4 F2K. Identity Initial Preferred Aternative. Obtain Authority Approval*	01	15-Nov-16	13-Jan-17	P2K identify initial Preferred Attentiative. Obtain Authority Approval *
	24	24-Apr-15 A	19-Apr-17	P2K EIR/dIS Analysis
1.05.4 P2K Perform Env Studies and Obtain Permits for Geotech Investigations	10	01-JUL-15A	20-Apr-15A	P2KI Perform Env Studies and Obtain Permits for Geolech Investigations
P2K. Prepare Administrative Draft Environmental Document and Circulate to Cooperating Agencies **		15-Nov-16	23- May-17	P2K. Frepare Administrative Draft Environmental Document and Circulate to Cooper
101.2. F.A. Freipite Uran Citye Municipal Johannelli and Catalone na Fulad Active and Comments. 1.07.3.1. P2K Rescond In Public Comments on Diafi Environmental Document	D 40	06-Jun-17	12-Dec-17	PAN, Prepare Litan, Entry Annemation Contremant and vertiliate tai Putant, Never and PDK, Restrict to Public Contremats on Draft Environmental Discutterit
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1.	- 40	15-May-17	10-001-17	P2K: Obtain Section 7 Bological Opinion from USFW/SNMFS ***
1.07.4 P2K. Identify Least Environmentally Damaging Fracticable Alternative (Checkpoint C. LEDPA)	5	18-Jul-17	05-Dec-17	P2K Identity Least Environmentally Damaging Practicable Alternative (Che
1.07.5 P2K: Cal. Dept of Fish & Game (CDFG) Consistency Determination	3	15-May 17	06-Oct 17	P2K Cal Dept of Figh & Game (CDFG) Consistency Determination
	4	21-Aug-17	19-Dec-17	P2K: Prepare and Crculate Acministrative Final Environmental Document
1.07.6.2 P2K. Prepare and Publish Final Environmental Document (includes FRA/ROD)	E	30-Nov-17	29-Dec-17	P2K Prepare and Publish Final Environmental Document (Includes FRA)
	4	21-Aug-17	19-Dec-17	P2K Findings & Statement of Overhang Considerations
1	0	09-Jan-18	11-Jan-18	P2K: Authority Board Certifies Environmental Document
1.00.4.4 P.ZA. Hullionty Files 1900 1.08.3.3 Surface Transcondisition Decidi STB: Jocuse DOD. Deliversia in Durhack	2 6	01-1180-50	70 Tao 17	ALCA AUTION PIES NOU
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1.08.4.1 P2K. Obtain Fully Executed Section 105 MOA	. 51	31-May-17	14-Jun-18	P2K Obtain Fully Executed Section 106 MOA
Ĩ.	12	04-Jan-17	01-Jan-18	P2K. Prepare and Submit Draft Section 401 and 404 Permit Applications
1.08.4.3 P2K: Prepare and Submit 2081 and 1602 Applications	23	71-18L-10	19-Nov-18	P2K: Prepare and Bubmit 2081 and 1902 Applications
1.08.4.4 P2K Prepare and Submit Section 408 Application	4	04-Jan-17	01-Jan-16	P2K: Prepare and Submit Section 408 Application
1.08.4.5 P2K Other Required Permits	60	04-Jan-17	21-Aug-17	P2K) Other Required Permits
P2K. Administrative Record (TBD)	0	01-Sep-16	01-Sep-16	P2K, Administrative Record (TBD)
PE 15% and Preliminary Design for Procurement	55	01-10-10A	21-Aug-18	PE 15% and Preimmary Design for Procurement
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P2K. ROW EIR/EIS Process	15	24-Mar-17	29-Jun-18	P2K RDW EIR/EIS Process
FWT/RDP ROW Work (P2K)	23	01-Sep-16	28-Aug-18	PMT/RDF ROW Work (F2K)
Ridership Forecasting - P2K	53	01-JUL-10A	29-Jun-12A	and here a first state of the s
Sation Area Parining (P2K)	46	01-Nov-13.A	29.Sep 17	Station Area Planning (P2A)
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22	33	01-Apr-15A	29-Dec-17	K2L: Project Management
ğ	8	01-Apr-15A	29-Dec-17	
ĥ	6	01-Feb-15A	14-Apr-16A	K2L: Conduct Atematives Analysis
1.03.4.2 K2L Identity Range of Alternatives for Environmental Evaluation	2	01-Apr-16A	11-Nov-16	K2L Identify Range of Alternatives for Environmental Evaluation
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1.03.0 MAL DETTIE EXISTING TRATEGOR CONDITIONS 1.03.7 K/21 INFORMATIA INFORMATION COMPANIENT RULT RULT		01-Sen-16	01-240-16	KAU DERIFE EXISTING FRANKPORT CONTINUES KOTI: NETEALAND Internation (Checkcount B) (TRID)
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1 Kat	8	01-Apr-15A	11-May-17	K2L Prepare Technical Reports
1.05.2.2 K2t. Prepare & Submit Section 106 Reports to SHPO/Review and Concurrence	10	24-May-16A	27-Mar-17	K2L Frepare & Submit Section 106 Reports to SHPO/Review and Concurre
1.05.2.3 K2L Prepare and Submit Biological Assessment to USFWSINMFS	20	01-Sep-15A	11-May-17	K2L. Prepare and Submit Biological Assessment to USFWSNMFS
t Kol	9	11-AUG-16 A	08-Feb-17	K2L: Identity Initial Preferred Alternative. Oblain Authority Approval
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-	2 10	31-Aug-17	05-Apr-16	K2U. Respond to Public Comments on Draft EIR/EIS
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	51	27-Jan-17	16-Jun-17	K2L Identify LEDPA
1.07.6.1 K2L Prepare and Circulate Administrative Final ERVEIS to Cooperating Agencies, includes FRAROD 4.62.6.2. Vol. Pressured Entrick Cost Explored Internet EPA POD	8	16-Oct-17	28-Dec-17	K2U: Prepare and Circulate Administrative Final EIR/EIS to
1	2 64	02-Nov-17	29-Dec-17	K2L, Findings & Statement of Overriding Considerations
1.08.2.1 K2L Authority Board Centifies EIR	-	06-Jan-18	23-Jan-18	K2L: Authority Board Centifies EIR
1.08.2.2 K2L Authority Prepares and Files Nolice of Determonation	+	29-Dec-17	24-Jan-18	K2L Authority Prepares and Files Notice of Determination
-	0	10-Jan-18	26-Feb-18	Surface Transportation Board (STB) issues ROD - Bu
1.08.3 KZL MMRP/MMEP	M 4	02-Nov-17	29-Jan-18	K2L MMKPMMEP
	2 40	17-Mar-17	15-Sep-17	K21: Prepare and Submit Draft Section 401 and 406 Permit Apris
and	23	01-Jul-10A	31-Aug-18	PE 15% and Preliminary Liesion for Procu
2.04 K2L Conduct Preiminary Engineering for Project Development - PE4PD	18	01-Apr-15A	27-Sep-16	K2L Conduct Preliminary Engineering for Project Development - PE4PD
2.11 K2L Pretminary Engineering for Procurement - PE4P	8	03-Oct-16	22-Aug-18	K2L: Freiminary Engineering for Producem
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	8	01-Sep-16	26-Oct-18	PMI/RUP RDW Work (K2L)
3.12 Ridership Forecesting - K2L	23	01-Jul-10A	29-Jun-12.A	
T	46	01-Nov-13.A	29-Sep-17	Station Area Planning (KZL)
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onmer	view	35		28-Mar-18		Environmental Review
	LA.A. Project Management	32		29-Dec-17		LA-A: Project Management
	LA.A. Public/Agency Participation	32		29-Dec-17		LA-A: Public/Agency Participation
1.03.4.1 LA.A. CO	LA, A. Conduct Afternatives Analysis		01-Feb-16A	30-Aug-16A		LA A Conduct Atematives Analysis
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1.05.2.1 LA.A. Pr	LA.A: Prepare Technical Recorts	22	01-Apr-15A	22-Feb-17		LA A Prepare Technical Reports
	LA-A: Prepare and Submit Section 106 Reports to SHPO/AEview and Concurrence	50		07-Feb-17		LAVA. Prepare and Submit Section 106 Reports to SHPO/Review and Concurre
4	LA-A: Prepare and Submit Biological Assessment to USFWS/NMFS	18	-	27-Mar-17		LAA. Prepare and Submit Biological Assessment to USFWSNMFS
1.05.2.4 LA-A 10	LA-A Identify Initial Preferred Alternative, Ottaun Authority Approval 14. A. Erb Ere And	C.	06-Gep-16	21-Apr-17	-	LA-A: Identify Initial Preferred Atemative, Obtain Authority Approval
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1.07.3.2 LA.A.Id	LA.A. Identify Preliminary Preferred Atemative	4	24-Feb-17	16-Jun-17		LA.A. Identify Preliminary Preferred Alternative
3	L4.A. Obtain Section 7 Biological Opinion from USFWSNMFS	0	28-Mar-17	29-Dec-17		LA.A. Obtain Section 7 Biological Opinion from USFWSW
	LA-A: Identify LEDPA	4	24-Feb-17	16-Jun-17		LA-X Identity LEDPA
1.07.6.1 LA.A. Pr	LA-A: Propare and Circulate Administrative Final Elikiels to Cooperating Agencies, includes FRAROD		16-NoV-17	04-Dec-1/		LAA. Prepare and Circulate Administrative Final ERVELS to
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1	LA-A: Authority Prepares and Files Notice of Determination	0	16-Jan-18	24-Jan-18		LA-A: Authority Prepares and Files Notice of Determination
1.08.2.3 Surface	Surface Transportation Board (STB) Issues ROD - Los Angeles to Anahem	1	27-Feb-18	28-Mar-18		Surface Transportation Board (STB) Issues ROD -
	LA-A MMRPAWEP	R	1	29-Jan-18		LA-A MARPANAEP
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1.08.4.2 LA.A. Pr	LA-A: Prepare and Submit Draft Section 401 and 404 Permit Apps	0	12-0ct-17	12-Oct-17		LA-A. Prepare and Submit Draft Section 401 and 404 Permit Ap
2.04 IAAC	PE 10% and Pfelminary Design for Producement 2.04 II A.A. Control Preiminary Engineering for Project Development - PEUDD	51		30-Sep-16 A	44.0	1.4.4. Conduct Designate Encrement for Project Development - PE4PD.
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8 Design/Build - CP 5 (FCS Track & Systems Combined) (Forecast)	30 25-Dec-18 16-Jun-21
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	 This Schedule is for the FRA ARRA Grant Amendment. Data Date September 1, 2015. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline Schedule dates by the Regional Consultants.

Barnes, Juliana (FRA)

From:	Barnes, Juliana (FRA)
Sent:	Wednesday, January 18, 2017 1:22 PM
То:	'Malone, Desiree@HSR'
Cc:	'Gilliland, Barbara(PB)@HSR'; 'mlrule@transystems.com'; Everett, Lynn (FRA); rlzimmerer@transystems.com
Subject: Attachments:	Initial Feedback: Q4-16 Deliverables CONOPS FRA Review (01-17-17).docx; 2016-2017 AWP FRA Review (01-17-17).docx; 2016 CVPFP FRA Review (01-17-17).docx

Hi Desi,

FRA acknowledges receipt of the following deliverables transmitted on Dec 29, 2016:

- FCS Utilization Plan/CONOPs
- Annual Work Plan (AWP)
- Central Valley Financial Plan (CVFP)
- Phase 1 Program Financial Plan
- Program Management Plan
- CP 4 Baseline Schedule
- Q4_16 Exhibit A Update

An initial review was conducted of the following submittals in the three attached documents: (1) FCS Utilization Plan/CONOPS, (2) Annual Work Plan, and (3) CV Financial Plan which contain initial comments. Please note FRA is returning those deliverables after initial review and requests resubmission after addressing the attached FRA initial comments for further development by Feb 2, 2017.

The remainder of the 4th Qtr deliverables are under review and FRA will provide comments prior to the end of the month.

Regards,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

Barnes, Juliana (FRA)

From:	Malone, Desiree@HSR <desiree.malone@hsr.ca.gov></desiree.malone@hsr.ca.gov>
Sent:	Monday, January 23, 2017 2:17 PM
То:	Barnes, Juliana (FRA)
Cc:	Gilliland, Barbara(PB)@HSR; mlrule@transystems.com; Everett, Lynn (FRA); rlzimmerer@transystems.com; Malone, Desiree@HSR
Subject: Attachments:	RE: Initial Feedback: Q4-16 Deliverables AWP FY 16 REVISED Final.docx

Categories: CHSRA

Hi Juliana,

The Authority acknowledges your comments and is revising the documents provided by the FRA.

This email returns a revised AWP for FRA comment purposes.

Please note that an extension to the Feb. 2 due date has been requested for the FCS/CONOPs due to being unable to discuss the document today as planned.

A revised CVPFP is in process and I will keep you informed on its status for timeliness to the revision due date of Feb 2.

Thank you - Desi

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Wednesday, January 18, 2017 1:22 PM
To: Malone, Desiree@HSR
Cc: Gilliland, Barbara(PB)@HSR; mlrule@transystems.com; Everett, Lynn (FRA); rlzimmerer@transystems.com
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Regards,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 I St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115





CHSRA delivered <u>Central Valley Project Financial Plan (CVPFP)</u>, dated June 2016, to FRA on 12/30/16. FRA's review comments follow.

• Central Valley Project Financial Plan:

- Required Components (ARRA Grant Amendment 6):
 - CHSRA will provide for FRA review and approval a Financial Plan for the FCS (FCS Financial Plan) that demonstrates CHSRA has secured firm commitments of all funding (other than that provided through the grant agreements) required to complete construction of the FCS. The financial plan will provide (in year-of-expenditure dollars) finalized annual projections for the sources and uses of all funds, during the development and construction phases of the FCS and a detailed assessment of financial risks facing the FCS during both the construction (including risks such as capital cost overruns, revenue shortfalls, and maintenance cost overruns), along with proposed actions for mitigating or accommodating such risks (including assessment of additional funding sources available to compensate for potential capital financing shortfalls). The FCS Financial Plan will discuss and incorporate the Interim Use Reserve.
- Key FRA Review Comments from Prior Review:
 - Develop a version that looks ahead, meets the requirements of ARRA Grant Amendment 6, and reflects the conclusions [from ARRA Grant Amendment 6] about schedule, cost/budget, and strategy for interim use.
 - The plan needs to cover the financial specifics of the FCS as a standalone part of the Silicon Valley to Central Valley IOS.
- Comments:
 - FRA does not accept the current version of the Central Valley Project Financial Plan, as the document does not address FRA's past review comments. CHSRA needs to develop the document by:
 - Taking into consideration the required components listed above per ARRA Grant Amendment 6, including a focus on the financial specifics of the FCS as a standalone part of the IOS.
 - In lieu of discussing and listing the requirements CHSRA has to meet, highlight how CHSRA prepares an FCP, a budget, etc. and what CHSRA takes into account when preparing an FCP, budget, etc. In other words, discuss how CHSRA meets all the necessary requirements.

CVPFP (June 2016) FRA Review Comments 1

2017-01-17

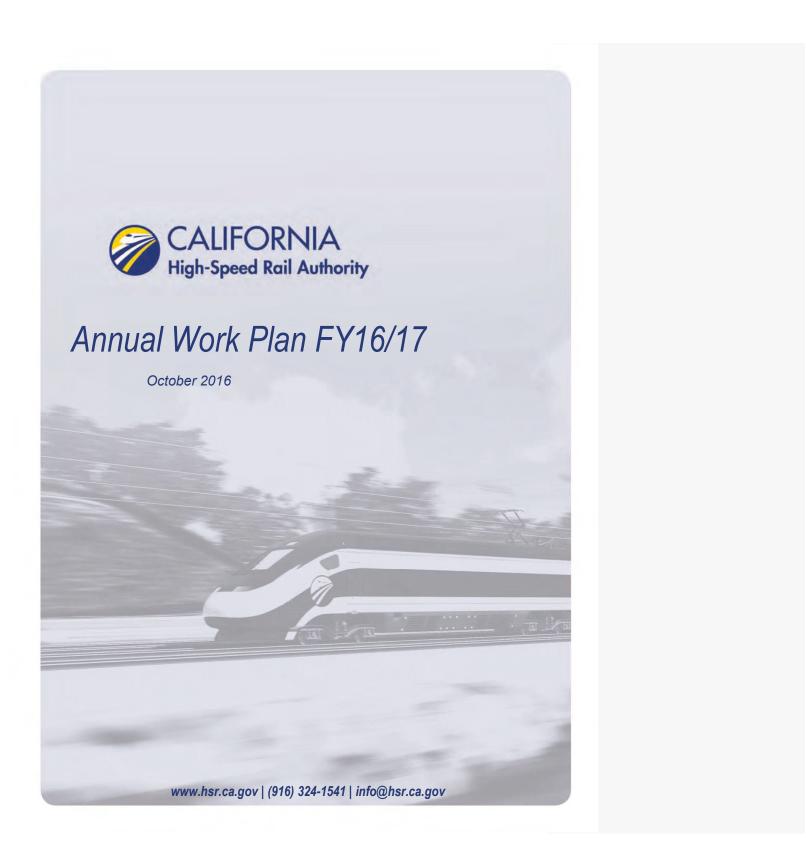


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Background

Established in 1996, the California High-Speed Rail Authority (Authority) is the state department responsible for planning, constructing and operating the 520-mile-long high-speed rail system in California connecting San Francisco to Los Angeles/Anaheim. The high-speed rail system is ultimately envisioned to extend to Sacramento and to San Diego.

The Authority is governed by a nine-member Board of Directors (five appointed by the Governor, two appointed by the Senate Committee on Rules, and two by the Speaker of the Assembly). There are elected Chair and Vice-Chair positions within the Board of Directors. The Authority is led by the Chief Executive Officer (CEO) who reports to the Board of Directors. The CEO works with the Board on the program's direction and a broad range of issues regarding the ongoing program, establishing program policies and goals, certifying environmental documents, and entering into agreements.

Introduction

This document is the Authority's Annual Work Plan (AWP). The AWP is prepared annually for the Federal Railroad Administration and submitted in compliance with the federal American Recovery and Reinvestment Act of 2009 (ARRA) and Fiscal Year 10 (FY 10) grant agreements. The AWP is a requirement within Task 5 of Attachment 3, Statement of Work for the ARRA and FY 10 agreements which states:

CHSRA will prepare for FRA's review and comment a detailed staffing plan and cost estimate for the Project. The AWP outlines the work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement, and tracking of deliverable so that implementation of the Project stays on schedule and within budget.

The Authority receives federal funding through the two grants identified above. These funds contribute to the completion of environmental documentation and preliminary engineering for the Phase 1 system from San Francisco to Los Angeles/Anaheim, and construction of the First Construction Section (FCS) generally from Madera to Shafter as shown in Figure 1. The two grants fund activities that are broken out by tasks within the grant in Attachment 3, Statement of Work. The tasks include:

- Task 1: Environmental Review (San Francisco Los Angeles/Anaheim)
- Task 2: Preliminary Engineering (San Francisco Los Angeles/Anaheim)
- Task 3: Other Related Work Needed Prior to Construction
- Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP) (now complete)
- Task 5: Program, Project and FCS Construction Management
- Task 6: Real Property Acquisition and Environmental Mitigation
- Task 7: Early Work Program (closed)
- Task 8: Final Design and Construction Contract Work for the FCS
- Task 9: Interim Use Project Reserve
- Task 10: Unallocated Contingency

The ten tasks are broken down into sub-tasks as defined in the Task and Sub-Task Descriptions in Appendix A – Grant Tasks and Sub-Tasks.

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Figure 1 - Phase 1 and First Construction Section

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This AWP provides a programmatic overview followed by a summary of specific activities related to each grant task as outlined in Attachment 3, Statement of Work, and highlights planned milestones and key activities in fiscal year July 1, 2016 to June 30, 2017 (FY16/17). This AWP, complimented by the Program Management Plan, which outlines the procedures used to manage the scope, budget, schedule and risk for the program, provides a comprehensive overview of how the Authority manages its work.

Staffing

The Authority's Board of Directors (Board) and Executive Management recognize the importance of a strong management structure and proper staffing to ensure the successful delivery of the high-speed rail program. The organizational model includes: Monitoring by multiple external agencies and federal grant funded oversight; an active Board of Directors to set policy and make environmental, contracting and financial decisions; a senior Executive management team with extensive project development experience; interagency support for many standard state administrative functions; and reliance on the private sector to deliver the project under contracts negotiated and managed by government employees and legal counsel.

The Authority Board sets direction and governs the organization through broad policies and objectives that outline the Authority's Business Plan. In addition to selecting the Chief Executive Officer (CEO), the board provides direct oversight of two key functions – internal audit and risk management.

The CEO has established an organization that provides direction and oversight for all aspects of developing and implementing the high-speed rail system. The Executive management team includes the CEO, chief counsel, chief financial officer, chief program manager and other senior management. Several key positions are specifically called out in statute [Section 185024 Public Utilities Code]. The staffing plan utilizes an integrated approach wherein the organization consists of both state employees and consultant staff from its rail delivery partner hired in 2015 and financial advisor hired in 2016.

The executive leadership team spans all functional areas to ensure consistency throughout the program, and has experienced staff at the regional level to enhance outreach and service delivery within local communities. It is responsible for selecting senior management staff, establishing management plans, identifying and monitoring risks, overseeing budgetary requirements and other organizational processes. Figure 2 - Authority Management Team Figure 2 - Authority Management Team shows the key leadership positions, these include:

- Chief Executive Officer
- Chief Deputy Director
- Chief Administrative Officer
- Chief Counsel
- Chief of Communications
- Chief Financial Officer
- Chief Program Manager
- Regional Directors (Northern California, Central Valley, and Southern California)

The executive leadership and senior management staff oversee the architectural and engineering design professionals and the construction design-build teams including:

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- Regional Consultants (RCs) Environmental documentation and preliminary engineering deliverables
- Environmental and Engineering Consultants (EECs) Environmental assessment, mitigation monitoring and engineering support after completion of environmental documents
- Right-of-Way (ROW) Consultants Technical staff to support appraisal and acquisition of property
- Project and Construction Management (PCM) Consultants Oversee the delivery of each construction package
- Design and Construction Contractors Complete a civil construction package
- Operations and Maintenance System operator to manage and maintain the system.

At the program and project levels, resource planning is divided into two categories: personnel resource planning, and resource planning for facilities, equipment, materials, etc. At the program level, each project's scope, schedule and budget are integrated into the program master schedule. The time needed to implement each project in the program master schedule is determined iteratively by balancing program need, available funding and program capabilities over time. At project initiation, it is the responsibility of the project manager to develop the preliminary scope, schedule and budget. The project-level schedule estimate informs the duration of the tasks and the estimated resources needed to complete it. The data from the schedule estimate enables the project budget to be developed.

Resource needs are evaluated at project initiation and the cost is included in the preliminary project budget. Resource needs are estimated from the bottom up using these steps:

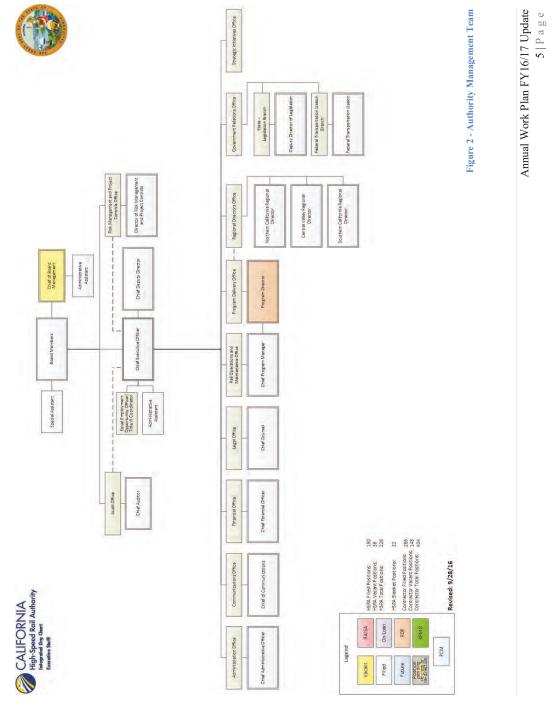
- Identify the project scope and desired outcomes.
- Determine the tasks necessary to deliver the project scope and desired outcomes.
- Determine the timing and duration of each task.
- Identify the specific staff and their utilization for each task.
- Determine the human resource level/cost for each task.
- Determine potential additional resource needs for the project and estimate their cost.

Program staffing is based on the resource needs and timing of the needs outlined above. As needs are identified, the integrated organization determines if the position can be filled internally or if outside resource(s) are required to fill the vacancy. Staffing and resource needs are monitored to balance the program needs vs. availability of staff as the program needs change.

Managing the Project

Recognizing that effective management of quality and performance accelerates program delivery, the Authority has instituted a program-wide quality policy that reflects the Authority's commitment to delivering the program on schedule and at the lowest possible cost with quality and safety that meets or exceeds acceptable industry and government standards. Through the integration and implementation of National Institute of Standards and Technology (NIST) criteria, ISO standards and FTA guidelines, a performance excellence framework was developed. This framework provides the elements essential to identifying and achieving goals and objectives, improving results and aligning requirements, roles,

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responsibilities, processes, procedures, actions and results. This framework also provides the tools to examine the organization, including its quality management system and to improve processes and results.

The diagram depicts the application of the integrated performance excellence framework for the high-speed rail program. A number of initiatives have been undertaken to institute a culture of continuous performance improvement, including:

- Internal process improvement for general process assessment and improvement,.
- Lessons-learned process to implement the knowledge gained from improvement initiatives into the work processes and procedures.
- Brown bag lunches that highlight various program activities to inform, educate and connect internal customers.
- Meetings between the quality manager and organizational units to update the group on quality developments and to follow up on any action items from prior meetings.
- Integration team comprised of organizational unit leads, along with other entities, which convenes to review progress and make adjustments to optimize performance and customer satisfaction. The team uses the established plan's "do, learn, share and sustain" approach to accelerate improvements within each organizational unit and within the organization as a whole by identifying solutions that can be immediately applied.

In addition, the Authority has a formalized Risk Management system consisting of a set of processes, protocols and responsibilities providing a systematic approach to identify, evaluate, assess, document and manage risks that could jeopardize the success of the program. Potential areas of risk include engineering, environmental, planning, right-of-way, procurement, construction, organizational, stakeholder, budget and schedule risk. The risk management plan balances the competing demands of scope, budget, schedule, quality, resources and risk to minimize risks to the program. Risk is reduced even further by requiring operators, infrastructure providers and contractors to accept risk directly through their contract agreements with the Authority. Further, risk management specialists identify key potential risks and develop mitigation plans in advance of their possible occurrence. Risk-related items and actions are documented in the risk register for the program. Individual risk registers are reviewed and updated quarterly, though individual risks are updated as new information is developed. The registers are reviewed by management and response strategies and actions for individual risks, as well as for overall program risks, are integrated into a consolidated plan.

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Figure 3 - Authority Program Phase 1 Milestone Road Map

High-Speed Rail Authority				5	HSR	A Pr	ogr	m	has	e 1	Σ	CHSRA Program Phase 1 Milestone Table	ne T	able						
	Environm	Environmental/Engineering	neering	0	Civil Infrastructure	ucture		Frack and Systems	tems		High-S	High-Speed Rail Trains	S			Testing and Commissioning	ammissioning			
Data Date: October 1 2016												Fleet 1 (Valley to Valley)	Valley)		Test Track					READY FOR
	RA ROD	STB ROD	Complete PE4P		Issue RFP Issue NTP	Substantial Completion	Issue RFP	Issue NTP	Substantial Completion	tssue RFP	Issue NTP	Prototype Acceptance	Acceptance	Complete Static Testing	Complete Dynamic Testing	Complete Prototype Testing	Complete Static Testing	Dynamic Testing	Complete Trial Run	SERVICE
silicon Valley to Central Valley Line (San Jose to Poplar Avenue)	e to Popl	ar Avenu	ue)																	
San Jose to FCS																				
San Jose Approach				Nov-17	Nov-17 Jun-18	Jan-22														
San Jose to Pacheco Pass					Nov-17 Jun-18	Oct-21				_										
Pachecho Pass Tunnels	/T-Dan	NIAF-15	T-AON ST-JEIN /T-SON	Nov-17	Nov-17 May-18	Oct-21			Dec-22	_							Jun-23			
Foothills to Carlucci Rd. &				Thursday	Mare 17 Inter 10	No. 22	11 11	Ann 10		10001	01 and 17 and		CL 21.4					Cr 12	No. 74	In 3C
Wye Leg - Carlucci Rd. to FCS	Dec-17	Dec-17 Mar-18 Sep-17	Sep-17		ot-linr	-	/T-IPINI	or-inte		T-IPIAI	or-ide		cz-Smw					CZ-JAN	#7-7an	C7-IIPF
First Construction Segment (FCS)																				
CP 1				Mar-12	Oct-13	Mar-12 Oct-13 Jun-19				-										
CP 2-3	0	Complete		Apr-14	Apr-14 Jul-15	Jun-19			Dec-20	_		Aug-21		Jun-21	Dec-21	Dec-22				
CP 4				May-15	May-15 Apr-16															
oilicon Valley to Central Valley Extensions (San Francisco to Merced & San Francisco to Bakersfield)	San Franc	isco to N	Merced 8	& San Fr	ancisco t	o Bakersfi	(pis													
San Francisco to San Jose	Dec-17	Mar-18	Jul-17	Dec-17	Dec-17 Mar-18 Jul-17 Dec-17 Oct-18	May-21														
Merced to Ranch Rd. & Wye Leg West	Dec-17	Mar-18	Sep-17	Dec-17	Dec-17 Mar-18 Sep-17 Dec-17 Jun-18	Sep-21 Mar-17 Apr-18	Mar-17	Apr-18	Sep-22	Mar-17							Jun-23	Dec-23	Dec-24	Jan-25
FCS to Bakersfield	Dec-17		Aug-18	Jun-17	Apr-17 Aug-18 Jun-17 Apr-18	Oct-21 Nov-17 Aug-18	LT-VON	Aug-18	Oct-22	T							Jun-23		Í	
Merced to FCS & FCS to Burbank																				
Wye Leg East	Dec-17	Mar-18	Sep-17	Dec-18	Oct-19	Dec-17 Mar-18 Sep-17 Dec-18 Oct-19 Nov-23 Nov-21 Sep-22	Nov-21	Sep-22	Jun-25											
Bakersfield to Palmdale																				
SCP 1				Jan-19	Jan-19 Nov-19	Oct-24														
SCP 2				Nov-18	Nov-18 Sep-19	Jan-25														
SCP 3		A	00	1	Jan-18 Nov-18	Dec-24														
SCP 4	/T-OPO	oT-ide	07-UPF		Sep-18 Jul-19	Sep-24														
SCP 5				May-19	May-19 Mar-20	Dec-24	Nau 71	LL YOU	DE MO											
SCP 6				May-19	May-19 Mar-20	Apr-24	TZ-AONI	77-dac	oz-dac	Mar-17							Jun-27	Dec-27	Dec-28	Jan-29
Palmdale to Burbank																				
SCP 7				May-18	May-18 Mar-19	Jan-25														
SCP 8	Dec-17		Jun-18	May-18	Dec-17 Jun-18 May-18 Mar-19	Mar-25														
SCP 9				May-18	May-18 Mar-19	Jan-24				-										
Burbank to Anaheim Corridor Improvements	S																			
Burbank to Los Angeles	Dec-17	Feb-18	Aug-18	Sep-18	May-19	Dec-17 Feb-18 Aug-18 Sep-18 May-19 Jun-25	PC mell	Cr	Dear	-										
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Schedule

As defined in the 2016 Business Plan, the Authority is projecting passenger service to start on the initial project segment, from the Silicon Valley to the Central Valley, in 2025 and Phase 1 completion by 2029. The milestone schedule and phasing strategy to meet these goals is shown above in Figure 3. The milestones provide a high-level summary of the key activities necessary to guide resource planning, and project scheduling and construction. It also shows the overall progression of work and how the interim use of the FCS for operations testing fits within the overall schedule for the start of high-speed rail revenue service by January 2025.

In FY 16/17 the Authority is expected to finalize work on all Phase 1 environmental documents which are scheduled to be completed by December 2017 (see Task 1 summary). In addition, construction of the FCS through Construction Package's (CP) 1-4 will continue with key construction milestones summarized in Task 8. Finally, RFP's are projected to be released for track and systems, and high-speed rail trainsets in Spring 2017.

The Authority provides the FRA with quarterly schedule updates that contain more detailed information about the current status of each grant task. The September schedule update is included in Appendix D.

Cost Estimate

The Authority updates the program cost estimate every two years as part of the business plan (a legislative statutory requirement). These costs were recently updated and included in the *Connecting and Transforming California, 2016 Business Plan* published on May 1, 2016. All cost estimates below are as of May 2016.

The updated costs to complete the environmental, preliminary engineering and planning efforts for the Phase 1 System from San Francisco to Anaheim are summarized below. The cost to complete has increased over previous budget projections due to a variety of reasons, including unanticipated additional environmental documentation and alignment variations to be studied. Project development costs are summarized in Table 1 and include spent-to-date and additional costs needed to complete work related to Tasks 1-4.

Table 1 - Project Development Costs

Project Development costs	Amount (\$ millions)
Environmental/Planning Spent-to-Date	\$ 643
Phase 1 Environmental/Planning Cost to	\$ 403
Complete	
Total	\$1,046

Task 8 covers civil infrastructure construction for the FCS. CP's 1-4 have been procured and contract amounts (including provisional sums) and contingency are summarized in Table 2 below. One additional contract remains to be released for final design and construction of FCS track work. It is anticipated that contract will be released within the FY 17/18.

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Table 2 - Design Build Contract Costs

Section ¹	Contractor	Current Contract (\$ millions)	Contingency (\$ millions)
SR 99	Caltrans ²	\$ 226	\$ 9
CP 1	Tutor-Perini/Zacary/Parsons (TPZP)	\$ 1,285	\$ 160
CP 2-3	Dragados/Flatiron	\$ 1,365	\$ 261
CP 4	California Rail Builders	\$ 444	\$ 62

1 Contract amounts as of September 2016 Finance and Audit Report

2 Using CMGC Delivery method, contingency split between Early Works and Main packages

A detailed capital cost estimate of all Phase I program costs can be found at http://www.hsr.ca.gov/docs/about/business plans/2016 Business Plan Basis of Estimate.pdf

Budget Summary

Phase 1 planning and FCS construction are funded through federal grants, and state resources from Proposition (Prop) 1A and Cap and Trade. The state funds and some local resources contribute to the match required in the ARRA and FY 10 grants. Local match is allocated to station area planning work in cities along the Phase 1 system. Table 3 summarizes federal and state funding. The Authority realizes that additional state funds will be required to complete the full scope of the grant agreements. These funds are identified as additional resources to be expended as part of construction in Task 8. Appendix B – Detailed Grant Budget contains the grant Quarterly Budget Update, September 30, 2016.

Table 3 - Budget Summary				
Task	Federal Budget	State Match	Total	Additional Resources
1 Environmental	\$173,327,113	\$326,207,370	\$499,534,483	
2 Preliminary Engineering	\$254,362,236	\$ 82,999,427	\$337,361,663	
3 Other Related Work	\$ 83,009,008	\$106,416,974 ¹	\$189,425,982	
4 Project Administration	\$ 677,872	-	\$ 677,872	
5 Construction Management	\$221,959,777	\$197,267,290	\$419,227,067	\$139,400,000
6 Property Acquisition	\$468,304,427	\$383,970,052	\$852,274,479	\$ 91,105,000
7 Early Works	-	-	-	
8 Final Design & Construction	\$2,109,117,773	\$1,662,939,722	\$3,772,057,495	\$994,541,391
9 Project Reserves	\$161,879,645	\$ 46,267,108	\$208,146,753	
10 Unallocated Contingency	\$ 8,538,380	\$59,508,288	\$68,046,668	
Total	\$3,481,176,231	\$2,865,576,231	\$6,346,752,462	\$1,225,046,391

1 Includes local funding

The following chapters outline the resources, plans and milestones for FY 16/17 for the tasks of the grant agreement except tasks 4, 7, 9 and 10 – Task 4 is complete; Task 7 was deleted; and use of Task 9 and 10 are detailed in separate reports (Interim Use Plan and the Unallocated Contingency Management Plan respectively).

Procurement

The power to enter into contracts necessary to carry out the functions of the Authority is provided by the statutes that created the Authority. These statutes include:

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- Public Utilities Code § 185033 which gives the Authority the contracting power to enter into contracts with private or public entities for the design, construction and operation of the high-speed rail Program. The contracts may be separated into individual tasks or segments or may include all tasks and segments, including a design-build or design-build-operate contract.
- Public Utilities Code 185036(a) which allows for architecture and engineering (A&E) and other professional service procurements. The Authority issues RFQs and RFPs respectively.
 - A&E procurements are consistent with the requirements of Government Code Section 4525, et seq., and California Code of Regulations Title 21, Division 6, Chapter 1, Article 1.
 - Other professional service procurements are consistent with the requirements of Public Contract Code Sections 10295 and 10335, et seq. For design-build (DB) procurements, the Authority is currently using a two-step process consisting of a request for qualifications followed by a request for proposals.

The overall procurement strategy has been developed through an ongoing process of industry engagement, including issuance of requests for expressions of interest, industry forums and one-on-one meetings. Design-build (DB), as well as other alternative delivery strategies, is under consideration for delivery of the Silicon Valley to Central Valley initial operating segment. Figure 3 (on page 7) highlights some of the major procurement milestones scheduled to deliver the program. In FY 16/17 the Authority expects to release several major procurement packages, including requests for track and systems and train sets.

Deliverables

The Authority provides FRA with an update of key deliverables once a quarter including:

- Quarterly Progress Reports
- Quarterly Budget Update
- Funding Contribution Plan
- Right-of-Way Acquisition Plan
- Summary Schedule
- Contingency Plan Update
- SF 425 Federal and State Match Expenditures

In addition, this past year the FRA and the Authority began conducting a quarterly review of all grant required deliverables' due dates and collaboratively revise the due dates as appropriate. Specific deliverables related to each task area are summarized in their respective task below.

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Task 1 Environmental

The environmental review process is conducted in accordance with the requirements of the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the Department of Transportation Act (49 U.S.C. 303), and other applicable environmental laws and regulations (collectively NEPA/CEQA).

Environmental review includes the preparation of environmental documentation for each project section, development of resource agency agreements in support of the NEPA/CEQA process and the process to obtain regulatory agency approvals and environmental permits. A mitigation monitoring system has been established to ensure contractor compliance with the environmental documentation Record of Decision (ROD) mitigation and permit conditions. Should alignment changes be proposed that affect previous clearances, staff is included in change management decision making to ensure environmental requirements are considered and documented as outlined in the Design-Build Program Plan – Project Management Plan.

Staffing

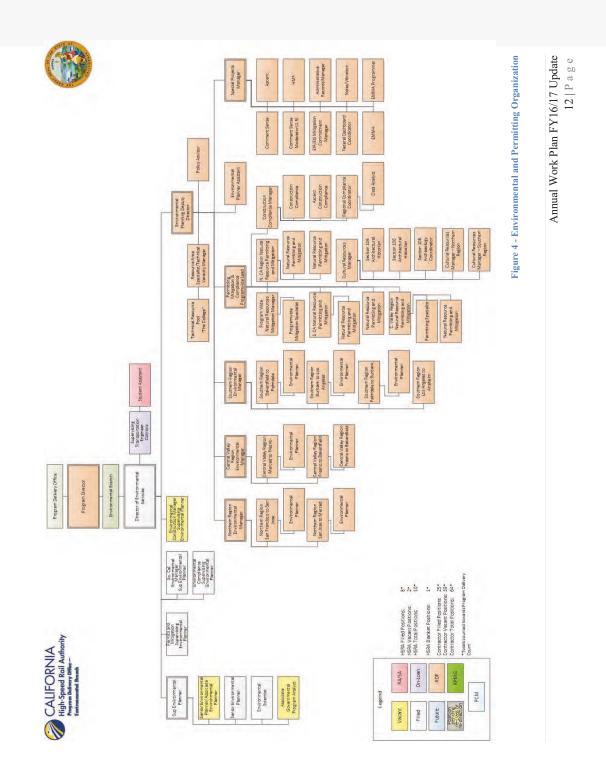
The environmental team is responsible for coordinating the activities required to environmentally clear and permit the high-speed rail projects to begin construction. They provide guidance on environmental strategies for project clearance, programmatic methodologies and assumptions to meet environmental commitments. The team directs permit activities and provides strategic guidance on permit approaches. In addition, the environmental team provides strategic guidance on the environmental approval process and serves as the liaison with the FRA, the attorney general's office and other federal, state, regional and local agencies, the regional consultants and environmental and engineering consultants, and other environmental consulting firms on environmental work products.

The environmental team also guides the regional consultants and the environmental and engineering consultants, and coordinates with them and other environmental consultants in preparing the environmental studies, documents and subsequent environmental approvals required for implementing high-speed rail construction and operation. The environmental team follows the quality procedures and reviews proposed environmental approach revisions and environmental deliverables submitted by the regional consultants, the environmental and engineering consultants and environmental teams.

The organizational chart shown in Figure 4 illustrates that the Director of Environmental Services provides direction and oversight of the preparation of environmental clearance documents prepared in each region by regional consultants managed by the regional directors. The team is also responsible for securing the permits necessary to begin construction and includes the following leadership positions:

- Director of Environmental Planning
- Deputy Director of Environmental Planning
- Supervising Environmental Planner
- Regional Environmental Manager South
- Regional Environmental Manager Central
- Regional Environmental Manager North
- Special Projects Manager
- Permitting, Mitigation and Compliance Manager

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Agency Coordination

The Authority and FRA have entered into a Memorandum of Understanding with the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) to facilitate compliance with the National Environmental Policy Act (NEPA - 42 U.S.C. section 4321, et seq.), the Clean Water Act (CWA – section 404 [U.S.C. section 1344]), and the Rivers and Harbors Action section 14 (33 U.S.C section 408) processes for the project-level (Tier 2) EISs for the ten sections of the program. Three steps in the checkpoint process require concurrence from the EPA and USACE. These steps are integrated with the environmental approval process as noted below:

Checkpoint A - Purpose and need; integrated with the purpose and need definition;

Checkpoint B – Range of alternatives; integrated with the alternatives analysis that leads to the range of alternatives studied in the EIR/EISs; and,

Checkpoint C – Least environmentally damaging practicable alternative (LEDPA); integrated with the selection of the preferred alternative.

The Checkpoint A process has been completed for the Phase 1 sections. Because some sections will not require an individual Section 404 permit for project construction (e.g., San Francisco to San Jose, Burbank to Los Angeles and Los Angeles to Anaheim), it may not be necessary to submit Checkpoint B and C documentation for agency review and concurrence. An EPA and USACE agreement on this approach is anticipated later in 2016. For the remaining sections that will require Checkpoints B and C, work is underway with completion anticipated in FY16/17.

Schedule

Phase 1 environmental clearances are expected to be completed by December 2017. Major milestones are shared with the Board on a monthly basis; in the Fall of 2016, major milestones will also be submitted to FRA to post to the Federal Permitting Dashboard. As dates change, the Authority will provide FRA with revised schedule information in order to update the dashboard. The Environmental Milestone Schedule and Permitting Milestone Schedules (September 2016) are included in Appendix C – Environmental Milestone and Permits Schedules.

Budget

The Environmental Review budget is \$499,534,483 and summarized in Table 3 - Budget Summary (on page 7). All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are contained in a monthly Operations Report. The Operations Report is reviewed by the Authority's Board of Directors Finance and Audit Committee on a monthly basis. The most recent Operations Report is located on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa_committee_meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 1 by project section. Table 4 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update (updated September 30, 2016).

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Section ¹	Total
San Francisco – San Jose	\$ 66,007,861
San Jose – Merced	\$161,504,942
Merced – Fresno	\$ 35,339,004
Fresno – Bakersfield	\$ 45,858,851
Bakersfield – Palmdale	\$ 75,065,146
Palmdale – Los Angeles	\$ 86,328,516
Los Angeles – Anaheim	\$ 29,430,163
Total	\$499,534,483

Table 4 - Task 1, Environmental Analysis, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Environmental documentation is governed by many laws and regulations. The Authority provides guidance to the regional consultants on preparation of the environmental documentation in order to ensure consistency across all environmental preparers. This guidance includes:

Project-Level Environmental Analysis Methodologies - Provides the methodological guidance for the preparation of technical reports and impact chapters of project-level environmental documents. https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Project_EIR-EIS_Environmental_Methodology_Guidelines-Version5.02.pdf;

Additional Guidance for Evaluating Impacts under NEPA – Outlines the analytical approach for identifying, evaluating and documenting environmental impacts under NEPA. https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/NEPA%20Impact%20 Guidance.pdf;

Guidance for Preparing Environmental Reviews for Electrical Interconnections – Describes the analytical and documentation steps for evaluating project-related electrical interconnections required for obtaining electrical power for the system.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env_Review_for_Ele ctrical_Interconnections.pdf;

Refined Guidance on Project EIR/EIS and Technical Report Content – Clarifies the content to be included in technical reports prepared in support of the EIR/EIS.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Technical_Report_Preparation_Guidance_2016.pdf;

Alternatives Analysis Methods for Project-Level Environmental Impact Reports and Environmental Impact Statements (EIR/EIS) – Provides guidance on conducting the alternatives analysis and documenting it in an alternatives analysis report.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Alternatives%20Anal ysis%20Methods.pdf;

Annual Work Plan FY16/17 Update 14 | P a g e Independent Utility/Logical Termini of HSR Sections – Outlines the requirement for establishing the logical termini for each of the HSR sections.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Authority_Independen t_Utility_Letter_02102009.pdf;

Multilingual Public Outreach Guidelines – Sets guidelines for public outreach to meet the Title VI requirements for multilingual outreach.

https://chsra.pbid.com/pmt/Environmental/VL/07.%20Outreach%20and%20Participation%20Guidance/Guidance%20for%20Multi-lingual%20Public%20Outreach%20Ver%201.pdf;

US Army Corp of Engineers Section 404/408 Memorandum of Understanding (MOU) – This document establishes the framework for integration of the Section 404/408 permit process with the environmental process.

https://chsra.pbid.com/pmt/Environmental/VL/06.%20Regulatory%20Permits%20and%20Guidance/NEP A Section%20404 Section 408%20MOU%20Ver%201.pdf;

Section 106 Programmatic Agreement for the National Historic Preservation Act Programmatic Agreement – Outlines the requirements and responsibilities for the approval process for the State Historic Preservation Officer (SHPO).

(https://chsra.pbid.com/pmt/Environmental/VL/05.%20Cultural%20Resources%20Guidance/Section%20 106%20Programmatic%20Agreement%20Ver%201.pdf);

Administrative Record Guidance – Describes the steps to organize, assemble and provide the administrative record in support of each individual EIR/EIS.

(https://chsra.pbid.com/pmt/Environmental/VL/03.%20Environmental%20Admin%20Record%20Guidan ce/20160105%20Revised%20Documentation%20Guidance-%20Admin%20Record%20FINAL.pdf);

Environmental Compliance Program Manual – Details the key elements of the program and lists the set of standards and procedures. <u>https://chsra.pbid.com/pmt/Environmental/pa/compliance/Forms/AllItems.aspx</u>

Environmental Re-examination Guidance – Describes the evaluation and documentation process for design and other changes to the high-speed rail project following environmental approval. (<u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env%20Re-Exam%20Guidance_Complete%20Doc%20(April%202014).pdf</u>).

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete the environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA for each project section:

- Notice of Intent
- Scoping Report
- Agency Coordination Plan
- Purpose and Need Statement
- Alternative Analysis Report

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- Administrative Draft EIR/EIS
- Draft EIR/EIS
- Administrative Final EIR/EIS
- Final EIR/EIS
- Record of Decision
- Mitigation and Monitoring Evaluation Plan (MMEP)
- Environmental Re-examinations (as necessary)

To date, the Authority has completed all Notices of Intent, Scoping Reports, Agency Coordination Plans, Purpose and Need Statements and Alternative Analysis Reports for all Phase 1 project sections. Two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and permitting activities for commencing project construction in accordance with the project's Notice of Determination (NOD)/Record of Decision (ROD) have been completed to date. The Authority is in the process of completing supplemental documents on these completed documents.

Table 5 summarizes the deliverables expected to be completed in FY 16/17.

Table 5 - FY 16/17 Environmental Deliverables

Deliverable/Section ¹	Schedule
Administrative Draft EIR/EIS	
San Francisco – San Jose	4 th Qtr 2016
San Jose – Merced	TBD
Bakersfield – Palmdale	TBD
Palmdale – Burbank	TBD
Burbank – Los Angeles	TBD
Los Angeles – Anaheim	TBD
Supplemental Documents	
Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	4 th Qtr 2016
Draft EIR/EIS	
San Francisco – San Jose	TBD
San Jose – Merced	1 st Qtr 2017
Bakersfield – Palmdale	2nd Qtr 2017
Palmdale – Burbank	2nd Qtr 2017
Burbank – Los Angeles	3 rd Qtr 2017
Los Angeles – Anaheim	3 rd Qtr 2017
Supplemental Documents	
Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	1 st Qtr 2017

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Administrative Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Draft Agency Decision Documents (NOD/ROD)	
Supplemental Documents	
Bakersfield F Street	TBD
MMEP	
Supplemental Documents	
Bakersfield F Street	TBD
1 September 2016	

The Authority will continue the permitting process, the acquisition and securing of off-site mitigation parcels, and compliance oversight of design-build work. Permitting milestones are summarized in Appendix C – Environmental Milestone and Permits Schedules. These are updated on a monthly basis and shared with FRA Environmental Management staff through standing agency briefings.

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Task 2 Preliminary Engineering

The Authority follows a standard design development process for each segment. Work has focused on the development of design standards, development of preliminary engineering to support environmental documentation and contract procurement and review of contractor submittals and requests for design variances and/or alternative technical concepts. The phases include:

- Preliminary Engineering The Authority provides ongoing oversight of regional consultant developed plans for design consistency across the system. This work supports alternatives development of the various sections in the Phase 1 system.
- **Preliminary Engineering for Project Development (PE4PD) Design** These plans support draft and final EIR/EIS alternatives, provides an itemized construction cost estimate and conforms with all requirements and commitments included in decision documents (FRA ROD; Authority Board Resolution, CEQA findings, and Mitigation Monitoring and Report Plan). The level of engineering detail in PE4PD design plans is sufficient to determine the required footprint for the high-speed rail program facilities and identify environmental impacts.
- **Preliminary Engineering for Procurement (PE4P) Design** These plans support procurement of final design and construction services and provide a more detailed construction cost estimate.

The Authority updates the Design Criteria Manual with new information gathered during preliminary engineering on the various project sections as well as with new information identified through the design-builders. During this fiscal year, the design manual will be updated to include elements of design for stations as well as more refined criteria related to tunneling.

Engineering staff also support the review of various DB contractor proposals related to design refinements and/or variations. This work includes: final design submittal review, design variance requests, constructability reviews, and value engineering.

Staffing

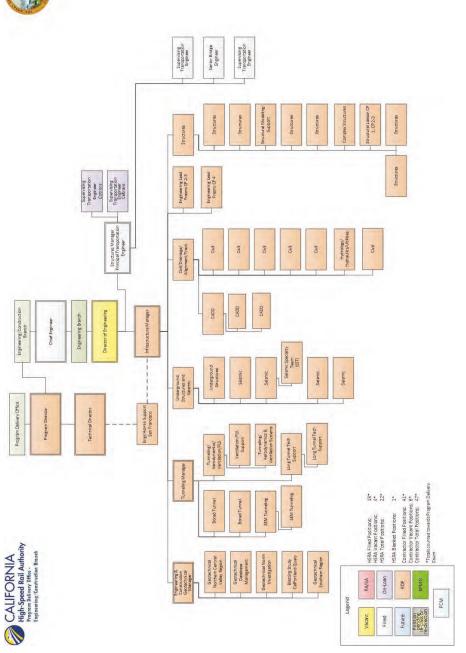
Planning and conceptual design supports the development of alternatives to be evaluated during the environmental review. Design development is based on the performance criteria contained in the legislation governing the high-speed rail program, and outlined in the business plan. As noted in Figure 5, the Chief Engineer provides direction and oversight of preliminary engineering policy and guidance for the development of plans associated with alignment development for environmental clearance documents. The plans are prepared in each region by regional consultants managed by the regional directors. The team consists of primarily RDP staff that prepares standards and oversees plans prepared by regional consultants and design-build teams for compliance with directed standards. Management roles cover the following engineering areas and include regional lead coordinators in Fresno:

- Infrastructure Manager
- Structures Manager
- Geotechnical Manager
- Tunneling Manager
- Underground Structures and Seismic Manager
- Civil/Drainage/Alignment/Track Manager

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Schedule

Phase 1 preliminary engineering for environmental clearances is expected to be completed during FY 16/17. The Authority shares major milestones with the Board on a monthly basis and provides regular updates to FRA. The Environmental Milestone Schedule (September 2016) provided in Appendix B highlights when preliminary engineering for project definition, and preliminary engineering for procurement will be completed. This schedule is updated monthly and provided to FRA during monthly resource planning meetings.

Budget

The preliminary engineering budget is \$337,361,663 and summarized in Table 6. All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are included in the Operations Report, and reviewed by the Authority's Board of Directors Finance and Audit Committee monthly. These costs include preliminary engineering costs for project definition. The most recent Operations Report can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa_committee_meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 2 by project section. Table 6 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update.

Table 6 - Task 2	, Preliminary	Engineering,	ARRA	Grant Budget
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Section ¹	Total
San Francisco – San Jose	\$26,484,517
San Jose – Merced	\$85,582,423
Merced – Fresno	\$16,090,509
Fresno – Bakersfield	\$43,482,519
Bakersfield – Palmdale	\$78,192,522
Palmdale – Los Angeles	\$66,485,509
Los Angeles – Anaheim	\$21,043,664
Total	\$337,361,663

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

The general performance requirements for the system are described in Technical Memorandum 0.3 -Basis of Design Policy, which is a foundation document for the development of design standards and criteria. The specific preliminary engineering design elements required to support environmental reviews are included in TM 0.1- Preliminary Engineering for Project Definition Guidelines. TM 0.1 presents design guidance for the minimum level of engineering required for project definition needed to support the project-specific EIR/EIS process. It further defines design elements, development level and engineering outputs with the objective of providing a consistent approach for developing preliminary engineering documents across project teams, while also ensuring compliance with federal, state and local regulations as well as the program-level design criteria.

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There are now over 100 individual TMs. In order to make the TM's more useful to the regional and environmental and engineering consultants, an effort is underway to update, consolidate and organize all TMs into a policy and procedures manual. The technical memorandum defines the major components and performance objectives that support the development of the engineering and regulatory basis for the high-speed rail program, including its components, objectives, processes, requirements and assumptions which are governed by the Authority. The Authority's policies that determine the processes, standards, and subsystems of the high-speed rail system are generally divided to address:

- Program implementation
- Performance requirements
- Infrastructure
- Systems (electrification, train controls and communications)
- Rolling stock
- Maintenance
- Operations

Conceptual engineering in support of programmatic environmental studies was developed based on a review and compilation of existing high-speed rail standards. The standards and criteria reflected the best practices at the time of the program-level studies and serve to support the development of conceptual alternatives applicable to the California environment and terrain.

Through the alignment and station screening evaluation process, a number of alignment and station options were identified, evaluated and defined for further study in the programmatic EIR/EIS. These alignment and station options are developed based on engineering criteria and parameters established for the screening evaluation. The regional teams complete the definition of the alignment and station options and provide the definitions to the environmental teams as the basis of their analyses.

Technical Memorandum 0.1 - Preliminary Engineering for Project Definition Guidelines: Presents design guidance for a minimum level of engineering, referred to as preliminary engineering for project definition (PEPD), required to support the project-specific environmental impact report/environmental impact statement process. It defines design elements, development level and engineering outputs with the objective of providing a consistent approach in developing preliminary engineering documents to a level that supports the identification of an inclusive environmental envelope.

http://www.hsr.ca.gov/docs/programs/eir_memos/Proj_Guidelines_TM0_1_PE_for_Project_Def_Guidelines_R4_021815.pdf

Technical Memorandum 0.3 - Basis of Design: Defines the major components and performance objectives of the high-speed rail system as envisioned by the Authority, outlining the objectives, requirements, and assumptions for the continuing development of the high-speed rail system. Specifically, it focuses on components, objectives, processes, requirements, and assumptions, which are governed by Authority policy. The policies are divided into program implementation, performance requirements, infrastructure, systems (electrification, train controls and communications), rolling stock and operations. http://www.hsr.ca.gov/docs/programs/eir_memos/TM%200.3%20Basis%20of%20Design%20R3%20120 222%20no%20sigs.pdf

Design Criteria Manual – Compilation of all the technical memorandum for individual elements of design.

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Technical Memorandum 0.1.1 Preliminary Engineering for Procurement (PE4P) – provides guidance on elements of design and process to inform bidders on construction packages. <u>http://hsr.ca.gov/docs/programs/eir memos/Proj Guidelines TM 01 1 Preliminary Engineering for Procurement Scope R3 131224 no sigs.pdf</u>

Technical Memorandum 100.07 Value Engineering Implementation Plan -

https://chsra.pbid.com/pmt/eng/SitePages/hs-tm.aspx?View={90E58D02-D2C4-4D7E-B64B-7C8176BB6023}&FilterField1=LinkTitle&FilterValue1=TM%20100%2E07%20Value%20Engineering %20Implementation%20Plan

Design Variance Request Policy -

http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_05_IVE_02_Design_Varianc e_Request_Procedure.pdf

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA related to Task 2:

- PE to Support Environmental Review
- Design Manual (Technical Memorandums)
- CONOPS for the FCS
- Rolling Stock Performance Specifications
- System Safety and Security Management Plan (SSMP)

To date, two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and have been completed. In addition, in progress drafts of the Design Manual, FCS CONOPS Plan, Rolling Stock Performance Specifications and SSMP have been provided. The Authority will complete preliminary engineering and update all plans in FY 16/17.

Table 7 - FY 16/17 Engineering Deliverables

Deliverable/Section ¹	Schedule
PE to Support Environmental Review	
San Francisco – San Jose	1 st Qtr 2017
San Jose – Merced	2 nd Qtr 2017
Bakersfield – Palmdale	2 nd Qtr 2017
Palmdale – Burbank	2nd Qtr 2017
Burbank – Los Angeles	3 rd Qtr 2017
Los Angeles – Anaheim	3 rd Qtr 2017
Supplemental Documents	

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Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	1st Qtr 2017
Design Manual Update	4 th Qtr 2016
CONOPS for the FCS and any other operating segments	4th Qtr 2016 (update)
Rolling Stock Performance Specifications	3 rd Qtr 2016
Systems Safety and Security Management Plan (SSMP)	3rd Qtr 2016

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Task 3 Other Related Work

The Authority performs additional work required prior to the start of construction for each section. The areas covered under this task include:

- Station Area Planning Work completed by the RC's to support the environmental documentation phase as well as support to local jurisdictions to evaluate land use and access planning around stations
- Right-of-Way (ROW) Work Work to support the identification of properties for environmental evaluation that establishes the footprint for environmental analysis and identification of the acquisition and relocation plan
- Ridership Forecasting Updates to ridership forecasts to support financial planning and operational development needs related to concessionaire planning
- LAUS/SoCal Investments ROW preservation

Staffing

Station Area Planning: Over the past year, planning staff has put a substantial emphasis on executing its station area planning contracts and developing working relationships with Phase 1 station cities. This work ensures coordinated infrastructure planning for the future high-speed rail stations. The Authority is working with stakeholders on station design and station area plans, access planning, land use changes, creating community hubs, defining the environmental footprint and massing, and mitigations. The Authority's planning team has provided technical assistance to the station cities helping with procurements, public involvement, and district scale planning (coordinating infrastructure investments, high-speed rail's high-performance station design criteria, and access planning at the station with the station area). Civic Spark Fellows (an AmeriCorps program) are also being provided as additional support to station cities. The Director of Planning and Integration reports to the Chief Program Manager and is made up of a mix of Authority and RDP staff. The staff develop policies and procedures for station planning, design standards for stations and coordinates with station cities on station area planning. Management roles cover the following primary areas:

- Transportation Planning and Local Support
- Station Development and Design
- Sustainability

Right-of-Way: To construct the various segments of California's high-speed rail system in the Central Valley, the Authority must acquire nearly 1,200 properties and land parcels. Accordingly, the Authority has a standard government transportation ROW function to conduct land surveys, prepare maps, prepare deeds, appraise property, acquire property, plan for utility relocation, and provide relocation assistance to homeowners and businesses. The right-of-way function also provides other property-related services such as managing encroachments, addressing damage to private property, coordinating permits, and providing escrow and title services. Efforts related to this task are focused on support for the environmental documentation phase. For more detailed information related to the ROW program staffing see Chapter 5, Real Property Acquisition and Environmental Mitigation.

Ridership Forecasting: The ridership forecasting team is part of the Financial Office, Commercial Division. It is led by the Deputy Director Commercial and focuses on modeling to support the Authority's financial planning efforts. The work is primarily overseen by RDP staff and conducted by Cambridge

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Systematics, an RDP sub-consultant. As the construction progresses, the program management team will continue to monitor the schedules for critical high-speed rail business plan milestone years (including the first leg of the initial operating segment [Silicon Valley to Central Valley] and passenger operations) which include testing, commissioning and start of service activities. This involves the integrated plans and schedules for bringing into service the track and systems elements as well as operations and maintenance facilities thereby completing the system commissioning milestone.

LAUS ROW Preservation: ARRA funding has been identified to purchase ROW in and adjacent to LAUS, including dedicated platforms and tracks within LAUS, and land to accommodate up to ten runthrough tracks for future use. Since February 2011, staff is working closely with Metro on planning, environmental, and preliminary engineering activities in order to accommodate these purchases. This effort is managed by the Southern California Regional Director.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the Task 4 activities. The next year will focus on the completion of station area planning in Phase 1 station cities and completion of the LAUS ROW procurement.

Station Area Planning: Although the Authority has actively engaged with station cities advance station area planning activities within the ARRA expenditure period, the station cities have taken and/or needed more time than anticipated to procure contractors and initiate their station area planning activities. The station cities could not reach the projected ARRA budget level or timeline to fully expend this line-item allocation. Therefore, on October 28, 2016, the Authority submitted a GARF to transfer \$2,800,000 of the Station Area Planning allocation to construction activities (Task 8). The schedule for each station area plan can be found on the Summary Schedule Update under Task 3 for each project section.

Right-of-Way: In order to accelerate ROW purchases, FRA has granted the Authority the use of a Working Capital Advance (WCA). This has helped accelerate the purchase of high value properties. Specific properties are identified and the Authority provides the FRA an update on the status of expenditures on a monthly basis. The Authority with continue with the WCA process throughout FY 16/17. In addition to the Quarterly Schedule Update identified above, the Authority also provides FRA with a quarterly ROW acquisition update. The latest update can be found at https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx by sorting on the deliverables pull down menu for ROW Acquisition Plan.

Ridership Forecasting: Work over FY 16/17 the model will support the efforts of the environmental team to complete the Phase 1 documentation. The model will also be evaluated for possible updates to support financial modeling needs. No major updates are planned this FY.

LAUS ROW Preservation: The Quarterly Schedule update includes the schedules for the Burbank-LA and LA-Anaheim project sections which will incorporate improvements at Los Angeles Union Station (LAUS). The Authority is actively coordinating with LA Metro to incorporate high-speed rail into the LAUS. As LA Metro advances plans and environmental clearance, the Authority is reviewing technical and engineering concepts as LA Metro identifies a preferred alternative and publishes the draft EIR/EIS for LinkUS. All grant-associated LAUS ROW acquisitions are expected to be finalized by the Spring of 2017.

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Budget

The budget for Task 3 Other Related Work is \$189,425,982 summarized in Table 8 below. All federal expenditures related to this task are from the ARRA grant. The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 3 by project section. Table 8 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update. This task also includes other local funding as part of the anticipated state match for the station area planning and LAUS sub-tasks. In addition, a separate sub-task has also been created for pre-construction planning and legal services related to pre-construction efforts.

Section ¹	ARRA	State	Local	Total
3.1 Station Area Planning (RC)	\$4,681,420	\$4,856,623		\$9,538,043
3.2 ROW Work (RC)	\$5,719,426	\$5,933,475		\$11,652,901
3.3 ROW Work (RDP)	\$237,231	\$246,109		\$483,340
3.4 Ridership Forecasting	\$1,662,521	\$1,724,741		\$3,387,262
3.5 Construction Planning/	\$2,009,773	\$2,084,989		\$4,094,762
Procurement Support				
3.6 Station Area Planning ²	\$2,700,000	\$4,200,000	\$4,100,000	\$11,000,000
3.7 LAUS/SoCal Investments ²	\$32,000,000		\$48,000,000	\$80,000,000
3.8 Legal Services – pre	\$33,998,637	\$35,271,037		\$69,269,674
construction				
Total	\$83,009,008	\$54,316,974	\$52,100,000	\$189,425,982

Table 8 - Task 3, Other Related Work, ARRA Grant Budget

1 Quarterly Budget Update September 2 Includes local funding

Regulatory Documentation and Guidelines

Station Area Planning: The Authority works with stakeholders on station design and station area plans. This work begins with siting and defining the environmental footprint and sizing of the station. In addition, staff is also working collaboratively with each Phase 1 station city to address transportation access planning, identify land use changes, and developing community transportation hubs.

The station cities are key stakeholders for the program. Federal and state funding is allocated toward the development of station areas. The funding is dedicated to support station area planning and local land use decisions related to transit-oriented development, joint development and other transit-supportive enhancement opportunities. Interagency agreements have been executed with all but one station city (Millbrae). The agreements outline the station access and development plan partnership between the city and the Authority.

The Authority has developed a variety of guidelines, plans and procedures for use by designers, local jurisdictions and other stakeholders in initiating and carrying out this process:

- High-Speed Train Station Area Development: General Principals and Guidelines Outline of the Authority's general principles and guidelines for station area development. <u>https://chsra.pbid.com/sites/ao/pm_pub/pf/POLI-PLAN-</u>
- 01%20HST_Station_Area_Development_General_Principles_and_Guidelines.pdf
- California High-Speed Train Project: Urban Design Guidelines A comprehensive planning guide that provides domestic and international examples of station area design, urban design and transit-

Annual Work Plan FY16/17 Update 26 | P a g e oriented development. This guide includes simple diagrams that analyze and explain successful public places and how each promotes livability and transit use. Urban design implemented around high-speed rail stations can encourage destination stations and enhance the value of the surrounding community. The report is intended to be used by cities and communities throughout the state as they work with their stakeholders and residents to create a vision for their high-speed rail station areas. http://www.hsr.ca.gov/docs/programs/green_practices/sustainability/Urban%20Design%20Guidelines .pdf

• Station Deliverables for PEPD and Environmental Documents Memorandum - Defines station planning deliverables for use in preliminary engineering for project definition deliverables and project-level draft environmental documents. This memorandum clarifies how to develop conceptual station plans.

https://chsra.pbid.com/pmt/pln/plndocs/Station%20Deliverable%20Memo%2005.27.16.pdf

Project Design Criteria Manual Chapter 14 Stations – Presents station design principles and goals as well as space requirements, passenger amenities, station performance, circulation, connections and safety and security for high-speed rail preliminary and final station design. The intended use of this chapter relates to high-speed rail dedicated stations as well as facilities shared in existing stations with other transportation agencies, owners and operators. Because high-speed rail station ridership is expected to increase over time, not all functions referenced in this document will be included in all initial station programs; instead, construction will occur in a staged or phased manner as the high-speed rail system expands.

https://chsra.pbid.com/pmt/pln/plndocs/Des%20Crit%20Manual%20Chap14%20Stations%20%2031 Mar2016_Submittal%20Issued.pdf

 Station Area Parking Guidance Technical Memorandum – Defines appropriate station area parking to be evaluated for the draft project-level environmental documents. As such, this technical memorandum defines the maximum possible footprint without taking into account how changes in local land use and transit connectivity can influence parking demand. This technical memorandum explains the desired parking approach, including cost and layout, along with the process for implementation including Authority, local and private-sector responsibilities. <u>https://chsra.pbid.com/pmt/pln/plndocs/Revised%20Station%20Area%20Parking%20Guidance%20w</u> <u>ith%20signatures.pdf</u>

Vision California – An effort to explore the critical role of land use and transportation investments in meeting the environmental, fiscal and public health challenges facing California today and in the future. New modeling tools are applied to formulate and compare scenarios for how California can accommodate growth based on policy decisions and development patterns. http://www.hsr.ca.gov/Programs/Green Practices/sustainability.html

 UC Berkeley Research on the Potential for Transit-Oriented Development in the Central Valley -These reports, prepared with the support of the Authority, examine the potential for transit-oriented development around high-speed rail stations in the Central Valley. They focus on proposed stations sites in the cities of Stockton, Merced, and Fresno and presents planning approaches and design concepts for land use, urban design and multimodal access and circulation in and around the proposed high-speed rail station areas. <u>http://www.hsr.ca.gov/Programs/Green_Practices/sustainability.html</u>

Right-of-Way: For more detailed information related to the ROW program see Task 6, Real Property Acquisition and Environmental Mitigation.

Ridership Forecasting: Documentation related to the development of the Authority's ridership and revenue forecasting can be found on the Authority's website at http://www.hsr.ca.gov/About/ridership and revenue.html. Information can be found on the California

Annual Work Plan FY16/17 Update 27 | P a g e High-Speed Rail Ridership and Revenue Model, Version 3 Model Documentation completed by Cambridge Systematics, February 17, 2016. In addition, reports from the Authority's Ridership Technical Advisory Panel can also be found.

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete station area planning or ROW planning activities. No other major procurements are anticipated.

Deliverables

The following deliverables scheduled for FY16/17 are below. To date, in progress drafts of the ROW Procedures Manual and FCS Contingency Plan have been provided to FRA. ROW Acquisition Plans for the FCS are provided quarterly.

 Table 9 - FY 16/17 Other Related Work Deliverables

Deliverable ¹	Schedule
Station Area plans	2 nd Qtr 2017
ROW Procedures Manual	2 nd Qtr 2017
ROW Acquisition Plan for the FCS	Quarterly
FCS Contingency Plan (Update)	4 th Qtr 2016

1 September 2016

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Task 5 Program, Project and FCS Construction Management

This task focuses on the overall management of the program and construction oversight of the designbuilders. Deliverables in this area focus on the overall program and project management and construction oversight provided by the Project Construction Managers (PCM).

Staffing

Together, the Authority and RDP form an integrated organization. The Authority provides overarching program oversight and policy direction, and the RDP manages, monitors and oversees the program's operations and progress. The organization is broken down into four primary areas which include:

Program Management: Program management is overseen by the Director of Program Operations and a Program Controls Manager. They are responsible to provide recommendations and support related to program delivery approach and master program planning such as oversight of program controls including program scope, cost, and schedule.

Program Delivery: This area is overseen by Program Director who oversees both Program and Project Delivery to ensure coordination between Program technical expertise as well as individual construction project support. This area is supported by Regional Directors responsible for project and community coordination and delivery in the Northern, Southern and Central Valley regions. On-site functional teams are assigned responsibility for program delivery. Each team oversees and monitors the performance of associated work packages under their assigned disciplines (environmental, engineering, ROW, and etc.) Part of program delivery includes providing the specialized technical resources which may include, but not be limited to, tunneling, seismic design, high-speed rail systems (track electrification, train control, signaling, and communications), trainsets, track work, heavy maintenance facilities, high-speed rail system testing and commissioning, and facility operations and maintenance.

Project Delivery: Project Delivery includes the overall planning, coordination, and control of construction. The Program Director and Chief Engineer have overall responsibility for the execution of the construction work program. The construction project manager is responsible for managing both the construction team and the functional resources needed for the construction project, including the DB contractor. Assigning the project manager the responsibility of managing both the personnel and resources required for a specific project results in creating a single point of contact and accountability for each project as well as program wide consistency across each of the projects comprising the high-speed rail program. For more information on the construction organization see Task 8, Final Design and Construction Contract Work.

Project & Construction Management: The Chief Engineer and Construction Branch Manager oversee the overall organization with support from Authority construction contract managers and the PCM's. The Authority has also retained the services of specialty project and construction management (PCM) firms to provide on-site management expertise and staff to oversee the DB contracts. The PCM oversees and directs field inspectors, and work closely with the design-builder to assist in coordination with agencies and utility companies. PCM's also assist the design-builder in making field decisions to address conditions and/or activities that could impact budget or schedule. The PCM's for each construction project are:

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- CP 1 PGH Wong Engineering
- CP 2-3 ARCADIS U.S. Inc.
- CP 4 HNTB Corporation

The Authority primarily manages oversight activities from its headquarters program offices in Sacramento; project managers, project staff, the PCM and the DB are located in local construction project offices. This co-location enhances communication between all parties, expedites the DB approach and provides onsite oversight and coordination.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the PCM schedule for each construction project. All other activities and deliverables related to this task will be performed over the ARRA and FY10 period of performance as required.

Budget

The Task 5 budget is \$419,227,067 and is summarized in Table 10 below. Expenditures related to Program Management and Legal Services are covered only in the ARRA and State funds budget. The budget below reflects the executed amounts for PCM contracts for CP 1 through CP 4.

Sub Task ¹	ARRA	State	FY10	State	Total	Additional State
5.1 Program Management	\$126,599,146	\$132,202,936	0	0	\$258,802,082	\$139,400,000
5.2 Project Construction Management (PCM)	\$48,748,955	\$50,906,782	\$44,500,052	\$11,952,478	\$156,108,267	
5.3 Legal Services	\$2,111,624	\$2,205,094	0	0	\$4,316,718	
Total	\$177,459,725	\$185,314,812	\$44,500,052	\$11,952,478	\$419,227,067	

 Table 10 - Task 5, Program, Project and FCS Construction Management Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Management and Program/Project Controls: Program management policies, procedures and tools are utilized to manage and control the delivery of the scope, budget and schedule commitments of the overall program. The program controls plan provides a functional overview of the control processes for managing the scope, budget and schedule at the program-level, whereas the regional project management plans address the specific control processes for managing scope, budget and schedule for each project. More detailed information is included in the Chapter 5, Management and Program/Project Controls of the Program Management Plan.

Project Construction Management Manual (PCMM): Establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work, dealing with

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various situations that may arise. The PCMM can be found on the Authority's web site at: <u>https://www.hsr.ca.gov/docs/programs/construction/PCM_Manual_Rev_0.pdf</u>. Various procedures and policies provide a framework for:

- Program structure and organization
- Contract administration
- Communication/documentation/reports
- DB contract submittals
- Verification, validation and self-certification
- Interface management and coordination
- Quality management
- Safety and security
- Schedule control
- Changes and claims
- Right-of-way
- Public involvement
- Completion and closeout

Design-Build Program Plan: The design-build program plan (DBPP) outlines the Authority's approach to project delivery and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery. FRA approved the final plan in April 2016 and it is located on the FRA sharepoint site at: <u>https://chsra.pbid.com/pmt/gm/Deliverables/DBPP-PMP%20FCS%20CHSRA%20Final%20042016.pdf</u>

Procurement

No significant procurements to complete the deliverables associated with this Task are anticipated.

Deliverables

The following deliverables are scheduled for FY16/17.

Table 11 - FY 16/17 Program, Project, and FCS Construction Management Deliverables

Deliverable ¹	Schedule
Annual Work Plan	4 th Qtr 2016
Program Management Plan	4 th Qtr 2016
Central Valley Project Financial Plan	4 th Qtr 2016
Phase 1 Program Financial Plan	4 th Qtr 2016
RFP's/NTP's for Design/Construction Services	
CP 5 RFP	4 th Qtr 2016
Network Integration Plan	3 rd Qtr 2016
Updated Service Development Plan	2 nd Qtr 2017
Infrastructure Maintenance Plan (update)	2 nd Qtr 2017
Rolling Stock Maintenance plan (update)	2 nd Qtr 2017

September 2016

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Task 6 Real Property Acquisition and Environmental Mitigation

Task 6 focuses on ROW delivery for construction and property associated with environmental mitigation. The ROW team maps, appraises, and acquires parcels and provides relocation assistance (associated with ROW) needed for CP1, CP2-3 and CP4. Emphasis in FY 16/17 is to continue to acquire property for construction and begin to focus on future property management activities. ROW schedules and costs are reported on a quarterly basis.

Staffing

ROW is managed by the Director of Real Property and reports to the Program Director. The Director is supported by a manager of ROW information, and a Deputy Director of Real Property that oversees Authority agents who oversee the work of ROW consultants. The Authority's ROW division managers are located in the Sacramento headquarters office, in the Central Valley regional office in Fresno, the Southern California regional office in Los Angeles and the Northern California regional office in San Jose. The organization is shown on <u>Figure 6Figure 6</u>. ROW consultants are responsible for performing ROW appraisal and acquisition services, including:

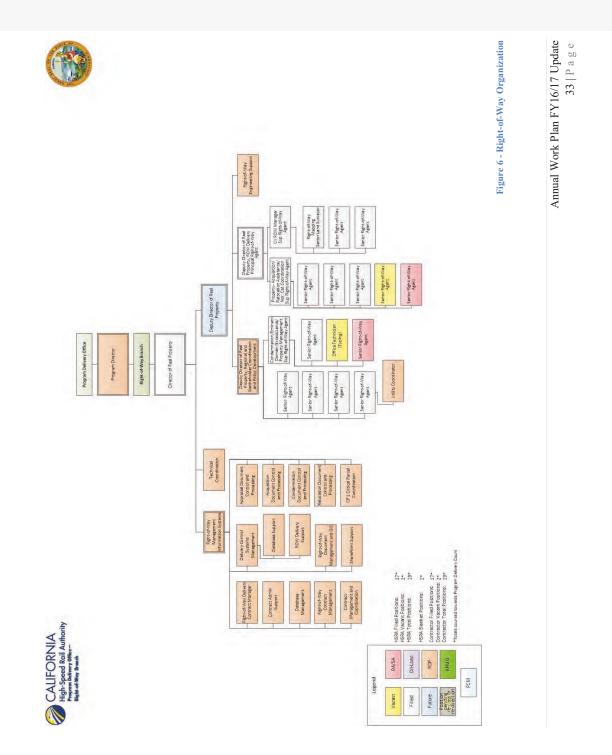
- Issuing initial letters to the property owners (Notice of Determination to Appraise [NODA]
- Conducting appraisals
- Issuing the first written offers
- Conducting negotiations
- Preparing the administrative settlement memo
- Issuing revised offers
- Establishing and providing relocation benefits and educating affected property owners about the benefits
- Preparing the acquisition quality checklist
- Preparing the memorandum of appraisal updates, the declaration of value and close escrow and the resolutions of necessity (RONs) needed for the condemnation process

Agency Coordination

The ROW process involves extensive coordination with other agencies which include:

- California State Public Works Board (PWB): This independent agency of the state was created to oversee fiscal matters associated with construction of projects for state agencies. Under the California Property Acquisition Law, the PWB is authorized to approve real estate transactions. Before an offer of just compensation is approved, the PWB reviews the project and its budget and makes an initial determination that the state has the legal authority to purchase the property in question.
- California Department of General Services (DGS): The Real Property Services Section (RPSS) reviews and approves each parcel appraisal for just compensation prior to a written offer for acquisition. Upon execution of the parcel's ROW contract, the Real Property Services Section reviews and recommends approval.
- California Department of Finance (DOF): The Capital Program Branch reviews and executes ROW agreements for compliance with budgetary and project authority for the parcel acquisition.

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California Department of Transportation: The Legal Division provides legal review and ٠ representation for ROW contracts, and performs legal services for cases of eminent domain through the Effective Order of Possession.

Schedule

The Authority shares major milestones and the current status of ROW procurement with the Board on a monthly basis and provides quarterly updates to FRA. This information about the work in progress is shared in a monthly operations report. The most updated version can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly fa committee meeting.html

Information is also shared quarterly with FRA. The latest update can be found at https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx by sorting on the deliverables pull down menu for ROW Acq Plan.

In July 2016, the FRA approved the Authority's request for the use of a \$60,000,000 working capital advance (WCA). Access to the WCA allowed the Authority to expedite several critical-path property acquisitions in CP 1 and CP 2-3. The Authority fully expended the initial \$60,000,000 WCA by the September 28, 2016 due date. In October 2015, the Authority requested a second WCA of \$65,000,000 to expedite the ROW acquisition process and correlative construction activities.

Budget

The Task 6 budget is \$852,274,479 and is summarized in Table 12. Currently ARRA federal funding for preliminary ROW and environmental mitigation is through the ARRA grant. These activities will continue beyond the ARRA September 2017 performance period, with future funding covered by state resources.

The Authority executed a WCA in August 2016 and fully expended the initial \$60 million requested within August-September. The second WCA request of \$65,000,000 (approval pending at the time of this report) will enable an expedited ROW acquisition process and completion.

Table 12 - Task 6, Real Property Acquisition and Environmental Mitigation Budget

Sub Task ¹	ARRA	State	FY10	State	Total	Additional State
6.1 Real Property – Preliminary ROW	\$13,311,325	\$11,016,061	0	0	\$24,327,386	
6.2 Real Property – ROW Services and Relocation	\$93,438,986	\$77,327,358	\$3,092,482	\$3,850,622	\$177,709,448	\$ 9,987,112
6.3 Real Property – Environmental Mitigation	\$29,489,968	\$24,405,032	0	0	\$53,895,000	\$46,313,298
6.4 Real Property – ROW Acquisition	\$323,079,364	\$267,370,979	\$5,892,302	0	\$596,342,645	\$34,804,590
Total	\$459,319,643	\$380,119,430	\$8,984,784	\$3,850,622	\$852,274,479	\$91,105,000

Regulatory Documentation and Guidelines

In support of the high-speed rail program and in compliance with federal and state mandates required by the California Property Acquisition Law and the Federal Uniform Relocation Assistance and Real Estate Property Acquisition for Federal and Federally Funded Policies Act of 1970, the Authority has developed policies and procedures for the appraisal, acquisition and management of real property.

ROW Manual: The Authority developed the program's right-of-way manual, which includes policies and procedures for acquiring and managing property rights through purchase, easement, lease or other legal instruments including, when necessary, condemnation. These policies and procedures are being utilized consistently throughout the program.

Right-Of-Way Acquisition Plan: The Authority prepares a right-of-way acquisition plan for each project (divided into construction packages) once a preferred alignment has been identified and preliminary design has been completed. The acquisition plan gives priority to parcels needed for long-lead construction activities and parcels that may have complicated relocation management matters. The acquisition plan is supported by a right-of-way cost estimate based on preliminary engineering plans. Land values, improvements and damages for each property are considered in the development of the right-of-way estimate, which includes costs for temporary and permanent easements, utility easements and fee acquisitions along with a contingency for condemnation increments and settlements. Relocation expenses are also included in the estimate for those acquisitions involving displacements and/or personal property moves. Assumptions for business displacements and relocation payments are based on the right-of-way relocation plan.

Property Management Plan: Maintenance and protection of property interests acquired in the name of the State of California are provided by the property acquisition agent until control of the property is transferred to the contractor. The property acquisition agent is required to maintain an inventory of real property and improvements acquired for the project. Additional responsibilities assigned to the property acquisition agent include protecting the property from vandalism, encroachment or other misuse prior to turnover to the contractor.

Right-of-Way Data Exchange System (ROWDES): In addition to the right-of-way manual, the Authority uses this internal reporting system to track right-of-way acquisition and management. This database is used to manage every parcel acquired by the Authority. ROWDES contains modules for each step of the acquisition/management process, including appraisals, acquisition, condemnation, costs, etc. The data generated by ROWDES enables the generation of weekly reports on ROW status and is used to produce the Board monthly and FRA Quarterly reports.

Procurement

In FY16/17 the Authority expects to award two additional contracts. The additional contracts include:

- ROW Services: Work related to environmental assessments, appraisals, acquisition and relocation services. (Anticipate awarding multiple contracts.)
- ROW Engineering: Work related to boundary surveys, appraisal maps, legal descriptions, title research for the San Jose to Madera section. (Expect to award up to four contracts.)
- ROW Property Management Services: Management of parcels once acquired, transfer to the DB for construction and final overall disposition of excess properties. (Will award up to four contracts.)

Annual Work Plan FY16/17 Update 35 | P a g e In addition, minor contract amendments may also be necessary to existing contracts to ensure the timely delivery of ROW for construction.

Deliverables

The Authority provides FRA an update on ROW acquisition as part of its quarterly reporting. In addition, monthly reports will continue related to WCA ROW activities and expenditures. The latest acquisition update can be found by sorting on the deliverables pull down menu for ROW Acq Plan at the following link: <u>https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx</u>

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Task 8 Final Design and Construction Contract Work

The First Construction Segment (FCS) is approximately 118 miles traversing the Central Valley from northern Madera County to Shafter. The alignment is broken into four civil construction packages and one track work construction package (Figure 7). The five construction packages include:

- SR 99 Civil Infrastructure Caltrans is designing and constructing roadway improvements to support the high speed train infrastructure from Ashlan Avenue to Clinton Avenue in Fresno
- CP 1 Civil Infrastructure Avenue 19 (Madera) to East American Avenue (Fresno), 31 miles
 CP 2-3 Civil Infrastructure East American Ave (Fresno) to one mile north of Tulare/Kern
- County line, 65 miles
 CP 4 Civil Infrastructure One mile north of Tulare/Kern County line to Poplar Avenue north of Bakersfield, 22 miles
- CP 5 Track (also known as Rail Infrastructure, RI1) including systems, communications, signaling, and overhead power for CP1, CP2-3 and CP4

The following contractors have been procured to date:

- CP 1 was awarded to Tutor Perini/Zachry/Parsons (TPZP) Joint Venture in 2013
- CP 2-3 was awarded to the Dragados/Flatiron Joint Venture in 2015
- CP 4 was awarded to California Rail Builders: Farrovial Agroman US Corp in 2016

Staffing

Chapter 3 of the DBPP outlines the roles and responsibilities of the Authority and the various contractors and consultant resources used to manage the DB construction. The plan was approved by FRA in April 2016 and can be found at https://chsra.pbid.com/pmt/gm/Deliverables/DBPP-PMP%20FCS%20CHSRA%20Final%20042016.pdf

The project director leads each construction section and has the overall responsibility for all construction elements including design, construction, ROW, third parties, project delivery, etc. The project director is supported by a project manager whose primary responsibility is to coordinate all the external and third party elements. A design and construction manager is the contract manager for each DB and PCM contract (Figure 8). They ensure effective coordination between the project team and the DB contractor. The project director is the Authority's lead representative for each construction project and the design and construction manager is the lead representative for DB and PCM contract issues.

The Authority has hired Project and Construction Management (PCM) firms (discussed in Task 5, Program, Project and FCS Construction Management) to oversee DB contract compliance. These firms provide on-site project and construction management services covering areas such as project pre-planning and programming; procurement, design and construction support; commissioning; testing; claims; and post construction services.

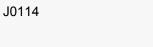
- Wong+Harris provides on-site oversight for CP 1
- Arcadis was procured for CP 2-3
- HNTB was procured for CP 4

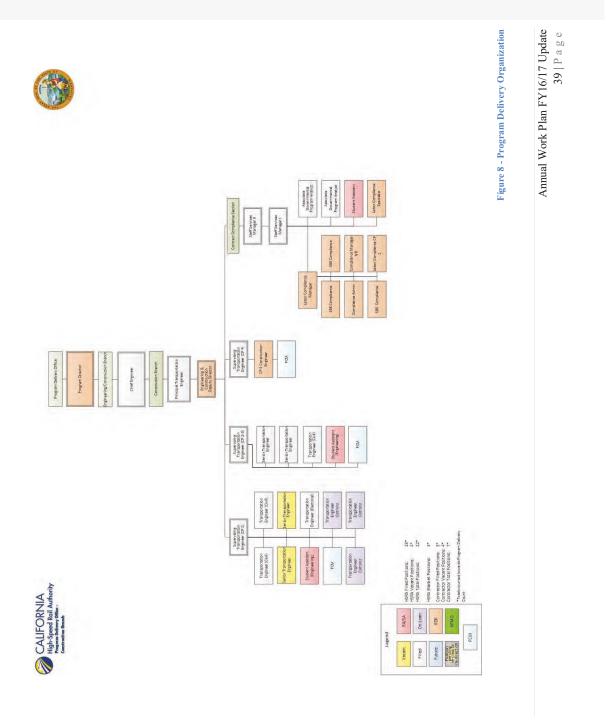
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Figure 7 - First Construction Section

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Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the construction schedules for each construction project. In addition, FRA is provided the baseline schedules for each construction project as they are approved by the Authority. Baseline schedules have been provided for CP1 and CP 2-3. The CP 4 baseline schedule will be available 4th Quarter 2016.

Budget

The Task 8 budget is summarized in Table 13. It reflects the grant agreement budget of \$3,772,057,495 for civil and track construction of the FCS. It also identifies the additional resources required of \$660,294,844 to complete the project as outlined in Attachment 3, Statement of Work of the grant agreements. Currently, funding for SR 99 is through the ARRA grant. The FCS Track Work Construction is currently under development. A budget will be identified prior to any proposal being released and the budget below will reflect only the federally funded portion of track work for the FCS.

Sub Task ¹	ARRA	State	FY10	State	Total
8.1 SR 99	\$101,889,294	\$124,010,706	0	0	\$ 225,900,000
8.2 Civil	\$479,871,360	\$367,440,832	\$541,762,788	\$58,956,469	\$1,448,031,449
Construction					
Package 1 (CP 1)					
8.3 Civil	\$706,738,379	\$857,745,697	\$93,048,378	\$138,235,436	\$1,795,767,890
Construction					
Package 2 (CP 2-3)					
8.4 Civil	\$62,045,209	\$75,515,983	\$123,762,365	\$41,034,599	\$302,358,156
Construction					
Package 4 (CP 4)					
8.5 FCS Track	0	0	0	0	0
Work Construction					
(CP 5)					
Total	\$1,350,544,242	\$1,424,713,218	\$758,573,531	\$238,226,504	\$3,772,057,495
1 Quarterly Budget Update Septe	mber 30, 2016				

Table 13 - Task 8, Final Design and FCS Construction Budget

Table 14 - Task 8, Additional Resources Budget

Sub Task ¹	Additional Resources
8.1 SR 99	\$ 35,000,000
8.2 Civil Construction Package 1 (CP 1)	\$ 235,246,547
8.3 Civil Construction Package 2 (CP 2-3)	\$ 27,000,000
8.4 Civil Construction Package 4 (CP 4)	\$ 251,198,844
8.5 FCS Track Work Construction (CP 5)	\$ 446,096,000
Total	\$ 994,541,391

1 Quarterly Budget Update September 30, 2016

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Regulatory Documentation and Guidelines

Design-Build Program Plan (DBPP): This plan outlines the Authority's approach to project delivery for the initial operating segment and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery.

Project and Construction Management Manual (PCMM): This manual describes how the Authority will execute the design-build projects through an integrated staffing approach that uses Authority staff, PCM, RDP and other consultants. The PCMM establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work in dealing with various situations that may arise.

Procurement

Several procurements are expected in FY16/17. These include:

- Procurement of rail infrastructure CP 5, also known as Rail Infrastructure 1 (RI 1)
- Rolling Stock

Other procurements under discussion include small traditional design-bid-build contracts for specific upfront work including small civil construction packages or contracts for such activities as utility relocations, hazardous materials removal/remediation, site demolition, and clearing and grubbing.

Deliverables

The deliverables identified in the grant agreement are noted below. The next fiscal year will see a dramatic increase in construction progress now that the three primary civil DB contracts have been executed. The following are some of the general activities that will occur:

SR 99

- Complete the Early Works package and begin Main package construction
- Complete remaining UPRR easements and eminent domain parcel acquisitions

CP 1

- Tuolumne Street overcrossing will be completed and Stanislaus bridge demolition will begin
- Work will continue on several structures including
 - o Fresno River Viaduct
 - o Cottonwood Creek Bridge
 - o San Joaquin River Bridge
 - o Fresno Trench and intrusion barrier construction
 - o SR 180 undercrossing
 - o Cedar Viaduct
- Work will begin in the following locations
 - o Avenue 8 Bridge overpass
 - $\circ \quad \text{Avenue 12 overpass and road widening}$
 - American Avenue, Avenue 15 and Avenue 15 ¹/₂ overpasses

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CP 2-3

- North nine miles and south six miles complete clearing and grubbing, begin utility relocation, relocation of irrigation crossings and construction of floodplain crossings
- Begin BNSF relocations at Bowles and Monmouth
- Begin grade separations at Adams, Floral, Elkhorn, Kent, Kansas and Nevada avenues and at Avenue 56

CP 4

- Complete environmental re-examinations
- Begin clearing and grubbing activities where ROW is available
- Complete utility agreements and final designs
- Prepare type selection reports and begin final design

The following deliverables are scheduled for FY16/17. The date noted below represents the last date a deliverable of that type is expected and that phase would be complete.

Table 15 - FY 16/17 Final Design and Construction Contract Deliverables

Deliverable ¹	Schedule
Construction Package 1	
Type Selection Reports	4 th Qtr 2016
60 % Design	4 th Qtr 2016
90% Design	1 st Qtr 2017
Ready for Construction Design	2 nd Qtr 2017
Construction Package 2-3	
Type Selection Reports	2 nd Qtr 2017
Construction Package 4	
Detailed Baseline Schedule	4 th Qtr 2016

1 September 2016

Appendix A – Grant Tasks and Sub-Tasks (Grant Work Breakdown Structure)

Task 1: Environmental Review

- Task 1.1. Regional Consultant Project Management (RC): Development of RC Project Management Plan.
- Task 1.2. Regional Consultant Public/Agency Participation (RC): Developing and implementing a public involvement program focused on identifying regional and local issues and concerns of the potential impacts of HST system and for proposing necessary mitigation measures.
- Task 1.3. Alternatives Analysis (RC): Project Definition including a segment-by-segment alignment description of the HST design options to be investigated in the Project EIR/EIS process(s).
- Task 1.4. EIR/EIS Analysis (RC): Technical studies necessary to evaluate and assess impacts of the HST Alternatives and No Project Alternative as part of the EIR/EIS process(s), addressing both alignments and proposed station locations.
- Task 1.5. Draft and Final EIR/EIS (RC): Preparation of the Draft EIR/EIS document(s) and Final EIR/EIS document(s), including necessary administrative review versions. The site-specific EIR/EIS document(s) must satisfy all the requirements of CEQA and NEPA.
- Task 1.6. Certification of EIR/EIS and ROD (RC): Preparation of other related environmental documents that are required as part of the certification of the Project EIR/EIS document(s), including Findings and a Statement of Overriding Considerations, the Record of Decision/Notice of Determination, and the Mitigation Monitoring and Reporting Plan.
- Task 1.7. Program Management (RDP): Project Management, Controls and communication related to environmental review and permitting for Rail Delivery Partners Team and Regional Consultants toward the goal of the Notice of Determination and Record of Decision.
- Task 1.8 Non-federal Resource and Other Agencies for Environmental Review (Multiple agencies): State agencies support of environmental permitting processes.

Task 2: Preliminary Engineering (PE)

- Task 2.1. Regional Consultant PE (RC): Development of HST design concepts at a sufficient level of detail to develop accurate capital cost estimates, right-of-way requirements, construction staging, traffic and environmental impacts to satisfy CEQA and NEPA requirements.
- Task 2.2. Program Management (RDP): Project Management, controls and communication related to preliminary engineering for Rail Delivery Partner Team and Regional Consultants.
- Task 2.3. RDP Engineering (RDP): Engineering support to establish master standards for the project and establish procedures and systems to provide compliance and coordination between all sections.

Task 3: Other Related Work Needed Prior to Start of Construction

- Task 3.1. Regional Consultant Station Area Planning (RC): RC-supported work with the local jurisdictions and public in developing HST station area plans.
- Task 3.2. Regional Consultant ROW Work (RC): Conduct assessments to identify segments at risk of imminent development or other changes in use that could significantly increase implementation costs and difficulty.

- Task 3.3. RDP ROW Work (RDP): Development of a Right-of-Way assessment and acquisition program.
- Task 3.4. Ridership Forecasting (RDP): Ridership work, ridership & revenue forecasts and station boarding's to support HST System phases of development.
- Task 3.5. Construction Planning / Procurement Support (RDP): Services to procure other services, equipment and construction for the total project implementation. Including possible staging options to best serve the project.
- Task 3.6. Station Area Planning: Development of a station area plan or equivalent incorporating a transit-oriented development (TOD) development code and/or specific plan (or equivalent) to the local comprehensive plan.
- Task 3.7. LAUS/So California Investments: Preservation and acquisition of property, rights-of way, and the related environmental clearances and engineering activities that will enable HST to operate at Los Angeles Union Station (LAUS).
- Task 3.8. Legal Services Pre-construction: Legal assistance in negotiations pertaining to federal and state laws with freight and passenger rail companies that may be impacted by the HSR project.

Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP, Complete)

Task 5: Program, Project and FCS Construction Management

- Task 5.1. Program Management (RDP): Program Management activities may include program and project management and controls, engineering due diligence reviews, commercial and procurement support, program wide planning, implementation planning, system electrification and testing and commissioning, design/build support (as applicable), network integration and system assurance.
- Task 5.2 Project Construction Management (PCM): FCS project construction management activities may include contract administration, submittal review, quality assurance oversight inspection for work in place and materials, management of claims and change orders, and review and approval of progress payment requests and final acceptance of the work.
- Task 5.3 Legal Services Construction: Legal assistance for issues that impact construction.

Task 6: Real Property Acquisition and Environmental Mitigation

- Task 6.1. Real Property Preliminary ROW: Work performed in preparation for procurement up to, but not including, the first written offer to purchase
- Task 6.2. Real Property ROW Services & Relocation: On-the-ground real property activities which may include parcel identification, survey and mapping, appraisals, offers of just compensation, negotiations and relocation benefits.
- Task 6.3 Real Property Environmental Mitigation: Grantee-implemented environmental mitigation.
- Task 6.4 Real Property ROW Acquisition: Capital costs of obtaining any real property interest necessary for the FCS. And, with FRA prior written approval, outside of the FCS.

Task 7: Early Work Program (Deleted)

Task 8: Final Design and Construction Contract Work for the FCS

- Task 8.1: SR-99: Final design and construction for highway relocations (State Route-99) as well as interface reviews and civil infrastructure. This work will be completed by Caltrans working as a contractor to CHSRA.
- Task 8.2: Civil Infrastructure Construction Package 1 (CP1): Civil and structural infrastructure from approximately Avenue 19 in Madera County to approximately East American Avenue in Fresno County.
- Task 8.3: Civil Infrastructure Construction Package 2-3 (CP2-3): Civil and structural infrastructure between approximately East American Avenue in Fresno County to approximately one mile north of the Tulare-Kern County Line.
- Task 8.4: Civil Infrastructure Construction Package 4 (CP4): Final design and construction of civil and structural infrastructure from one mile north of the Tulare-Kern County Line southward to North of Bakersfield, currently near Poplar Ave.
- Task 8.5: FCS Track Work Construction (CP5): Final design and construction of track work for the civil and structural infrastructure construction in Construction Packages 1 through 4.

Task 9: Interim Use Project Reserve

- Task 9.1 Project Reserves: Funds over and above the Unallocated Contingency that have been budgeted but not yet allocated to specific tasks.
- Task 9.2 Interim Use Reserve: Infrastructure necessary to initiate independent utility on the FCS funded under this Agreement which may include track, signal and communications elements, stations, and a limited maintenance facility.

Task 10: Unallocated Contingency – Contingency that is not allocated to a specific task or sub-task.

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Budget Summary

State

Tota Buder

Total Budgeted

Local (0ther) Expended to Date

State Expended to Local (Other) Expen

Federal Expended Federal Outlays to to Date ² Date ²

ARRA Grant # HSR-0009	Total Budgeted	Page.	to Date		55	Date ³	Budget	Date	(Prior Quarter)	Prior Quarter)	Budget
ask 1: Environmental Review	\$ 499,534,483	\$ 173,327,113	\$ 144,029,194	\$ 144029,194	\$ 326,207,370	\$ 72,554,237			\$ 499,534,483	,	,
ask 2: Preliminany Engineering	337,361,663	254,362,236	128,504,951	128,504,951	82,999,427	84952362	*	×	337,261,563	*	
ask 3: Other Related Work Needed	189,425,982	800 600 88	31,453,400	31,463,400	54,316,974	15,448,931	52,100,000		189,425,982	1.3	17
Stateside Cost Allocation Plan SWICAP)	677.872	228229	677,872	218778					677.872	2	
asko: Program, Project and FCS Construction Management	362,774,537	177,469,726	172,499,637	172,400,637	186,314,812	21 023 596	*	X	382,774,537	*	139,400,000
ask 6. Real Property Acquisition and pronomental Mitigation	839,439,073	469.319.643	406.000.258	496 000 258	380,119,430	68.700.362	x		839,439,073	1	91,105,000
ask 7: Early Work Program								X			
ack8: Find Design and Construction Contract Work for the CS	2,775,257,460	1,350,544,242	588,984,947	588,984,947	1,424,713,218	50,408,700	Y	2	2,775,257,460	,	894541,391
ask9: Project Reserves	53,856,392	63,856,392	53,856,392	53,856,392	1.7 Sec. 1. 1. 1.	-	*	×	53,856,392	*	1 X
10: Unallocated Contingency	-							1			
	\$ 5,058,327,462	\$ 2,552,556,231	\$ 1,616,006,661	\$ 5058.227.462 \$ 2.552.556.231 \$ 1.016.006.051 \$ 1.516.006.051 \$ 2.463.571.231 \$	\$ 2,453,671,231		293,089,188 \$ 52,100,000 \$	× ×	\$ 5,058,327,462		\$ 1,225,046,391
EY 10 Grant # HSR-0118	Total Budgeted	Federal Budget	Federal Expended to Date '	Federal Expended Federal Outlays to to Date ²	State Budget	State Expended to Date	Local (Other) Budget	Local (Other) Expended to Date	Tctal Budgeted (Prior Quarter)	beta State Expendedto Local (Other) Expendedto Tdas Budgeted (Tota Budgeted vs. Date Date (Prior Budgeted)	Additional State Budget
ask 1: Environmental Review						,		·			,
ask 2: Preliminary Engineering						1	1.000				
Task 3; Other Related Work Needed Prior to Start of Construction		1		×		1 T	.7	X	4	3	
Task 4: Project Administration 8. Stateside Cost Allocation Plan SWICAP)				·		,	A	×		,	
Task 5: Program, Project and FCS Construction Management	1029 290 99	44 600 062			11 069 478				58.462.630		

FY 10 Grant # HSR-01(8	Total Budgeted Federal Budget	Rederal Budget	Federal Expended to Date	Federal Expended Federal Outlays to to Date ² Date ²	State Budget	State Expended to Date	Local (Other) Budget	Local (0ther) Expended to Date	Total Budgeted (Prior Quarter)	State Expended to Local (Dthen) State Expended to Local (Dthen) Expended to Total Budgeted vs. Date (Date Date (Findred Juster) Find Quarter)	Additional State Budget
Task 1: Environmental Review						· .					, 69
Task 2: Preliminary Engineering	- d-					1	1.00				
Task 3: Other Related Work Needed Prior to Start of Construction	×					-	7		4	3	1
Task 4: Project Administration & Stateside Cost Allocation Plan (SWCAP)						,		×		,	
Task 5: Program, Project and FCS Construction Management	56,452,530	44,500,052		X	11,962,478		1		58,462,530		2
Task 6: Real Property Acquisition and Environmental Mitigation	12,835,406	8,984,784		*	3,850,622		4	X	12,835,406		
Tack 7: Early Work Program				300			X	28		X	
Task8: Final Design and Construction Contract Work for the FCS	996,800 p35	768,573,531			238,226,504			X	996,200,035		1
ITack 9: Project Reserves	154,290,361	108 023 263			46,267,108			1	154,290,361	3	14
Task 10: Urallocated Contingency	68,046,668	8,538,380		1	59,508,288		2	X	68,046,668	N.X.	1.14
Total	\$ 1288.425.000 \$	\$ 928.620.000			\$ 359,805,000			•	\$ 1288.425.000		

¹ Federal Expendencies Date represents payments the FRA/has made to The Authoritysis reported on the SF 435 and riskrifted within draw 18-003. ² Federal Outlayer to Date represents payments The Authority/has made to their vendors. ³ Stelle Expendence Date represents draw 185032.

Draft Quarterly Budget for the period and September 30, 2016 v3.6

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Budget Summary

Budgeted	Total Budgeted Rederal Budget		Federal Expended Rederal Outlayeto to Date 2 Date 2	State Budget	State Expended to Date ³	Local (Other) Budget	Local (Uther) Expended to Date	Total Budgeted (Prior Quarter)	State Expendedto Local (Other) Local (Other) Defa State Expendedto Local (Other) Expendedto Fidal Budgeted vs. Date Baca Date Prior Guarter) Fidro Guarter) Fidro Budter)	Additional State Budget
69	495.54.483 \$ 173.327.113 \$	\$ 144029.194 \$	\$ 144.029.194	326 207 370	\$ 72.654237			\$ 499534.433		
	254,362,236	128504851	128.504.951	124,036,03	64,952,362		100	337361.663	100	
	83 009 008	31453.400	31.463.400	64316.974	15,449,931	52,100,000		189,425,982	-	
	677872	677,872	677,872					677,872	4	
2	221 959,777	172,499,637	172,499,637	197,267,290	21,023,596			419,227,067	ŝ	\$ 139,400,000
	468.304,427	496,000,258	498,000,258	383,970,052	68,700,362			852274,479		\$ 91,105,000
	x	x	A CONTRACTOR	1 ×	The second se	-			×	
~	2,109,117,773	588,984,947	588,884,947	1,862,938,722	50,408,700			3,772,067,495		\$ 994,541,391
	161,879,846	53,856,392	53,856,392	46,267,108		-	*	208,146,753		
	8,538,380			59,518,288			007 1	68,046,668	-	•
\$ 6.346.752.462 3	3.481.176.231	\$ 1.616.006.061 \$		1.816.006.651 \$ 2,813,476.231 \$		293,089,188 \$ 52,100,000	,	\$ 8,346,752,462		第 1235,046,301

Federal Expended to Date inspresents payments the FRAhaismade to The Authority as incorred on the SF 425 and identified within draw 16-033. Federal London to the represents staryments The Authority has mode for their levidors. * Reader Repredent Expresents Internet (in 16-03).

Annual Work Plan FY16/17 Update 48 | P a g e

Page 5 of 38

Draft Quarte fly Budget for the period end September 30, 2016 v3.6

Appendix C – Environmental Milestone and Permits Schedules (September 2016)

Annual Work Plan FY16/17 Update $49 \mid P \mid g \mid e$

Annual Work Plan FY16/17 Update $50 \mid P \mid a \mid c \mid c$

- M P		_	P		P		_	_		_			_	_			_		_		_			_	_	1
Freihndnary Engineering for Procuremen (PE4P)		Jun-12.	046	Oct-14	089	Jal-17	940	Nov-17	5	240-17	940	AUK	940	TBD	990	Aug-18	940	Jan-20	940	Jun-18	949	Aug-18	049	71-204	0%	-
Physical % Cumplete Toward NOD	96001		046		0%0		9622		2014		73%		4394		2016		NGL		34W		40.0		2596		42%6	para de la compara de
Obtain USACE KOD		Mar:14	100%	Sep.16	016	May-18	940	Jun-18	240	F@-18	940	Dec-17	940	Nov-17	010	71-70	040	Aug-18	ONS	Feb-18	0%	Jan-18	09/6	Jan-18	ONS	banı final desiş
Obtain STB RUU		-1				Mar-18	940	Mar-18	25	Mar-18	SNO	Feb-18	040	A126-17	048	Apr-17	040	Apr-18	ONS	Dec-17	ONS	Feb-18	049	Mar-18	046	Amital Amital has free days to Authordy resector al of al of and document
Obtain NOD	196	May-12	100%	May-14	100%	Jan-18	940	Jan-18	940	Feb-18	NO	Dec-17	960	Disy-17	NO	Apr-17	NO	Jan-18	NO.	Jan-18	940	Jan-18	960	Jan-18	940	 P. The second sec
Board Certifies Environmental Document		1day-12	100%6	bday-14	100%	Jan-18	15	Jan-18	355	Dics17	10	Dec-17	*60	Ddsy-17	940	Apr-17	10	Jan-18	940	Jan-18	940	Jan-18	940	Jan-18	016	s, charting with th fact that the Authorch advant back choor and the Authorch advant back choor advant back on a difference of the and difference on the s
Obtain FRA ROD	19%	Sep-12	100%	Meant.	100%	Dec-17	940	Dec-17	NAN .	Dac-17	940	04-17	140	SI-Keyy	140	71-017	940	Dec.17	940	Dec-17	044	Dec-17	990	Dec-17	940	Che is ten day then a ten day listuation and listuation M6 408 Chedpoir 408 Chedpoir 408 Autority
Publish Final Environmental Incurrent / FRA ROD ROD	10%	Apr-12	100%	Apr-14	100%	Dec-17	940	Dec-17	250	No9-17	940	04-17	140	E1-fieye	940	Jan-17	0%6	Dec-17	940	Dec-17	046	Dec-17	0%9	Dec-17	9%0	documents. Cycle is to complete and other and complete and addressing of the Addressing of the Addressing of the and other equ
Publish Administrative Final Epvronmental Document		bdar-12	100%	Feb-14	100%	Aug-17	949	Sep-17	1000	Sep-17	945	04-12	940	bdse-17	940	Dec-16	046	04-17	940	Nov-17	0%8	Dec 17	0%5	Dec-17	0%6	Fireenatt Fireenatt renier of lechnical renit, then fire day rener workdrop, for final version pplinner with NES PA, Reference to J
Identfy Preliminary Prefereed Alternative (Checkpoint C) ³		Des 11	100%	Nor+13	100%	L1-2my	940	Sep-17	Nin Nin	0:4-17	946	201902	960	Jan-13	940	May-16	100%	Sep-17	046	Aug-17	046	21-PC	0%6	20:PC	ONS	Ma antise of the second
Respond to Public Comments		Nor-11	100%	Lan-13	100%	Aug-17	940	241.17	940	21-102	940	F46-17	940	Nov-16	940	Non-16	046	71-20	940	Dec-17	016	Aug-17	094	Aug-17	046	Landon and the second s
Publish & Circulate Draft Environmental Document	396	04-11	100%	04:12	100%	F46-17	542	Mar-17	10%	Fdb-17	0410	Nor-16	560	DED	045	Oct.16	544	Nay-17	545	May-17	1546	24-17	5%5	71-Inf	585	Admit Admit days for review to days for review to the workshop. Thus, a workshop, Thus, a workshop, Thus, a seed an italizing to read and control
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Board Selection of Preferred Atternatives ²	9621	2				Nov-16	1346	Dec16	1396	Sep-16	60%5	Aug-16	5655	CBT.	940	May-16	100%	Desile	20%5	Tim.17	940	F@-17	980	Feb-17	0%	Laggende 11 3 3 4
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Complete Preliminary Engineering for Project Definition (PE4PD)	33%	201-11	100%	Dec-13	100%	Nov-16	1846	Nov-16	5076	N20-14	100%	May-16	10049	TBD	140	0ct-16	806	Apr-17	58.67	Apr-17	62%	Sep-16	450	Sep-16	50%	and the work
Identify Runge of Alternatives (cnecepting is)		Jun-11	100%	04/11	100%	Oct-16	15%	Nor-16	15%	Sap-14	100%	Complete	100%	· Complete	100%	16:00	100%6	Apr-17	100%	Dec 16	46%	F@-17	05%	Feb-17	0%	us or In development. J
Complete Alternatives Annaysis	5402	01-20V.	100%	11-seq1	100%	May-13	100%	Sep-14	100%	Aprila	100%	Complete	100%	Complete	100%	[Dec-11	100%	401-16	100%	Apr-16	100%	Complete	100%	Complete	100%	trently under so
Complete Project Purpose & Need (Chrodopaint A) ²	365	11:093	100%	11/992	100%	May-16	100%	Nov-11	IOUN	(No)-11	100%	Complète	100%	Complete	100%	11-94	100%	Mag-14	100%	Dec-14	100%	201-12	100%	311.12	100%	ties for alguments of
Initiate Scoping		Apr-09	100%	Apr-09	100%	Sep-16	8466	Age-09.	TUDIe	Age-05	100%	Age-09	100%	Agr-09	100%	Age-09	1004	Complete	100%	Ange 14	1004	Aug-14	1005%	Age-07	100%	eting and estim environmental
Publish Notice of mean	**	Mar-09	100%	Mar-09	10046	31446	100%	Mar-09	100%	1446-09	100%	Mar-09	100%	Mar-09	1004	PARE-09	100%	Complete	1004	34.14	100%	34.14	100%	Tor-my1	100%	intrary mgine
	Assigned Weight	Complete		Complete		Forecast	% Complete	Forecast	7% Complete	Forecat	% Complete	Forest	%6 Complete	Forecast	% Complete	Forent	% Complete	Forecast	% Complete	Forecast	% Complete	Forecat	% Complete	Forecat	% Complete	ation from preli
Section		Merced - Fresno (M-F)		Fresno - Bakersfield (F.B)			SBIT # TAILCISCO = SEID JOSE (F-U)		Sun Jose - Mercrol (J-01)	1	Central Valley Wye (M-F)	Centrol Valley Electrical Interconnect	(cvn)*		Heavy Maintenance Facility (HMF)	NAME OF ALL ALL ALL ALL ALL ALL ALL ALL ALL AL	LOGUY CERTING ARETISTING (P-B)	Area and and and	Bakerstield - Paindale (B-P)	Name of the second	Paradate - Diritomic (P-B)	Transfer and the second second	(wrt-c) such as a such asuch as a such as a su	The state of the second second second	(V-VT) IIIIIIIIIII - SAUGUV SOT	All AT Properts of Galaxies 4, Alls . - Lichard starts of Kalaxies 4, Alls. - Lichard starts of scalardy a function from y starts and a schematic a figurests carriedy under under under one of one weat - scalard scalars and a scalardy a factor of starg. As a schemated invest, to this geal field stalps.

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Section. I	Submit Biological Assessment	Obtain Biological Opinion	Submit Section 106 Report	Obtain Executed Section 106 MOA	Section 401 Permit Annication	Outain Section 401 Water Qity Certification	Submit Preliminary 408 Determination ⁷	Submit Receive Preliminary 408 Determination ⁷ Determination ⁸	Submit Section 404 Permit Amilication	Obtain Section 404 Permit	Draft Compensatory Mitigation Plan	Final Compensatory Mitigation Plan	Submit CDFW 1602 Application	Obtain CDFW 1602 Permit	Submit CDFW 2081 Permit Annlication	Obtain CDFW 2081 Permit	Submit 408 Permit Application ⁹	Obtain 408 Permit ¹⁰
	Section 7	a.7	Section	Section 106	Sectio	Section 401		408 Determination	Sectio	Section 404		CMP	CDFW 1602	1602	CDFW 2081	12081	408 Permit	rmit
Merced - Fresno (M-F)	Dec-11	Mar-14	Sep-11	Aug-12	Apr-13	Apr-14	NA	NA	Jan-13	Mar-14	Mar-12	Mar-14	Apr-13	Mar-14	Mar-13	Mar-14	Mar-17	Sep-17
Fresno - Bakersfield (F-B)	Jul-12	Apr-14	Aun-13	May-14	Mar-14	Nov-16	Nov-13	Jan-14	Jan-14	Nov-16	Dec-13	Apr-15	Mar-15	Apr-16	Mar-15	Jun-1.5	Apr-17	04-17
San Francisco - San Jose (F-J)	Jan-17	Aug-17	Nov-16	Sep-17	Sep-17	Apr-18	N/A	N/A	Sep-17	Mar-18	Sep-17	May-18	Sep-17	Apr-18	Sep-17	May-18	May-18	Nov-18
San Jose - Merced (J-M)	Mar-17	Aug-17	Nov-16	Sep-17	Dec-17	Jun-18	Mar-17	Apr-17	Dec-17	Jun-18	Dec-17	Jun-18	Dec-17	Jun-18	Dec-17	Jun-18	May-18	Nov-18
Central Valley Wye (M-F) 5	Mar-16	Jun-17	Dec-16	Sep-17	Sep-17	Jan-18	Jun-17	Nov-17	Oct-16	Apr-18	May-17	Nov-17	Sep-17	Feb-18	Sep-16	Jun-18	Jun-18	Dec-18
CV Electrical Interconnect (CVI)	Jul-16	Oct-16	Mar-17	May-17	N/A	N/A	Sep-16	N/A	Nov-16	Nov-16	Oct-17	Nov-17	N/A	N/A	Sep-16	Jun-18	N/A	N/A
Heavy Maintenance Facility (HMF)	Mar-16	Mar-17	Apr-16	71-mM	Mar-17	71-voN	N/A	N/A.	Mar-17	71-voN	Mar-17	Sep-17	Mar-17	Sep-17	Mar-17	Sep-17	N/A	N/A
Locally Generated Alternative (F-B) 6	Mar-16	Sep-16	May-16	Sep-16	Jun-17	Aug-17	May-16	Aug-16	May-17	Sep-17	Feb-16	TBD	Aug-17	Oct-17	Apr-16	Oct-17	Nov-17	May-18
Bakersfield - Palmdale (B.P) ³	May-17	Oct-17	Nov-16	Jun-17	Dec-17	Jun-18	N/A	N/A	Dec-17	Aug-18	May-17	Sep-17	Jul-17	Mar-18	Jul-17	May-18	Jun-18	Dec-18
Palmdale - Burbank (P-B) ^{3,4}	May-17	Oct-17	71-IBM	Oct-17	Dec-17	Mar-18	71-Iut	Aug-17	Dec-17	May-18	Jun-17	Feb-18	Dec-17	Mar-18	Aug-17	Jul-18	Jun-18	Dec-18
Burbank - Los Angeles (B-LA) ³	Nov-16	Dec-17	Dec-16	Dec-17	Aug-17	Jan-18	N/A	N/A	Aug-17	Jan-18	Mar-17	Apr-17	Jul-17	Dec-17	Apr-17	Dec-17	Jun-18	Dec-18
Los Angeles - Anaheim (LAA) ⁵	Nov-16	Dec-17	Dec-16	Dec-17	Aug-17	Jan-18	N/A	N/A.	71-guA	Jan-18	Mar-17	Apr-17	Jul-17	Dec-17	Apr-17	Dec-17	Jun-18	Dec-18

DR117 breared as of September 1, 2016 DR117 breared as of September 1, 2016 (or algument currently under such or hole of the such as the section for algument currently under such or in development. Limits of the work represent for the sector possible information and are subject to change due to environmental review. funding and fund design.

hile assumes two cycle mittal. Reviewers hav Actual Legend: Mimm-YV Notes: The schedule assumes The schedu initial subn

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cycles of concurrent Authority, Attemp; Ocarent, and FRA review of technical documents. Cycle: Oto is ten days, The days for experiment the other an RC/review revokspon to access communits inter days to complete and statistic has fore days to review and resolution. Cycle: Those Lays, starting with resoluting and a RC/review worksho, domin back check reviewant to the Authority within fire days of the workshop. The RC than has fire days to review. The RC

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Appendix D – Summary Schedule (September 2016)

Annual Work Plan FY16/17 Update 52 | P a g e



Method ant frag ant frag ant an	Activity Name PLANNING San Francisco to San Jose Entometra Rever
Olaure10A Fauge18 20 0-140210A Fauge18 22 0-140210A Fauge18 22 0-140210A Fauge18 23 22-250-515A 0-140210 24 22-250-515A 0-140210 24 22-3402-15A 0-140216 20 22-3402-15A 0-140216 21 0-140216 0-140216 21 0-140216 0-140216 21 0-140216 0-140216 21 0-140216 24-40216 21 0-140216 24-40216 21 0-140216 24-40216 21 0-140216 24-40216 21 0-140216 24-40216 21 0-140216 24-40216 21	co to San Jose I Review J. Protet Management
No Overlan (MA) Towage (A) 233 24440 (25) 93440 (25) 9440 (25) 40 22-4440 (25) 04440 (15) 9440 (15) 95440 (15) 40 22-4440 (25) 04440 (15) 95440	co to San Jose Review J. Protet Management
32 2-440pt 15 0-440pt 15 10 2220cm-15A 0-440pt 16 10 2220cm-15A 0-440pt 16 10 22440pt 15A 0-440pt 16 10 22440pt 15A 0-440pt 16 10 24440pt 15A 0-440pt 16A 10 0-4440pt 16A 0-4440pt 16A 11 0-4440pt 16A 0-4440pt 16A 12 0-4440pt 16A 0-4440pt 16A 13 0-4440pt 16A 0-4440pt 16A 14 0-4440pt 16A 0-4440pt 16A 15 0-4440pt 16A 0-4440pt 16A 16 0-4440pt 16A 0-4440pt 16A 17 0-4440pt 16A 0-4440pt 16A 18 0-4440pt 16A 0-4440pt 16A 18 0-4440pt 16A 0-4440pt 16A	Review J: Prolect Management
40 22 22 24 24 25 24<	J: Project Management
40 22-Nov-155 30-Man-16 41 22-Nov-155 01-Julie 6 10 24-Mag-15A 05-Julie 6 10 24-Mag-15A 11-Dec-16 7 04-Jan-15A 04-Junie 8 8 04-Jan-16A 24-Jun-16A 8 04-Jan-16A 24-Jun-16A 8 04-Jan-16A 24-Jun-16A 8 04-Jan-16A 24-Jun-16A	2
12 A-Magrish Orburleh Amerika 10 A-Magrish Orburleh Amerika 10 A-Manrish Orburleh 10 A-Manrish Orburleh 10 A-Manrish Orburleh 10 A-Manrish Z-Manrish 10 A-Manrish Z-Manrish 10 A-Manrish Z-Manrish 10 A-Manrish Z-Manrish	F2J: Public/Agency Participation
10 24/402/15A 05-Apr-16A 752/ 10 04/48/15A 11-10-6-16 7 04/48/15A 04-14/10-61 8 04-48/15A 23-04/16 8 05-48/48/16A 23-04-16 8 05-48/48/16A 24-04-16 8 05-48/48/16A 24-04-16 8 05-48/48/16A 24-04-16 8 05-48/48/16A 24-04-16 8 05-48/16A 24-04-16 8 05-4	F2J: Prepare Project Description
16 04-Jan 16 A 11-06-16 7 04-Jan 16 A 11-06-16 8 04-Jan 16 A 24-Jan 16 A 16 04-Jan 16 A 26-02-16 8 04-02-16 8 04-02-16 8 04-02-16 8 04-02-16 9 04-02-16 16 04-04-16 16 04-04-16 16	F2J: Define Existing Transportation Conditions
7 04-Jan-15A 04-Jun-15A 04-Jun-15A 04-Jun-15A 04-Jun-15A 04-Jan-15A 24-Jun-15A 24-Jun-15	F2J: Environmental Task Management
8 04-Jan 16A 24-Jun 16A 14 04-Jan 16A 22-00-16 18 05-Jun 16A 22-00-16	F2J: Prepare Technical Reports
14 04-Jan-16A 28-Oct-16 8 05-Jun-16A 24-Nor-16 7	F2J: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence
8 05-Jun-16A 24-Nov-16	F2J: Prepare and Submit Biological Assessment to USFWS/NMFS
	F2J: Identify Initial Preferred Atternative, Obtain Authority Approval *
14 of Labrids Annual P and Lab	F2J: EIR/EIS Sections
6 02-Servic 02-Jervi7	1.23. Friepare Aurimination and Crian Crivitation and Christiate for Duble Paview and Commany Register for Duble Paview and Command
6 04-Jan-17 05-May-17	F2J: Respond to Public Comments on Draft Environmental Document
8 29-0ct-16 28-Apr-17	F2J: Obtain Section 7 Biological Opinion from USFWS/NMFS
	F2J: Identity Least Environmentally Damaging Practicable Alternative (Checkpoint C, LEDPA)
6 06-May-17 02-Sep-17 02-Sep-17	F2J: Prepare and Circulate Adminstrative Final Environmental Document to Cooperating Agencies
3 03-06t-17 29-Dec-17	F2J: Prepare and Publish Final Environmental Document (Includes FRAROD)
03-Jun-17 05-Jan-18	F2J: Findings & Statement of Overriding Considerations
01-Dec-17 13-Jan-18	F2J: Authority Board Certifies Environmental Document
2 01-Dec-7 13-Jan-18	F2J: Authority Prepares and Files Notice of Determination
0 24-Mar-18 24-Mar-18	Surface Transporation Board (STB) Issues ROD - San Francisco to San Jose
06-May-1/ 06-May-1/ 1 F.24. Muga	F24: Miligation Monitoring & Reporting Man
23 25-JUN-16 A 27-DE-17	
popications P-12 - P-206-17 - P-206-17 - P-206-17 - P-201-17 - P-201 P-201-17 - P-201- P-201-17 - P-201-1 P-201-17 - P-201-17 - P-2	F2J: Frepare and Submit Uraft Section 4U1 and 4U4 Permit Applications
20 VI-due IVA 00-due IVA 00-	PE Tow and Preliminary Design for Producement 2 04 E 231: Conduct Designment Environment for Evolution Development (DEADD)
	 Conduct Proliminary Linguised ing to Project Development E21: Conduct Engineers: Engineering for Eventement (IEE8).
01-701-10 V	KUP Programwide Engineering (FJ)
the state of the s	Outer Related WOLA
II-Jan-10 A 10-Sep-10	J. Station Area Hanning
02-len-11 A 15-Aun-18	TUPDE POINTWORK (EI)
01-Jui-10 A 29-Jui-12 A	tership Forecasting - E-I
21-Jan-16A	Station Area Planning (SJ Diridon)
	F-21. Food Market Frankers Marking Pool Work (F. J.) Retening Foodsating - F.J. Stalon Area Planning (S.) Dridon)



				2010 0012	0010 0000
Activity Name	Duration (months)	Start	Finish	5 2016 2017 2018 2017 2018 2018 2018 2018 2018 2018 2018 2018	04 01 02 03 04 01 02
PLANNING	86	01-Jul-10A	16-Aug-18		NING
San Jose to Central Valley Wye	96	01-Jul-10A	16-Aug-18		 San Jose to Central Valley Wye
onmen		23-Sep-14.A	08-Mar-18	Environmental Review	tal Review
		23-Nov-15A	08-Mar-18	J2Y. Projec	J2Y. Project Management
		Act-gue-02			JZY: Hublic/Agendy Harticipation
1.0.5 J.Z.Y. Prepare Fridect Description		23-Sep-14.A			
1.05.0 J.2.1. Definite Existing Transportation Contactors 4.05.7 T.25. NEDA 40.4 Interaction (Characterist B)		A #1 -dac- 02	A #1 -dao-02	III I I I I I I I I I I I I I I I I I	
	2 4	Vol-Jan-10	C 11-18M-OD		
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1.00.4.1 Julii: Prepare recrimical reports 1.05.1.2.1 PNP: Deserve and Submit Scattor 105 Deserve to SUDD (Devices and Construction)	0 -	01-JUF 10A	01-VOV-10	127. Prepare recimical Reports 12V. Departs and Submit Souther 406 Bonets to SUD/ Boulesu and Construction	UDO Barjant and Construction
	- 4	01-Jul-16A	26-Mau-17		1.12Y: Prenare and Submit Biological Assessment to LISEW/S/MMFS.
	5 C	01-01-0	12-Mar-17	1.2V. Identify lotis Preferred Afernative Chiair Automas	ive Ottain Authority Annroval *
	9	01-Jul-16A	07-Nov-16	J2Y: EIR/EIS Sections	
	4	08-Nov-16	05-Feb-17	J2Y: Prepare Administrative Draft Env	J2Y: Prepare Administrative Draft Environmental Document and Circulate to Coc
1.07.2 J2Y: Prepare Draft Environmental Document and Circulate for Public Review and Comment	-	06-Feb-17	01-Mar-17	J2Y: Prepare Draft Environmental D	J2Y: Prepare Draft Environmental Document and Circulate for Public Review i
	40	02-Mar-17	24-Jun-17	J2Y: Respond to Public Com	J2Y: Respond to Public Comments on Draft Environmental Document
~	60 1	27-May-17	23-Sep-17	J2Y: Obtain Section 7	J2Y: Obtain Section 7 Biological Opinion from USFWS/MFS
	1 13	01-May-17	02-Jun-17	J2Y: Identify Least Environme	 J2Y: Identify Least Environmentally Damaging Practicable Alternative (Ch
1.07.6.1 J221: Hrepare and Unculate Administrative Final EliXIEIS to Cooperating Agencies		25-Jun-1/	70 Dec 47	JZY: Frepare and Circu	J2Y: Prepare and Circulate Administrative Final EIR/EIS to Cooper
12V Eindinge & Statement of	4 0	35 Int 47	07 Can 17	12V Enclose 8 Statem	13V Eindinge 9 Statement of Duscriding Considerations
	4 6	07- Ian-18	16-Feb-18		12Y Authority Brand Certifies Environmental Document
	1 0	0. Jan-18	17-Jan-18	Vitronthuk YCL	1.12Y Authority Prepares and Files Notice of Determination
	÷	25-Jun-17	20-Feb-18	J2Y: Mitigatic	J2Y: Mitigation Monitoring & Reporting Plan
-	10	13-Mar-17	06-Oct-17	J2Y Obtain Fully Exe	J2Y; Obtain Fully Executed Section 106 MOA
1.08.4.2 J2Y: Prepare and Submit Draft Section 401 and 404 Permit Applications	12	27-May-17	10-Feb-18	J2Y: Prepare	J2Y: Prepare and Submit Draft Section 401 and 404 Per
% and		01-Jul-10A	06-Jun-18	PE 18	PE 15% and Preliminary Design for Procurement
		20-Nov-15A	24-May-17	J2Y: Conduct Preliminary Engi	J2Y: Conduct Preliminary Engineering for Project Development (PE4PD)
	8	01-Jul-16A	07-Nov-17	J2Y: Conduct Prein	J2Y: Conduct Preliminary Engineering for Procurement (PE4P
2.13 RDP Programwide Engineering (FJ & J2Y)	83	01-Jul-10A	06-Jun-18	RDP	RDP Programwide Engineering (FJ & J2Y)
Relat	8	01-JuF10A	16-Aug-18		Other Related Work
3.0B J.Z. Station Area Manung	2 8	10-Jul-16A	24-May-17	J2Y: Station Area Planning	
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1.01 CVW: Project Management		80 02-May-11 A		CVW: Project Management
		1.0		CVW: Public Participation Program
				CVM: Environmental Task Management
1.05.2.1 CVW: Prepare Technical Reports		46 24-Sep-12A	V 29-Aug-16A	CVW: Prepare Technical Reports
1.05.2.2 CVW: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence	s to SHPO/Review and Concurrence	2 24-May-16A	A 27-Jul-16A	
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1.05.2.4 CVW: Identify Initial Preferred Atternative, Obtain Authority Approval	n Authority Approval	13 05-Jan-15A	16-Feb-16A	CVW: Identify Initial Preferred Alternative, Obtain Authority Approval
1.05.3 CVW: SEIR/SEIS Sections/Chapters		47 02-Jul-12A	19-Jul-16A	¢VW/: SEIR/SEIS Sections/Chapters
CVW: Prepare Administrative	Draft EIR/EIS and Circulate to Cooperating Agencies	3 18-Jul-16A	17-Oct-16	CVMV: Prepare Administrative Draft EIR/EIS and Circulate to Cooperating Agencies
	Public Review and Comment	3 14-Nov-16	10-Feb-17	CVW: Prepare Draft EIR/EIS and Circulate for Public Review and Comment
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1.08.2.2 CVW: Authority Prepares and Files Notice of Determination	stermination	5 27-Sep-17	14-Feb-18	CVW: Authority Prepares and Files Notice of Determine
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1.08.3 CVW: Milgation Monitoring and Reporting Plan		15 18-May-17	24-Aug-18	CVW: Mitigation Monitoring and Reporting
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1.08.4.5 CVW: Other Required Permits				CVW: Other Required Permits
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	ect Development (PE4PD)		-	CVW: Conduct Preliminary Engineering for Project
2.11 CVW: Complete 15% Design	101-101			CWW: Complete 15% Design
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1.01	HMF: Project Management	43		22-Jan-18			HMF: Project Management	
1.01.1	HMF: PM Plan/Meetings/Coordination	4		22-Jan-18			HMF: PM Plan/Meetings/Coordination	
1.01.2	HMF: Quality Assurance/Quality Control/Safety/Risk			14-Oct-15A	HMF: Quality Assuran	HMF: Quality Assurance/Quality Control/Safety/Risk		
1.01.3	HMF; Document Control	4		22-Jan-18			HMF: Document Control	
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2.02	HIME: PE Program Management	4	15 01-Aug-15 A	11-Nov-16		HMF: PE Program Management	lement	
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2.11	HMF: Conduct Preliminary Engineering for Procurement (PE4P)	X		01-Oct-16		HMF: Conduct Preliminary E	HMF: Conduct Preliminary Engineering for Procurement (PE4P)	
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	Activity Name	Duration Start Finish It	Start	Finish	15 2016 2017 2018 2019 2020 2021
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1.02	P-K: Regional Consultant Public / Agency Participation	54 2	24-Apr-15A	30-Jun-18	P-K Regional Consultant Public / Agency Participation
1.03			02-May-16 A	14-Nov-16	P2K: Prepare Project Description
1.03.4.1		0	01-Jun-15A	01-Jun-15A	P2K: Conduct Alternatives Analysis
1.03.6	P2K: Define Existing Transporation Conditions		21-Dec-15A	28-Jan-16A	P2K. Define Existing Transporation Conditions
1.03.7	P2K: Identify Range of Atternatives for Environmental Evaluation * (Checkpoint B)		05-Jul-16A	26-Jan-17	P2K: identify Range of Alternatives for Environmental Evaluation * (Checkpoint B)
1.05.1			24-Apr-15A	29-Jun-18	P2K: Ehvironmental Task Management
1.05.2.1			01-Jul-15A	10-Nov-17	P2K: Prepare Technical Reports
1.05.2.2	P2K: Submit Section 106 Reports to SHPO/Review and Concurrence		29-Dec-16	14-Jun-18	P2K: Submit Section 106 Reports to SHPO/Review and Concur
1.05,2.3			01-Jul-15A	12-May-17	P2K: Prepare and Submit Biological Assessment to USFWSNMFS
1.05.2.4			15-Nov-16	13-Jan-17	P2K: Identify Initial Preferred Atternative, Obtain Authority Approval *
1.05.3	P2K: EIR/EIS Analysis	24 2	24-Apr-15A	19-Apr-17	P2K: EIR/EIS Analysis
1.05.4	P2K: Perform Env Studies and Obtain Permits for Geotech Investigations		01-Jul-15A	20-Apr-16 A	P2K Perform Env Studies and Obtain Permits for Geotech Investigations
1.07.1	P2K: Prepare Administrative Draft Environmental Document and Circulate to Cooperating Agencies **		15-Nov-16	23-May-17	P2K: Prepare Administrative Draft Environmental Document and Circulate to Coope
1.07.2			04-Jan-17	17-Jul-17	P2K: Prepare Draft Environmental Document and Circulate for Public Review an
1.07.3.1		9	06-Jun-17	12-Dec-17	P2K: Respond to Public Comments on Draft Environmental Document
1.07.3.2			24-Apr-17	31-May-17	P2K Identity Preliminary Preferred Attemative
1.07.3.3			/L-KBM-CL	10-OCF-1/	
1.07.4	P2K: Identity Least Environmentally Damaging Practicable Alternative (Checkpoint C, LEDPA)	5	18-Jul-17	05-Dec-17	P2K: Identity Least Environmentally Damaging Practicable Atternative (Ch
C.10.1	P.C. Cal. Dept of Fish & Game (CUPIC) Consistency Determination	0	11-KBIM-CI	40 Dec 17	
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1.08.1	P2K: Findings & Statemen	4	21-Aud-17	19-Dec-17	P2K: Findings & Statement of Overriding Considerations
1.08.2.1	T	0	09-Jan-18	11-Jan-18	I P2K: Authority Board Certifies Environmental Document
1.08.2.2		0	09-Jan-18	12-Jan-18	I P2K: Authority Files NOD
1.08.2.3	Surface Transportation Board (STB) Issues ROD - Palmdale to Burbank	0	27-Dec-17	29-Dec-17	Surface Transportation Board (STB) Issues ROD - Pelmdale to Burbank
1.08.3	P2K: Mitigation Monitoring & Reporting Plan	4	21-Aug-17	19-Dec-17	P2K: Mitigation Monitoring & Reporting Plan
1.08.4.1			31-May-17	14-Jun-18	P2K: Obtain Fully Executed Section 105 MOA
1.08.4.2	P2K: Prepare and Submit		04-Jan-17	01-Jan-18	P2K: Prepare and Submit Draft Section 401 and 404 Permit Applications
1.08.4.3	P2K: Prepare and Submit		04-Jan-17	19-Nov-18	P2K: Prepare and Submit 2081 and 1502 Applications
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2.04	P2K. Preliminary Engineering (15%, PE4PD)	22 0	01-Jul-15A	21-Apr-17	P2K. Preliminary Engineering (15%, PE4PD)
2.11	P2K: Conduct PE4P		24-Mar-17	29-Jun-18	P2K: Conduct PE4P
2.13	RDP Programwide Engineering (P2K)		01-Jul-10A	31-Aug-18	RDP Programwide Engineering (P2K)
Other R	Other Related Work		01-Jul-10 A	28-Aug-18	Other Related Work
3.06	P2K: Station Area Planning		30-Jun-15 A	15-Aug-15A	 P2K: Station Area Planning
3.09	P2K: ROW EIR/EIS Process		24-Mar-17	29-Jun-18	P2K: ROW EIR/EIS Process
3.11	PMT/RDP ROW Work (P2K)		01-Sep-16	28-Aug-18	PMT/RDP ROW Work (P2K)
3.12	Ridership Forecasting - P2K		01-Jul-10A	29-Jun-12A	
3.14	Station Area Planning (F2K)	46 0	01-Nov-13 A	28-Sep-1/	Sation Area Hanning (PZK)
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From:	Barnes, Juliana (FRA)					
То:	"Malone, Desiree@HSR"; Gilliland, Barbara(PB)@HSR					
Cc:	"rlzimmerer@transystems.com"; "mlrule@transystems.com"					
Subject:	RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)					
Date:	Wednesday, March 29, 2017 12:57:00 PM					
Attachments:	2015 4 30 DRAFT Gilroy Workplan.docx					
	AWP FY 16 REVISED Final FRA Comments (as of Mar 17).docx					

Hi Desi,

FRA acknowledges receipt of CHSRA's Revised Annual Work Plan (AWP) on January 23, 2017.

Please see the following feedback below and attached (AWP FY 16 Revised Final _FRA Comments) after review of the revised 2016-2017 AWP:

- In its revisions, CHSRA attempts to address FRA's review comments by tying the AWP and the Program Management Plan together; in other words, by making them one. FRA understands that everything CHSRA does ultimately ties together. However, the grants' Statements of Work prescribe different contents/subjects for the AWP versus the Program Management Plan; they are two distinctive deliverables/documents with different purposes even though they relate to one another.
- The primary purpose of the Program Management Plan is explaining how CHSRA manages scope, budget, schedule, and risk over the life of the program while the primary purpose of the AWP is explaining what CHSRA is doing this year to stay on target with scope, budget, schedule, and risk.
- The AWP should provide specific milestones or deliverables (even if partial/iterative) CHSRA is going to meet or provide to FRA during the timeframe covered in the document as well as the number of people/resources and costs associated with achieving specific milestones or deliverables. For example, if the Program Management Plan indicates that CHSRA is going to finish a given task in say five years, then the AWP would indicate what CHSRA is doing this year (expressed by describing the number/type of people involved and/or the cost) to make sure iterative tasks are progressing as necessary to reach project completion at the end of the five years.

In recent years, FRA understood the need to keep the AWP broad given that the period of performance of the grants was fast-approaching. Now that FRA and CHSRA have extended the grants' period of performance, the AWP needs to be specific.

Attached is an example of a good work plan (in a table format) that CHSRA could use as a reference and an FRA mark-up on the Revised AWP (pg 24 – 28, on Task 3). Those comments, while contained to Task 3, offer insight into how FRA viewed each section and the plan as a whole. FRA hopes CHSRA will address those comments in future submissions of the AWP and other annual deliverables/"plans" as a similar thought process was applied to their review.

Please focus on revising Task 3 of the Annual Work Plan to address FRA's review comments as a standalone document for receipt by April 21st. As previously shared with CHSRA on January 18, 2017 keeping in mind that one of the primary benefits of a good AWP is allowing FRA to know what is

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"coming down the pipeline." One piece of feedback CHSRA provides on an ongoing basis to FRA is that CHSRA appreciates quick reviews/turnarounds; thus, letting FRA know what specifically is coming well in advance in the form of the AWP would help FRA better address this valuable feedback.

Thank you,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

From: Malone, Desiree@HSR [mailto:Desiree.Malone@hsr.ca.gov]
Sent: Monday, January 23, 2017 2:17 PM
To: Barnes, Juliana (FRA) <juliana.barnes@dot.gov>
Cc: Gilliland, Barbara(PB)@HSR <barbara.gilliland@hsr.ca.gov>; mlrule@transystems.com; Everett, Lynn (FRA) <lynn.everett@dot.gov>; rlzimmerer@transystems.com; Malone, Desiree@HSR
<Desiree.Malone@hsr.ca.gov>
Subject: RE: Initial Feedback: Q4-16 Deliverables

Hi Juliana,

The Authority acknowledges your comments and is revising the documents provided by the FRA.

This email returns a revised AWP for FRA comment purposes.

Please note that an extension to the Feb. 2 due date has been requested for the FCS/CONOPs due to being unable to discuss the document today as planned.

A revised CVPFP is in process and I will keep you informed on its status for timeliness to the revision due date of Feb 2.

Thank you - Desi

Hi Desi,

FRA acknowledges receipt of the following deliverables transmitted on Dec 29, 2016:

- FCS Utilization Plan/CONOPs
- Annual Work Plan (AWP)
- Central Valley Financial Plan (CVFP)
- Phase 1 Program Financial Plan
- Program Management Plan
- CP 4 Baseline Schedule
- Q4_16 Exhibit A Update

An initial review was conducted of the following submittals in the three attached documents: (1) FCS Utilization Plan/CONOPS, (2) Annual Work Plan, and (3) CV Financial Plan which contain initial comments. Please note FRA is returning those deliverables after initial review and requests resubmission after addressing the attached FRA initial comments for further development by Feb 2, 2017.

The remainder of the 4^{th} Qtr deliverables are under review and FRA will provide comments prior to the end of the month.

Regards,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

Gilroy Inter-Agency Partnership Sustainable Communities and HSR Planning DRAFT Two-Year Work Plan, 4/30/15

Partners: Gilroy, CA HSR Authority, CA Strategic Growth Council, Caltrans, HUD, FTA, FRA, EPA

Table	1: Tasks Ready for Act	1	D	Address (Date	1
	Focus Area	Actions	Resources	Milestone/Date (Need Gilroy to estimate dates)	Leads
1.1	Equity – Gilroy concerned with equity; existing east- west economic and racial divide could	EPA-funded Building Blocks workshop on equity EPA convene experts to explore opportunities for	EPA - staff time and Building Blocks Workshop (\$12-15K)	Building Blocks Workshop (Date?) Equity addressed in Gilroy X planning	EPA: Debbie Lowe Liang, Sarah Dale FTA: Eric
	be worsened by HSR; challenges gaining and	strengthening community participation	FTA – staff time HUD - Fair	document (Date?) Community-wide	Eidlin, Faith Hall
	maintaining input from Hispanic community	FTA share info from National Transit Institute EJ course	Housing & Equal Opportunity (FHEO) subject matter	FHEO workshops (Fall 2016?) HUD – Meeting	HUD: Marie Mazwi, Musibau Arogundade
		HUD scan the city's Affirmatively Furthering Fair Housing (AFFH) plan – identify opportunities & challenges to pursue	experts/one-on- one consultation; Community-wide FHEO workshops	with Equity Collaborative (Fall 2016?)	Partner with: CHSRA: Ben Lichty and SGC: Suzanne
		HUD connect city with Equity Collaborative Leadership, resources (Bay Area Prosperity Plan)	HUD - Equity Collaborative: community- based partners, funders		Hague
1.2	Brownfields – Downtown brownfields hinder infill development	Targeted Brownfields Assessment (longer term, potentially Brownfields Community Wide Assessment and/or Cleanup Grant)	EPA staff time Brownfields TBA funding	Gilroy submit request for funding (Date?) Assessment kickoff (Date?)	EPA: Nova Blazej
1.3	Smart Growth – Gilroy wants economic revitalization, walkable, infill, sustainable downtown and is	EPA Smart Growth Implementation Assistance to support contractor for downtown smart growth market analysis, finding barriers/solutions	EPA staff time EPA Smart Growth Implementation Assistance (up to \$60k)	Prepare Smart Growth Implementation Assistance proposal by May 1 Smart Growth	EPA: Carolyn Mulvihill FTA: Eric Eidlin & Faith Hall HUD ongoing
	looking for guidance on how to use HSR to achieve goals.	HUD-DOT-EPA comment on Gilroy's planning documents when requested FTA will provide examples of best practices for Gilroy from U.S. and Europe	FTA staff time HUD staff time	Implementation Assistance project kickoff (Spring 2016?)	grants management: Musibau Arogundade, Cynthia Abbott

		EPA & SGC provide best practices from SC2 Fresno HUD - Ensure highest & best use of Federal Housing Programs i.e. CDBG, HOME. Determine TA eligibility HUD - Connect city with peer cities, communities that have relevant best practices to insure jobs/ housing balance	HUD Exchange TA; National Resource Network (potential)	HUD - On-going grants management; TA support (Fall 2016?) HUD Exchange TA (Fall 2016?)	HUD Exchange TA: Josh Geyer, Dwayne Marsh Partner with – CHSRA: Ben Lichty SGC: Suzanne Hague FRA: Sue Herre
1.4	Transit – Need to plan for transit connectivity to HSR	Convene partners to assist Gilroy in planning for transit connectivity and applying for appropriate grants FTA review Gilroy's proposals and be available to Gilroy staff and consultants for questions FTA identify best practices for rail projects that go through communities TBD white paper on integration of transit services and facilities among transit providers (Building on Henry Servin's San Jose	FTA staff time EPA staff time	Meeting to explore issue (Summer 2015?) FTA to review Gilroy's plans (as needed) Transit connectivity fully addressed in draft Station Area Plan (Date?)	FTA: Faith Hall, Eric Eidlin FRA: Sue Herre Partner with – EPA: Carolyn Mulvihill, CHSRA: Ben Lichty, SGC: Suzanne Hague, HUD: Marie Mazwi
1.5	Homelessness – High levels of homelessness in downtown area	experiences) Provide best practices and recommendations to assist Gilroy in incorporating low income housing downtown HUD scan of city's participation in the Santa Clara Continuum of Care i.e. financial awards from HUD's homeless assistance programs HUD provide ideas, review Gilroy's housing proposals, and be available to staff and consultants for questions	HUD homeless subject matter experts/one-on- one consultations; possible TA	Homelessness fully addressed in TBD Gilroy planning document (Date?)	HUD: Marie Mazwi, Musibau Arogundade, Cynthia Abbott Partner with – EPA: Debbie Lowe Liang, CHSRA: Ben Lichty SGC: Suzanne Hague

	2: Tasks Under Develo Focus Area	Actions	Resources	Milestone/Date	Leads
	Focus Area	Actions	Resources	(Need Gilroy to estimate dates)	Leaus
2.1	Renewable Energy – Gilroy is interested in RE on lands formerly used to treat wastewater (~250 acres) and potentially downtown	EPA work with Gilroy to define goals, convene partners and to leverage TBD technical assistance	EPA staff time EPA (or partner agency) technical assistance TBD	EPA – Gilroy RE information sharing call (May 2015?) Gilroy RE strategy? (Summer 2016?)	EPA: Trina Martynowicz, Cara Gillen Partner with: CHSRA: Ben Lichty
2.2	Infill / Historic Preservation – Unreinforced masonry (URM) buildings downtown hinder infill and harm downtown productivity	EPA will look for partners interested in protecting historic buildings who may be able to assist FTA will share best practices for integrating historic buildings into TOD	EPA staff time FTA staff time	Meeting with partners to assist Gilroy in developing strategy (Date?)	EPA: Carolyn Mulvihill FTA: Eric Eidlin Partner with – SGC: Suzanne Hague CHSRA: Ben Lichty
2.3	Air Quality – HSR induced traffic could harm air quality near roadways. City used to have air monitoring station and would like to have one again	Assist Gilroy in developing traffic access routes to station that minimize impacts to human health EPA to review and comment on planning documents from an air quality / health perspective as requested by Gilroy EPA will look into reason for removal of Gilroy air monitoring station and process for acquiring one	EPA staff time	As requested by Gilroy	EPA: Debbie Lowe Liang, Shelley Rosenblum
2.4	Water Efficiency, Recycling and Treatment Plant – Expected growth in Gilroy will increase water demands and CA facing projected water shortages	Assist Gilroy in exploring options to improve water system, including water recycling Promote EPA's WaterSense program Convene partners to explore opportunities for water efficiency	EPA technical assistance TBD EPA staff time for WaterSense	Convene meeting with Gilroy to better define needs and goals for water recycling and treatment plant (May 4, 2015) EPA provide guidance on WaterSense (Date?)	EPA: Sarvy Mahdavi

Table	3: Tasks Discussed wit	h No Actions Currently Planned	d		
	Focus Area	Actions	Resources	Milestone/Date	Leads
3.1	Safety Training – Gilroy is interested in using green space at urban edge as a regional emergency response training center	Potential for Gilroy to meet with EPA Emergency Response for guidance			EPA: Debbie Lowe Liang
3.2	Jobs and Housing – Existing jobs / housing imbalance and strong need for more jobs downtown.	Apply lessons on attracting anchor institutions downtown from Fresno; Reach out to Social Security Administration in Gilroy and GSA about potential to relocate downtown Coordinate with SPUR and use their Prosperity Plan findings (MTC grant) to inform Gilroy options			EPA: Carolyn Mulvihill Partner with – SGC
3.3	Grant Capacity – Gilroy would like guidance on preparing applications for specific grants (not grant writing in general) Gilroy is interested in Tiger grants, among others				EPA: Debbie Lowe Liang Partner with – HUD
3.4	Parking – Gilroy would like assistance planning for parking (beyond what will be addressed in HSR Station Area Plan Grant)				
3.5	GHG Goals – Gilroy would like assistance is exploring SB 743 and meeting GHG goals				



Annual Work Plan FY16/17

October 2016

www.hsr.ca.gov | (916) 324-1541 | info@hsr.ca.gov

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Background

Established in 1996, the California High-Speed Rail Authority (Authority) is the state department responsible for planning, constructing and operating the 520-mile-long high-speed rail system in California connecting San Francisco to Los Angeles/Anaheim. The high-speed rail system is ultimately envisioned to extend to Sacramento and to San Diego.

The Authority is governed by a nine-member Board of Directors (five appointed by the Governor, two appointed by the Senate Committee on Rules, and two by the Speaker of the Assembly). There are elected Chair and Vice-Chair positions within the Board of Directors. The Authority is led by the Chief Executive Officer (CEO) who reports to the Board of Directors. The CEO works with the Board on the program's direction and a broad range of issues regarding the ongoing program, establishing program policies and goals, certifying environmental documents, and entering into agreements.

Introduction

This document is the Authority's Annual Work Plan (AWP). The AWP is prepared annually for the Federal Railroad Administration and submitted in compliance with the federal American Recovery and Reinvestment Act of 2009 (ARRA) and Fiscal Year 10 (FY 10) grant agreements. The AWP is a requirement within Task 5 of Attachment 3, Statement of Work for the ARRA and FY 10 agreements which states:

CHSRA will prepare for FRA's review and comment a detailed staffing plan and cost estimate for the Project. The AWP outlines the work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement, and tracking of deliverable so that implementation of the Project stays on schedule and within budget.

The Authority receives federal funding through the two grants identified above. These funds contribute to the completion of environmental documentation and preliminary engineering for the Phase 1 system from San Francisco to Los Angeles/Anaheim, and construction of the First Construction Section (FCS) generally from Madera to Shafter as shown in Figure 1. The two grants fund activities that are broken out by tasks within the grant in Attachment 3, Statement of Work. The tasks include:

- Task 1: Environmental Review (San Francisco Los Angeles/Anaheim)
- Task 2: Preliminary Engineering (San Francisco Los Angeles/Anaheim)
- Task 3: Other Related Work Needed Prior to Construction
- Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP) (now complete)
- Task 5: Program, Project and FCS Construction Management
- Task 6: Real Property Acquisition and Environmental Mitigation
- Task 7: Early Work Program (closed)
- Task 8: Final Design and Construction Contract Work for the FCS
- Task 9: Interim Use Project Reserve
- Task 10: Unallocated Contingency

The ten tasks are broken down into sub-tasks as defined in the Task and Sub-Task Descriptions in Appendix A – Grant Tasks and Sub-Tasks.

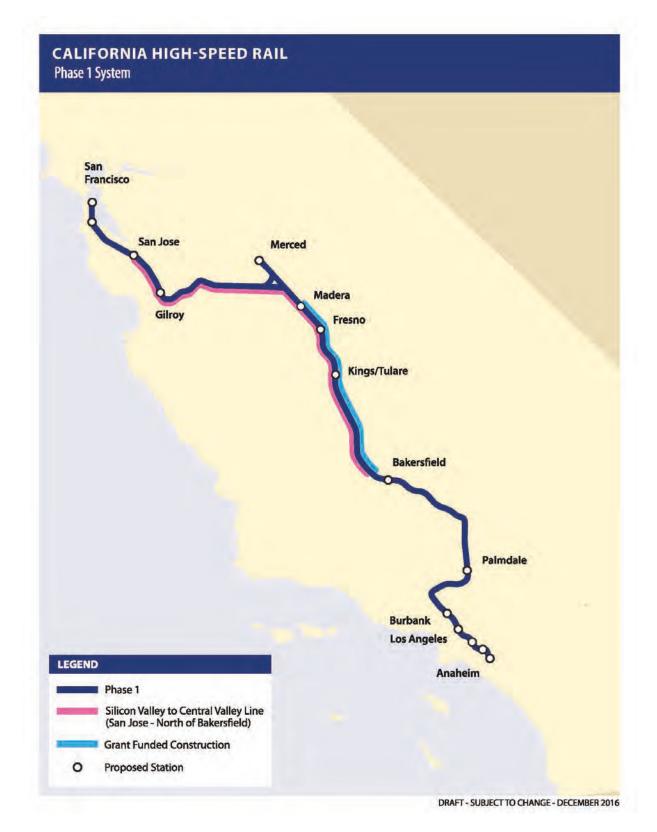


Figure 1 - Phase 1 and First Construction Section

This AWP provides a programmatic overview followed by a summary of specific activities related to each grant task as outlined in Attachment 3, Statement of Work, and highlights planned milestones and key activities in fiscal year July 1, 2016 to June 30, 2017 (FY16/17). This AWP, complimented by the Program Management Plan, which outlines the procedures used to manage the scope, budget, schedule and risk for the program, provides a comprehensive overview of how the Authority manages its work.

Staffing

The Authority's Board of Directors (Board) and Executive Management recognize the importance of a strong management structure and proper staffing to ensure the successful delivery of the high-speed rail program. The organizational model includes: Monitoring by multiple external agencies and federal grant funded oversight; an active Board of Directors to set policy and make environmental, contracting and financial decisions; a senior Executive management team with extensive project development experience; interagency support for many standard state administrative functions; and reliance on the private sector to deliver the project under contracts negotiated and managed by government employees and legal counsel.

The Authority Board sets direction and governs the organization through broad policies and objectives that outline the Authority's Business Plan. In addition to selecting the Chief Executive Officer (CEO), the board provides direct oversight of two key functions – internal audit and risk management.

The CEO has established an organization that provides direction and oversight for all aspects of developing and implementing the high-speed rail system. The Executive management team includes the CEO, chief counsel, chief financial officer, chief program manager and other senior management. Several key positions are specifically called out in statute [Section 185024 Public Utilities Code]. The staffing plan utilizes an integrated approach wherein the organization consists of both state employees and consultant staff from its rail delivery partner hired in 2015 and financial advisor hired in 2016.

The executive leadership team spans all functional areas to ensure consistency throughout the program, and has experienced staff at the regional level to enhance outreach and service delivery within local communities. It is responsible for selecting senior management staff, establishing management plans, identifying and monitoring risks, overseeing budgetary requirements and other organizational processes. Figure 2 - Authority Management Team shows the key leadership positions, these include:

- Chief Executive Officer
- Chief Deputy Director
- Chief Administrative Officer
- Chief Counsel
- Chief of Communications
- Chief Financial Officer
- Chief Program Manager
- Regional Directors (Northern California, Central Valley, and Southern California)

The executive leadership and senior management staff oversee the architectural and engineering design professionals and the construction design-build teams including:

- Regional Consultants (RCs) Environmental documentation and preliminary engineering deliverables
- Environmental and Engineering Consultants (EECs) Environmental assessment, mitigation monitoring and engineering support after completion of environmental documents
- Right-of-Way (ROW) Consultants Technical staff to support appraisal and acquisition of property
- Project and Construction Management (PCM) Consultants Oversee the delivery of each construction package
- Design and Construction Contractors Complete a civil construction package
- Operations and Maintenance System operator to manage and maintain the system.

At the program and project levels, resource planning is divided into two categories: personnel resource planning, and resource planning for facilities, equipment, materials, etc. At the program level, each project's scope, schedule and budget are integrated into the program master schedule. The time needed to implement each project in the program master schedule is determined iteratively by balancing program need, available funding and program capabilities over time. At project initiation, it is the responsibility of the project manager to develop the preliminary scope, schedule and budget. The project-level schedule estimate informs the duration of the tasks and the estimated resources needed to complete it. The data from the schedule estimate enables the project budget to be developed.

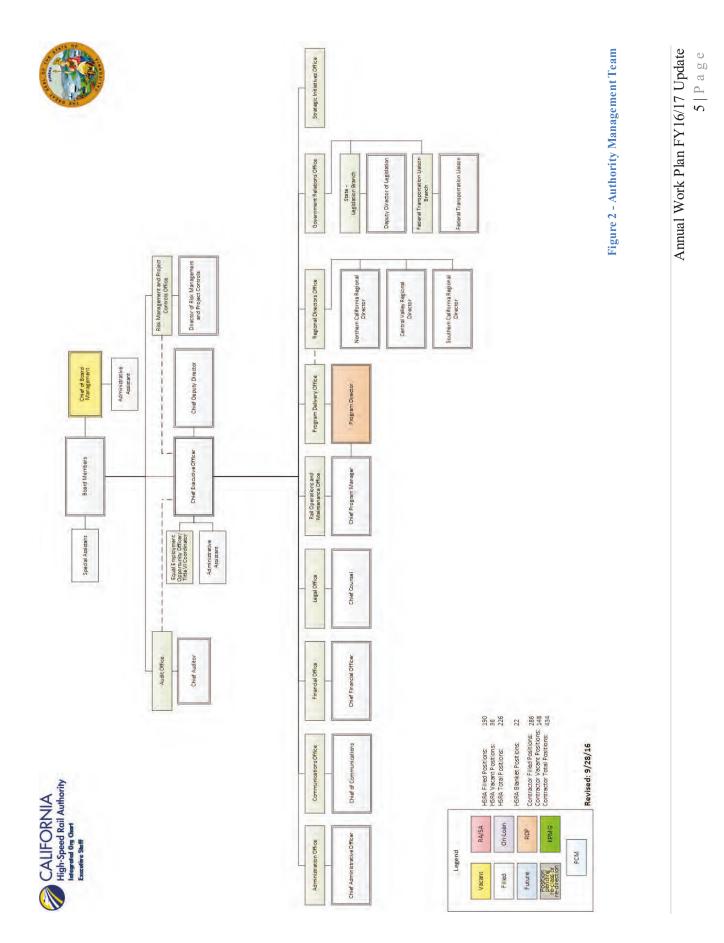
Resource needs are evaluated at project initiation and the cost is included in the preliminary project budget. Resource needs are estimated from the bottom up using these steps:

- Identify the project scope and desired outcomes.
- Determine the tasks necessary to deliver the project scope and desired outcomes.
- Determine the timing and duration of each task.
- Identify the specific staff and their utilization for each task.
- Determine the human resource level/cost for each task.
- Determine potential additional resource needs for the project and estimate their cost.

Program staffing is based on the resource needs and timing of the needs outlined above. As needs are identified, the integrated organization determines if the position can be filled internally or if outside resource(s) are required to fill the vacancy. Staffing and resource needs are monitored to balance the program needs vs. availability of staff as the program needs change.

Managing the Project

Recognizing that effective management of quality and performance accelerates program delivery, the Authority has instituted a program-wide quality policy that reflects the Authority's commitment to delivering the program on schedule and at the lowest possible cost with quality and safety that meets or exceeds acceptable industry and government standards. Through the integration and implementation of National Institute of Standards and Technology (NIST) criteria, ISO standards and FTA guidelines, a performance excellence framework was developed. This framework provides the elements essential to identifying and achieving goals and objectives, improving results and aligning requirements, roles,



responsibilities, processes, procedures, actions and results. This framework also provides the tools to examine the organization, including its quality management system and to improve processes and results.

The diagram depicts the application of the integrated performance excellence framework for the high-speed rail program. A number of initiatives have been undertaken to institute a culture of continuous performance improvement, including:

- Internal process improvement for general process assessment and improvement,.
- improvement,.Lessons-learned process to implement the knowledge gained from

improvement initiatives into the work processes and procedures.

- Brown bag lunches that highlight various program activities to inform, educate and connect internal customers.
- Meetings between the quality manager and organizational units to update the group on quality developments and to follow up on any action items from prior meetings.
- Integration team comprised of organizational unit leads, along with other entities, which convenes to review progress and make adjustments to optimize performance and customer satisfaction. The team uses the established plan's "do, learn, share and sustain" approach to accelerate improvements within each organizational unit and within the organization as a whole by identifying solutions that can be immediately applied.

In addition, the Authority has a formalized Risk Management system consisting of a set of processes, protocols and responsibilities providing a systematic approach to identify, evaluate, assess, document and manage risks that could jeopardize the success of the program. Potential areas of risk include engineering, environmental, planning, right-of-way, procurement, construction, organizational, stakeholder, budget and schedule risk. The risk management plan balances the competing demands of scope, budget, schedule, quality, resources and risk to minimize risks to the program. Risk is reduced even further by requiring operators, infrastructure providers and contractors to accept risk directly through their contract agreements with the Authority. Further, risk management specialists identify key potential risks and develop mitigation plans in advance of their possible occurrence. Risk-related items and actions are documented in the risk register for the program. Individual risk registers are reviewed and updated quarterly, though individual risks are updated as new information is developed. The registers are reviewed by management and response strategies and actions for individual risks, as well as for overall program risks, are integrated into a consolidated plan.



CALIFORNIA High-Speed Rait Authority				Э	SRA	Prc	gra	Б Ш	has	e 1	Mil	estol	CHSRA Program Phase 1 Milestone Table	able						
	Environm	Environmental/Engineering	neering	C	Civil Infrastructure	ture	Tra	Track and Systems	ems		High-Sp	High-Speed Rail Trains	5			esting and Co	Festing and Commissioning			
Data Date: October 1, 2016											11	Fleet 1 (Valley to Valley)	(alley)		Test Track			Control and		READY FOR REVENUE
	ITA NOD	STB ROD	STB ROD Complete	Issue RFP	Issue NTP	Substantial Completion	Issue RFP	Issue NTP	Substantial Completion	Issue RFP	Issue NTP	Prototype Acceptance	Acceptance	Complete Static Testing	Complete Dynamic Testing	Complete Prototype Testing	Complete Static Testing	Dynamic Testing	Complete Trial Run	SERVICE
Silicon Valley to Central Valley Line (San Jose to Poplar Avenue)	se to Popl	lar Aven	(ər																	
San Jose to FCS							-													
San Jose Approach				Nov-17	Jun-18	Jan-22		1												
San Jose to Pacheco Pass			1	Nov-17	Jun-18	Oct-21														
Pachecho Pass Tunnels	/T-Dan	Mar-18	/T-AON	Nov-17 May-18	May-18	Oct-21			Dec-22								Jun-23			
Foothills to Carlucci Rd. &				Nov-17	18	Nov-21	Mar-17	Anr-18		Mar-17 Anr-18	Anr-18		A116-23					Dec-23	Dec-24	lan-25
Wye Leg - Carlucci Rd. to FCS	Dec-17		Mar-18 Sep-17	/T-001	ot-Inc	T7-001		ot- ide			ot- Ide		cz-8nw					Nec-23	47-72A	C7.110F
First Construction Segment (FCS)											L									
CP 1				Mar-12 Oct-13	Oct-13	Jun-19		1												
CP 2-3	0	Complete		Apr-14	Jul-15	Jun-19			Dec-20			12-gue		Jun-21	Dec-21	Dec-22				
CP 4				May-15 Apr-16	Apr-16	Apr-19														
Silicon Valley to Central Valley Extensions (San Francisco to Merced & San Francisco to Bakersfield)	(San Franc	isco to N	Aerced 8	k San Fra	ncisco to	Bakersfie	(p													
San Francisco to San Jose	Dec-17		Mar-18 Jul-17	Dec-17 Oct-18		May-21														
Merced to Ranch Rd. & Wye Leg West	Dec-17	Mar-18	Mar-18 Sep-17	Dec-17	Jun-18	Sep-21	Mar-17	Apr-18	Sep-22	Mar-17							Jun-23	Dec-23	Dec-24	Jan-25
FCS to Bakersfield	Dec-17	Apr-17	Apr-17 Aug-18 Jun-17	Jun-17	Apr-18	Oct-21	Nov-17	Aug-18	Oct-22								Jun-23			
Merced to FCS & FCS to Burbank																				
Wye Leg East	Dec-17	Mar-18	Mar-18 Sep-17	Dec-18	Oct-19	Nov-23	Nov-21	Sep-22	Jun-25											
Bakersfield to Palmdale																				
SCP 1				Jan-19 Nov-19	Nov-19	Oct-24														
SCP 2				Nov-18 Sep-19	Sep-19	Jan-25														
SCP 3	Doc 17		And 19 han 30	Jan-18 Nov-18	Nov-18	Dec-24														
SCP 4	/T-Dar		07-118r	Sep-18 Jul-19	Jul-19	Sep-24														
SCP 5				May-19 Mar-20	Mar-20	Dec-24	10 VON	Con 37	50n 76											
SCP 6				May-19 Mar-20	Mar-20	Apr-24		3ch-42	07-420	Mar-17							Jun-27	Dec-27	Dec-28	Jan-29
Palmdale to Burbank																				
SCP 7				May-18 Mar-19	Mar-19	Jan-25														
SCP 8	Dec-17	Dec-17	Jun-18	Dec-17 Jun-18 May-18 Mar-19	Mar-19	Mar-25														
SCP 9				May-18 Mar-19	Mar-19	Jan-24														
Burbank to Anaheim Corridor Improvements	nts																			
Burbank to Los Angeles	Dec-17		Aug-18	Feb-18 Aug-18 Sep-18 May-19	May-19	Jun-25	No. 21	5 an 37	Doc 36											
Los Angeles to Anaheim	Dec-17	Mar-18	Aug-17	Mar-18 Aug-17 Jun-19 Apr-20	Apr-20	Apr-25		77-Mac	עפריצנ											

Figure 3 - Authority Program Phase 1 Milestone Road Map

Annual Work Plan FY16/17 Update $7 \mid P \mid a \mid g \in C$

Schedule

As defined in the 2016 Business Plan, the Authority is projecting passenger service to start on the initial project segment, from the Silicon Valley to the Central Valley, in 2025 and Phase 1 completion by 2029. The milestone schedule and phasing strategy to meet these goals is shown above in Figure 3. The milestones provide a high-level summary of the key activities necessary to guide resource planning, and project scheduling and construction. It also shows the overall progression of work and how the interim use of the FCS for operations testing fits within the overall schedule for the start of high-speed rail revenue service by January 2025.

In FY 16/17 the Authority is expected to finalize work on all Phase 1 environmental documents which are scheduled to be completed by December 2017 (see Task 1 summary). In addition, construction of the FCS through Construction Package's (CP) 1-4 will continue with key construction milestones summarized in Task 8. Finally, RFP's are projected to be released for track and systems, and high-speed rail trainsets in Spring 2017.

The Authority provides the FRA with quarterly schedule updates that contain more detailed information about the current status of each grant task. The September schedule update is included in Appendix D.

Cost Estimate

The Authority updates the program cost estimate every two years as part of the business plan (a legislative statutory requirement). These costs were recently updated and included in the *Connecting and Transforming California, 2016 Business Plan* published on May 1, 2016. All cost estimates below are as of May 2016.

The updated costs to complete the environmental, preliminary engineering and planning efforts for the Phase 1 System from San Francisco to Anaheim are summarized below. The cost to complete has increased over previous budget projections due to a variety of reasons, including unanticipated additional environmental documentation and alignment variations to be studied. Project development costs are summarized in Table 1 and include spent-to-date and additional costs needed to complete work related to Tasks 1-4.

Project Development costs	Amount (\$ millions)
Environmental/Planning Spent-to-Date	\$ 643
Phase 1 Environmental/Planning Cost to	\$ 403
Complete	
Tot	al \$1,046

Table 1 - Project Development Costs

Task 8 covers civil infrastructure construction for the FCS. CP's 1-4 have been procured and contract amounts (including provisional sums) and contingency are summarized in Table 2 below. One additional contract remains to be released for final design and construction of FCS track work. It is anticipated that contract will be released within the FY 17/18.

Section ¹	Contractor	Current Contract (\$ millions)	Contingency (\$ millions)
SR 99	Caltrans ²	\$ 226	\$ 9
CP 1	Tutor-Perini/Zacary/Parsons (TPZP)	\$ 1,285	\$ 160
CP 2-3	Dragados/Flatiron	\$ 1,365	\$ 261
CP 4	California Rail Builders	\$ 444	\$ 62
1 Contract amount	ts as of September 2016 Finance and Audit Report		

Table 2 - Design Build Contract Costs

2 Units CMCCD lines and a section of the transformer back have been the first section of the transformer back have been the first section of the transformer back have been the transformer back have ba

2 Using CMGC Delivery method, contingency split between Early Works and Main packages

A detailed capital cost estimate of all Phase I program costs can be found at http://www.hsr.ca.gov/docs/about/business plans/2016 Business Plan Basis of Estimate.pdf

Budget Summary

Phase 1 planning and FCS construction are funded through federal grants, and state resources from Proposition (Prop) 1A and Cap and Trade. The state funds and some local resources contribute to the match required in the ARRA and FY 10 grants. Local match is allocated to station area planning work in cities along the Phase 1 system. Table 3 summarizes federal and state funding. The Authority realizes that additional state funds will be required to complete the full scope of the grant agreements. These funds are identified as additional resources to be expended as part of construction in Task 8. Appendix B – Detailed Grant Budget contains the grant Quarterly Budget Update, September 30, 2016.

Task	Federal Budget	State Match	Total	Additional Resources
1 Environmental	\$173,327,113	\$326,207,370	\$499,534,483	
2 Preliminary Engineering	\$254,362,236	\$ 82,999,427	\$337,361,663	
3 Other Related Work	\$ 83,009,008	\$106,416,974 ¹	\$189,425,982	
4 Project Administration	\$ 677,872	-	\$ 677,872	
5 Construction Management	\$221,959,777	\$197,267,290	\$419,227,067	\$139,400,000
6 Property Acquisition	\$468,304,427	\$383,970,052	\$852,274,479	\$ 91,105,000
7 Early Works	-	-	-	
8 Final Design & Construction	\$2,109,117,773	\$1,662,939,722	\$3,772,057,495	\$994,541,391
9 Project Reserves	\$161,879,645	\$ 46,267,108	\$208,146,753	
10 Unallocated Contingency	\$ 8,538,380	\$59,508,288	\$68,046,668	
Total	\$3,481,176,231	\$2,865,576,231	\$6,346,752,462	\$1,225,046,391

Table 3 - Budget Summary

1 Includes local funding

The following chapters outline the resources, plans and milestones for FY 16/17 for the tasks of the grant agreement except tasks 4, 7, 9 and 10 - Task 4 is complete; Task 7 was deleted; and use of Task 9 and 10 are detailed in separate reports (Interim Use Plan and the Unallocated Contingency Management Plan respectively).

Procurement

The power to enter into contracts necessary to carry out the functions of the Authority is provided by the statutes that created the Authority. These statutes include:

- Public Utilities Code § 185033 which gives the Authority the contracting power to enter into contracts with private or public entities for the design, construction and operation of the high-speed rail Program. The contracts may be separated into individual tasks or segments or may include all tasks and segments, including a design-build or design-build-operate contract.
- Public Utilities Code 185036(a) which allows for architecture and engineering (A&E) and other professional service procurements. The Authority issues RFQs and RFPs respectively.
 - A&E procurements are consistent with the requirements of Government Code Section 4525, et seq., and California Code of Regulations Title 21, Division 6, Chapter 1, Article 1.
 - Other professional service procurements are consistent with the requirements of Public Contract Code Sections 10295 and 10335, et seq. For design-build (DB) procurements, the Authority is currently using a two-step process consisting of a request for qualifications followed by a request for proposals.

The overall procurement strategy has been developed through an ongoing process of industry engagement, including issuance of requests for expressions of interest, industry forums and one-on-one meetings. Design-build (DB), as well as other alternative delivery strategies, is under consideration for delivery of the Silicon Valley to Central Valley initial operating segment. Figure 3 (on page 7) highlights some of the major procurement milestones scheduled to deliver the program. In FY 16/17 the Authority expects to release several major procurement packages, including requests for track and systems and train sets.

Deliverables

The Authority provides FRA with an update of key deliverables once a quarter including:

- Quarterly Progress Reports
- Quarterly Budget Update
- Funding Contribution Plan
- Right-of-Way Acquisition Plan
- Summary Schedule
- Contingency Plan Update
- SF 425 Federal and State Match Expenditures

In addition, this past year the FRA and the Authority began conducting a quarterly review of all grant required deliverables' due dates and collaboratively revise the due dates as appropriate. Specific deliverables related to each task area are summarized in their respective task below.

Task 1 Environmental

The environmental review process is conducted in accordance with the requirements of the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the Department of Transportation Act (49 U.S.C. 303), and other applicable environmental laws and regulations (collectively NEPA/CEQA).

Environmental review includes the preparation of environmental documentation for each project section, development of resource agency agreements in support of the NEPA/CEQA process and the process to obtain regulatory agency approvals and environmental permits. A mitigation monitoring system has been established to ensure contractor compliance with the environmental documentation Record of Decision (ROD) mitigation and permit conditions. Should alignment changes be proposed that affect previous clearances, staff is included in change management decision making to ensure environmental requirements are considered and documented as outlined in the Design-Build Program Plan – Project Management Plan.

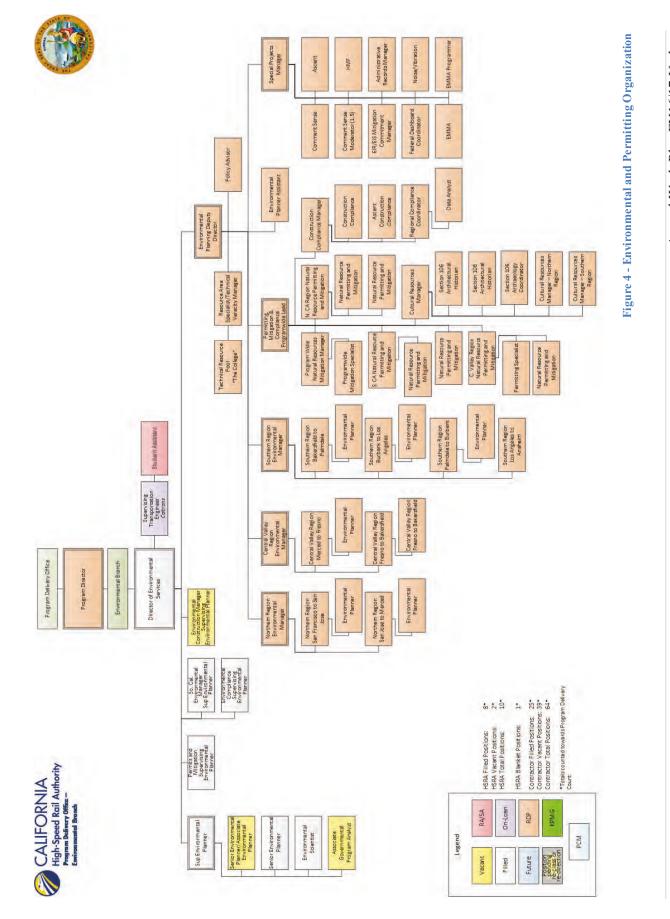
Staffing

The environmental team is responsible for coordinating the activities required to environmentally clear and permit the high-speed rail projects to begin construction. They provide guidance on environmental strategies for project clearance, programmatic methodologies and assumptions to meet environmental commitments. The team directs permit activities and provides strategic guidance on permit approaches. In addition, the environmental team provides strategic guidance on the environmental approval process and serves as the liaison with the FRA, the attorney general's office and other federal, state, regional and local agencies, the regional consultants and environmental and engineering consultants, and other environmental consulting firms on environmental work products.

The environmental team also guides the regional consultants and the environmental and engineering consultants, and coordinates with them and other environmental consultants in preparing the environmental studies, documents and subsequent environmental approvals required for implementing high-speed rail construction and operation. The environmental team follows the quality procedures and reviews proposed environmental approach revisions and environmental deliverables submitted by the regional consultants, the environmental and engineering consultants and environmental teams.

The organizational chart shown in Figure 4 illustrates that the Director of Environmental Services provides direction and oversight of the preparation of environmental clearance documents prepared in each region by regional consultants managed by the regional directors. The team is also responsible for securing the permits necessary to begin construction and includes the following leadership positions:

- Director of Environmental Planning
- Deputy Director of Environmental Planning
- Supervising Environmental Planner
- Regional Environmental Manager South
- Regional Environmental Manager Central
- Regional Environmental Manager North
- Special Projects Manager
- Permitting, Mitigation and Compliance Manager



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Agency Coordination

The Authority and FRA have entered into a Memorandum of Understanding with the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) to facilitate compliance with the National Environmental Policy Act (NEPA - 42 U.S.C. section 4321, et seq.), the Clean Water Act (CWA – section 404 [U.S.C. section 1344]), and the Rivers and Harbors Action section 14 (33 U.S.C section 408) processes for the project-level (Tier 2) EISs for the ten sections of the program. Three steps in the checkpoint process require concurrence from the EPA and USACE. These steps are integrated with the environmental approval process as noted below:

Checkpoint A – Purpose and need; integrated with the purpose and need definition;

Checkpoint B – Range of alternatives; integrated with the alternatives analysis that leads to the range of alternatives studied in the EIR/EISs; and,

Checkpoint C – Least environmentally damaging practicable alternative (LEDPA); integrated with the selection of the preferred alternative.

The Checkpoint A process has been completed for the Phase 1 sections. Because some sections will not require an individual Section 404 permit for project construction (e.g., San Francisco to San Jose, Burbank to Los Angeles and Los Angeles to Anaheim), it may not be necessary to submit Checkpoint B and C documentation for agency review and concurrence. An EPA and USACE agreement on this approach is anticipated later in 2016. For the remaining sections that will require Checkpoints B and C, work is underway with completion anticipated in FY16/17.

Schedule

Phase 1 environmental clearances are expected to be completed by December 2017. Major milestones are shared with the Board on a monthly basis; in the Fall of 2016, major milestones will also be submitted to FRA to post to the Federal Permitting Dashboard. As dates change, the Authority will provide FRA with revised schedule information in order to update the dashboard. The Environmental Milestone Schedule and Permitting Milestone Schedules (September 2016) are included in Appendix C – Environmental Milestone and Permits Schedules.

Budget

The Environmental Review budget is \$499,534,483 and summarized in Table 3 - Budget Summary (on page 7). All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are contained in a monthly Operations Report. The Operations Report is reviewed by the Authority's Board of Directors Finance and Audit Committee on a monthly basis. The most recent Operations Report is located on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly fa committee meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 1 by project section. Table 4 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update (updated September 30, 2016).

Section ¹	Total
San Francisco – San Jose	\$ 66,007,861
San Jose – Merced	\$161,504,942
Merced – Fresno	\$ 35,339,004
Fresno – Bakersfield	\$ 45,858,851
Bakersfield – Palmdale	\$ 75,065,146
Palmdale – Los Angeles	\$ 86,328,516
Los Angeles – Anaheim	\$ 29,430,163
Total	\$499,534,483

Table 4 - Task 1, Environmental Analysis, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Environmental documentation is governed by many laws and regulations. The Authority provides guidance to the regional consultants on preparation of the environmental documentation in order to ensure consistency across all environmental preparers. This guidance includes:

Project-Level Environmental Analysis Methodologies - Provides the methodological guidance for the preparation of technical reports and impact chapters of project-level environmental documents. https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Project_EIR-EIS_Environmental_Methodology_Guidelines-Version5.02.pdf;

Additional Guidance for Evaluating Impacts under NEPA – Outlines the analytical approach for identifying, evaluating and documenting environmental impacts under NEPA. <u>https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/NEPA%20Impact%20</u> Guidance.pdf;

Guidance for Preparing Environmental Reviews for Electrical Interconnections – Describes the analytical and documentation steps for evaluating project-related electrical interconnections required for obtaining electrical power for the system.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env Review for Ele ctrical Interconnections.pdf;

Refined Guidance on Project EIR/EIS and Technical Report Content – Clarifies the content to be included in technical reports prepared in support of the EIR/EIS.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Technical_Report_Preparation_Guidance_2016.pdf;

Alternatives Analysis Methods for Project-Level Environmental Impact Reports and Environmental Impact Statements (EIR/EIS) – Provides guidance on conducting the alternatives analysis and documenting it in an alternatives analysis report.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Alternatives%20Anal ysis%20Methods.pdf;

Independent Utility/Logical Termini of HSR Sections – Outlines the requirement for establishing the logical termini for each of the HSR sections.

https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Authority_Independen t_Utility_Letter_02102009.pdf;

Multilingual Public Outreach Guidelines – Sets guidelines for public outreach to meet the Title VI requirements for multilingual outreach.

https://chsra.pbid.com/pmt/Environmental/VL/07.%20Outreach%20and%20Participation%20Guidance/Guidance%20for%20Multi-lingual%20Public%20Outreach%20Ver%201.pdf;

US Army Corp of Engineers Section 404/408 Memorandum of Understanding (MOU) – This document establishes the framework for integration of the Section 404/408 permit process with the environmental process.

https://chsra.pbid.com/pmt/Environmental/VL/06.%20Regulatory%20Permits%20and%20Guidance/NEP A Section%20404 Section 408%20MOU%20Ver%201.pdf;

Section 106 Programmatic Agreement for the National Historic Preservation Act Programmatic Agreement – Outlines the requirements and responsibilities for the approval process for the State Historic Preservation Officer (SHPO).

(https://chsra.pbid.com/pmt/Environmental/VL/05.%20Cultural%20Resources%20Guidance/Section%20 106%20Programmatic%20Agreement%20Ver%201.pdf);

Administrative Record Guidance – Describes the steps to organize, assemble and provide the administrative record in support of each individual EIR/EIS. (https://chsra.pbid.com/pmt/Environmental/VL/03.%20Environmental%20Admin%20Record%20Guidan ce/20160105%20Revised%20Documentation%20Guidance-%20Admin%20Record%20FINAL.pdf);

Environmental Compliance Program Manual – Details the key elements of the program and lists the set of standards and procedures. <u>https://chsra.pbid.com/pmt/Environmental/pa/compliance/Forms/AllItems.aspx</u>

Environmental Re-examination Guidance – Describes the evaluation and documentation process for design and other changes to the high-speed rail project following environmental approval. (https://chsra.pbid.com/pmt/Environmental/VL/01.%20Environmental%20Methods/Env%20Re-Exam%20Guidance_Complete%20Doc%20(April%202014).pdf).

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete the environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA for each project section:

- Notice of Intent
- Scoping Report
- Agency Coordination Plan
- Purpose and Need Statement
- Alternative Analysis Report

- Administrative Draft EIR/EIS
- Draft EIR/EIS
- Administrative Final EIR/EIS
- Final EIR/EIS
- Record of Decision
- Mitigation and Monitoring Evaluation Plan (MMEP)
- Environmental Re-examinations (as necessary)

To date, the Authority has completed all Notices of Intent, Scoping Reports, Agency Coordination Plans, Purpose and Need Statements and Alternative Analysis Reports for all Phase 1 project sections. Two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and permitting activities for commencing project construction in accordance with the project's Notice of Determination (NOD)/Record of Decision (ROD) have been completed to date. The Authority is in the process of completing supplemental documents on these completed documents.

Table 5 summarizes the deliverables expected to be completed in FY 16/17.

Table 5 - FY 16/17 Environmental Deliverables

Deliverable/Section ¹	Schedule
Administrative Draft EIR/EIS	
San Francisco – San Jose	4 th Qtr 2016
San Jose–Merced	TBD
Bakersfield – Palmdale	TBD
Palmdale – Burbank	TBD
Burbank – Los Angeles	TBD
Los Angeles – Anaheim	TBD
Supplemental Documents	
Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	4 th Qtr 2016
Draft EIR/EIS	
San Francisco – San Jose	TBD
San Jose – Merced	1 st Qtr 2017
Bakersfield – Palmdale	2nd Qtr 2017
Palmdale – Burbank	2nd Qtr 2017
Burbank – Los Angeles	3rd Qtr 2017
Los Angeles – Anaheim	3 rd Qtr 2017
Supplemental Documents	
Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	1st Qtr 2017

Administrative Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Final EIR/EIS	
Supplemental Documents	
Bakersfield F Street	TBD
Draft Agency Decision Documents (NOD/ROD)	
Supplemental Documents	
Bakersfield F Street	TBD
MMEP	
Supplemental Documents	
Bakersfield F Street	TBD

1 September 2016

The Authority will continue the permitting process, the acquisition and securing of off-site mitigation parcels, and compliance oversight of design-build work. Permitting milestones are summarized in Appendix C – Environmental Milestone and Permits Schedules. These are updated on a monthly basis and shared with FRA Environmental Management staff through standing agency briefings.

Task 2 Preliminary Engineering

The Authority follows a standard design development process for each segment. Work has focused on the development of design standards, development of preliminary engineering to support environmental documentation and contract procurement and review of contractor submittals and requests for design variances and/or alternative technical concepts. The phases include:

- **Preliminary Engineering** The Authority provides ongoing oversight of regional consultant developed plans for design consistency across the system. This work supports alternatives development of the various sections in the Phase 1 system.
- **Preliminary Engineering for Project Development (PE4PD) Design** These plans support draft and final EIR/EIS alternatives, provides an itemized construction cost estimate and conforms with all requirements and commitments included in decision documents (FRA ROD; Authority Board Resolution, CEQA findings, and Mitigation Monitoring and Report Plan). The level of engineering detail in PE4PD design plans is sufficient to determine the required footprint for the high-speed rail program facilities and identify environmental impacts.
- **Preliminary Engineering for Procurement (PE4P) Design** These plans support procurement of final design and construction services and provide a more detailed construction cost estimate.

The Authority updates the Design Criteria Manual with new information gathered during preliminary engineering on the various project sections as well as with new information identified through the design-builders. During this fiscal year, the design manual will be updated to include elements of design for stations as well as more refined criteria related to tunneling.

Engineering staff also support the review of various DB contractor proposals related to design refinements and/or variations. This work includes: final design submittal review, design variance requests, constructability reviews, and value engineering.

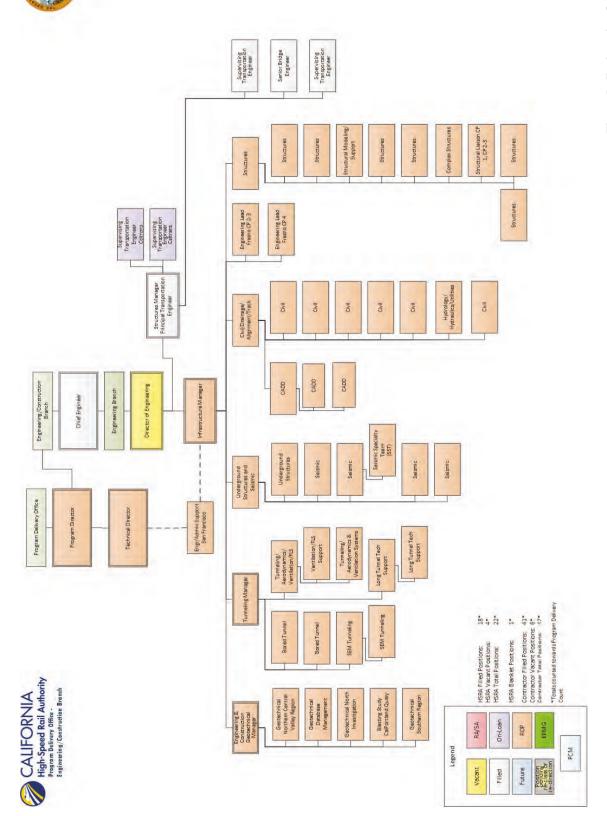
Staffing

Planning and conceptual design supports the development of alternatives to be evaluated during the environmental review. Design development is based on the performance criteria contained in the legislation governing the high-speed rail program, and outlined in the business plan. As noted in Figure 5, the Chief Engineer provides direction and oversight of preliminary engineering policy and guidance for the development of plans associated with alignment development for environmental clearance documents. The plans are prepared in each region by regional consultants managed by the regional directors. The team consists of primarily RDP staff that prepares standards and oversees plans prepared by regional consultants and design-build teams for compliance with directed standards. Management roles cover the following engineering areas and include regional lead coordinators in Fresno:

- Infrastructure Manager
- Structures Manager
- Geotechnical Manager
- Tunneling Manager
- Underground Structures and Seismic Manager
- Civil/Drainage/Alignment/Track Manager



Figure 5 - Engineering Organization



Schedule

Phase 1 preliminary engineering for environmental clearances is expected to be completed during FY 16/17. The Authority shares major milestones with the Board on a monthly basis and provides regular updates to FRA. The Environmental Milestone Schedule (September 2016) provided in Appendix B highlights when preliminary engineering for project definition, and preliminary engineering for procurement will be completed. This schedule is updated monthly and provided to FRA during monthly resource planning meetings.

Budget

The preliminary engineering budget is \$337,361,663 and summarized in Table 6. All federal expenditures related to this task are from the ARRA grant. Each segment's project costs, schedules and status are included in the Operations Report, and reviewed by the Authority's Board of Directors Finance and Audit Committee monthly. These costs include preliminary engineering costs for project definition. The most recent Operations Report can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly_fa committee meeting.html

The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 2 by project section. Table 6 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update.

Section ¹	Total
San Francisco – San Jose	\$26,484,517
San Jose – Merced	\$85,582,423
Merced – Fresno	\$16,090,509
Fresno – Bakersfield	\$43,482,519
Bakersfield – Palmdale	\$78,192,522
Palmdale – Los Angeles	\$66,485,509
Los Angeles – Anaheim	\$21,043,664
Total	\$337,361,663

Table 6 - Task 2, Preliminary Engineering, ARRA Grant Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

The general performance requirements for the system are described in Technical Memorandum 0.3 -Basis of Design Policy, which is a foundation document for the development of design standards and criteria. The specific preliminary engineering design elements required to support environmental reviews are included in TM 0.1- Preliminary Engineering for Project Definition Guidelines. TM 0.1 presents design guidance for the minimum level of engineering required for project definition needed to support the project-specific EIR/EIS process. It further defines design elements, development level and engineering outputs with the objective of providing a consistent approach for developing preliminary engineering documents across project teams, while also ensuring compliance with federal, state and local regulations as well as the program-level design criteria. There are now over 100 individual TMs. In order to make the TM's more useful to the regional and environmental and engineering consultants, an effort is underway to update, consolidate and organize all TMs into a policy and procedures manual. The technical memorandum defines the major components and performance objectives that support the development of the engineering and regulatory basis for the high-speed rail program, including its components, objectives, processes, requirements and assumptions which are governed by the Authority. The Authority's policies that determine the processes, standards, and subsystems of the high-speed rail system are generally divided to address:

- Program implementation
- Performance requirements
- Infrastructure
- Systems (electrification, train controls and communications)
- Rolling stock
- Maintenance
- Operations

Conceptual engineering in support of programmatic environmental studies was developed based on a review and compilation of existing high-speed rail standards. The standards and criteria reflected the best practices at the time of the program-level studies and serve to support the development of conceptual alternatives applicable to the California environment and terrain.

Through the alignment and station screening evaluation process, a number of alignment and station options were identified, evaluated and defined for further study in the programmatic EIR/EIS. These alignment and station options are developed based on engineering criteria and parameters established for the screening evaluation. The regional teams complete the definition of the alignment and station options and provide the definitions to the environmental teams as the basis of their analyses.

Technical Memorandum 0.1 - Preliminary Engineering for Project Definition Guidelines: Presents design guidance for a minimum level of engineering, referred to as preliminary engineering for project definition (PEPD), required to support the project-specific environmental impact report/environmental impact statement process. It defines design elements, development level and engineering outputs with the objective of providing a consistent approach in developing preliminary engineering documents to a level that supports the identification of an inclusive environmental envelope.

http://www.hsr.ca.gov/docs/programs/eir memos/Proj Guidelines TM0 1 PE for Project Def Guidelines R4 021815.pdf

Technical Memorandum 0.3 - Basis of Design: Defines the major components and performance objectives of the high-speed rail system as envisioned by the Authority, outlining the objectives, requirements, and assumptions for the continuing development of the high-speed rail system. Specifically, it focuses on components, objectives, processes, requirements, and assumptions, which are governed by Authority policy. The policies are divided into program implementation, performance requirements, infrastructure, systems (electrification, train controls and communications), rolling stock and operations. http://www.hsr.ca.gov/docs/programs/eir_memos/TM%200.3%20Basis%20of%20Design%20R3%20120

Design Criteria Manual – Compilation of all the technical memorandum for individual elements of design.

http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_EX_IIIA_01_Design_Criteri a_Manual.pdf

Technical Memorandum 0.1.1 Preliminary Engineering for Procurement (PE4P) – provides

guidance on elements of design and process to inform bidders on construction packages. http://hsr.ca.gov/docs/programs/eir_memos/Proj_Guidelines_TM_01_1_Preliminary_Engineering_for_Pr ocurement_Scope_R3_131224_no_sigs.pdf

Technical Memorandum 100.07 Value Engineering Implementation Plan -

https://chsra.pbid.com/pmt/eng/SitePages/hs-tm.aspx?View={90E58D02-D2C4-4D7E-B64B-7C8176BB6023}&FilterField1=LinkTitle&FilterValue1=TM%20100%2E07%20Value%20Engineering %20Implementation%20Plan

Design Variance Request Policy -

http://www.hsr.ca.gov/docs/programs/construction/CP23_executed/P13_57_05_IVE_02_Design_Varianc e_Request_Procedure.pdf

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete environmental deliverables in process. No other major procurements are anticipated.

Deliverables

The Authority provides the following deliverables to the FRA related to Task 2:

- PE to Support Environmental Review
- Design Manual (Technical Memorandums)
- CONOPS for the FCS
- Rolling Stock Performance Specifications
- System Safety and Security Management Plan (SSMP)

To date, two Final EIR/EIS documents (Merced – Fresno and Fresno – Bakersfield) and have been completed. In addition, in progress drafts of the Design Manual, FCS CONOPS Plan, Rolling Stock Performance Specifications and SSMP have been provided. The Authority will complete preliminary engineering and update all plans in FY 16/17.

Table 7 - FY 16/17 Engineering Deliverables

Deliverable/Section ¹	Schedule
PE to Support Environmental Review	
San Francisco – San Jose	1 st Qtr 2017
San Jose – Merced	2 nd Qtr 2017
Bakersfield – Palmdale	2 nd Qtr 2017
Palmdale – Burbank	2 nd Qtr 2017
Burbank – Los Angeles	3 rd Qtr 2017
Los Angeles – Anaheim	3rd Qtr 2017
Supplemental Documents	

Bakersfield F Street	4 th Qtr 2016
Central Valley Wye	1 st Qtr 2017
Design Manual Update	4 th Qtr 2016
CONOPS for the FCS and any other operating segments	4 th Qtr 2016 (update)
Rolling Stock Performance Specifications	3 rd Qtr 2016
Systems Safety and Security Management Plan (SSMP)	3 rd Qtr 2016

Task 3 Other Related Work

The Authority performs additional work required prior to the start of construction for each section. The areas covered under this task include:

- Station Area Planning Work completed by the RC's to support the environmental documentation phase as well as support to local jurisdictions to evaluate land use and access planning around stations
- **Right-of-Way (ROW) Work** Work to support the identification of properties for environmental evaluation that establishes the footprint for environmental analysis and identification of the acquisition and relocation plan
- **Ridership Fore casting** Updates to ridership forecasts to support financial planning and operational development needs related to concessionaire planning
- LAUS/SoCal Investments ROW preservation

Staffing

Station Area Planning: Over the past year, planning staff has put a substantial emphasis on executing its station area planning contracts and developing working relationships with Phase 1 station cities. This work ensures coordinated infrastructure planning for the future high-speed rail stations. The Authority is working with stakeholders on station design and station area plans, access planning, land use changes, creating community hubs, defining the environmental footprint and massing, and mitigations. The Authority's planning team has provided technical assistance to the station cities helping with procurements, public involvement, and district scale planning (coordinating infrastructure investments, high-speed rail's high-performance station design criteria, and access planning at the station with the station area). Civic Spark Fellows (an AmeriCorps program) are also being provided as additional support to station cities. The Director of Planning and Integration reports to the Chief Program Manager and is made up of a mix of Authority and RDP staff. The staff develop policies and procedures for station planning, design standards for stations and coordinates with station cities on station area planning. Management roles cover the following primary areas:

- Transportation Planning and Local Support
- Station Development and Design
- Sustainability

Right-of-Way: To construct the various segments of California's high-speed rail system in the Central Valley, the Authority must acquire nearly 1,200 properties and land parcels. Accordingly, the Authority has a standard government transportation ROW function to conduct land surveys, prepare maps, prepare deeds, appraise property, acquire property, plan for utility relocation, and provide relocation assistance to homeowners and businesses. The right-of-way function also provides other property-related services such as managing encroachments, addressing damage to private property, coordinating permits, and providing escrow and title services. Efforts related to this task are focused on support for the environmental documentation phase. For more detailed information related to the ROW program staffing see Chapter 5, Real Property Acquisition and Environmental Mitigation.

Ridership Fore casting: The ridership forecasting team is part of the Financial Office, Commercial Division. It is led by the Deputy Director Commercial and focuses on modeling to support the Authority's financial planning efforts. The work is primarily overseen by RDP staff and conducted by Cambridge

Systematics, an RDP sub-consultant. As the construction progresses, the program management team will continue to monitor the schedules for critical high-speed rail business plan milestone years (including the first leg of the initial operating segment [Silicon Valley to Central Valley] and passenger operations) which include testing, commissioning and start of service activities. This involves the integrated plans and schedules for bringing into service the track and systems elements as well as operations and maintenance facilities thereby completing the system commissioning milestone.

LAUS ROW Preservation: ARRA funding has been identified to purchase ROW in and adjacent to LAUS, including dedicated platforms and tracks within LAUS, and land to accommodate up to ten runthrough tracks for future use. Since February 2011, staff is working closely with Metro on planning, environmental, and preliminary engineering activities in order to accommodate these purchases. This effort is managed by the Southern California Regional Director.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the Task 4 activities. The next year will focus on the completion of station area planning in Phase 1 station cities and completion of the LAUS ROW procurement.

Station Area Planning: Although the Authority has actively engaged with station cities advance station area planning activities within the ARRA expenditure period, the station cities have taken and/or needed more time than anticipated to procure contractors and initiate their station area planning activities. The station cities could not reach the projected ARRA budget level or timeline to fully expend this line-item allocation. Therefore, on October 28, 2016, the Authority submitted a GARF to transfer \$2,800,000 of the Station Area Planning allocation to construction activities (Task 8). The schedule for each station area plan can be found on the Summary Schedule Update under Task 3 for each project section.

Right-of-Way: In order to accelerate ROW purchases, FRA has granted the Authority the use of a Working Capital Advance (WCA). This has helped accelerate the purchase of high value properties. Specific properties are identified and the Authority provides the FRA an update on the status of expenditures on a monthly basis. The Authority with continue with the WCA process throughout FY 16/17. In addition to the Quarterly Schedule Update identified above, the Authority also provides FRA with a quarterly ROW acquisition update. The latest update can be found at https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx by sorting on the deliverables pull down menu for ROW Acquisition Plan.

Ridership Forecasting: Work over FY 16/17 the model will support the efforts of the environmental team to complete the Phase 1 documentation. The model will also be evaluated for possible updates to support financial modeling needs. No major updates are planned this FY.

LAUS ROW Preservation: The Quarterly Schedule update includes the schedules for the Burbank-LA and LA-Anaheim project sections which will incorporate improvements at Los Angeles Union Station (LAUS). The Authority is actively coordinating with LA Metro to incorporate high-speed rail into the LAUS. As LA Metro advances plans and environmental clearance, the Authority is reviewing technical and engineering concepts as LA Metro identifies a preferred alternative and publishes the draft EIR/EIS for LinkUS. All grant-associated LAUS ROW acquisitions are expected to be finalized by the Spring of 2017.

Budget

The budget for Task 3 Other Related Work is \$189,425,982 summarized in Table 8 below. All federal expenditures related to this task are from the ARRA grant. The Quarterly Budget Update (Appendix B – Detailed Grant Budget) provides a summary of Task 3 by project section. Table 8 below summarizes the budget for each project section as identified in the detailed Quarterly Budget Update. This task also includes other local funding as part of the anticipated state match for the station area planning and LAUS sub-tasks. In addition, a separate sub-task has also been created for pre-construction planning and legal services related to pre-construction efforts.

ARRA	State	Local	Total
\$4,681,420	\$4,856,623		\$9,538,043
\$5,719,426	\$5,933,475		\$11,652,901
\$237,231	\$246,109		\$483,340
\$1,662,521	\$1,724,741		\$3,387,262
\$2,009,773	\$2,084,989		\$4,094,762
\$2,700,000	\$4,200,000	\$4,100,000	\$11,000,000
\$32,000,000		\$48,000,000	\$80,000,000
\$33,998,637	\$35,271,037		\$69,269,674
\$83,009,008	\$54,316,974	\$52,100,000	\$189,425,982
	\$4,681,420 \$5,719,426 \$237,231 \$1,662,521 \$2,009,773 \$2,700,000 \$32,000,000 \$33,998,637	\$4,681,420 \$4,856,623 \$5,719,426 \$5,933,475 \$237,231 \$246,109 \$1,662,521 \$1,724,741 \$2,009,773 \$2,084,989 \$2,700,000 \$4,200,000 \$33,998,637 \$35,271,037	\$4,681,420 \$4,856,623 \$5,719,426 \$5,933,475 \$237,231 \$246,109 \$1,662,521 \$1,724,741 \$2,009,773 \$2,084,989 \$2,700,000 \$4,200,000 \$32,000,000 \$48,000,000 \$33,998,637 \$35,271,037

Table 8 - Task	, Other Related	Work, ARRA	Grant Budget
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2 Includes local funding

Regulatory Documentation and Guidelines

Station Area Planning: The Authority works with stakeholders on station design and station area plans. This work begins with siting and defining the environmental footprint and sizing of the station. In addition, staff is also working collaboratively with each Phase 1 station city to address transportation access planning, identify land use changes, and developing community transportation hubs.

The station cities are key stakeholders for the program. Federal and state funding is allocated toward the development of station areas. The funding is dedicated to support station area planning and local land use decisions related to transit-oriented development, joint development and other transit-supportive enhancement opportunities. Interagency agreements have been executed with all but one station city (Millbrae). The agreements outline the station access and development plan partnership between the city and the Authority.

The Authority has developed a variety of guidelines, plans and procedures for use by designers, local jurisdictions and other stakeholders in initiating and carrying out this process:

- High-Speed Train Station Area Development: General Principals and Guidelines Outline of the Authority's general principles and guidelines for station area development. <u>https://chsra.pbid.com/sites/ao/pm_pub/pf/POLI-PLAN-</u> 01%20HST Station Area Development General Principles and Guidelines.pdf
- California High-Speed Train Project: Urban Design Guidelines A comprehensive planning guide that provides domestic and international examples of station area design, urban design and transit-

oriented development. This guide includes simple diagrams that analyze and explain successful public places and how each promotes livability and transit use. Urban design implemented around high-speed rail stations can encourage destination stations and enhance the value of the surrounding community. The report is intended to be used by cities and communities throughout the state as they work with their stakeholders and residents to create a vision for their high-speed rail station areas. http://www.hsr.ca.gov/docs/programs/green_practices/sustainability/Urban%20Design%20Guide lines .pdf

• Station Deliverables for PEPD and Environmental Documents Memorandum - Defines station planning deliverables for use in preliminary engineering for project definition deliverables and project-level draft environmental documents. This memorandum clarifies how to develop conceptual station plans.

https://chsra.pbid.com/pmt/pln/plndocs/Station%20Deliverable%20Memo%2005.27.16.pdf

• Project Design Criteria Manual Chapter 14 Stations – Presents station design principles and goals as well as space requirements, passenger amenities, station performance, circulation, connections and safety and security for high-speed rail preliminary and final station design. The intended use of this chapter relates to high-speed rail dedicated stations as well as facilities shared in existing stations with other transportation agencies, owners and operators. Because high-speed rail station ridership is expected to increase over time, not all functions referenced in this document will be included in all initial station programs; instead, construction will occur in a staged or phased manner as the high-speed rail system expands.

https://chsra.pbid.com/pmt/pln/plndocs/Des%20Crit%20Manual%20Chap14%20Stations%20%2031 Mar2016_Submittal%20Issued.pdf

 Station Area Parking Guidance Technical Memorandum – Defines appropriate station area parking to be evaluated for the draft project-level environmental documents. As such, this technical memorandum defines the maximum possible footprint without taking into account how changes in local land use and transit connectivity can influence parking demand. This technical memorandum explains the desired parking approach, including cost and layout, along with the process for implementation including Authority, local and private-sector responsibilities. <u>https://chsra.pbid.com/pmt/pln/plndocs/Revised%20Station%20Area%20Parking%20Guidance%20w</u> <u>ith%20signatures.pdf</u>

Vision California – An effort to explore the critical role of land use and transportation investments in meeting the environmental, fiscal and public health challenges facing California today and in the future. New modeling tools are applied to formulate and compare scenarios for how California can accommodate growth based on policy decisions and development patterns. http://www.hsr.ca.gov/Programs/Green Practices/sustainability.html

• UC Berkeley Research on the Potential for Transit-Oriented Development in the Central Valley -These reports, prepared with the support of the Authority, examine the potential for transit-oriented development around high-speed rail stations in the Central Valley. They focus on proposed stations sites in the cities of Stockton, Merced, and Fresno and presents planning approaches and design concepts for land use, urban design and multimodal access and circulation in and around the proposed high-speed rail station areas. <u>http://www.hsr.ca.gov/Programs/Green_Practices/sustainability.html</u>

Right-of-Way: For more detailed information related to the ROW program see Task 6, Real Property Acquisition and Environmental Mitigation.

Ridership Fore casting: Documentation related to the development of the Authority's ridership and revenue forecasting can be found on the Authority's website at http://www.hsr.ca.gov/About/ridership and revenue.html. Information can be found on the California

High-Speed Rail Ridership and Revenue Model, Version 3 Model Documentation completed by Cambridge Systematics, February 17, 2016. In addition, reports from the Authority's Ridership Technical Advisory Panel can also be found.

Procurement

Procurement activities planned for FY 16/17 are minor contract amendments for budget and time to complete station area planning or ROW planning activities. No other major procurements are anticipated.

Deliverables

The following deliverables scheduled for FY16/17 are below. To date, in progress drafts of the ROW Procedures Manual and FCS Contingency Plan have been provided to FRA. ROW Acquisition Plans for the FCS are provided quarterly.

Schedule		
2 nd Qtr 2017		
2 nd Qtr 2017		
Quarterly		
4 th Qtr 2016		
-		

September 2016

Task 5 Program, Project and FCS Construction Management

This task focuses on the overall management of the program and construction oversight of the designbuilders. Deliverables in this area focus on the overall program and project management and construction oversight provided by the Project Construction Managers (PCM).

Staffing

Together, the Authority and RDP form an integrated organization. The Authority provides overarching program oversight and policy direction, and the RDP manages, monitors and oversees the program's operations and progress. The organization is broken down into four primary areas which include:

Program Management: Program management is overseen by the Director of Program Operations and a Program Controls Manager. They are responsible to provide recommendations and support related to program delivery approach and master program planning such as oversight of program controls including program scope, cost, and schedule.

Program Delivery: This area is overseen by Program Director who oversees both Program and Project Delivery to ensure coordination between Program technical expertise as well as individual construction project support. This area is supported by Regional Directors responsible for project and community coordination and delivery in the Northern, Southern and Central Valley regions. On-site functional teams are assigned responsibility for program delivery. Each team oversees and monitors the performance of associated work packages under their assigned disciplines (environmental, engineering, ROW, and etc.) Part of program delivery includes providing the specialized technical resources which may include, but not be limited to, tunneling, seismic design, high-speed rail systems (track electrification, train control, signaling, and communications), trainsets, track work, heavy maintenance facilities, high-speed rail system testing and commissioning, and facility operations and maintenance.

Project Delivery: Project Delivery includes the overall planning, coordination, and control of construction. The Program Director and Chief Engineer have overall responsibility for the execution of the construction work program. The construction project manager is responsible for managing both the construction team and the functional resources needed for the construction project, including the DB contractor. Assigning the project manager the responsibility of managing both the personnel and resources required for a specific project results in creating a single point of contact and accountability for each project as well as program wide consistency across each of the projects comprising the high-speed rail program. For more information on the construction organization see Task 8, Final Design and Construction Contract Work.

Project & Construction Management: The Chief Engineer and Construction Branch Manager oversee the overall organization with support from Authority construction contract managers and the PCM's. The Authority has also retained the services of specialty project and construction management (PCM) firms to provide on-site management expertise and staff to oversee the DB contracts. The PCM oversees and directs field inspectors, and work closely with the design-builder to assist in coordination with agencies and utility companies. PCM's also assist the design-builder in making field decisions to address conditions and/or activities that could impact budget or schedule. The PCM's for each construction project are:

- CP 1 PGH Wong Engineering
- CP 2-3 ARCADIS U.S. Inc.
- CP 4 HNTB Corporation

The Authority primarily manages oversight activities from its headquarters program offices in Sacramento; project managers, project staff, the PCM and the DB are located in local construction project offices. This co-location enhances communication between all parties, expedites the DB approach and provides onsite oversight and coordination.

Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the PCM schedule for each construction project. All other activities and deliverables related to this task will be performed over the ARRA and FY10 period of performance as required.

Budget

The Task 5 budget is \$419,227,067 and is summarized in Table 10 below. Expenditures related to Program Management and Legal Services are covered only in the ARRA and State funds budget. The budget below reflects the executed amounts for PCM contracts for CP 1 through CP 4.

Sub Task ¹	ARRA	State	FY10	State	Total	Additional State
5.1 Program Management	\$126,599,146	\$132,202,936	0	0	\$258,802,082	\$139,400,000
5.2 Project Construction Management (PCM)	\$48,748,955	\$50,906,782	\$44,500,052	\$11,952,478	\$156,108,267	
5.3 Legal Services	\$2,111,624	\$2,205,094	0	0	\$4,316,718	
Total	\$177,459,725	\$185,314,812	\$44,500,052	\$11,952,478	\$419,227,067	

Table 10 - Task 5, Program, Project and FCS Construction Management Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Manage ment and Program/Project Controls: Program management policies, procedures and tools are utilized to manage and control the delivery of the scope, budget and schedule commitments of the overall program. The program controls plan provides a functional overview of the control processes for managing the scope, budget and schedule at the program-level, whereas the regional project management plans address the specific control processes for managing scope, budget and schedule for each project. More detailed information is included in the Chapter 5, Management and Program/Project Controls of the Program Management Plan.

Project Construction Management Manual (PCMM): Establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work, dealing with

various situations that may arise. The PCMM can be found on the Authority's web site at: <u>https://www.hsr.ca.gov/docs/programs/construction/PCM_Manual_Rev_0.pdf</u>. Various procedures and policies provide a framework for:

- Program structure and organization
- Contract administration
- Communication/documentation/reports
- DB contract submittals
- Verification, validation and self-certification
- Interface management and coordination
- Quality management
- Safety and security
- Schedule control
- Changes and claims
- Right-of-way
- Public involvement
- Completion and closeout

Design-Build Program Plan: The design-build program plan (DBPP) outlines the Authority's approach to project delivery and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery. FRA approved the final plan in April 2016 and it is located on the FRA sharepoint site at: <u>https://chsra.pbid.com/pmt/gm/Deliverables/DBPP-PMP%20FCS%20CHSRA%20Final%20042016.pdf</u>

Procurement

No significant procurements to complete the deliverables associated with this Task are anticipated.

Deliverables

The following deliverables are scheduled for FY16/17.

De liverable ¹	Schedule
Annual Work Plan	4 th Qtr 2016
Program Management Plan	4 th Qtr 2016
Central Valley Project Financial Plan	4 th Qtr 2016
Phase 1 Program Financial Plan	4 th Qtr 2016
RFP's/NTP's for Design/Construction Services	
CP 5 RFP	4 th Qtr 2016
Network Integration Plan	3 rd Qtr 2016
Updated Service Development Plan	2 nd Qtr 2017
Infrastructure Maintenance Plan (update)	2 nd Qtr 2017
Rolling Stock Maintenance plan (update)	2 nd Qtr 2017

1 September 2016

Task 6 Real Property Acquisition and Environmental Mitigation

Task 6 focuses on ROW delivery for construction and property associated with environmental mitigation. The ROW team maps, appraises, and acquires parcels and provides relocation assistance (associated with ROW) needed for CP1, CP2-3 and CP4. Emphasis in FY 16/17 is to continue to acquire property for construction and begin to focus on future property management activities. ROW schedules and costs are reported on a quarterly basis.

Staffing

ROW is managed by the Director of Real Property and reports to the Program Director. The Director is supported by a manager of ROW information, and a Deputy Director of Real Property that oversees Authority agents who oversee the work of ROW consultants. The Authority's ROW division managers are located in the Sacramento headquarters office, in the Central Valley regional office in Fresno, the Southern California regional office in Los Angeles and the Northern California regional office in San Jose. The organization is shown on Figure 6. ROW consultants are responsible for performing ROW appraisal and acquisition services, including:

- Issuing initial letters to the property owners (Notice of Determination to Appraise [NODA]
- Conducting appraisals
- Issuing the first written offers
- Conducting negotiations
- Preparing the administrative settlement memo
- Issuing revised offers
- Establishing and providing relocation benefits and educating affected property owners about the benefits
- Preparing the acquisition quality checklist
- Preparing the memorandum of appraisal updates, the declaration of value and close escrow and the resolutions of necessity (RONs) needed for the condemnation process

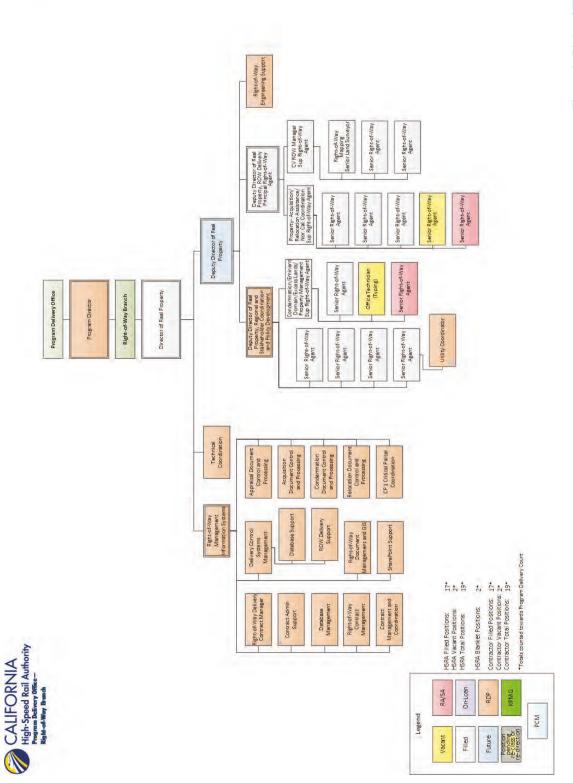
Agency Coordination

The ROW process involves extensive coordination with other agencies which include:

- California State Public Works Board (PWB): This independent agency of the state was created to oversee fiscal matters associated with construction of projects for state agencies. Under the California Property Acquisition Law, the PWB is authorized to approve real estate transactions. Before an offer of just compensation is approved, the PWB reviews the project and its budget and makes an initial determination that the state has the legal authority to purchase the property in question.
- California Department of General Services (DGS): The Real Property Services Section (RPSS) reviews and approves each parcel appraisal for just compensation prior to a written offer for acquisition. Upon execution of the parcel's ROW contract, the Real Property Services Section reviews and recommends approval.
- California Department of Finance (DOF): The Capital Program Branch reviews and executes ROW agreements for compliance with budgetary and project authority for the parcel acquisition.



Figure 6 - Right-of-Way Organization



• California Department of Transportation: The Legal Division provides legal review and representation for ROW contracts, and performs legal services for cases of eminent domain through the Effective Order of Possession.

Schedule

The Authority shares major milestones and the current status of ROW procurement with the Board on a monthly basis and provides quarterly updates to FRA. This information about the work in progress is shared in a monthly operations report. The most updated version can be found on the Board's Finance and Audit Committee website at http://www.hsr.ca.gov/Board/monthly fa committee meeting.html

Information is also shared quarterly with FRA. The latest update can be found at https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx by sorting on the deliverables pull down menu for ROW Acq Plan.

In July 2016, the FRA approved the Authority's request for the use of a \$60,000,000 working capital advance (WCA). Access to the WCA allowed the Authority to expedite several critical-path property acquisitions in CP 1 and CP 2-3. The Authority fully expended the initial \$60,000,000 WCA by the September 28, 2016 due date. In October 2015, the Authority requested a second WCA of \$65,000,000 to expedite the ROW acquisition process and correlative construction activities.

Budget

The Task 6 budget is \$852,274,479 and is summarized in Table 12. Currently ARRA federal funding for preliminary ROW and environmental mitigation is through the ARRA grant. These activities will continue beyond the ARRA September 2017 performance period, with future funding covered by state resources.

The Authority executed a WCA in August 2016 and fully expended the initial \$60 million requested within August-September. The second WCA request of \$65,000,000 (approval pending at the time of this report) will enable an expedited ROW acquisition process and completion.

Sub Task ¹	ARRA	State	FY10	State	Total	Additional
						State
6.1 Real Property	\$13,311,325	\$11,016,061	0	0	\$24,327,386	
– Preliminary						
ROW						
6.2 Real Property	\$93,438,986	\$77,327,358	\$3,092,482	\$3,850,622	\$177,709,448	\$ 9,987,112
- ROW Services						
and Relocation						
6.3 Real Property	\$29,489,968	\$24,405,032	0	0	\$53,895,000	\$46,313,298
– Environmental						
Mitigation						
6.4 Real Property	\$323,079,364	\$267,370,979	\$5,892,302	0	\$596,342,645	\$34,804,590
-ROW						
Acquisition						
Total	\$459,319,643	\$380,119,430	\$8,984,784	\$3,850,622	\$852,274,479	\$91,105,000
1 Quarterly Budget Update Septem	, ,	\$380,119,430	\$8,984,784	\$3,850,622	\$852,274,479	\$91,105,000

Table 12 - Task 6, Real Property Acquisition and Environmental Mitigation Budget

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

In support of the high-speed rail program and in compliance with federal and state mandates required by the California Property Acquisition Law and the Federal Uniform Relocation Assistance and Real Estate Property Acquisition for Federal and Federally Funded Policies Act of 1970, the Authority has developed policies and procedures for the appraisal, acquisition and management of real property.

ROW Manual: The Authority developed the program's right-of-way manual, which includes policies and procedures for acquiring and managing property rights through purchase, easement, lease or other legal instruments including, when necessary, condemnation. These policies and procedures are being utilized consistently throughout the program.

Right-Of-Way Acquisition Plan: The Authority prepares a right-of-way acquisition plan for each project (divided into construction packages) once a preferred alignment has been identified and preliminary design has been completed. The acquisition plan gives priority to parcels needed for long-lead construction activities and parcels that may have complicated relocation management matters. The acquisition plan is supported by a right-of-way cost estimate based on preliminary engineering plans. Land values, improvements and damages for each property are considered in the development of the right-of-way estimate, which includes costs for temporary and permanent easements, utility easements and fee acquisitions along with a contingency for condemnation increments and settlements. Relocation expenses are also included in the estimate for those acquisitions involving displacements and/or personal property moves. Assumptions for business displacements and relocation payments are based on the right-of-way relocation plan.

Property Management Plan: Maintenance and protection of property interests acquired in the name of the State of California are provided by the property acquisition agent until control of the property is transferred to the contractor. The property acquisition agent is required to maintain an inventory of real property and improvements acquired for the project. Additional responsibilities assigned to the property acquisition agent include protecting the property from vandalism, encroachment or other misuse prior to turnover to the contractor.

Right-of-Way Data Exchange System (ROWDES): In addition to the right-of-way manual, the Authority uses this internal reporting system to track right-of-way acquisition and management. This database is used to manage every parcel acquired by the Authority. ROWDES contains modules for each step of the acquisition/management process, including appraisals, acquisition, condemnation, costs, etc. The data generated by ROWDES enables the generation of weekly reports on ROW status and is used to produce the Board monthly and FRA Quarterly reports.

Procurement

In FY16/17 the Authority expects to award two additional contracts. The additional contracts include:

- ROW Services: Work related to environmental assessments, appraisals, acquisition and relocation services. (Anticipate awarding multiple contracts.)
- ROW Engineering: Work related to boundary surveys, appraisal maps, legal descriptions, title research for the San Jose to Madera section. (Expect to award up to four contracts.)
- ROW Property Management Services: Management of parcels once acquired, transfer to the DB for construction and final overall disposition of excess properties. (Will award up to four contracts.)

In addition, minor contract amendments may also be necessary to existing contracts to ensure the timely delivery of ROW for construction.

Deliverables

The Authority provides FRA an update on ROW acquisition as part of its quarterly reporting. In addition, monthly reports will continue related to WCA ROW activities and expenditures. The latest acquisition update can be found by sorting on the deliverables pull down menu for ROW Acq Plan at the following link: <u>https://chsra.pbid.com/pmt/gm/Deliverables/Forms/AllItems.aspx</u>

Task 8 Final Design and Construction Contract Work

The First Construction Segment (FCS) is approximately 118 miles traversing the Central Valley from northern Madera County to Shafter. The alignment is broken into four civil construction packages and one track work construction package (Figure 7). The five construction packages include:

- SR 99 Civil Infrastructure Caltrans is designing and constructing roadway improvements to support the high speed train infrastructure from Ashlan Avenue to Clinton Avenue in Fresno
- CP 1 Civil Infrastructure Avenue 19 (Madera) to East American Avenue (Fresno), 31 miles
- **CP 2-3 Civil Infrastructure** East American Ave (Fresno) to one mile north of Tulare/Kern County line, 65 miles
- **CP 4 Civil Infrastructure** One mile north of Tulare/Kern County line to Poplar Avenue north of Bakersfield, 22 miles
- **CP 5 Track** (also known as Rail Infrastructure, RI1) including systems, communications, signaling, and overhead power for CP1, CP2-3 and CP4

The following contractors have been procured to date:

- CP 1 was awarded to Tutor Perini/Zachry/Parsons (TPZP) Joint Venture in 2013
- CP 2-3 was awarded to the Dragados/Flatiron Joint Venture in 2015
- CP 4 was awarded to California Rail Builders: Farrovial Agroman US Corp in 2016

Staffing

Chapter 3 of the DBPP outlines the roles and responsibilities of the Authority and the various contractors and consultant resources used to manage the DB construction. The plan was approved by FRA in April 2016 and can be found at https://chsra.pbid.com/pmt/gm/Deliverables/DBPP- PMP%20FCS%20CHSRA%20Final%20042016.pdf

The project director leads each construction section and has the overall responsibility for all construction elements including design, construction, ROW, third parties, project delivery, etc. The project director is supported by a project manager whose primary responsibility is to coordinate all the external and third party elements. A design and construction manager is the contract manager for each DB and PCM contract (Figure 8). They ensure effective coordination between the project team and the DB contractor. The project director is the Authority's lead representative for each construction project and the design and construction manager is the lead representative for DB and PCM contract issues.

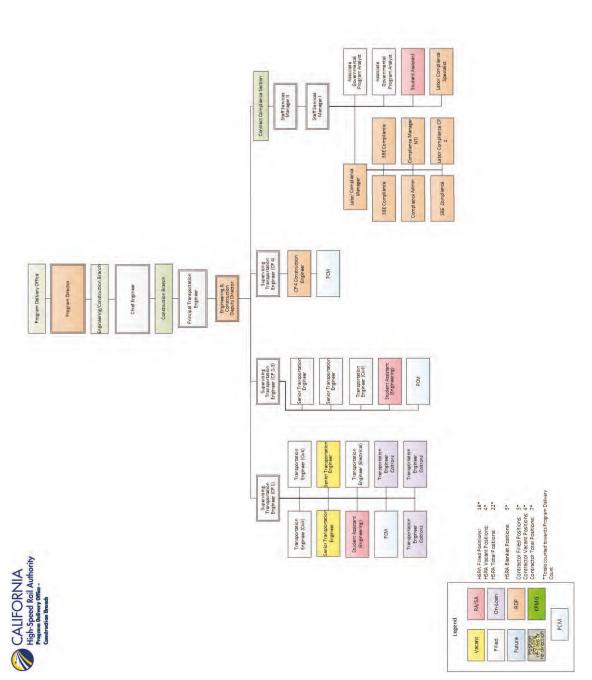
The Authority has hired Project and Construction Management (PCM) firms (discussed in Task 5, Program, Project and FCS Construction Management) to oversee DB contract compliance. These firms provide on-site project and construction management services covering areas such as project pre-planning and programming; procurement, design and construction support; commissioning; testing; claims; and post construction services.

- Wong+Harris provides on-site oversight for CP 1
- Arcadis was procured for CP 2-3
- HNTB was procured for CP 4



Figure 7 - First Construction Section

Figure 8 - Program Delivery Organization



Schedule

Appendix D – Summary Schedule (September 2016) provides an overview of the construction schedules for each construction project. In addition, FRA is provided the baseline schedules for each construction project as they are approved by the Authority. Baseline schedules have been provided for CP1 and CP 2-3. The CP 4 baseline schedule will be available 4th Quarter 2016.

Budget

The Task 8 budget is summarized in Table 13. It reflects the grant agreement budget of \$3,772,057,495 for civil and track construction of the FCS. It also identifies the additional resources required of \$660,294,844 to complete the project as outlined in Attachment 3, Statement of Work of the grant agreements. Currently, funding for SR 99 is through the ARRA grant. The FCS Track Work Construction is currently under development. A budget will be identified prior to any proposal being released and the budget below will reflect only the federally funded portion of track work for the FCS.

Sub Task ¹	ARRA	State	FY10	State	Total
8.1 SR 99	\$101,889,294	\$124,010,706	0	0	\$ 225,900,000
8.2 Civil	\$479,871,360	\$367,440,832	\$541,762,788	\$58,956,469	\$1,448,031,449
Construction					
Package 1 (CP 1)					
8.3 Civil	\$706,738,379	\$857,745,697	\$93,048,378	\$138,235,436	\$1,795,767,890
Construction					
Package 2 (CP 2-3)					
8.4 Civil	\$62,045,209	\$75,515,983	\$123,762,365	\$41,034,599	\$302,358,156
Construction					
Package 4 (CP 4)					
8.5 FCS Track	0	0	0	0	0
Work Construction					
(CP 5)					
Total	\$1,350,544,242	\$1,424,713,218	\$758,573,531	\$238,226,504	\$3,772,057,495
1 Quarterly Budget Update Septen	nber 30, 2016				

Table 13 - Task 8, Final Design and FCS Construction Budget

1 Quarterly Budget Update September 30, 2016

Table 14 - Task 8, Additional Resources Budget

Sub Task ¹	Additional Resources
8.1 SR 99	\$ 35,000,000
8.2 Civil Construction Package 1 (CP 1)	\$ 235,246,547
8.3 Civil Construction Package 2 (CP 2-3)	\$ 27,000,000
8.4 Civil Construction Package 4 (CP 4)	\$ 251,198,844
8.5 FCS Track Work Construction (CP 5)	\$ 446,096,000
Tota	\$ 994,541,391

1 Quarterly Budget Update September 30, 2016

Regulatory Documentation and Guidelines

Design-Build Program Plan (DBPP): This plan outlines the Authority's approach to project delivery for the initial operating segment and identifies the project implementation procedures and methods established by the Authority to achieve successful design-build project delivery.

Project and Construction Management Manual (PCMM): This manual describes how the Authority will execute the design-build projects through an integrated staffing approach that uses Authority staff, PCM, RDP and other consultants. The PCMM establishes uniform guidelines and procedures in contract management and administration and design and construction oversight for each design-build contract. The PCMM addresses responsibilities subsequent to the award of contracts. It also presents, interprets and clarifies established general policies and practices applicable to the work in dealing with various situations that may arise.

Procurement

Several procurements are expected in FY16/17. These include:

- Procurement of rail infrastructure CP 5, also known as Rail Infrastructure 1 (RI 1)
- Rolling Stock

Other procurements under discussion include small traditional design-bid-build contracts for specific upfront work including small civil construction packages or contracts for such activities as utility relocations, hazardous materials removal/remediation, site demolition, and clearing and grubbing.

Deliverables

The deliverables identified in the grant agreement are noted below. The next fiscal year will see a dramatic increase in construction progress now that the three primary civil DB contracts have been executed. The following are some of the general activities that will occur:

SR 99

- Complete the Early Works package and begin Main package construction
- Complete remaining UPRR easements and eminent domain parcel acquisitions

CP 1

- Tuolumne Street overcrossing will be completed and Stanislaus bridge demolition will begin
- Work will continue on several structures including
 - Fresno River Viaduct
 - Cottonwood Creek Bridge
 - San Joaquin River Bridge
 - Fresno Trench and intrusion barrier construction
 - SR 180 undercrossing
 - Cedar Viaduct
 - Work will begin in the following locations
 - Avenue 8 Bridge overpass
 - Avenue 12 overpass and road widening
 - $\circ~$ American Avenue, Avenue 15 and Avenue 15 $^{1\!/_{\!2}}$ overpasses

CP 2-3

- North nine miles and south six miles complete clearing and grubbing, begin utility relocation, relocation of irrigation crossings and construction of floodplain crossings
- Begin BNSF relocations at Bowles and Monmouth
- Begin grade separations at Adams, Floral, Elkhorn, Kent, Kansas and Nevada avenues and at Avenue 56

CP 4

- Complete environmental re-examinations
- Begin clearing and grubbing activities where ROW is available
- Complete utility agreements and final designs
- Prepare type selection reports and begin final design

The following deliverables are scheduled for FY16/17. The date noted below represents the last date a deliverable of that type is expected and that phase would be complete.

Table 15 - FY 16/17 Final Design and Construction Contract Deliverables

De liverable ¹	Schedule
Construction Package 1	
Type Selection Reports	4 th Qtr 2016
60 % Design	4 th Qtr 2016
90% Design	1 st Qtr 2017
Ready for Construction Design	2 nd Qtr 2017
Construction Package 2-3	
Type Selection Reports	2 nd Qtr 2017
Construction Package 4	
Detailed Baseline Schedule	4 th Qtr 2016

1 September 2016

Appendix A – Grant Tasks and Sub-Tasks (Grant Work Breakdown Structure)

Task 1: Environmental Review

- Task 1.1. Regional Consultant Project Management (RC): Development of RC Project Management Plan.
- Task 1.2. Regional Consultant Public/Agency Participation (RC): Developing and implementing a public involvement program focused on identifying regional and local issues and concerns of the potential impacts of HST system and for proposing necessary mitigation measures.
- Task 1.3. Alternatives Analysis (RC): Project Definition including a segment-by-segment alignment description of the HST design options to be investigated in the Project EIR/EIS process(s).
- Task 1.4. EIR/EIS Analysis (RC): Technical studies necessary to evaluate and assess impacts of the HST Alternatives and No Project Alternative as part of the EIR/EIS process(s), addressing both alignments and proposed station locations.
- Task 1.5. Draft and Final EIR/EIS (RC): Preparation of the Draft EIR/EIS document(s) and Final EIR/EIS document(s), including necessary administrative review versions. The site-specific EIR/EIS document(s) must satisfy all the requirements of CEQA and NEPA.
- Task 1.6. Certification of EIR/EIS and ROD (RC): Preparation of other related environmental documents that are required as part of the certification of the Project EIR/EIS document(s), including Findings and a Statement of Overriding Considerations, the Record of Decision/Notice of Determination, and the Mitigation Monitoring and Reporting Plan.
- Task 1.7. Program Management (RDP): Project Management, Controls and communication related to environmental review and permitting for Rail Delivery Partners Team and Regional Consultants toward the goal of the Notice of Determination and Record of Decision.
- Task 1.8 Non-federal Resource and Other Agencies for Environmental Review (Multiple agencies): State agencies support of environmental permitting processes.

Task 2: Preliminary Engineering (PE)

- Task 2.1. Regional Consultant PE (RC): Development of HST design concepts at a sufficient level of detail to develop accurate capital cost estimates, right-of-way requirements, construction staging, traffic and environmental impacts to satisfy CEQA and NEPA requirements.
- Task 2.2. Program Management (RDP): Project Management, controls and communication related to preliminary engineering for Rail Delivery Partner Team and Regional Consultants.
- Task 2.3. RDP Engineering (RDP): Engineering support to establish master standards for the project and establish procedures and systems to provide compliance and coordination between all sections.

Task 3: Other Related Work Needed Prior to Start of Construction

- Task 3.1. Regional Consultant Station Area Planning (RC): RC-supported work with the local jurisdictions and public in developing HST station area plans.
- Task 3.2. Regional Consultant ROW Work (RC): Conduct assessments to identify segments at risk of imminent development or other changes in use that could significantly increase implementation costs and difficulty.

- Task 3.3. RDP ROW Work (RDP): Development of a Right-of-Way assessment and acquisition program.
- Task 3.4. Ridership Forecasting (RDP): Ridership work, ridership & revenue forecasts and station boarding's to support HST System phases of development.
- Task 3.5. Construction Planning / Procurement Support (RDP): Services to procure other services, equipment and construction for the total project implementation. Including possible staging options to best serve the project.
- Task 3.6. Station Area Planning: Development of a station area plan or equivalent incorporating a transit-oriented development (TOD) development code and/or specific plan (or equivalent) to the local comprehensive plan.
- Task 3.7. LAUS/So California Investments: Preservation and acquisition of property, rights-of way, and the related environmental clearances and engineering activities that will enable HST to operate at Los Angeles Union Station (LAUS).
- Task 3.8. Legal Services Pre-construction: Legal assistance in negotiations pertaining to federal and state laws with freight and passenger rail companies that may be impacted by the HSR project.

Task 4: Project Administration and Statewide Cost Allocation Plan (SWCAP, Complete)

Task 5: Program, Project and FCS Construction Management

- Task 5.1. Program Management (RDP): Program Management activities may include program and project management and controls, engineering due diligence reviews, commercial and procurement support, program wide planning, implementation planning, system electrification and testing and commissioning, design/build support (as applicable), network integration and system assurance.
- Task 5.2 Project Construction Management (PCM): FCS project construction management activities may include contract administration, submittal review, quality assurance oversight inspection for work in place and materials, management of claims and change orders, and review and approval of progress payment requests and final acceptance of the work.
- Task 5.3 Legal Services Construction: Legal assistance for issues that impact construction.

Task 6: Real Property Acquisition and Environmental Mitigation

- Task 6.1. Real Property Preliminary ROW: Work performed in preparation for procurement up to, but not including, the first written offer to purchase
- Task 6.2. Real Property ROW Services & Relocation: On-the-ground real property activities which may include parcel identification, survey and mapping, appraisals, offers of just compensation, negotiations and relocation benefits.
- Task 6.3 Real Property Environmental Mitigation: Grantee-implemented environmental mitigation.
- Task 6.4 Real Property ROW Acquisition: Capital costs of obtaining any real property interest necessary for the FCS. And, with FRA prior written approval, outside of the FCS.

Task 7: Early Work Program (Deleted)

Task 8: Final Design and Construction Contract Work for the FCS

- Task 8.1: SR-99: Final design and construction for highway relocations (State Route-99) as well as interface reviews and civil infrastructure. This work will be completed by Caltrans working as a contractor to CHSRA.
- Task 8.2: Civil Infrastructure Construction Package 1 (CP1): Civil and structural infrastructure from approximately Avenue 19 in Madera County to approximately East American Avenue in Fresno County.
- Task 8.3: Civil Infrastructure Construction Package 2-3 (CP2-3): Civil and structural infrastructure between approximately East American Avenue in Fresno County to approximately one mile north of the Tulare-Kern County Line.
- Task 8.4: Civil Infrastructure Construction Package 4 (CP4): Final design and construction of civil and structural infrastructure from one mile north of the Tulare-Kern County Line southward to North of Bakersfield, currently near Poplar Ave.
- Task 8.5: FCS Track Work Construction (CP5): Final design and construction of track work for the civil and structural infrastructure construction in Construction Packages 1 through 4.

Task 9: Interim Use Project Reserve

- Task 9.1 Project Reserves: Funds over and above the Unallocated Contingency that have been budgeted but not yet allocated to specific tasks.
- Task 9.2 Interim Use Reserve: Infrastructure necessary to initiate independent utility on the FCS funded under this Agreement which may include track, signal and communications elements, stations, and a limited maintenance facility.

Task 10: Unallocated Contingency – Contingency that is not allocated to a specific task or sub-task.

J0195

J0196

Appendix B – Detailed Grant Budget (September 2016)



Budget Summary

				_				Local (Other)		Delta	
			Federal Expended	Federal Expended Federal Outlays to		State Expended to	Local (Other)	Expended to	Total Budgeted	State Expended to Local (Other) Expended to Total Budgeted (Total Budgeted vs.	Additional State
ARRA Grant # HSR-0009	Total Budgeted	Federal Budget	to Date `	Date ²	State Budget	Date ³	Budget	Date	(Prior Quarter)	Prior Quarter)	Budget
Task 1: Environmental Review	\$ 499,534,483	173 \$ 173 327,113	\$ 144,029,194	\$ 144,029,194 \$	\$ 326,207,370 \$	\$ 72,554,237	\$	\$	\$ 499,534,483	•	چ
Task 2: Preliminary Engineering	337,361,663	254,362,236	128,504,951	128,504,951	82,999,427	64,952,362			337,361,663		
Task3: Other Related Work Needed											
Prior to Start of Construction	189,425,982	8009008	31,453,400	31,453,400	54,316,974	15,449,931	52,100,000		189,425,982		
Stateside Cost Allocation Plan											
(SWCAP)	677,872	677,872	677,872	677,872		•			677,872		
Task 5: Program, Project and FCS											
Construction Management	362,774,537	177,459,725	172,499,637	172,409,637	185,314,812	21,023,596			362,774,537		139,400,000
Task 6: Real Property Acquisition and											
Environmental Mitigation	839,439,073	459,319,643	496,000,258	496 000 258	380,119,430	68,700,362			839,439,073		91,105,000
Task 7: Early Work Program											
Task8: Final Design and											
Construction Contract Work for the											
FCS	2,775,257,460	1,350,544,242	588,984,947	588,984,947	1,424,713,218	50,408,700			2,775,257,460		894,541,391
Task 9: Project Reserves	53,856,392	556,392	53,856,392	53,856,392					53,856,392		
Task 10: Uralboated Contingenoy											
Total	\$ 5058,327,462	\$ 2,552,556,231	\$ 5,058,327,462 \$ 2,552,556,231 \$ 1,616,006,661 \$	\$ 1,616,006,651	1,616,006,651 \$ 2,463,671,231 \$		293,089,188 \$ 52,100,000 \$		\$ 5,058,327,462 \$	•	\$ 1,225,046,391

l da	1 \$ 0 J08,327,462	1% Z 200Z 200Z 31	1 \$ 1,616,006,001	1 \$ 0,008,327,402 \$ 2,502,506,23 \$ 1,616,006,00 \$ 1,616,007 \$ 2,403,677,231 \$ 2,502,502,247 \$ 3,707,007 \$	\$ 2,403,5/1,231	\$ 283,089,188	\$ 52,100,000		 1 \$ 0 J08 227 462 \$ 	"	\$ 1,220,046,381
			Federal Expended	Federal Expended Federal Outlays to		State Emended to	Local (Other)	Local (Other) Emended to	Total Budgeted	Local (Other) Local (Other) Delta State Emercled to Local (Other) Emercled to Local Budrated vs	Additional State
FY 10 Grant # HSR-0118	Total Budgeted	ted Federal Budget	to Date `	Date 2	State Budget	Date	Budget	Date	(Prior Quarter)	Prior Quarter)	Budget
Task 1: Environmental Review	•	\$	•	•	• \$	• \$	\$	\$	•	\$	چ
Task2: Preliminary Engineering											
Task 3: Other Related Work Needed											
Prior to Start of Construction	•										
Task 4: Project Administration &											
Stateside Cost Alocation Plan								_			
(SWCAP)								•			
Task6: Program, Project and FCS											
Construction Management	56,462,530	44,500,052			11,262,478				56,462,530		
Task6: Real Property Acquisition and											
Environmental Mitigation	12,835,406	8,984,784			3,850,622				12,835,406		
Task 7: Early Work Program											
Task8: Final Design and											
Construction Contract Work for the											
FCS	996,800 D35	768,573,531			238,226,504				996,200 D35		
Task9: Project Reserves	154,290,361	108 023 253			46,267,108				154,290,361		
Task 10: Urallocated Contingenov	68,046,668	8,538,380			59,508,288				68 046 668		
Total	\$ 1288.425.000	\$ 1288.425.000 \$ 928.520.000 \$			\$ 329,205,000 \$	• \$	9	9	\$ 1288.425.000 \$	9	بو

¹ Federal Expendent to Date represents payments the FRAhas made to The Authority as reported on the SF 425 and identified within draw 16-033.
² Federal Outlays to Date represents payments The Authority has made to their vendors.
³ State Expendent to Date represents draw 16-033.

Draft Quarterly Budget for the period end September 30, 2016 v3.6

Page **4** of **38**



Budget Summary

	tate										000		000				8			1,381
	Additional State	Budget	\$	\$		8			\$		\$ 139,400,000		\$ 91,105,000	\$			\$ 994,541,391	\$	\$	\$ 1,225,046,391
																_				
Delta	(Total Budgetedvs.	Prior Quarter)	•																	•
	Total Budgeted	(Prior Quarter)	\$ 499534483	337,361,663		189.425.982			677,872		419,227,067		852274,479				3,772,057,495	208,146,753	68,046,068	\$ 6,346,752,462
Local (Other)	Expended to	Date							•					•						•
	Local (Other)	Budget				52.100.000														233,089,188 \$ 52,100,000 \$
	State Expended to Local (Other) Expended to Total Budgeted	Date ³	\$ 72.554237	64952.362		15.449.931					21,023,596		68,700,362				50,408,700			
	<u></u>	State Budget	326.207.370	82,939,427		54316.974					197 267 290		383 970 052				1,662,939,722	46,267,108	59,508,288	1,616,006,651 \$ 2,813,476,231 \$
	ederal Outlaysto	Date ²	5 144.029.194	128.504.951		31.453.400			677,872		172,499,637		406,000,258				588,984,947	53,856,392		
	Federal Expended Federal Outlaysto	to Date `	\$ 144029,194 [128.504.951		31.463.400			677,872		172,499,637		496,000,258				588,984,947	53,856,392		\$ 1,616,006,061 \$
		Total Budgeted Federal Budget	\$ 173.327.113	254362236		8009008			677,872		221,959,777		468,304,427				2,109,117,773	161,879,646	8,538,380	3,481,176,231 \$
		Total Budgeted	\$ 499.534.483	337.361.663		189.425.982			677,872		419,227,067		862,274,479				3,772,067,495	208,146,753	68,046,668	\$ 6,346,752,462
		Contined Project Funding	Task 1: Environmental Review	Task2: Preliminary Engineering	Task 3: Other Related Work Needed	Prior to Start of Construction	Task 4: Project Administration &	Stateside Cost Alocation Plan	(SWCAP)	Task6: Program, Project and FCS	Construction Management	Task6: Real Property Acquisition and	Environmental Mitigation	Task 7: Early Work Program	Task8: Final Designand	Construction Contract Work for the	FCS	Task9: Project Reserves	Task 10: Unalboated Contingency	Total

¹ Federal Expended to Date represents payments the FRAhas made to The Authority as reported on the SF 425 and identified within draw 16-033. ² Federal Outlays to Date represents payments The Authority has made to their verdors. ³ State Expended to Date represents draw 16-003.

Annual Work Plan FY16/17 Update 48 | P a g e

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Draft Quarterly Budget for the period end September 30, 2016 v3.6

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Appendix C – Environmental Milestone and Permits Schedules (September 2016)

Nork Plan FY16/17 Update	50 P a g e
Annual W	

Environmental Milestone Schedule**																						
Section		Publish Notice of Intent	Inklate Scoping	Complete Project Purpose & Need (Checkpoint A) ³	Cump lete Alternatives Analysis	Identify Range of Alternatives (Checkpoint B)	Complete Preliminary Engineering for Project	Complete I Technical Reports	Board Selection of Preferred Alternatives ³	Publish Administrative Draft Environmental	Publish & Circulate Draft Environmental	Respond to Public Comments	Ident#y Preliminary Preferred Alternative (Checkpoint C) ³	Publish Administrative Final Environmental	Publish Final Environmental Document / FRA	Obtain FRA ROD	Board Certifies Environmental	Obtain NOD	Obtain STB ROD	I Obtain USACE ROD	Physical % Complete Toward NOD/	Preliminary Engineering for Procurement
_							(PE4PD)			Document	Document			Document	KOD		Document			-	FRA ROD	(PE4P)
	Assigned Weight			59%	20%		33%		12%	13%	59%				10%	1%		19/6			100%	
Merced - Fresno (MFF)	Complete	Mar-09	Apr-09	Feb-11	Aug-10	11-unC	11-INC	Sep-10		Jul-11	Oct-11	Nov-11	Dec-11	Mar-12	Apr-12	Sep-12	May-12	May-12		Mar-14		Jun-12
		100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%	t	100%	0%6	940
Fresno - Bakersfield (F-B)	Complete	Mar-09	Apr-09	Feb-11	Dec-11	11-Inf.	Dec-13	May-12		Aug-11	Oct-12	Jan-13	Nov-13	Feb-14	Apr-14	Jun-14	May-14	May-14		Sep-16		Oct-14
		100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%	t	0%6	0%6	940
2 5 5 5 5 6 6 6 6 6 7 6 7 7 7 7 7 7 7 7 7	Forecast	31-Int	Sep.16	May-16	May-13	Oct-16	Nov-16	Nov-16	Nov-16	Dec-16	Feb-17	Aug-17	Aug-17	Aug-17	Dec-17	Dec-17	Jan-18	Jan-18	Mar-18	May-18		71-lut
San Francisco - San Jose (F-J)	% Complete	100%	9846	100%	100%	15%	18%	17%	13%	12%	746	\$60	0%	0%0	960	940	0%	960	%	0%6	32%	\$60
	Forecast	Mar-09	Apr-09	Nov-11	Sep-14	Nov-16	Nov-16	Oct-16	Dec-16	Dec-16	Mar-17	Jul-17	Sep-17	Sep-17	Dec-17	Dec-17	Jan-18	Jan-18	Mar-18	Jun-18		Nov-17
San Jose - Merced (J-M)	% Complete	100%	100%	100%	100%	15%6	20%	22%6	13%6	15%	10%	940	0%	0%6	940	940	0%6	960	%0	0%6	33%	%0
	Forecast	Mar-09	Apr-09	Nov-11	Apr-13	Sep-14	Nov-14	Sep-16	Sep-16	Nov-16	Feb-17	7ul-17	Od:17	Sep-17	Non-17	Dec-17	Dec-17	Feb-18	Mar-18	Feb-18		Sep-17
Central Valley Wye (M-F)	% Complete	100%	100%	100%	100%	100%	100%	79%	60%	60%	940	960	0%	960	940	940	0%	9/60	960	966	73%	960
Centrol Valley Electrical Interconnect	Forecast	Mar-09	Apr-09	Comp lete	Complete	Complete	May-16	Sep-16	Aug-16	Nov-16	Nov-16	Feb-17	Jul-17	Odt-17	Oct-17	Od-17	Dec-17	Dec-17	Feb-18	Dec-17		N/A
(CVI) ⁴	% Complete	100%	100%	100%	100%	100%	100%	75%	959%	40%	940	960	946	960	960	940	0%6	0%0	9%0	0%6	43%	%0
	Forecast	Mar-09	Apr-09	Complete	Complete	Complete	TBD	TBD	TBD	TBD	TBD	Nov-16	Jan-17	Mar-17	May-17	May-17	May-17	May-17	Aug-17	Nov-17		TBD
Heavy Maintenance Facility (HMF)	% Complete	100%	100%	100%	100%	100%	0%6	9%	0%	0%	940	960	0%	960	940	940	0%	0%0	36	0%6	20%	%0
	Forecast	Mar-09	Apr-09	Feb-11	Dec-11	Jul-11	Oct-16	Dec-16	Mag-16	0d-16	Oct-16	Nov-16	May-16	Dec-16	Jan-17	Jan-17	Apr-17	Apr-17	Apr-17	7ul-17		Aug-18
Locally Generated Alternative (F-B)	% Complete	100%	100%	100%	100%	100%	80%	93%6	100%	92%	5%	\$60	100%	966	940	940	940	9%0	36	0%6	9462	960
	Forecast	Complete	Complete	May-14	Apr-16	Apr-17	Apr-17	May-17	Dec-16	Mar-17	May-17	0dt-17	Sep-17	Odt-17	Dec-17	Dec-17	Jan-18	Jan-18	Apr-18	Aug-18		Jan-20
Bakerstieki - Palmdale (B-P)	% Complete	100%	100%	100%	100%	100%	948S	83%	20%6	32%	5%	960	0%6	0%6	940	940	0%6	960	-	946	34%	940
Il man and a second	Forecast	Jul-14	Aug-14	Dec-14	Apr-16	Dec-16	Apr-17	Mar-17	Jan-17	May-17	May-17	Dec-17	Aug-17	Nov-17	Dec-17	Dec-17	Jan-18	Jan-18	Dec-17	Feb-18		Jun-18
(G-J) NIEGING - ARDUR J	% Complete	100%	100%	100%	100%	46%	62%	73%	0%6	25%	15%	0%6	0%	0%	0%6	0%	0%	0%0	0%	0%6	49%	0%6
	Forecast	Jul-14	Aug-14	Jul-12	Complete	Feb-17	Sep-16	Mar-17	Feb-17	Feb-17	Jul-17	Aug-17	Jul-17	Dec-17	Dec-17	Dec-17	3an-18	Jan-18	Feb-18	Jan-18		Aug-18
(VT-4) salaguy son - Mugund	% Complete	100%	100%	100%	100%	0%6	0%6	15%6	0%6	10%	59/6	960	0%	0%6	0%6	0%6	0%6	0%0	940	0%6	25%	0%
5	Forecast	Mar-07	Apr-07	Jul-12	Complete	Feb-17	Sep-16	Mar-17	Feb-17	Feb-17	Jul-17	Aug-17	7ul-17	Dec-17	Dec-17	Dec-17	.an-18	Jan-18	Mar-18	Jan-18		Aug-17
Los Angeles - Ananem (LA-A)	% Complete	100%	100%	100%	100%	0%6	50%	15%	0%6	10%	5%6	0%6	0%6	0%6	0%6	0%	0%6	9/60	0%0	0%6	42%	9/60
D. S. F. T. P. garding. S.	st im from n relim	in ary environment	no and edimate	s for alterments cur-	rently under stud	lv or in development. T it	nits of the work		Legend:	Mrun-YY	Actual		Mmm-YY	Forecast								
represent discrete possible alternatives and are subject to change due to environmental review, funding and final design.	d are subject to ch	ange due to en-	vironmental rev.	tew, funding and fin	al design.				Notes:													
					I.				- 	The schedule assume keviewers have five previse and resubmi	astwo cycles of conc days for reriew befor t. Cycle Two is fire.	urrent Authority, z re an R.O/reviewer days, starting with	Restrict the first structure option of concurrent Andhrong Anthreney General, and FEXA-review of behavious Location Structure with the CC's ratifial structure of the CC's ratifial structure of the CC's ratifial structure that first effect on the structure structure of the CC's ratifial structure structure of the SC's ratification of the SC's ra	review of technic pents, then five day swer workshop. Re	al documents. Cycl- rs to complete and : wiewers complete d	a One is ten days adomit comment. hiscussions and s	s, starting with the s to the Authority ubmit back check	e RC's initial sub . The RC then I t revisions to the	omittal. has five days e Authority			
									n	within five days of It	te workshop. The RC	c then has five day	within five days of the workshop. The RC then has five days to revise, produce, and submit a final version to the Authority.	bmit a final versio	n to the Authority.							
									о е	Fext identified in rec for HSR sections the Project Purpose & N. Invironmental Quality	Fact identified in red indicates a change from the previous month. For ERBs externor that need in Theirwish Sectors 404 permix, active Project Propose & Need, Zange of Alteratures, and Identification Environmetal Quality (CEQ) Dashboard reporting requirements.	Yom the previous 1 Section 404 perm atives, and Identifi reporting requirer.	The field of the deducted a charge from the periors that will for EES reduces that a charge from the periors that will be a compleme with NEDA Societies of degrades (the grade and USACE constructed for Foreign Franciski Charge Schemistrics, and Indention of Politizansy LEDEA. Reference to NEDA Societies of dedrige Charge Schemistrics, and Indentional Charge Policy Provide Neuron Schemistrics, and Indentional Charges. Reference to NEDA Societies of dedrige Charges Societies of the Indentional Charges and the Indentional Charges a	ripliance with NEJ PA. Reference to	PA/Section 404/408 NEPA/Section 404	1 Integration MO 408 Checkpoint	U for EPA and U smay also be nee	SACE concurre sted for Council	nce for Lof			
									4 H 0	od&E will perform - onstruction. The sol	design and constructi hedule reflects master	ion improvements r plan for testing a	1948: will perform obagin and construction improvements required for exciting adoktions, finantision lines and other equipment. For new utily improvement, the authority will perform final design and construction. The schedule reflects matter plin for testing and scarmental ison metalion needed score advections on the plin of restring and score tables in the subscript of construction of the schedule of the sched	ttions, transmission ISR train Dates a	t lines and other equipied to change per	apment Forne sding Authority	w utility improver decision on the ty,	ments, the autho 'pe of environme	rtiy will perfon ental document	m final design ation needed	pue	

tion, the ecognize t

The schedule is being offend to incorporte continuing discontions on the selection of a poleneal alternative that would be the presentation for the control thereof to example the CVT of the control of the control theorem of theorem of theorem of theore

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Section	Submit Biological Assessment	Obtain Biological Opinion	Submit Section 106 Report	Obtain Executed Section 106 MOA	Submit Obtain Section 401 Section 401 Permit Water Qity Application Certification	Obtain Section 401 Water Qlty Certification	Submit Preliminary 408 Determination ⁷	Submit Receive Preliminary 408 Preliminary 408 Determination ⁷ Determination ⁸	Submit Section 404 Permit Application	Obtain Section 404 Permit	Draft Compensatory Mitigation Plan	Draft Final Compensatory Compensatory Mitigation Plan Plan	Submit Obtain CDFW 1602 CDFW 1602 Application Permit	Obtain CDFW 1602 Permit	Submit CDFW 2081 Permit Application	Obtain CDFW 2081 Permit	Sub P.
	Section	on 7	Section 106	n 106	Section 401	n 401	408 Deter	408 Determination	Section 404	n 404	C	CMP	CDFW 1602	7 1602	CDFW 2081	2081	
Merced - Fresno (M-F)	Dec-11	Mar-14	Sep-11	Aug-12	Apr-13	Apr-14	NA	NA	Jan-13	Mar-14	Mar-12	Mar-14	Apr-13	Mar-14	Mar-13	Mar-14	M
Fresno - Bakersfield (F-B)	Jul-12	Apr-14	Jun-13	May-14	Mar-14	Nov-16	Nov-13	Jan-14	Jan-14	Nov-16	Dec-13	Apr-15	Mar-15	Apr-16	Mar-15	Jun-15	A
San Francisco - San Jose (F-J)	Jan-17	Aug-17	Nov-16	Sep-17	Sep-17	Apr-18	N/A	N/A	Sep-17	Mar-18	Sep-17	May-18	Sep-17	Apr-18	Sep-17	May-18	Μ
San Jose - Merced (J-M)	Mar-17	71-guA	Nov-16	Sep-17	Dec-17	Jun-18	Mar-17	Apr-17	Dec-17	Jun-18	Dcc-17	Jun-18	Dec-17	Jun-18	Dec-17	Jun-18	Μ
Central Valley Wye (M-F) ⁵	Mar-16	Jun-17	Dec-16	Sep-17	Sep-17	Jan-18	Jun-17	Nov-17	Oct-16	Apr-18	May-17	Nov-17	Sep-17	Feb-18	Sep-16	Jun-18	5
CV Electrical Interconnect (CVI)	Jul-16	Oct-16	Mar-17	May-17	N/A	N/A	Sep-16	N/A	Nov-16	Nov-16	Oct-17	Nov-17	N/A	N/A	Sep-16	Jun-18	
Heavy Maintenance Facility (HMF)	Mar-16	Mar-17	Apr-16	Mar-17	Mar-17	Nov-17	N/A	N/A	Mar-17	Nov-17	Mar-17	Sep-17	Mar-17	Sep-17	Mar-17	Sep-17	
Locally Generated Alternative (F-B) 6	Mar-16	Sep-16	May-16	Sep-16	Jun-17	Aug-17	May-16	Aug-16	May-17	Sep-17	Fcb-16	TBD	Aug-17	Oct-17	Apr-16	Oct-17	z
Bakersfield - Palmdale (B-P) ³	May-17	Oct-17	Nov-16	Jun-17	Dec-17	Jun-18	N/A	N/A	Dec-17	Aug-18	May-17	Sep-17	Jul-17	Mar-18	Jul-17	May-18	ų
Palmdale - Burbank (P-B) ^{3,4}	May-17	Oct-17	Mar-17	Oct-17	Dec-17	Mar-18	Jul-17	Aug-17	Dec-17	May-18	Jun-17	Feb-18	Dec-17	Mar-18	Aug-17	Jul-18	5

Environmental Permits ^{1,2}

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Schedule analysis as motified by information from preliminary engineering and estimates for alignments currently under study or in development. Limits of the work represent for the possible alternatives and are subject to change due to environmental review, funding and final design.

ij	Legend: Mmm-YY Actual Mmm-YY Forcast	Forecast
Notes:		
	The schedule assumes two cycles of concurrent Authority, Attorney General, and FRA review of technical documents. Cycle One is ten days, starting with the RC's	lays, starting with the RC's
	initial submittal. Reviewers have five days for review before an RC/reviewer workshop to discuss comments, then five days to complete and submit comments to	and submit comments to
	the Authority. The RC then has five days to revise and resubmit. Cycle Two is five days, starting with resubmittal and a RC/reviewer workshop. Reviewers	wkshop. Reviewers
	complete discussions and submit back check revisions to the Authority within five days of the workshop. The RC then has five days to revise, produce, and submit	vise, produce, and submit
	a final version to the Authority.	
	Text identified in red indicates a change from the previous month.	
	Discussions ongoing with USFWS regarding Regional BO approach.	
	Consultation with USFS ongoing regarding permitting approach (East Corridor Alternatives).	
	Represent forecast trends as a result of the deferred identification of the initial preferred alternative and additional effort in scope definition	n
	USFWS has indicated no need to reinitiate Section 7 consultation.	
	Filed with Submittal of Checkpoint C	
	With Checkpoint C Concurrence	
	6 months after FRA ROD is published	
	6 months after 408 annitication submitted	

Obtain 408 Permit¹⁰

Submit 408 Permit Application⁹ 408 Pc Sep-17

Mar-17

Oct-17

Apr-17

May-18

Nov-17 Jun-18

Dec-18 Dec-18 Dec-18 Dcc-18

Jun-18

Dcc-17

Jun-18

Jun-18

Jul-18 Dec-17

Aug-17 Apr-17 Apr-17

Mar-18 Dec-17 Dec-17

Feb-18 Apr-17 Apr-17

71-1nC Jul-17

Mar-17 Mar-17

Jan-18 Jan-18

Aug-17 Aug-17

Aug-17 N/A N/A

Jul-17 N/A N/A

> Jan-18 Jan-18

> Aug-17 Aug-17

Dec-17 Dec-17

Dec-16 Dec-16

Dec-17 Dec-17

May-17 Nov-16 Nov-16

Palmdale - Burbank (P-B)^{3,4} Burbank - Los Angeles (B-LA)³ Los Angeles - Anaheim (LAA) ³

Nov-18

May-18

Dec-18

Jun-18

N/AN/A

N/A N/A

Nov-18

May-18

J0202

Appendix D – Summary Schedule (September 2016)

Activity Name PLANNICS PLANNICS PLANNICS San FLEARCISCO to San Jose Environmental Review 101 7.21. Project Management 103 7.21. Project Management 105 7.21. Project Management 105.1 7.21. Project Management 105.2 7.21. Project Management 105.2 7.21. Project Management 105.3 7.21. Project and Submit Bodgical Assessment to USFWWSMMFS 106.3 7.21. Project and Submit Bodgical Assessment to USFWWSMMFS 106.3 7.21. Project and Atomit Approval 107.3 7.21. Project and Concurrence 107.3 7.21. Project and Atomit Approval 107.3 7.21. Project and Concurrence 107.3 7.21. Respond to Public Commental Document and Cruclust for Cooperating Agencies 107.1 7.21. Respond to Public Commental Document and Cruclust for Public Review and Comment 107.3 </th <th>HPO/Review and Concurrence</th> <th></th> <th>Start 01-JuL-10 A 01-JuL-10 A 24-Aug-15 A 22-Dec-15 A 23-Nov-15 A 24 Aug-15 A</th> <th>Finish 15 15-Aug-18 15-Aug-18 04-May-18 04-May-18 30-Mar-18</th> <th>04 01 02 03 04 0 02 03 04 0</th> <th></th> <th>2018 2019 201 22 03 04 201 22 03 04 201 22 03 04 201 201 02 03 04 201 241NING 23 03 04 201 251 Project Nane 28 105 201 26 28 Finitiscoto San Jose 28 201 27 29 28 105 202 28 29 28 29 28 203 28 29 28 29 28 203 28 29 28 29 28 29 28 203 28 29 28 29 28 29 28 29 28 203 28 29 28 29 28 29 28 29 28 28 28 28 28 28 28 28 28</th> <th>2020 24 Q1 Q2</th>	HPO/Review and Concurrence		Start 01-JuL-10 A 01-JuL-10 A 24-Aug-15 A 22-Dec-15 A 23-Nov-15 A 24 Aug-15 A	Finish 15 15-Aug-18 15-Aug-18 04-May-18 04-May-18 30-Mar-18	04 01 02 03 04 0 02 03 04 0		2018 2019 201 22 03 04 201 22 03 04 201 22 03 04 201 201 02 03 04 201 241NING 23 03 04 201 251 Project Nane 28 105 201 26 28 Finitiscoto San Jose 28 201 27 29 28 105 202 28 29 28 29 28 203 28 29 28 29 28 203 28 29 28 29 28 29 28 203 28 29 28 29 28 29 28 29 28 203 28 29 28 29 28 29 28 29 28 28 28 28 28 28 28 28 28	2020 24 Q1 Q2
	HDO/Review and Concurrence		01-Jul-10A 01-Jul-10A 24-Aug-15A 22-Dec-15A 23-Nov-15A 23-Auro-15A				Environmental	
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1.07.3.2	CVW: Identify Preliminary Preferred Atternative *	1 27		25-May-17		CWV: Idei	CVW: Identify Preliminary Preferred Atternative *
1.07.3.3	CVW: Obtain Section 7 Biological Opinion from USFWS/NMFS			31-Aug-17		Ğ	CVW: Obtain Section 7 Biological Opinion from USFWS/NMFS
1.07.4	CVW: Identify Least Environmentally Damaging Practicable Alternative (LEDPA)	35 05-	4	15-Dec-17			CVW: Identify Least Environmentally Damaging Practicable
1.07.5	CVW: Cal. Dept of Fish & Wildlife (CDFW) Consistency Determination	11 21	_	19-Feb-18			CVW: Cal. Dept of Fish & Wildlife (CDFW) Consistency
1.07.6.1	CVW: Prepare and Circulate Administrative Final EIR/EIS to Cooperating Agencies		+	28-Sep-17			CVW: Prepare and Circulate Administrative Final EIR/EIS to Cool
1.07.6.2	CVW: Prepare and Publish Final EIR/EIS (Includes FRAROD)		+	29-Dec-17			CVW: Prepare and Publish Final EIR/EIS (Includes FRAR)
1.08.1	CVVV: Findings & Statement of Overriding Considerations	90 09: 	+	14-Nov-17			CVW: Findings & Statement of Overriding Considerations
1.08.2.1			30-Nov-17 2	29-Dec-1/			
1.00.2.2	CVVV. Autionity Prepares and Flies Notice of Determiniation Surface Transmototion Doord (STD) Incurse DOD - CVVIIII		+	07 Mar 19			CVW: Autionity Frepares and Files Nouce of Determina
1.00.2.0	CMM: Mitination Exercises and Reporting Pan		+	24-Aun-18			
1.08.4.1	CVW: Obtain Fully Executed Section 106 MOA		-	14-Dec-17			CVW: Obtain Fully Executed Section 106 MOA
1.08.4.2	CVW: Prepare and Submit Draft Section 401 and 404 Permit Applications		16-Feb-17	10-Jul-17		CW:	CVW: Prepare and Submit Draft Section 401 and 404 Permit Application
1.08.4.3	CVW: Prepare and Submit 2081 and 1602 Applications		+	29-Aug-17		S	CVW: Prepare and Submit 2081 and 1602 Applications
1.08.4.4	CVW: Prepare and Submit Section 408 Application	11 05-1	05-Feb-16A 0	03-Jan-17		CVW: Prepare and	CVW: Prepare and Submit Section 408 Application
1.08.4.5	CVW: Other Required Permits		05-Oct-15 A 1	19-Feb-18			CVW: Other Required Permits
PE 15% an	PE 15% and Preliminary Design for Procurement	62 10-1	Dec-12A C	01-Feb-18			PE 15% and Preliminary Design for Procurement
2.04	CVW: Conduct Preliminary Engineering for Project Development (PE4PD)	31 10-1	10-Dec-12A 00	03-Aug-15 A		CVW: Conduct Preliminary Engineering for Project Development (PE4PD)	velopment (PE4PD)
2.11	CVW: Complete 15% Design	56 10-1	10-Dec-12A 2	25-Sep-17			CVW: Complete 15% Design
2.11	CVW: Complete Preliminary Engineering for Procurement (PE4P)			08-Sep-17		S	CVW: Complete Preliminary Engineering for Procurement (PE4P)
2.13	RDP Programwide Engineering (CV Wye)	4 18	18-Sep-17 0	01-Feb-18			RDP Programwide Engineering (CV Wye)

Annual Work Plan FY16/17 Update $55 \mid P \mid a \mid g \in c$

		0	2017	
	(cmpcii)	5		19
PLANNING	01-Jul-09 A 05-J		PLANNING	
Merced to Fresno	94 01-Jul-09 A 05-Ji	05-Jul-17	Merced to Fresno	
Environmental Review	67 01-Jul-09 A 28-Ju	28-Jun-13 A		
1.02 M-F: Regional Consultant Public / Agency Participation_SUMMARY	01-Jul-09 A	28-Jun-13 A pipation_SUMMARY		
	06-May-11 A	-		
1.07.2 M-F: DEIR/EIS Public Comment Period_SUMMARY		13-Oct-11 A		
	14-Oct-11 A	sr-12A		
1.08 M-F: Certification of EIR/EIS and NOD/ROD_SUMMARY	27-Feb-12A	11-Oct-12 A		
Relat	01-Jul-10A	05-JUF1/	Other Related Work	
	31-Jan-11 A	ut-1/		
3.12 Rulei Sing Forecasung - Wr 3.14 Station Area Planning - MF		29-Juli-12A 30-Dec-16	Station Area Planning - MF	
Layout: *FRA Qrtrly Summary Report FY16-17	FR	FR-HSR-009-10-01-05 Phase 1 PE/NEPA/CEQA	PE/NEPA/CEQA	
		 This Schedule is for the FRA Af 2. The San Francisco to San Jose Schedule dates by the Regiona 	 This Schedule is for the FRA ARRA Grant Amendment, Data Date September 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline Schedule dates by the Regional Consultants. 	ber 1, 2016. sflect the approved Baseline

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	Activity Norma		toto Ite	15 JO16	2047	2018 2016	0000
				a3 a4 a1 a2 a3 a	3 Q4	3 Q4 Q1 Q	24 Q1 Q
PLANNING	NG		31-Aug-18			PLANNING	
Fresno to	Fresno to Bakersfield	107 07-Jul-09.A	31-Aug-18			Fresno to Bakersfield	
Environme	Environmental Review	84 07-Jul-09 A					
1.02	F-B: Regional Consultant Public / Agency Participation	26 20 100 10 40 A	30-Jun-14 A	ant Public / Agency Participation			
1.07.1	F-B: PUTIMINI AUVE DI AULT LINUELS_SOUMMARY F-B: DFIR/FIS Approval Process SUMMARY		_				
1.07.2	F-B: DEIR/EIS Public Review Period_SUMMARY						
Other Related Work	ated Work					 Other Related Work 	
3.11	PMT/RDP ROW Work (FB)					PMT/RDP ROW Work (FB)	<i>~</i>
3.12 3.14	Ktdefsnip Forecasting - FB Station Area Planning - FB	55 02-Dec-13.A	29-Jun-12A 31-Aug-18			Station Area Planning - FB	
ut: *FRA	Layout: *FRA Qitrly Summary Report FY16-17		FR-HSR	FR-HSR-009-10-01-05 Phase 1 PE/NEPA/CEQA	'E/NEPA/CEQA		
			1. Thi 2. The Sch	s Schedule is for the FRA AR San Francisco to San Jose a edule dates by the Regional	RA Grant Amendment, Dat and San Jose to Merced sc Consultants.	 This Schedule is for the FRA ARRA Grant Amendment, Data Date September 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline Schedule dates by the Regional Consultants. 	l Baseline
					Annual Work	Annual Work Plan FY16/17 Update 57 P a g e	late g e

	FKA SUMMARY SCHEDULE	۰l	September 2016	
-	Activity Name	Duration Start (months)	Finish	15 2016 2017 2018 2019 2020 03 04 01 02 03 04
PLANNING	NG	84 02-Feb-11 A	22-Jan-18	
Heavy N	Heavy Maintenance Facility	84 02-Feb-11 A	22-Jan-18	Heavy Maintenance Facility
Environn	Ervironmental Review	118 02-Feb-11 A	22-Jan-18	Environmental Review
1.01	HMF: Project Management		22-Jan-18	HMF: Project Management
1.01.1	HMF: PM Plan/Meetings/Coordination		22-Jan-18	
1.01.2	HMF: Quality Assurance/Quality Control/Safety/Risk		14-Oct-15A	HMF: Quality Assurance/Quality Control/Safety/Risk
1.01.3	HMF: Document Control		22-Jan-18	HMF: Document Control
1.01.4	HMF: Schedule, Budget & Progress Reporting		22-Jan-18	HMF: Schedule, Budget & Progress Reporting
1.02	HMF: Public/Agency Participation		10-May-17	HMF: Public/Agency Participation
1.02.3	HMF: Maintain Stakeholder Database		10-May-17	HMF: Maintain Stakeholder Database
1.02.5	HMF: Stakeholder Meetings & Briefings	17 16-Oct-15 A	10-Oct-16	HMF: Stakeholder Meetings & Briefings
1.03	HMF: Complete NOP/NOI, Scoping and Purpose & Need *		02-Feb-11 A	
1.03.5	HMF: Prepare Project Description		10-Dec-15 A	HMF: Prepare Project Description
1.05.1	HMF: Environmental Task Management	43 01-Jul-15A	22-Jan-18	HMF: Environmental Task Management
1.05.2.1	HMF: Prepare Technical Reports	16 16-Oct-15A	25-Sep-16	HMF: Prepare Technical Reports
1.05.2.2	HMF: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence	1 26-Sep-16	10-Oct-16	HMF: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence
1.05.2.3	HMF: Prepare and Submit Biological Assessment to USFWS/NMFS	16 16-Oct-15 A	26-Sep-16	HMF: Prepare and Submit Biological Assessment to USFWS/NMFS
1.05.2.4	HMF: Identify Initial Preferred Alternative, Obtain Authority Approval *	1 01-Sep-16	12-Sep-16	HMF Identify Initial Preferred Atternative, Obtain Authority Approval *
1.05.3	HMF: EIR/EIS Sections	23 16-Oct-15 A	04-Mar-17	HMF: EIR/EIS Sections
1.07.1	HMF: Prepare Administrative Draft Environmental Document and Circulate to Cooperating Agencies	23 16-Oct-15 A	04-Mar-17	HMF: Prepare Administrative Draft Environmental Document and Circulate to
1.07.2	HMF: Prepare Draft Environmental Document and Circulate for Public Review and Comment	0 05-Mar-17	11-Mar-17	HMF: Prepare Draft Environmental Document and Circulate for Public Review
1.07.3.1	HMF: Respond to Public Comments on Draft Environmental Document	3 12-Mar-17	10-May-17	HMF: Respond to Public Comments on Draft Environmental Document
1.07.3.2	HMF: Identify Preliminary Preferred Attennative *	3 11-May-17	09-Jul-17	HMF: Identify Preliminary Preferred Atternative *
1.07.3.3	HMF: Obtain Section 7 Biological Opinion from USFWS/NMFS	3 22-Jun-17	21-Aug-17	HMF: Obtain Section 7 Biological Opinion from USFWS/NMFS
1.07.4	HMF: Identify Least Environmentally Damaging Practicable Atternative (Checkpoint C, LEDPA)	7 24-Mar-17	21-Aug-17	HMF: Identify Least Environmentally Damaging Practicable Atternat
1.07.5	HMF: Cal. Dept of Fish & Game (CDFG) Consistency Determination	0 21-Aug-17	21-Aug-17	I HMF: Cal. Dept of Fish & Game (CDFG) Consistency Determinatio
1.07.6.1	HMF: Prepare and Circulate Administrative Final Environmental Document to Cooperating Agencies (includes FRAROD)	4 09-May-17	02-Aug-17	HMF: Prepare and Circulate Administrative Final Environmental Doc
1.07.6.2	HMF: Prepare and Publish Final Environmental Document (Includes FRAROD)	3 03-Aug-17	11-Oct-17	HMF: Prepare and Publish Final Environmental Document (Incl
1.08.1	HMF: Findings & Statement of Overriding Considerations	1 27-Sep-17	11-Oct-17	HMF: Findings & Statement of Overriding Considerations
1.08.2.1	HMF: Authority Board Certifies Environmental Document	1 27-Sep-17	11-Oct-17	HMF: Authority Board Certifies Environmental Document
1.08.2.2	HMF: Authority Prepares and Files Notice of Determination	1 27-Sep-17	11-Oct-17	HMF: Authority Prepares and Files Notice of Determination
1.08.2.3	HMF: Surface Transportation Board (STB) Issues ROD	2 12-Oct-17	30-Nov-17	HMF: Surface Transportation Board (STB) Issues ROD
1.08.3	HMF: Mitigation Monitoring & Reporting Plan		11-Oct-17	HMF: Mitigation Monitoring & Reporting Plan
1.08.4.1	HMF: Obtain Fully Executed Section 106 MOA		21-Aug-17	HMF: Obtain Fully Executed Section 106 MOA
1.08.4.2	HMF: Prepare and Submit Draft Section 401 and 404 Permit Applications		21-Aug-17	HMF: Prepare and Submit Draft Section 401 and 404 Permit Applic.
1.08.5	HMF: Administrative Record		22-Jan-18	HMF: Administrative Record
PE 15% &	PE 15% and Preliminary Design for Procurement		29-Dec-16	PE 15% and Preliminary Design for Procurement
2.02	HMF: PE Program Management		11-Nov-16	HMF: PE Program Management
2.04	HMF: Conduct Preliminary Engineering for Project Development (PE4PD)		29-Sep-16	
2:11	HMF: Conduct Preliminary Engineering for Procurement (PE4P)		01-Oct-16	HMF: Conduct Preliminary Engineering for Procurement (PE4P)
2.13	KUP Hogramwide Engineering (HMF)	Act-luc-ru /r	29-Dec-16	
Other Ke	other Related Work	1 01-OCt-15A	31-Oct-15A	
3.09	HMF: ROW EIR/EIS Process	1 01-Oct-15A	31-Oct-15 A	
ayout: *FR	Layout: *FRA Qrtrly Summary Report FY16-17		FR-HSF	FR-HSR-009-10-01-05 Phase 1 PE/NEPA/CEQA
			1. Thi 2. The	 This Schedule is for the FRA ARRA Grant Amendment, Data Date September 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline
			Sch	Schedule dates by the Regional Consultants.

	Duration Start		15 2016 2017	2018 2019 2019
	(months)		as a4 a1 a2 a3 a4 a1 a2 a3 a	Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
PLANNING	44 12-Feb-15A	27-Nov-18		
E-B I ocally Generated Alternative (LGA)	44 12-Feb-15A	27-Nov-18		F-B Locally Generated Alternative (L
environmential Review	44 12-Feh-15 A	27-Nov-18		Environmental Review
entrumining interview 101 f.Tsisk 1) Project Management		27-Nov-18		(Task 1) Project Management
		2/ 100 10 02-Feb-18		(Task 2) Public/Agency Participation
_		02-Apr-15 A	k 2.1) Public Participation Plan	
	5 06-Mar-15A	07-Aug-15A	(Task 2.2) CHSTP Agency Coordination Plan	
Γ		16-Mar-16A	(Task 3.5) Prepare Project Description	
1.03.6 (Task 3.6) Define Existing Transportation Conditions	11 13-Feb-15A	15-Jan-16A	(Task 3.6) Define Existing Transportation Conditions	conditions
1.03.7 BFS: NEPA404 Integration (Checkpoint B) [TBD]	0 01-Feb-16A	01-Feb-16A	I BFS: NEPA404 Integration (Checkpoint B) [TBD])) [TBD]
1.05.1 (Task 5.1) Environmental Task Management	18 12-Mar-15 A	01-Sep-16	(Task 5.1) Environmental Task Management	ask Management
1.05.2.1 (Task 5.2) Technical Reports	21 12-Mar-15 A	15-Dec-16	(Task 5.2) Technical Reports	Reports
1.05.2.2 (Task 5.2.2) Submit Section 106 Reports to SHPO/Review & Concurrence	2 18-Feb-16A	18-Apr-16 A	(Task 5.2.2) Submit Section 106 Rej	(Task 5.2.2) Submit Section 106 Reports to SHPO/Review & Concurrence
1.05.2.3 (Task 5.2.3) Prepare & Submit Biological Assessment to USFWSNMFS	8 07-Jul-15A	11-Mar-16 A	(Task 5.2.3) Prepare & Submit Biological Assessment to USFWS/NMFS	al Assessment to USFWS/NMFS
1.05.2.4 (Task 5.2.4) Identify Initial Preferred Alternative, Obtain Authority Approval (LEDPA Test)	7 27-Aug-15 A	16-Mar-16 A	(Task 5.2.4) Identify Initial Preferred Al	(Task 5.2.4) Identify Initial Preferred Atternative, Obtain Authority Approval (LEDPA Test)
1.05.3 BFS: EIR/EIS Sections	7 15-Sep-15.A	20-Apr-16 A	BFS: EIR/EIS Sections	
		01-Feb-16A	I BFS: Perform Env Studies and Obtain Pe	m Env Studies and Obtain Permits for Geotech Investigations (TBD)
	15 03-Aug-15 A	31-Oct-16	I (Task 7.1) Prepare Adr.	I (Task 7.1) Prepare Administrative Draft EIR/EIS & Circulate to Cooperation Agencies
	2 01-Sep-16	17-Oct-16	(Task 7.2) Prepare Drat	(Task 7.2) Prepare Draft EIR/EIS & Circulate for Public Review & Comment
	2 29-Sep-16	29-Nov-16	Task 7.3.1) Respon	(Task 7.3.1) Respond to Public Comments on Draft EIR/EIS
		31-May-16A	(Task 7.3.2) Identify Preliminary Preferred Alternative	referred Alternative
		22-Aug-16 A	(Task 7.3.3) Obtain Section	(Task 7.3.3) Obtain Section 7 Biological Opinion from USFWS/NMFS
		29-Sep-16	I DEC OF DET STATE OF THE OF OF OF OF	((1ask 7.4)Identity Least Environmentally Damaging Practicable Atternative(Checkpoint
T	1	UI-LED-10A		
		30-Dec-16	(lask /.6.1) Prepa	(lask /.6.1) Prepare & Crculate Administrative Final EIR/EIS to Cooperating Agen
	01-Ceb-10	51-Jan-1/	(185K 7.0.2) Hel	
1.00.1 (Task 6.1) Financys & Statement of Overriging Considerations 4.08.2.1 (Task 8.2.1) Authority Carifias EID	20-100-12 41	31-Jan-17		ask o.1.) Findings & statement of Overruing Considerations
		27-Apr-17		(Task 8.2) Notice of Determination / Record of Decision
1.08.3 (Task 8.3) Mitigation Monitoring & Reporting Plan	3 27-Dec-16	05-Apr-17	(Task 8.3) M	(Task 8.3) Mitigation Monitoring & Reporting Plan
-	0 01-Feb-16A	01-Feb-16A	I BFS: Obtain Fully Executed Section 106 MOA	NOA
1.08.4.2 (Task 8.4.2) Prepare & Submit 401 & 404 Applications	4 22-Nov-16	31-Mar-17	(Task 8.4.2)	(Task 8.4.2) Prepare & Submit 401 & 404 Applications
	18 11-Apr-16 A	12-Oct-17		(Task 8.4.3) Prepare & Submit 2081 & 1602 Applications
1.08.4.4 BFS: Prepare and Submit Section 408 Application	0 01-Feb-16A	01-Feb-16A	I BFS: Prepare and Submit Section 408 Application	olication
2		01-Feb-16A	I BFS: Other Required Permits	
1.08.5 (Task 8.5) Administrative Record	17 30-Dec-15 A	12-May-17	(Task 8.5)	(Task 8.5) Administrative Record
5% and		24-Aug-18		► PE 15% and Preliminary Desigh for Procur
		11-Jul-18		(Task 4.99) Engineering Management
	-	26-Oct-16	(Task 4) Preliminary En	(Task 4) Preliminary Engineering (15% PE4PD) - BFSSA
		24-Aug-18		(Task 11) Conduct PE4P
2.13 RDP Programwide Engineering (BFSSA)	39 06-Mar-15 A	20-Jun-18		RDP Programwide Engineering (BFSSA)

PLANNING Bakersfield				
PLANN Bakers		(months)		Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q3 Q4 Q1<
Bakers	ING	115 01-70	01-Jul-10 08-May-20	
	Bakersfield to Palmdale	115 01-Ju	01-Jul-10 A 08-May-20	
Environ	Ervironmental Review	69 20-Fe	20-Feb-14 A 08-Jan-20	
1.01	B2P: Project Management			B2P: Project Management
1.02			_	
1.03.4.1			_	
1.03.4.2				
1.03.5	B2P: Prepare Project Description		-	Ц,
1.03.6	B2P: Define Existing Transportation Conditions		_	B2P: Define Existing Transportation Cond
1.03.7	B2P: NEPA/404 Integration (Checkpoint B)		_	
1.05.1		_	_	
1.05.2.1			_	
1.05.2.2			_	B2P: Pre
1.05.2.3			1	
1.05.2.4			_	
1.05.3	B2P: EIR/EIS Sections		_	
1.05.4	B2P: Perform Env Studies and Obtain Permits for Geotechnical Investigation		+	B2P: P
1.07.1	B2P: Prepare Admin Draft Environmental Document and Circulate to Coopeeratin Agencies	12 28-Ja	-	B2P:
1.07.2				
1.07.3.1			+	
1.07.5.2			1/-Aug-1/ 23-Oct-1/	
1 07 4	1	11 10-10	+	R2P- Identify
1.07.5	B2P. CADent of Fish & Game (CDFG) Consistency Determination	8 19-N	+	
1.07.6.1	T		┝	
1.07.6.2	B2P: Prepare & Publish Final EIS (includes FRAROD)	4 18-A	-	
1.08.1	B2P: Findings & Statement of Overriding Considerations	2 20-S	20-Sep-17 07-Nov-17	
1.08.2.1		2 20-S	20-Sep-17 07-Nov-17	B2P
1.08.2.2	B2P: Authority Prepares and Files Notice of Determination	3 25-C	25-Oct-17 17-Jan-18	B2P: Authority Prepares and Files Notice of Determination
1.08.2.3			_	
1.08.3			-	
1.08.4.1			-	B2P: Obtain Fully Exec
1.08.4.2			+	8 B2P: Prepare & Submit Draft Section 401 an
1.08.4.3	1		+	
1.08.4.4	+		+	B2P: Prepare
1.08.4.5	B2P. Other Required Permits	0 18-May-17	0+17 18-May-17	B2P: Other Required Permits
	and Designation (1996)			
2.04	PE 10% and Preliminary Design for Producement 2.0.4 Ppp forwhich pE4ph, pp		01-04-10 00-1483-20 02-Dec-15.0 17-Anr-17	B2P. Conduct PEAPD - BD
2.11	B2P. Conduct PE4P - BP		-	
2.13	RDP Programwide Engineering (BP)	115 01-Ju	01-Jul-10 A 08-May-20	
Other R	Other Related Work	98 01-Ju	01-Jul-10 A 16-Nov-18	8 Other Related Work
3.06	B2P: Station Area Planning	17 01-71	01-Jul-15A 29-Nov-16	6 B2P: Station Area Planning
3.09	B2P: ROW EIR/EIS Process		01-Apr-16A 16-Nov-18	
3.11	PMT/RDP ROW Work (BP)	90 03-Ja		8 PMT/RDP ROW Work (BP)
3.12	Ridership Forecasting - BP		01-Jul-10A 29-Jun-12A	A A
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			-	
				 This Schedule is for the FRA ARRA Grant Amendment, Data Date September 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule datas reflect the announced Baseline.
			i	The pair Faircisco to bair bose and bair bose to merced schedule dates reneat the approved bai Schedrife dates by the Partional Consultants

	FRA Summary Schedule -	hedule -	Septem	September 2016	25-6
Ω	Activity Name	Duration (months)	Start	Finish	15 2016 2017 2018 2019 2020 2021 03 04 01 02 03
PLANNING	9	0 86	01-Jul-10A	19-Nov-18	
Palmdal	Palmdale to Burbank	0 86	01-Jul-10A	19-Nov-18	 Palmdale to Burbahk
Environn	Ervironmental Review	42 24	24-Apr-15 A	19-Nov-18	Environmental Review
1.01	P2K: Project Management		24-Apr-15 A	29-Jun-18	P2K: Project Management
1.02	P-K: Regional Consultant Public / Agency Participation	40 	24-Apr-15A	30-Jun-18	P-K: Regional Consultant Public / Agency Patricipation
1 03 4 1	PZK. Prepare Project Description P2K. Conduct Alternatives Analysis	, 0 , 0	01-Jun-15A	01-Jun-15A	P2K. Conduct Alternatives Analysis
1.03.6	P2K. Define Existing Transportition Conditions		21-Dec-15A	28-Jan-16A	P2K: Define Existing Transportion Conditions
1.03.7	P2K: Identify Range of Atternatives for Environmental Evaluation * (Checkpoint B)	20	05-Jul-16A	26-Jan-17	P2K: Identify Range of Alternatives for Environmental Evaluation * (Checkpoint B)
1.05.1	P2K: Environmental Task Management		24-Apr-15 A	29-Jun-18	P2K: Environmental Task Management
1.05.2.1	P2K: Prepare Technical Reports	29 0	01-Jul-15A	10-Nov-17	P2K: Prepare Technical Reports
1.05.2.2	P2K: Submit Section 106 Reports to SHPO/Review and Concurrence		29-Dec-16	14-Jun-18	P2K: Submit Section 106 Reports to SHPO/Review and Concurr
1.05.2.3	P2K: Prepare and Submit Biological Assessment to USFWS/NMFS		01-Jul-15A	12-May-17	P2K: Prepare and Submit Biological Assessment to USFWSNMFS
1.05.2.4	P2K: Identify Initial Preferred Atternative, Obtain Authority Approval *		15-Nov-16	13-Jan-17	P2K: Identify Initial Preferred Atternative, Obtain Authority Approval *
1.05.3	P2K: EIR/EIS Analysis		24-Apr-15A	19-Apr-17	P2K: EIR/EIS Analysis
1.05.4	P2K. Perform Env Studies and Obtain Permits for Geotech Investigations		01-Jul-15A	20-Apr-16 A	P2K Perform Env Studies and Obtain Permits for Geotech Investigations
1.0/1	Pzk. Prepare Aurillinisuarive of air Citvil official documentation of Citvilate for Oublic Pariaw and Commant		01-vov-10	47- InL47	PZN. Prepare Aurimistrative Drait Environmental Document and Circulate for Dublic Paviaw and
1.07.3.1	1. 2.1. Topian contractional Document and Oriotatic Not a data (Network and Oriotatic) DDK: Reserved to Dishie Command: A District Environmental Document and		06-Jun-17	12-Dec-17	P2K: Rescond to Dublic Comments on Draft Environments in Draft Environments
1.07.3.2	P2K: Identify Preliminary Preferred Alternative *		24-Apr-17	31-Mav-17	P2K: Identify Preliminary Preferred Alternative *
1.07.3.3	P2K: Obtain Section 7 Biological Opinion from USFWS/NMFS ***	0	15-May-17	10-Oct-17	P2K: Obtain Section 7 Biological Opinion from USFWS/NMFS ***
1.07.4	P2K: Identify Least Environmentally Damaging Practicable Alternative (Checkpoint C, LEDPA)	ŝ	18-Jul-17	05-Dec-17	P2K: Identify Least Environmentally pamaging Practicable Atternative (Che
1.07.5	P2K: Cal. Dept of Fish & Game (CDFG) Consistency Determination	5	15-May-17	06-Oct-17	P2K: Cal. Dept of Fish & Game (CDFG) Consistency Determination
1.07.6.1	P2K: Prepare and Circulate Administrative Final Environmental Document to Cooperating Agencies	4	21-Aug-17	19-Dec-17	P2K: Prepare and Circulate Administrative Final Environmental Documen
1.07.6.2	P2K: Prepare and Publish Final Environmental Document (includes FRA/ROD)	1 3	30-Nov-17	29-Dec-17	P2K: Prepare and Publish Final Environmental Document (includes FRA)
1.08.1	P2K: Findings & Statement of Overriding Considerations	4	21-Aug-17	19-Dec-17	P2K: Findings & Statement of Overriding Considerations
1.08.2.1	P2K. Authority Board Certifies Environmental Document		09-Jan-18	11-Jan-18	P2K: Authority Board Certifies Environmental Document
1.08.2.2	P2K.Authorty Files NOD		09-Jan-18	12-Jan-18	P2K: Authority Files NOD
1.08.2.3	Surface Transportation Board (STB) Issues ROD - Palmdale to Burbank		27-Dec-17	29-Dec-17	Surface Transportation Board (STB) Issues ROD - Palmdale to Burbank
1.06.3			/1-0nV-17	13-Dec-1/	
1.08.4.1	PZK: Uptalin Fully Executed Section 106 MUA D2K: Drenare and Scientish Preaft Section 404 and 404 Dermit Annihostions	<u>5</u> 5	31-May-17	14-JUN-18 01- Jan-18	P2K. Denarce and Submit Draft Saction 100 MOA
1.00.1.2	r Z. repare and Submit 2014 south and unant sector and and we remain a post- DDK. Preserve and Submit 2014 and 46/12 Annihostives		04-Jan-17	10-Nov-18	shoursoning the region of should be a second should
1.08.4.4	P2K: Prepare and Submit Section 408 Application		04-Jan-17	01-Jan-18	P2K: Prepare and Submit Section 408 Application
1.08.4.5	P2K: Other Required Permits		04-Jan-17	21-Aug-17	P2K Other Required Permits
1.08.5	P2K: Administrative Record (TBD)		01-Sep-16	01-Sep-16	P2K; Administrative Record (TBD)
PE 15% 8	PE 15% and Preliminary Design for Procurement		01-Jul-10A	31-Aug-18	✓ PE 15% and Preliminary Design for Procurement
2.04	P2K: Preliminary Engineering (15%, PE4PD)		01-Jul-15A	21-Apr-17	P2K: Preliminary Engineering (15%, PE4PD)
2:11	P2K: Conduct PE4P		24-Mar-17	29-Jun-18	P2K: Conduct PE4P
2.13	RDP Programwide Engineering (P2K)		01-Jul-10A	31-Aug-18	RDP Programwide Engineering (P2K)
Other Re	Other Related Work		01-Jul-10A	28-Aug-18	Other Related Work
3.06			SU-JUN-12A	A CT-QUA-CT	
3.11	PLAR. ROW EINESS PLACES		01-Sen-16	28-Juir-10 28-Aun-18	
3.15	Primitian to the second of the second s		01-00-00	29- hin-12 A	
3.14	Station Area Planning (P2K)	46 01	01-Nov-13A	29-Sep-17	Station Area Planning (P2K)
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0	Activity Name	Duration (months)	Start	Finish	15 2016 23 24 21 22 23	2017 Q4 Q1 Q2 Q3 Q4	2018 2019 2020 01 02 03 04 01 02 03 04 01 02
PLANNING	NG	67	01-Jul-10A	26-Oct-18			
Burbank	Burbank to Los Angeles	26	01-Jul-10 A	26-Oct-18			 Burbank to Los Angeles
Environm	Environmental Review	35	01-Apr-15A	05-Apr-18			 Environmental Review
1.01	K2L: Project Management	33	01-Apr-15A	29-Dec-17			K2L: Project Management
1.02	K2L: Public/Agency Participation	، 33	01-Apr-15A	29-Dec-17			K2L: Public/Agency Participation
1.03.4.1	K2L: Conduct Attentatives Analysis		01-Feb-16A	14-Apr-16A	K2L: Con	K2L: Conduct Alternatives Analysis	
1.03.4.2	KZL: Identity Range of Atternatives for Environmental Evaluation	, u	01-Apr-16A	91-VON-11		V21 - Project Definition	KZL: Identity Range of Atternatives for Environmental Evaluation
1.03.0	nzzl. Frugeu Deimiuun 1221 - Dafina Evistinn Transmoration Conditione	. 1	01-AUI-10A	01-110-16 A		NZL: FI Gett Definition Define Evisting Transportation Conditions	
1.03.7	K2L: NEPA/404 Integration (Checkpoint B) (TBD)	•	01-Sep-16	01-Sep-16	; —	K2L: NEPA404 Integration (Checkpoint B) (TBD)	theckpoint B) (TBD)
1.05.1	K2L: Environmental Task Management	33	01-Apr-15A	29-Dec-17			K2L: Environmental Task Management
1.05.2.1	K2L: Prepare Technical Reports	26	01-Apr-15A	11-May-17		K2L: Prepare	K2L: Prepare Technical Reports
1.05.2.2	K2L: Prepare & Submit Section 106 Reports to SHPO/Review and Concurrence	10	24-May-16 A	27-Mar-17		K2L: Prepare &	K2L: Prepare & Submit Section 106 Reports to SHPO/Review and Concurrer
1.05.2.3	K2L: Prepare and Submit Biological Assessment to USFWS/NMFS	20	01-Sep-15A	11-May-17		K2L: Prepare	K2L: Prepare and Submit Biological Assessment to USFWS/NMFS
1.05.2.4	K2L: Identify Initial Preferred Atternative, Obtain Authority Approval	9	11-Aug-16 A	08-Feb-17		K2L: Identify Initial F	K2L: Identify Initial Preferred Alternative, Oblain Authority Approval
1.05.3	K2L: EltVielS Analysis	ŝ	01-Apr-15A	29-Dec-1/			K2L: EIK/EISAnalysis
1.0/1	NZL: Prepare Administrative Unant Envicto and Uncutate to Cooperating Agencies	0	23-Feb-1/	23-Feb-17			Initiative Drait Elix/Els and Circulate to Cooperating Ag
1.07.2	NZL. Prepare Urait Einviels & Curculate for Public Review/Continent & Public Review 121 : Descrivative Dommaste on Draft EID/EIS	- 0	01-reb-1/ 31 Aug.17	05 Anr 18			ALL: Prepare Urait EIR/EIS & Uncutate for Public Review/Continent.
1.07.3.2	K2L: Identify Preiminary Preferred Attemative	- vo	27-Jan-17	16-Jun-17		K2L: Identi	K2L: Identify Preliminary Preferred Alternative
1.07.3.3	K2L: Obtain Section 7 Biological Opinion from USFWS/NMFS	14	02-Nov-16	29-Dec-17			K2L: Obtain Section 7 Biological Opinion from USFWS/NM
1.07.4	K2L: Identify LEDPA	S	27-Jan-17	16-Jun-17		K2L: Identify LEDPA	fy LEDPA
1.07.6.1	K2L: Prepare and Circulate Adminstrative Final EIR/EIS to Cooperating Agencies, includes FRAROD	m	16-Oct-17	29-Dec-17			K2L: Prepare and Circulate Adminstrative Final EIR/EIS to
1.07.6.2	K2L: Prepare and Publish Final EIR/EIS, Includes FRAROD	0	18-Dec-17	29-Dec-17		_	K2L: Prepare and Publish Final EIR/EIS, Includes FRARO
1.08.1	K2L: Findings & Statement of Overriding Considerations	0	02-Nov-17	29-Dec-17			K2L: Findings & Statement of Overriding Considerations
1.08.2.1	K2L: Authority Board Certifies EIR	~	08-Jan-18	23-Jan-18			K2L: Authority Board Certifies EIR
1.08.2.2	K2L. Authority Prepares and Files Notice of Determination	~	29-Dec-17	24-Jan-18			K2L: Authority Prepares and Files Notice of Determination
1.08.2.3	Surface Transportation Board (STB) Issues ROD - Burbank to Los Angeles	~ ~	10-Jan-18	26-Feb-18			Surface Transportation Board (STB) Issues ROD - Bu
1.00.5	NZL. MINISTYMMEP K21 - Ottain Fully Eventiad Sentian 108 MO &	υų	02-INOV-17	29-Jän-10 20.Feh.18			K2L: MINIKP/MINIEP
1 08 4 2	K21: Prenare and Submit Traft Section 401 and 404 Permit Anns	2 (17-Mar-17	15-Sen-17			K21 : Prenare and Submit Draft Section 401 and 404 Permit Anns
PE 15% a	PE 15% and Preliminary Design for Procurement	95	01-Jul-10A	31-Aug-18			► PE 15% and Preliminary Design for Procu
2.04	K2L: Conduct Preliminary Engineering for Project Development - PE4PD	6	01-Apr-15A	27-Sep-16		K2L; Conduct Preliminary Er	K2L; Conduct Preliminary Engineering for Project Development - PE4PD
2.11	K2L: Preliminary Engineering for Procurement - PE4P	22	03-Oct-16	22-Aug-18			K2L: Preliminary Engineering for Procurem
2.13	RDP Programwide Engineering (K2L)	96	01-Jul-10A	31-Aug-18			RDP Programwide Engineering (K2L)
Other Re	Other Related Work	26	01-Jul-10A	26-Oct-18			 Other Related Work
3.06	KZL: Station Area Planning	21 72	01-JUL-15A	105-UCT-16		KZLI Station Area Planning	tanning
3.11		27 25	01-Sen-16	26-Oct-18			
3.12	Ridership Forecasting - K2L	3 8	01-Jul-10A	29-Jun-12A			
3.14	Station Area Planning (K2L)	46	01-Nov-13.A	29-Sep-17		Stat	Station Area Planning (K2L)
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PLANNING	NG	35	01-Jul-10A	31-Aug-18			
Los Ang	Los Angeles to Anaheim	95	01-Jul-10A	31-Aug-18			Los Angeles to Anaheim
Environm	Environmental Review	35	01-Apr-15 A	28-Mar-18			Environmental Review
1.01	LA-A: Project Management	32	01-Apr-15A	29-Dec-17			LA-A: Project Management
1.02	LA-A: Public/Agency Participation	32	01-Apr-15A	29-Dec-17			LA-A: Public/Agency Participation
1.03.4.1	LA-A: Conduct Atternatives Analysis	2	01-Feb-16A	30-Aug-16 A	LAA Cor	LA-A: Conduct Alternatives Analysis	lysis
1.03.4.2	LA-A: Identity Range of Alternatives for Environmental Evaluation	/	01-Apr-16A	11-Nov-16		. Identify Range of Alte	LA-A: Identify Range of Alternatives for Environmental Evaluation
1.03.5	LA-A: Project Definition	0 7	01-Apr-16A	30-Aug-16A		LA-R Project Definition	
1.05.1	LA-A. Environmental Tack Management	= 5	01-Anr-15 A	20-Dec-17			L A. A. Environmental Task Management
1.05.2.1	LX-X. Environmentari rass management. LA-X. Prepare Technical Reports	22	01-Apr-15A	22-Feb-17		LA-A: Prepare Technical Reports	LAPA. EIIVII OIIIITEIIKAI IASA IMAITAGEILEIK
1.05.2.2	LA-A: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrence	9	25-Jul-16A	07-Feb-17		LA-A: Prepare and S	LA-A: Prepare and Submit Section 106 Reports to SHPO/Review and Concurrer
1.05.2.3	LA-A: Prepare and Submit Biological Assessment to USFWS/NMFS	92	01-Sep-15 A	27-Mar-17		LA-A: Prepare and	LA-A: Prepare and Submit Biological Assessment to USFWS/NMFS
1.05.2.4	LA-A: Identify Initial Preferred Atternative, Obtain Authority Approval	2	06-Sep-16	21-Apr-17		LA-A: Identify In	LA-A: Identify Initial Preferred Atternative, Obtain Authority Approval
1.05.3	LA-A: EIR/EIS Analysis	32	01-Apr-15A	29-Dec-17			LA-A: EIR/EIS Analysis
1.07.1	LA-A: Prepare Administrative Draft EIR/EIS and Circulate to Cooperating Agencies	9	16-Dec-16	14-Jun-17		LA-A: Prepai	LA-A: Prepare Administrative Draft EIR/EIS and Circulate to Cooperating
1.07.2	LA-A: Prepare Draft EIR/EIS & Circulate for Public Review/Comment & Public Review	S	01-Mar-17	24-Jul-17		LA-A: Pre	I LA.A: Prepare Draft EIR/EIS & Crculate for Public Review/Comment
1.07.3.1	LA-A: Respond to Public Comments on Draft EIR/EIS	7	30-Nov-17	30-Jan-18			LA-A: Respond to Public Comments on Draft EIR/EIS
1.07.3.2	LA-A: Identify Preliminary Preferred Atternative	4	24-Feb-17	16-Jun-17		LA-A: Identif	LA-A: Identify Preliminary Preferred Atternative
1.07.3.3	LA-A: Obtain Section 7 Biological Opinion from USFWSNMFS	o •	28-Mar-17	29-Dec-17			LA-A: Obtain Section 7 Biological Opinion from USFWS/NN
1.07.4		4 1	24-Feb-17	16-Jun-17		LA-A: Identify LEDPA	y LEDPA
1.07.6.7	LA-A: Frepare and Circulate Administrative Final EIX/EIS to Cooperating Agencies, includes FKA KUU		16-Nov-17	04-Dec-1/ 26 Dec 17			LA-A: Prepare and Circulate Administrative Final EIK/EIS to (
1.07.0.2	LAFA: Findinas & Statement of Overtidina Considerations		01-Dec-17	29-Dec-17]	LAVA: Findings & Statement of Overriding Considerations
1 08 2 1	1 A. A. Auhorito Postri Certifice FIR	· c	23-Jan-18	23-Jan-18		1	I I A-A: Authority Board Certifies FIR
1.08.2.2	LA-A: Authority Prepares and Files Notice of Determination	0	16-Jan-18	24-Jan-18			LA-A: Authority Prepares and Files Notice of Determination
1.08.2.3	Surface Transportation Board (STB) Issues ROD - Los Angeles to Anaheim	-	27-Feb-18	28-Mar-18			Surface Transportation Board (STB) Issues ROD - I
1.08.3	LA-A: MMRPMMEP	7	01-Dec-17	29-Jan-18			LA-A: MMRP/MMEP
1.08.4.1	LA-A: Obtain Fully Executed Section 106 MOA	14	02-Nov-16	03-Jan-18			LA-A: Obtain Fully Executed Section 106 MOA
1.08.4.2	LA-A: Prepare and Submit Draft Section 401 and 404 Permit Apps	0	12-Oct-17	12-Oct-17			I LAA: Prepare and Submit Draft Section 401 and 404 Permit App
PE 15% a	PE 15% and Preliminary Design for Procurement	35	01-Jul-10 A	31-Aug-18			PE 15% and Preliminary Design for Procur
2.04	LA-A: Conduct Preliminary Engineering for Project Development - PE4PD	1 5	01-Jul-15A	30-Sep-16A		onduct Preliminary En	LA A: Conduct Preliminary Engineering for Project Development - PE4PD
2.11	LA-A: Preliminary Engineering for Procurement - PE4P	9	03-Oct-16	10-Aug-17		Ξ. Ξ	I LA-A: Preliminary Engineering for Procurement - PE4P
2.13	RDP Programwide Engineering (LO)	96	01-Jul-10A	31-Aug-18			RDP Programwide Engineering (LO)
Other Ret	Other Related Work	8	01-Jul-10 A	31-Aug-18			 Other Related Work
3.06	LA-A: Station Area Planning	15	01-Jul-15A	03-Oct-16		LA-A: Station Area Planning	
3.09	LA-A: ROW Preservation and Acquisition	24	01-Jul-15A	18-Jul-17		LA-A: RO	LA-A: ROW Preservation and Acquisition
5.11 2.12	PMI/KUP ROW Work (LO) Difacehin Erzensetinn - I O	84 23	01-JUL-TI A	31-Aug-18 29-1110-12 A			
3.14	Southern California Improvements (LAUS)	0	03-Oct-16	03-Oct-16	I Souther	Southern California Improvements (LAUS)	hents (LAUS)
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		FKA Summary Schedule - September 2016		
Q	Activity Name		Finish 15 2016 03 04 01 02 03 04 0	15 2016 2017 2018 2020 2021 03/04/01/02/03/04/01/02/03/04/01/02/03/04/01/02/03/04/01/02/03/04 04/01/02/03/04/01/02/03/04 203/04/01/02/03/04 203/04/01/02/03/04
CONST	CONSTRUCTION	136 01-Jul-10A	25-Oct-21	
Merced	Merced to Fresno	108 01-Jul-10.A	28-Jun-19	Merced to Fresno
Design-E	Design-Build Program Management			Design-Build Program Management
5 Deal Dro	5 Design-Build Program Management (M-F)	72 01-Jul-10A 67 24-Ant-13 A	01-Sep-16	Design-Build Program Management (M-F) Peal Pronerty Anni istition
9	ROW Acquisition - CP 1A/B	56 24-Apr-13 A	13-Dec-17	ROW Acquisition - CP 1A/B
9	M-F: Real Property Acquisition/Condemnation Support		12-Nov-18	M-F: Real Property Acquisition/Condemnation Support
9	ROW Acquisition - CP 1D		17-Aug-17	ROW Acquisition - CP 1D
Design-B	Design-Build Contract Work 8	// 19-Feb-13.A 69 15-Oct-13.A	28-Jun-19	Design/Build Civil Infrastructure - CP 1A/B *
0 80	SR99 Realignment		29-Jun-18	SR99 Realignment
Fresno (Fresno to Bakersfield		25-Oct-21	
Design-E	Design-Build Program Management	132 01-Jul-10 A	25-Oct-21	
Ω	Design-Build Program Management (F-B)	5	25-Oct-21	
Real Pro	Real Property Acquisition		20-Dec-17	Real Property Acquisition
6	ROW Acquisition - CP 1C		07-Dec-17	ROW Acquisition - CP 1C
ی ہ	ROW Acquisition - CP 2-3 ROW Acquisition - CP 4	40 27-Jun-14A 42 27-Jun-14A	19-Oct-1/ 20-Dec-17	ROW Acquisition - CP 2-3 ROW Acquisition - CP 4
Design-E	Destan-Build Contract Work		28-Jun-19	Design Build Contract Work
æ	Design/Build Civil Infrastructure - CP 2-3 *	47 25-Jul-15A	14-Jun-19	Design/Build Civil Infrastructure - CP 2-3 *
8	Design/Build Civil Infrastructure - CP 4 *		02-Apr-19	Design/Build Civil Infrastructure - CP 4 *
ø	Design/Build Civil Infrastructure - CP 1C *	60 08-Jul-14.A	28-Jun-19	Design/Build Civil Infrastructure - CP 1C *
First Co	First Construction Segment	30 25-Dec-18	16-Jun-21	First Co
Design-E	Design-Build Contract Work		16-Jun-21	Design-
ø	Design/Build - CP 5 (FCS Track & Systems Combined) (Forecast)	30 25-Dec-18	16-Jun-21	Design
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			 This Schedule is for the FRA The San Francisco to San Jo Schedule dates by the Region 	 This Schedule is for the FRA ARRA Grant Amendment, Data Date September 1, 2016. The San Francisco to San Jose and San Jose to Merced schedule dates reflect the approved Baseline Schedule dates by the Regional Consultants.

Annual Work Plan FY16/17 Update 64 | P a g e Hi Juliana,

The AWP is submitted for FRA review and comment. The Authority submitted the AWP timely, in December, and per FRA comments received in January, submitted a revised AWP in January. Thank you for providing feedback on the revision.

The Authority acknowledges FRA's comments and interest in the ongoing refinement process to the content of the AWP, and appreciates the example work plan recently provided. As the project progresses, FRA's desire for specific content in the AWP may change; therefore, please inform the Authority of new content/format wishes by June 30 (annually). This could be via a sample template (header categories) or updated guidance on the information FRA needs included for future AWPs.

As the Authority moves forward with it's work planning for the next year, FRA's comments on the 2016 AWP and potential content changes as mentioned above, will be incorporated into the 2017 submission.

Thank you,

Desi Malone Grant Manager California High-Speed Rail Authority 770 L Street, Suite 870 Sacramento, CA 95814 w: (916) 330-5640 c: (916) 291-4121 <u>desiree.malone@hsr.ca.gov</u> <u>www.hsr.ca.gov</u>

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Wednesday, March 29, 2017 1:15 PM
To: Malone, Desiree@HSR; Gilliland, Barbara(PB)@HSR
Cc: rlzimmerer@transystems.com; mlrule@transystems.com
Subject: RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)

Hi Desi,

FRA acknowledges receipt of CHSRA's Revised Annual Work Plan (AWP) on January 23, 2017.

Please see the following feedback below and attached (AWP FY 16 Revised Final _FRA Comments)

after review of the revised 2016-2017 AWP:

- In its revisions, CHSRA attempts to address FRA's review comments by tying the AWP and the Program Management Plan together; in other words, by making them one. FRA understands that everything CHSRA does ultimately ties together. However, the grants' Statements of Work prescribe different contents/subjects for the AWP versus the Program Management Plan; they are two distinctive deliverables/documents with different purposes even though they relate to one another.
- The primary purpose of the Program Management Plan is explaining how CHSRA manages scope, budget, schedule, and risk over the life of the program while the primary purpose of the AWP is explaining what CHSRA is doing this year to stay on target with scope, budget, schedule, and risk.
- The AWP should provide specific milestones or deliverables (even if partial/iterative) CHSRA is going to meet or provide to FRA during the timeframe covered in the document as well as the number of people/resources and costs associated with achieving specific milestones or deliverables. For example, if the Program Management Plan indicates that CHSRA is going to finish a given task in say five years, then the AWP would indicate what CHSRA is doing this year (expressed by describing the number/type of people involved and/or the cost) to make sure iterative tasks are progressing as necessary to reach project completion at the end of the five years.

In recent years, FRA understood the need to keep the AWP broad given that the period of performance of the grants was fast-approaching. Now that FRA and CHSRA have extended the grants' period of performance, the AWP needs to be specific.

Attached is an example of a good work plan (in a table format) that CHSRA could use as a reference and an FRA mark-up on the Revised AWP (pg 24 – 28, on Task 3). Those comments, while contained to Task 3, offer insight into how FRA viewed each section and the plan as a whole. FRA hopes CHSRA will address those comments in future submissions of the AWP and other annual deliverables/"plans" as a similar thought process was applied to their review.

Please focus on revising Task 3 of the Annual Work Plan to address FRA's review comments as a standalone document for receipt by April 21st. As previously shared with CHSRA on January 18, 2017 keeping in mind that one of the primary benefits of a good AWP is allowing FRA to know what is "coming down the pipeline." One piece of feedback CHSRA provides on an ongoing basis to FRA is that CHSRA appreciates quick reviews/turnarounds; thus, letting FRA know what specifically is coming well in advance in the form of the AWP would help FRA better address this valuable feedback.

Thank you,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration

J0217

801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

From: Malone, Desiree@HSR [mailto:Desiree.Malone@hsr.ca.gov]
Sent: Monday, January 23, 2017 2:17 PM
To: Barnes, Juliana (FRA) <juliana.barnes@dot.gov>
Cc: Gilliland, Barbara(PB)@HSR <barbara.gilliland@hsr.ca.gov>; mlrule@transystems.com; Everett,
Lynn (FRA) <lynn.everett@dot.gov>; rlzimmerer@transystems.com; Malone, Desiree@HSR
<Desiree.Malone@hsr.ca.gov>
Subject: RE: Initial Feedback: Q4-16 Deliverables

Hi Juliana,

The Authority acknowledges your comments and is revising the documents provided by the FRA.

This email returns a revised AWP for FRA comment purposes.

Please note that an extension to the Feb. 2 due date has been requested for the FCS/CONOPs due to being unable to discuss the document today as planned.

A revised CVPFP is in process and I will keep you informed on its status for timeliness to the revision due date of Feb 2.

Thank you - Desi

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Wednesday, January 18, 2017 1:22 PM
To: Malone, Desiree@HSR
Cc: Gilliland, Barbara(PB)@HSR; mlrule@transystems.com; Everett, Lynn (FRA); rlzimmerer@transystems.com
Subject: Initial Feedback: Q4-16 Deliverables

Hi Desi,

FRA acknowledges receipt of the following deliverables transmitted on Dec 29, 2016:

- FCS Utilization Plan/CONOPs
- Annual Work Plan (AWP)
- Central Valley Financial Plan (CVFP)
- Phase 1 Program Financial Plan
- Program Management Plan
- CP 4 Baseline Schedule
- Q4_16 Exhibit A Update

An initial review was conducted of the following submittals in the three attached documents: (1) FCS Utilization Plan/CONOPS, (2) Annual Work Plan, and (3) CV Financial Plan which contain initial comments. Please note FRA is returning those deliverables after initial review and requests resubmission after addressing the attached FRA initial comments for further development by Feb 2, 2017.

The remainder of the 4^{th} Qtr deliverables are under review and FRA will provide comments prior to the end of the month.

Regards,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

From:	Malone, Desiree@HSR
То:	Barnes, Juliana (FRA)
Cc:	Gilliland, Barbara@HSR
Subject:	RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)
Date:	Thursday, April 06, 2017 2:52:35 PM

Actually no. With all due respect, we decided, for a <u>variety</u> of reasons, not to spend valuable time reworking the report again and instead addressing the recent comments (and possible unforeseen at this time future refinements) in the next report.

Let's discuss when you come by for the next Monday meeting ok?

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Thursday, April 06, 2017 2:42 PM
To: Malone, Desiree@HSR
Subject: RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)

Hi Desi,

I think I may be missing the attachment?

Thank you, Juliana

From: Malone, Desiree@HSR [mailto:Desiree.Malone@hsr.ca.gov]
Sent: Wednesday, April 05, 2017 12:45 PM
To: Barnes, Juliana (FRA) <juliana.barnes@dot.gov>; Gilliland, Barbara(PB)@HSR
<barbara.gilliland@hsr.ca.gov>
Cc: rlzimmerer@transystems.com; mlrule@transystems.com
Subject: RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)

Hi Juliana,

The AWP is submitted for FRA review and comment. The Authority submitted the AWP timely, in December, and per FRA comments received in January, submitted a revised AWP in January. Thank you for providing feedback on the revision.

The Authority acknowledges FRA's comments and interest in the ongoing refinement process to the content of the AWP, and appreciates the example work plan recently provided. As the project progresses, FRA's desire for specific content in the AWP may change; therefore, please inform the Authority of new content/format wishes by June 30 (annually). This could be via a sample template (header categories) or updated guidance on the information FRA needs included for future AWPs.

As the Authority moves forward with it's work planning for the next year, FRA's comments on the

J0220

2016 AWP and potential content changes as mentioned above, will be incorporated into the 2017 submission.

Thank you,

Desi Malone Grant Manager California High-Speed Rail Authority 770 L Street, Suite 870 Sacramento, CA 95814 w: (916) 330-5640 c: (916) 291-4121 <u>desiree.malone@hsr.ca.gov</u> www.hsr.ca.gov

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Wednesday, March 29, 2017 1:15 PM
To: Malone, Desiree@HSR; Gilliland, Barbara(PB)@HSR
Cc: rlzimmerer@transystems.com; mlrule@transystems.com
Subject: RE: Feedback: Q4-16 Deliverables (Revised Annual Work Plan)

Hi Desi,

FRA acknowledges receipt of CHSRA's Revised Annual Work Plan (AWP) on January 23, 2017.

Please see the following feedback below and attached (AWP FY 16 Revised Final _FRA Comments) after review of the revised 2016-2017 AWP:

- In its revisions, CHSRA attempts to address FRA's review comments by tying the AWP and the Program Management Plan together; in other words, by making them one. FRA understands that everything CHSRA does ultimately ties together. However, the grants' Statements of Work prescribe different contents/subjects for the AWP versus the Program Management Plan; they are two distinctive deliverables/documents with different purposes even though they relate to one another.
- The primary purpose of the Program Management Plan is explaining how CHSRA manages scope, budget, schedule, and risk over the life of the program while the primary purpose of the AWP is explaining what CHSRA is doing this year to stay on target with scope, budget, schedule, and risk.
- The AWP should provide specific milestones or deliverables (even if partial/iterative) CHSRA is going to meet or provide to FRA during the timeframe covered in the document as well as the number of people/resources and costs associated with achieving specific milestones or deliverables. For example, if the Program Management Plan indicates that CHSRA is going to finish a given task in say five years, then the AWP would indicate what CHSRA is doing this

year (expressed by describing the number/type of people involved and/or the cost) to make sure iterative tasks are progressing as necessary to reach project completion at the end of the five years.

In recent years, FRA understood the need to keep the AWP broad given that the period of performance of the grants was fast-approaching. Now that FRA and CHSRA have extended the grants' period of performance, the AWP needs to be specific.

Attached is an example of a good work plan (in a table format) that CHSRA could use as a reference and an FRA mark-up on the Revised AWP (pg 24 – 28, on Task 3). Those comments, while contained to Task 3, offer insight into how FRA viewed each section and the plan as a whole. FRA hopes CHSRA will address those comments in future submissions of the AWP and other annual deliverables/"plans" as a similar thought process was applied to their review.

Please focus on revising Task 3 of the Annual Work Plan to address FRA's review comments as a standalone document for receipt by April 21st. As previously shared with CHSRA on January 18, 2017 keeping in mind that one of the primary benefits of a good AWP is allowing FRA to know what is "coming down the pipeline." One piece of feedback CHSRA provides on an ongoing basis to FRA is that CHSRA appreciates quick reviews/turnarounds; thus, letting FRA know what specifically is coming well in advance in the form of the AWP would help FRA better address this valuable feedback.

Thank you,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

From: Malone, Desiree@HSR [mailto:Desiree.Malone@hsr.ca.gov]
Sent: Monday, January 23, 2017 2:17 PM
To: Barnes, Juliana (FRA) <juliana.barnes@dot.gov>
Cc: Gilliland, Barbara(PB)@HSR <barbara.gilliland@hsr.ca.gov>; mlrule@transystems.com; Everett,
Lynn (FRA) <lynn.everett@dot.gov>; rlzimmerer@transystems.com; Malone, Desiree@HSR
<Desiree.Malone@hsr.ca.gov>
Subject: RE: Initial Feedback: Q4-16 Deliverables

Hi Juliana,

The Authority acknowledges your comments and is revising the documents provided by the FRA.

This email returns a revised AWP for FRA comment purposes.

Please note that an extension to the Feb. 2 due date has been requested for the FCS/CONOPs due to being unable to discuss the document today as planned.

A revised CVPFP is in process and I will keep you informed on its status for timeliness to the revision due date of Feb 2.

Thank you - Desi

From: Barnes, Juliana (FRA) [mailto:juliana.barnes@dot.gov]
Sent: Wednesday, January 18, 2017 1:22 PM
To: Malone, Desiree@HSR
Cc: Gilliand, Barbara(PB)@HSR; mlrule@transystems.com; Everett, Lynn (FRA); rlzimmerer@transystems.com
Subject: Initial Feedback: Q4-16 Deliverables

Hi Desi,

FRA acknowledges receipt of the following deliverables transmitted on Dec 29, 2016:

- FCS Utilization Plan/CONOPs
- Annual Work Plan (AWP)
- Central Valley Financial Plan (CVFP)
- Phase 1 Program Financial Plan
- Program Management Plan
- CP 4 Baseline Schedule
- Q4_16 Exhibit A Update

An initial review was conducted of the following submittals in the three attached documents: (1) FCS Utilization Plan/CONOPS, (2) Annual Work Plan, and (3) CV Financial Plan which contain initial comments. Please note FRA is returning those deliverables after initial review and requests resubmission after addressing the attached FRA initial comments for further development by Feb 2, 2017.

The remainder of the 4th Qtr deliverables are under review and FRA will provide comments prior to the end of the month.

Regards,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466

J0223

Sacramento, CA 95814 Cell: 916-215-9115
 From:
 Malone, Desiree@HSR

 To:
 Barnes, Juliana (FRA)

 Cc:
 Everett, Lynn (FRA); Gilliland, Barbara(PB)@HSR; Giovinazzi, Giles@DOT

 Subject:
 Q3-17 Deliverables

 Date:
 Monday, October 30, 2017 9:14:33 AM

 Attachments:
 CVPFP June 2017.pdf FY17-18 AWP.pdf Q3-17 Deliverables Transmittal.doc

Hi Juliana,

Attached in this email are deliverables due in Q3-17:

- Q3-17 Transmittal #06646
- Task 1: Various Re-exams (links are in the transmittal)
- Task 5: Annual Work Plan and Central Valley Project Financial Plan

Desi Malone Grant Manager California High-Speed Rail Authority 770 L Street, Suite 870 Sacramento, CA 95814 w: (916) 330-5640 c: (916) 291-4121 desiree.malone@hsr.ca.gov www.hsr.ca.gov





Annual Work Plan FY 17/18

November 2017

www.hsr.ca.gov | (916) 324-1541 | info@hsr.ca.gov

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Purpose of the Annual Work Plan

The purpose of the Annual Work Plan (AWP) is to provide insight into the processes the Authority uses to manage the project control system, maintain project schedule and budget, and track deliverables within the coming year. The AWP is prepared annually and provides insight into the Authority's operational planning for the next fiscal year, the staffing necessary to support that work, what challenges are anticipated, what actions the Authority will take to meet those requirements and challenges and a summary of the expected expenditures. This plan covers work budgeted and projected for the Authority's fiscal year from July 1, 2017– June 30, 2018. In general, the AWP will address:

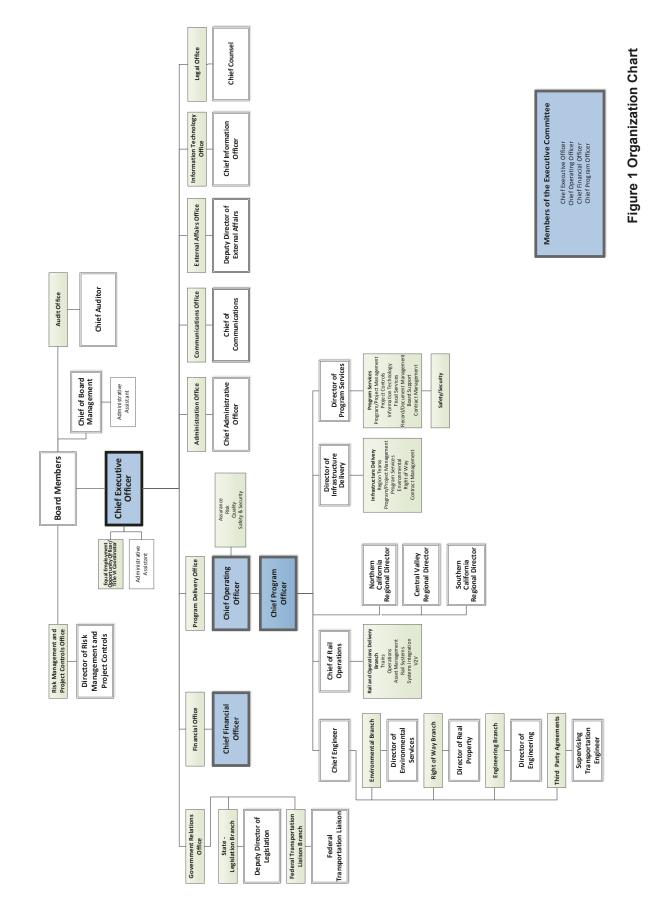
- ≠ How is the Authority going to complete each task?
- ✓ What the Authority will complete this year?
- ✓ How does the work help to progress project completion on schedule and within budget?

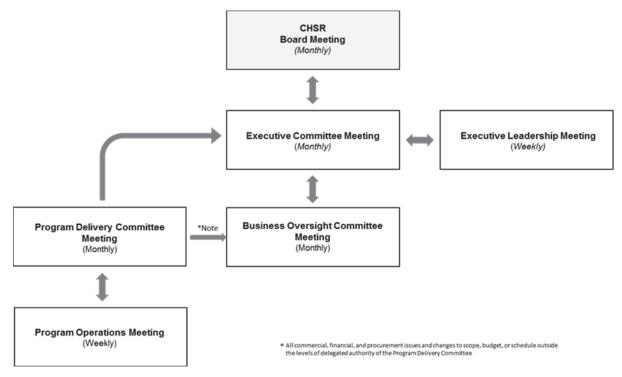
Introduction

On July 10, 2017 Board Chair Dan Richard, announced that the High-Speed Rail Program began implementing organizational changes and process improvements to maintain momentum in constructing the nation's first true high-speed rail system. The Board established Tom Fellenz, as Interim CEO and identified an Executive Committee to act as a core leadership group until a permanent replacement is announced. The Executive Committee consists of Acting CEO Tom Fellenz, Acting Chief Operating Officer (COO) Jon Tapping, Chief Financial Officer (CFO) Russ Fong and Chief Program Officer (CPO) Roy Hill. The Executive Committee will ensure that the organization continues to move forward, establishes a clear sense of roles and responsibilities within the high-speed rail program, and maintains focus on established priorities.

With the Executive Committee in place one of the first actions was a reorganization and a new reporting structure. The attached organization chart provides a high-level overview of that new organization. This change brings an appropriate level of governance and checks and balances for the size and magnitude of the high-speed rail program.

To meet the goals of, and to actualize the benefits of the California High-Speed Rail Program, this updated organization structure is underpinned with key decision-making meetings and committees that integrate the lines and boxes of the organization. They bring governance, structure and informed and timely decision making and provide the necessary reporting, controls and confidence to the Board of Directors, the Federal Railroad Administration, the organization and other partners as the program delivers on the commitments.





The new committees and their interrelationships are outlined in the diagram below.

Figure 2 Executive Management Committees

This organizational change, along with decision-making committees and Executive Committee creates greater clarity around the role of the functional areas and better integrates the workforce as one team.

Additionally, the executive team developed a high-level program prioritization of goals to assure that program components are delivered within approved funding levels and the cash is available to pay for these components. These priorities are based upon meeting the federal grant agreements, pursuing implementation of the 2016 Business Plan and inclusive of executed contract obligations.

Priorities are outlined in three general areas including Planning, Development and Construction and commitments to Bookend Investments directed by the California State Legislature through SB 1029 and authorization of Proposition 1A funding. Priorities are listed in three levels. Priority 1 investments are contract commitments which funding has been appropriated and is available. Priority 2 include those activities remaining that complete the federal grants scope of work that have appropriated funding and either are currently funded or awaiting funding approvals based upon project timing. The final priority 3 activities are those that complete implementation of the Silicon Valley to Central Valley line as envisioned in the 2016 Business Plan. Funds related to these activities are at various levels of appropriation and funding.

Accomplishments

The program has accomplished a great deal since signing the first American Recovery and Reinvestment Act (ARRA) grant in 2010. ARRA funds provided the initial investment necessary to move the program forward and have been used to accomplish significant public benefits, such as:

- \neq Environmental clearance on two project sections.
- Executed contracts with three Design-Build (DB) construction contractors for 119-miles of construction, putting hundreds of laborers and engineers back to work during one of the worst economic downturns in history.
- ✓ Expanded the overall program workforce and encouraged new industry committed to building the nation's first high-speed rail system.

The significant investment of federal funding through ARRA has enabled the Authority to resolve lawsuits and establish sustained, on-going state funding to continue the work that has begun. This Annual Work Plan (AWP) represents the first full fiscal year of dedicated state funding toward program implementation.

Annual Work Plan Areas of Focus

The primary goal of this AWP is to inform FRA of how the Authority plans to stay on schedule and budget. The following four areas are the largest drivers of the schedule and budget in the coming year and will therefore be the primary focus of the AWP:

- ≠ Environmental documentation
- ≠ Preliminary engineering completion
- ✓ Other related work
- ≠ Right of way acquisition
- ≠ Construction

In addition, the Authority will complete its fourth business plan in this fiscal year. The planning process provides an opportunity to update supporting information such as ridership and operational implementation and funding that is of interest to the FRA.

Anticipated Expenditures

The Authority anticipates spending in the following areas over the next year. With the completion of ARRA federal spending this last fiscal year, all funding during the next fiscal year will be from Proposition 1A and Cap-and-Trade revenues and local match.

Task	k Description	
Task 1	Environmental Documentation	\$ 166,719
Task 2	Preliminary Engineering	\$ 76,525
Task 3	Other Related Work	\$ 88,986
Task 4	SWCAP	Complete
Task 5	Program, Project, and FCS Construction Management	\$ 84,837
Task 6	Real Property Acquisition and Environmental Mitigation	\$ 213,309
Task 7	Early Works	N/A
Task 8	FCS Final Design and Construction	\$ 1,408,618
Task 9	Interim Use Project Reserves	0
Total		\$ 2,038,994

Table 1 Projected FY 17/18 Expenditures*

*Funding Contribution Plan June 30, 2017

The Authority anticipates spending nearly \$350 million on project development activities, primarily toward the completion of environmental documents, preliminary engineering to support environmental review, and station area planning.

In addition, it is anticipated that nearly \$2 billion will be expended in support of continued construction in the Central Valley. The next fiscal year will see a significant increase in construction throughout the entire 119 miles of the Central Valley first construction segment.

Plan Outline

Each chapter of this AWP will include:

- 1. General overview
- 2. Deliverables to be completed
- 3. Staffing organization dedicated to completing the work
- 4. Program challenges and current mitigation strategies
- 5. Priorities and actions for the coming year
- 6. Projected expenditures summary

Each chapter is designed to outline the, "work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement, and tracking of deliverables so that implementation of the project stays on schedule and within budget."

Environmental Review

Introduction

The environmental team is responsible for outlining a strategy, and coordinating the activities required for environmentally clearing and obtaining the necessary permits required for building and operating the high-speed rail system. At present, the Authority is preparing eight project-level environmental documents for Phase 1 of the system that will extend 500 miles from San Francisco south to Los Angeles/Anaheim. As part of this effort, the team provides support in three primary areas: environmental planning, permitting and mitigation, and environmental compliance and reporting.

In general, environmental planning includes developing the Authority's approach and strategy for environmental NOD/ROD approvals; providing technical direction to the regional consultant teams for preparing the Environmental Impact Reports/ Environmental Impact Statements (EIR/EIS) and related environmental documents; and conducting technical, quality, and consistency reviews of documents.

For permitting and mitigation, the team works with FRA and federal and state resource agencies responsible for reviewing the Authority's environmental documents and providing necessary approvals and/or permits, permit amendments, mitigation negotiations and corrective actions for permit violations. The team also provides strategic and technical direction to the regional consultant teams for preparing permit applications and obtaining permit approvals.

Environmental compliance and reporting includes monitoring and reporting compliance with permits and agreements as well as required biological mitigation related to project construction. This area is described in greater detail in Task 6 – Real Property Acquisition and Environmental Mitigation.

All three areas of activity require the Authority to comply with requirements under the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), Section 4(f) of the Department of Transportation (49 U.S.C. 303), and other applicable federal and state environmental laws and regulations.

Review of Grant Required Deliverables

The grant agreement requires the Authority to make steady progress in completing its environmental documents, obtaining needed permits and approvals from federal and state resources agencies, and for monitoring environmental compliance during project construction. During fiscal year 2016/2017, the Authority continued work preparing environmental documents and obtaining permits in all project sections. Administrative draft milestones were achieved for the Central Valley Way and the Bakersfield Locally Generated Alternative supplemental documents. Key accomplishments for the past year included:

 San Francisco to San Jose – Supported Caltrain and its effort to obtain federal funding approval of its electrification project. Authority activities in this corridor included project scoping, beginning environmental analysis and community engagement.

- San Jose to Merced Continued to conduct community outreach and engineering along the corridor. The Authority and FRA also consulted with environmental regulatory agencies, landowning state and federal agencies and stakeholders. This additional outreach led to the development of new design options in the Monterey Corridor, Morgan Hill and Gilroy and Pacheco Pass subsections.
- Merced to Fresno Central Valley Wye Authority and FRA worked to prepare a Draft Supplemental Draft Environmental Impact Report/ Environmental Impact Statement (EIR/EIS). In January 2017, the Authority's Board of Directors concurred with the staff's recommendation to identify the Road 11 to State Route 152 alternative as the preferred alternative in the Draft Supplemental EIR/EIS.
- Fresno to Bakersfield The Authority continued collaboration with the City of Bakersfield and other stakeholders to identify an alternative alignment through downtown Bakersfield.
 Following support from the city, the Authority's Board of Directors in May 2016 concurred with the staff's recommendation to identify the Locally Generated Alternative and F Street Station as the preferred alternative in a Draft Supplemental EIR/EIS.
- Bakersfield to Palmdale Conducted preliminary geotechnical drilling and a substantial amount of environmental field work and data gathering. Extensive public outreach to refine alignment alternatives through meetings with the US Department of Defense, Bureau of Land Management, Kern County, the cities of Tehachapi, Lancaster, and Palmdale, environmental groups such as the Pacific Crest Trail Association, the Chavez Center, and resource agencies.
- Palmdale to Burbank Conducted, in cooperation of the US Forest Service, geotechnical work in the Angeles National Forest investigating rock quality and tunnel depth to optimize the tunnel alignments while minimizing impacts. Conducted extensive public outreach and meetings with local jurisdictions, resource agencies and the general public.
- Burbank to Los Angeles Continued preliminary engineering and environmental studies on alternatives that focus utilizing as much existing railroad right-of-way, adjacent to the Los Angeles River and through the cities of Burbank, Glendale, and Los Angeles and terminating at Los Angeles Union Station. Coordinated with Los Angeles Metro and conducted extensive public outreach by holding several public workshops to discuss proposals for enhancing safety at six current grade crossings.
- Los Angeles to Anaheim Continued design and environmental work in close cooperation with Los Angeles Metro, individual corridor cities, the Gateway Cities Council of Governments, the Orange County Transportation Authority, LOSSAN Joint Powers Authority, Metrolink, BNSF, Amtrak and others to refine two study alternatives.
- In addition to these activities, the Authority completed environmental re-examinations as needed and monitoring environmental compliance for construction underway between Madera and Kern Counties.

Deliverables for FY 17/18

Building on the work already accomplished, the Authority tracks targeted completion of several major environmental milestones monthly. The milestones are in three primary areas and summarized in the tables below:

- ≠ NEPA Project-Level Documents
- ✓ Construction-Related Environmental Re-Examinations
- ≠ Permitting

The tables also identify the projected date of completion for each deliverable by project section. The dates are preliminary and are subject to change based upon completion of NEPA Assignment discussions and/or additional FRA input.

Section		Publish & Circulate Draft Environmental Document	Publish Final Environmental / FRA ROD	Obtain FRA ROD
San Francisco to San Jose		Jan-19	Jan-20	Jan-20
San Jose to Merced		Oct-18	Oct-19	Oct-19
Central Valley Wye		Mar-18	Mar-19	Mar-19
Fresno to Bakersfield Locally Generated Alternative		Oct-17	Oct-18	Oct-18
Bakersfield to Palmdale		Jun-18	Jun-19	Jun-19
Palmdale to Burbank		Oct-18	Jan-20	Jan-20
Burbank to Los Angeles		May-18	Feb-19	Feb-19
Los Angeles to Anaheim		May-18	Mar-19	Mar-19
Table Legend	Due this FY			

*Dates above confirmed as of October 4, 2017

Table 3 Permitting Deliverables

Section	Application/Decision	Obtain Biological Opinion	Obtain Section 106 Report	Obtain Section 401 Water Quality Certification	Obtain Section 404 Permit	Obtain Section 408 Permit	Obtain CDFW 1602 Permit	Obtain CDFW 2801 Permit
San Francisco to San Jose	Application	Feb 17	Jun 18	Dec 18	Dec 18	TBD	Dec 18	Dec 18
	Decision	Jan 20	Dec 19	Jan 20	Dec 19	TBD	Jan 20	Jan 20
San Jose to Merced	Application	Sep 17	Apr 18	Aug 18	Aug 18	TBD	Aug 18	Aug 18
	Decision	Sep 18	Sep 19	Oct 19	Sep 19	TBD	Oct 19	Oct 19
Central Valley Wye	Application	Jun 17	Oct 16	Nov 18	Nov 18	May 16	Oct 18	Dec 17
	Decision	Dec 17	Feb 19	Feb 19	Feb 19	Nov 16	Jan 19	Jan 19
Fresno to Bakersfield Locally Generated Alternative	Application	Jul 15	Nov 16	Jan 17	Dec 16	N/A	Jan 17	Jan 17
	Decision	Jun 17	Sep 18	Aug 18	Aug 18	N/A	Aug 18	Aug 18
Bakersfield to	Application	Dec 17	Dec 16	Jun 19	Aug 18	N/A	Jan 17	Apr 16
Palmdale	Decision	Jun 18	May 19	Nov 19	Dec 19	N/A	Jun 19	Jun 19
Palmdale to Burbank	Application	Jun 15	Feb 18	Jan 20	Jan 20	Jan 20	Jan 20	May 18
	Decision	Nov 17	Dec 19	Mar 20	May 20	Feb 20	Mar 20	Apr 19
Burbank to Los	Application	Dec 17	Jun 17	Feb 18	Jul 18	TBD	Jan 18	Dec 17
Angeles	Decision	Jan 19	Jan 19	Mar 19	Mar 19	TBD	Jan 19	Jan 19
Los Angeles to	Application	Jun 17	Oct 16	Mar 18	Jul 18	TBD	Feb 18	Nov 17
Anaheim	Decision	Jan 19	Feb 19	Mar 19	Mar 19	TBD	Jan 19	Jan 19
Table Legend	Due this FY							

NEPA Assignment

In addition to the deliverables listed above, the State of California has formally requested assignment of the FRA's responsibility under NEPA and other federal environmental laws to transfer to the California High-Speed Rail Authority for the California High-Speed Rail Program. The NEPA Assignment will provide for a more-efficient and expedient environmental review process reducing delays to the delivery of the high-speed rail program, and allow the Authority to build stronger relationships with local stakeholders, state partners, and federal agencies. In addition, it enables the Authority to manage both the NEPA and CEQA processes in their entireties, finding efficiencies where possible to complete the process faster without diminishing the rigor or the environmental analysis or the opportunities for the public to meaningfully engage with the Program.

Geotechnical Investigation

For geotechnical work, the Authority will continue the preparation of an (IS/MND) under the California Environmental Quality Act (CEQA) and an EA/FONSI under NEPA for three subsections (i.e., San Jose to Pacheco Pass, Pacheco Pass, and San Joaquin Valley [to Carlucci Road]) for the San Jose to Merced Project Section. The environmental analysis will include evaluation of up to 300 bore locations. The IS/MND and EA/FONSI documentation will be prepared pursuant to the Authority's lead agency role under CEQA and the FRA's lead agency role under NEPA.

Staffing

The environmental team is responsible for coordinating the activities required to environmentally clear and permit the high-speed rail projects to begin construction. They provide guidance on environmental strategies for project clearance, programmatic methodologies and assumptions to meet environmental commitments. The team directs permit activities and provides strategic guidance on permit approaches. In addition, the environmental team provides strategic guidance on the environmental approval process and serves as the liaison with the FRA, the attorney general's office and other federal, state, regional and local agencies, the regional consultants and environmental and engineering consultants, and other environmental consulting firms on environmental work products.

The environmental team also guides the regional consultants and the environmental and engineering consultants, and coordinates with them and other environmental consultants in preparing the environmental studies, documents and subsequent environmental approvals required for implementing high-speed rail construction and operation. The environmental team follows the quality procedures and reviews proposed environmental approach revisions and environmental deliverables submitted by the regional consultants, the environmental and engineering consultants and environmental teams.

For Fiscal Year 17/18, the Authority's environmental program is staffed by 60 full- or part-time individuals with working knowledge of NEPA, CEQA, environmental permitting, mitigation, and compliance. Many of the staff possess bachelor or graduate degrees in transportation, air quality, noise and vibration, biology, hydrology, geology, economics, sociology, architectural history, archaeology, environmental studies, and planning.

Regional Consultants

Provided below is a table that identifies the prime environmental consultants under contract to the Authority for preparing the eight Phase 1 environmental documents.

High-Speed Rail Section	Prime Consultant	Primary Environmental Sub- consultant
San Francisco to San Jose	HNTB Corporation	ICF International
San Jose to Merced	HNTB Corporation	ICF International
Merced to Fresno, Central Valley Wye	Parsons Transportation	ICF International
Fresno to Bakersfield, Locally Generated Alternative	T.Y. Lin International	LSA Associates
Bakersfield to Palmdale	T.Y. Lin International	LSA Associates
Palmdale to Burbank	Sener Engineering	Circlepoint
Burbank to Los Angeles	STV Incorporated	STV Incorporated
Los Angeles to Anaheim	STV Incorporated	STV Incorporated

Table 4 Project Sections, Prime Consultants and Environmental Sub-consultants

The contracts are managed by a project section manager supported by environmental and engineering mangers supporting each region. The Authority also uses specialized assistance from several other consulting firms. This includes Ascent Environmental for evaluating electrical interconnections and utility network upgrades needed for providing power to the high-speed rail system; Letterly Environmental and Land Planning Management for managing environmental permitting activities in the Authority's Los Angeles regional office; and SC Wildlands for identifying and evaluating the size, design, and placement of wildlife crossings along the high-speed rail system.

Key Challenges and Mitigation

The Authority has identified five key challenges across the program. These include:

- 1. The efficiency of environmental reviews and permitting;
- 2. Costly processes;
- 3. Delayed or premature decisions;
- 4. Early risk identification and mitigation, and;
- 5. Engaging effectively with key stakeholders.

To address these challenges, the Authority has identified and is implementing several mitigation measures.

- 1) Improve the efficiency of environmental reviews and permitting:
 - a) Moving permitting earlier into the document process to achieve permits within 90 days of ROD.
 - b) Implemented and hosting monthly agency meetings by region.
 - c) Focusing reviews that match purviews of cooperating agencies.

- d) Conducted environmental program-wide quality workshops.
- e) Implemented use of quality checklists.
- f) Issued memo on NEPA significance.
- g) Narrowing the number of reviewers per document.
- h) Sharing best practices across the program.
- 2) Conduct a less costly process while promoting better project outcomes:
 - a) Continue developing programmatic guidance to communicate best practices, achieve consistency and minimize efforts across the eight documents.
 - b) Tailor the environmental process to the significance of impacts.
 - c) Develop "end to end" alternatives.
 - d) Refine impact avoidance and minimization features and mitigation measures for use across the program.
 - e) Availing process of FAST Act efficiencies.
- 3) Make informed, timely decisions that stick:
 - a) Utilize the weekly Executive Leadership meetings to clarify decisions programmatically as well as by project section.
 - b) Hold cross-disciplinary meetings to communicate needs and actions.
- 4) Identify and mitigate risks:
 - a) Convene program-wide monthly meetings with the Executive Management.
 - b) Augment these meetings with monthly regional team meetings.
 - c) Elevated these discussions to the weekly Executive Leadership team for action.
- 5) Engage effectively with key stakeholders:
 - a) Implement recently adopted guidance on stakeholder outreach for the upcoming Draft EIR/EISs circulation.
 - b) Held training on environmental justice, Americans with Disability Act and Limited English Proficiency.
 - c) Conducted Section 508 compliance training.
 - d) Using input to identify and refine an appropriate range of alternatives.

In addition, the following specific risks and proposed mitigations are also being addressed.

Section	Risk Title	Risk Description	Trigger Phase
Programmatic	Delay to review times of environmental documents, technical reports and permit applications because of inadequate staffing/resources in local, state and federal resource agencies.	Insufficient staffing / resource levels in local, state and federal resource agencies to support HSR program; and changes in law/standards, especially with regard to the FRA and the fact that no HSR system has been implemented in the U.S. This would increase costs and/or schedule for the project. Also, FRA is short staffed which also delays environmental activities.	Draft EIR/EIS
	Delay or increase costs to the HSR program because of non- compliance with mitigation and permitting commitments.	The language in DB contract documents is not specific regarding performance standards and enforcement of requirements has been insufficient. DB contractors performance could affect Authority's reputation with regulatory agencies and may delay permitting activities in other sections. Lack of compliance could result in a regulatory agency issuing a stop consultation and work order on the project.	Construction
	NEPA Litigation	Community groups may litigate the NEPA process and the ROD. Schedule impact while litigation is settled. Unplanned legal costs.	Draft EIR/EIS
San Francisco to San Jose	USACE Permit	USACE may require an Individual Permit for compliance with CWA Section 404 instead of a Nationwide 14 permit, which could delay ROD. An Individual Permit will trigger Checkpoint process required by the NEPA/404/408 Integration MOU. This could impact schedule ROD schedule.	Draft EIR/EIS
San Jose to Merced	Other Project Interference	Other projects (planned, planned/unfunded, or unplanned) may influence and/or change HSR project footprint and/or design. Requires re-work of plan and could negatively impact construction if occurrence if downstream.	
Bakersfield to Palmdale	Project footprint changes due to Chavez Center, causing delay and project cost increases.	Chavez Center may require the alignment to be pushed and therefore change the project footprint, which will cause delay and increase project cost.	
Palmdale to Burbank	Potential schedule delays due to predictive modelling for Section 7/Biological Resources.	Risk to schedule if Agencies cannot agree on predictive model for each species. Risk to schedule and budget if field surveys are needed for certain species (e.g. plant species).	Record of Decision

Table 5 Environmental Task Top Risks for RY 17/18

	Lack of consensus on groundwater effects/surface resources may delay Checkpoint C and Forest Service approval.	Inability to reach consensus with agencies on potential effects on groundwater. Disagreements or prolonged negotiations may delay Draft Environmental Document.	Record of Decision
Burbank to Los Angeles	Future Development ROW Impact Delays	The risk of not obtaining environmental clearances prior to other developments coming in first (e.g. Fullerton Station) could result in significant delays and cost impacts in ROW acquisition and significant delays in design development and associated construction costs due to redesign.	PE4P

For project level documentation, efforts to fully implement the previously described mitigation measures will be a key priority. Successful adoption of NEPA Assignment early in 2018 will help the Authority manage both the NEPA and CEQA processes and accelerate the completion of the remaining project-level documents. This will be in accordance with meeting FRA's expectations for environmental analysis and document quality.

Additionally, the Authority has implemented a new organizational approach to clarify roles and responsibilities between regional and headquarters staff. This approach provides regional Authority staff more flexibility in managing day-to-day environmental work through the regional consultant teams. Headquarters will continue to conduct technical and quality reviews of documents prior to submittal to FRA for review and comment.

Established Priorities for FY 17/18

Over the next year, the Authority will accomplish the following:

- ✓ Obtain approval from the FRA of its oversight and review responsibilities under NEPA and other federal environmental laws.
- ≠ Circulate the Fresno to Bakersfield Locally Generated Alternative Supplemental EIR/EIS.
- ≠ Circulate the Merced to Fresno Central Valley Wye Draft Supplemental EIR/EIS.
- ≠ Circulate the San Jose to Merced Section Draft EIR/EIS.
- Identify a preliminary preferred alternative for the San Francisco to San Jose, Bakersfield to Palmdale, Palmdale to Burbank, Burbank to Los Angeles, and Los Angeles to Fresno sections.
- Complete initial versions of the Administrative Draft EIR/EIS for San Francisco to San Jose, Bakersfield to Palmdale, Palmdale to Burbank, Burbank to Los Angeles, and Los Angeles to Fresno sections.
- ✓ Continue to process environmental re-examinations and conduct compliance monitoring for project-related construction activities between Madera and Kern counties.

Project-Level Documentation

The Authority will continue preparation of the eight project-level EIR/EIS documents required to evaluate and environmentally clear the Phase 1 project between San Francisco and Los Angeles/Anaheim.

Actions

- Provide environmental support to project elements necessary to support construction procurements outside of the EIR/EIS, such as clearing the geotechnical investigation program for the Pacheco Pass.
- Develop guidance on outreach for the final EIRs/EISs, which is a companion piece to the guidance on outreach for the draft EIRs/EISs, which is critical for achieving stakeholder engagement and meeting federal and state regulatory requirements.

Permitting

The Authority will continue to facilitate the NEPA/Section 404 Integration Process between the Authority, FRA, US Army Corps of Engineers and US Environmental Protection Agency that will result in the identification of a preliminary least environmentally damaging practicable alternative (LEDPA) for obtaining a Clean Water Act Section 404 permit for project construction. Also, the Authority will continue to facilitate Section 7 consultation under the federal Endangered Species Act with the US Fish and Wildlife Service and National Marine Fisheries Service to obtain a Biological Opinion and an Incidental Take Statement to allow project construction.

Actions

- Manage, monitor and support environmental re-evaluations and permitting amendments to support Phase 1 program delivery.
- Prepare Authority-initiated environmental re-examinations and permitting amendments, as needed to advance construction.
- Monitor and report compliance with permits and agreements, and identify corrective actions for implementation, as appropriate, reflecting lessons learned in the DB delivery process.
- Manage, monitor and support environmental permitting amendments to reflect changes that occur in the field leading to and during construction.
- ✓ Prepare Authority-initiated environmental permitting amendments, as needed, to support construction.
- Implement environmental permitting process improvements identified in 2016 by defining ways to help facilitate delivery of permits within 90 days of the FRA's Record of Decision (level of design permitting) to expedite construction.
- Provide support to the Authority, project construction manager and DB contractor in their respective responsibilities for obtaining necessary environmental permits and permit amendments.

Coordination

The Authority will continue to coordinate, collaborate, and communicate among the Authority's team managers/directors and the FRA to provide integrated project delivery from strategy, early planning phases through project delivery. This includes development of strategic approaches and programmatic tools (agreements/plans, methodologies) to support delivery of project sections and support consistency among the sections.

- With the Authority's leadership, work to place and maintain the Phase 1 high-speed rail projects (and their components) on the Federal Permitting Dashboard, which helps enforce accountability for delivering on schedule.
- ✓ In relationship with the item above, coordinate public schedules for environmental reviews and permitting with the FRA and affected agencies for posting to the Federal Dashboard.
- Conduct monthly meetings with resource and regulatory agencies to maintain progress on environmental clearances with more frequent resource-specific meetings held, as needed, that improve stakeholder engagement and facilitate use of the Federal Dashboard.
- ✓ Provide monthly progress updates, including those needed for the Authority's Finance and Audit Committee, change control committee, program management and risk register.
- Work with the Authority, FRA and legal counsel to update the guidance for establishing and maintaining the administrative record for the environmental clearance process, which is critical to maintaining construction while any litigation may be underway.
- Support Authority Government Affairs team with legislative analysis on proposed bills introduced in the California Legislature so the Authority can weigh in on likely program effects should these bills become laws.

Task Budget

The table below summarizes the projected expenditures as outlined in the Q2-17 Funding Contribution Plan.

Table 6 Summary Budget Task 1

Description	Task Number	FY17/18 Projected Expenditures
Regional Consultant Project Management	1.1	\$ 26,326,780
Regional Consultant Public/Agency Participation	1.2	\$ 4,230,510
Alternatives Analysis	1.3	\$ 404,541
EIR/EIS Analysis	1.4	\$ 9,355,597
Draft and Final EIR/EIS	1.5	\$ 12,371,240
Certification of EIR/EIS and ROD	1.6	\$ 7,436,765
Program Management	1.7	\$ 15,476,022
Non-federal Resource and Other Agencies for Environmental Review	1.8	\$ 91,117,938
Total		\$166,719,393

*Data based on June 30, 2017 Funding Contribution Plan forecast

Preliminary Engineering

Introduction

The Authority follows a standard design development process for each segment. Work has focused on the development of design standards, development of preliminary engineering to support environmental documentation and contract procurement and review of contractor submittals and requests for design variances and/or alternative technical concepts. The phases include:

- Preliminary Engineering Provides ongoing oversight of regional consultant-developed plans for design consistency across the system.
- Preliminary Engineering for Project Development (PE4PD) Design Supports draft and final EIR/EIS alternatives, provides an itemized construction cost estimate and conforms with all requirements and commitments included in decision documents (FRA ROD; Authority Board Resolution, CEQA findings, and Mitigation Monitoring and Report Plan).

During this fiscal year, the design manual will be updated to include elements of design for stations as well as more refined criteria related to tunneling. Engineering staff also support the review of various DB contractor proposals related to design refinements and/or variations. This work includes: final design submittal review, design variance requests, constructability reviews, and value engineering.

Deliverable/Section	Schedule from FY 16/17	FY 17/18 Update*
PE to Support Environmental Review	·	
San Francisco – San Jose	1st Qtr 2017	1 st Qtr 2019
San Jose – Merced	2nd Qtr 2017	4 th Qtr 2018
Bakersfield – Palmdale	2nd Qtr 2017	2 nd Qtr 2018
Palmdale – Burbank	2nd Qtr 2017	4 th Qtr 2018
Supplemental Documents		
Bakersfield F Street	4th Qtr 2016	4 th Qtr 2017
Central Valley Wye	1st Qtr 2017	1 st Qtr 2018
Other Deliverables		
Design Manual Update	4th Qtr 2016	4th Qtr 2017
CONOPS for the FCS and any other operating segments	4th Qtr 2016 (update)	Complete (next update 4 th Qtr 2018)
Rolling Stock Performance Specifications	3rd Qtr 2016	Complete
System Safety and Security Management Plan (SSMP)	3rd Qtr 2016	Complete

Review of Grant Required Deliverables

*Updates based upon revised environmental schedule. PEPD for Environmental to be delivered with Draft EIR/EIS

Deliverables for FY 17/18

Deliverable/Section	FY 17/18
Burbank – Los Angeles	2 nd Qtr 2018
Los Angeles – Anaheim	2 nd Qtr 2018

Deliverable: PE to Support Environmental Review

The dates above are based upon a revised environmental schedule developed jointly with FRA. Draft PEPD submittals for all but three sections are anticipated to be completed within the next FY as noted above.

Deliverable: Design Manual Update

Design Criteria was developed for the Central Valley and supported the procurement of three DB contracts, Construction Packages (CP) 1, 2-3 and 4 in a low seismic region. With the 2016 Business Plan decision to implement a Silicon Valley to Central Valley operable segment and new procurements extending into a higher seismic region with more variable ground conditions and complex structures including long span high-speed rail viaducts and tunneling, design criteria continues to evolve and needed to be updated to incorporate new sections, lessons learned and a re-write of several key sections in the Design Criteria Manual.

Staffing

Planning and conceptual design supports the development of alternatives to be evaluated during the environmental review. Design development is based on the performance criteria contained in the legislation governing the high-speed rail program, and outlined in the business plan. The chief engineer provides direction and oversight of preliminary engineering policy and guidance for the development of plans associated with alignment development for environmental clearance documents. The plans are prepared in each region by regional consultants managed by the regional directors. The team consists of primarily RDP staff that prepares standards and oversees plans prepared both by regional consultants in the environmental phase and DB teams for preparation of final design in compliance with the Authority's criteria and standards. RDP management roles cover the following engineering areas and include engineering points of contact assigned to the CP teams in Fresno:

- ≠ Technical Director
- ≠ Infrastructure Manager
- ≠ Structures Manager
- ≠ Geotechnical Manager
- ≠ Tunneling Manager
- ≠ Underground Structures and Seismic Manager
- ≠ Civil/Drainage/Utilities Manager

Sacramento staff provide programmatic support to the field including interpretation of technical requirements, responses to contractor's design related RFIs, review and recommendation of design

variances, preparation of due diligence reviews of contractor's design submittals at a programmatic level and issuance of design directives. Field engineering staff in the Project and Construction Management (PCM) teams are primarily responsible for project level requirements and adherence to local conditions.

In addition, the preliminary engineering task is supported by the various regional consultants and environmental and engineering consultants identified in the environmental task. The consultants develop the designs that support the environmental review process.

Key Challenges and Mitigation

The authority has identified three primary key challenges:

- ∠ A key challenge is developing less prescriptive requirements that allow for more performance based criteria and encourages innovation.
- ≠ Tunnel requirements for ventilation facilities add significant costs to tunnel sections.
- ✓ Developing new seismic criteria to cover the unique challenges of a high-speed rail system built in the higher seismic regions of California.

To address these technical challenges, the Authority has identified several staffing enhancements to bring a broader perspective to these issues. These have included:

- Recruiting and retaining key staff with experience in development of complex and highly technical projects with experience in the development of performance based criteria.
- ≠ Expanding engagement of engineering staff across multiple office locations. Efforts are being made to:
 - Communicate regularly with all engineering staff on Authority program issues.
 - \circ $\;$ Identification of workshops to address issues and develop common objectives.

The Authority's organizational approach ensures that the staff roles and responsibilities are well defined. In addition, the establishment of various committees has allowed for greater participation and development of recommendations to ensure broad identification of solutions and a clearer narrowing of recommendations. For example, a Tunnel Steering Committee guides the evaluation of associated risks and hazards. Infrastructure Engineering provides technical experts to support steering committee.¹ Infrastructure Engineering also interfaces quarterly with a Technical Advisory Panel and a Seismic Advisory Panel on a bi-yearly basis. Both panels include technical experts in multiple fields that provide feedback and input to the development of Authority design criteria and other requirements.

¹ A final report will document the findings and recommendations of the steering committee and enable an informed decision by the State Fire Marshall and other stakeholders.

The following table outlines the key risks by project section and the mitigation strategies to address those risks.

Section	Risk Title	Risk Description	Trigger Phase
San Francisco to San Jose	Project Definition related to passing tracks and maintenance facility.	Narrowing down of the project definition issues in a timely manner is critical to ROD schedule: i) ii) Passing Tracks; iii) Maintenance Facility	Initial Preferred Alternative
San Jose to Merced	Project Definition	 Narrowing down of the project definition issues in a timely manner is critical to ROD schedule: 1. Diridon Station 2. Monterey Highway cut and cover tunnel 	Initial Preferred Alternative
Palmdale to Burbank	Difficulty in meeting a reasonable construction schedule due to long length of tunnel through ANF and not having intermediate access.	Risk is not having approved/permitted intermediate access to satisfy practical construction program. Adit locations are being cleared in environmental document that would provide for construction access and not preclude for use as mid-tunnel ventilation shafts, if required.	PE4P
Palmdale to Burbank	Difficulty in clearing a below-grade cut and cover Burbank station in an active EPA Super Fund site	Uncertainty in addressing mitigations and cost to address below grade station location in Super Fund site. Site is currently undergoing groundwater treatment. Construction may interfere with ongoing ground water treatment. Need to identify hazardous materials site. May require EPA to open its ROD. EPA has to sign off on station location.	PE4P
Los Angeles to Anaheim	Uncertainties in reaching concurrence with Railroads (UPRR and Metro/Metrolink) and City of LA may cause delay	The risk could result in changes to alignment /station changes and significant re-survey and re-design work, increase in ROW, change in railroad operation requirements. Possible expansion outside environmental footprint is also an issue.	Final Design
Los Angeles to Anaheim	Unable to finalize design assumptions for corridor in a timely manner could delay project section ROD.	Delays in finalizing decisions regarding alternatives within shared track segment with BNSF would delay environmental clearance process.	Record of Decision

Table 7 Key Risks by Project Section

Examples of mitigation currently being evaluated the address these specific issues include:

Mitigation

1. Development of service plans and ongoing negotiations with Caltrain to eliminate passing tracks.

- Resolution of key issues at Diridon Station require ongoing discussion and negotiation with key stakeholders including City of San Jose and Google. Station may be a phased development approach over time; may need to isolate environmental clearance of Diridon Station.
- 3. Intermediate access to Palmdale to Burbank section is proposed from possible adit locations inside private holdings in the ANF.
- 4. Mitigation of high groundwater pressure and inflows into tunnel requires additional geotechnical investigations and innovative construction methods.
- 5. Discussion with EPA on Super Fund site to identify constraints and identify process for environmental clearance of Burbank station.
- 6. Regional staff are in active discussions with BNSF to approve a 2 plus 2 alternatives for LA to Anaheim section. Working with BNSF to validate corridor capacity.
- 7. Ongoing discussions and negotiation with other operators in LA to Anaheim section.

Established Priorities for FY 17/18

Over the next year, the preliminary engineering task will focus primarily on providing the engineering support for environmental documentation. A focus will be on the completion of preliminary preferred alternative alignments for draft environmental documents.

In addition, the team will continue to provide support to construction staff on evaluation of design proposals to ensure that a consistent high-speed rail design is achieved. Any changes will be documented and updates to design standards will be made as appropriate.

The team will also be updating the design criteria manual. The goal is to update technical standards as previously defined in technical memoranda and to begin to outline the requirements for tunneling construction and operational elements.

Below is a more detailed accounting of some activities that will be conducted over the next fiscal year.

Infrastructure Engineering Support

Staff will continue to support the development of design standards and work with regional consultants and environmental and engineering teams. Work will focus on developing new design criteria for tunnel sections and support the development of preliminary engineering designs to support environmental review.

- Integrate operations and maintenance knowledge and Reliability, Availability and Maintainability (RAM) requirements into infrastructure engineering design requirements and criteria.
- ✓ Support regional management on review of ongoing draft and final PEPD submittals to support establishment of environmental footprints for environmental analysis.
- ✓ Provide support to development of the 2018 Business Plan cost estimate and basis of cost assumptions and differences between 2016 and 2018 Business Plan cost estimates.
- ≠ Provide interface coordination between Infrastructure and Rail/Systems/Operations/Maintenance group.

- ✓ Review and provide comments and recommendations on design variance reports submitted by the regional consultants.
- ✓ Provide technical studies and review in support of ongoing third-party negotiations (e.g., impacts to railroad facilities or right-of-way.

Construction Support

Staff will continue to review construction RFI's and provide independent review of contractor design variations.

Actions

- Participate in partnering, project development team meetings, and other meetings as requested by senior management staff.
- Support the construction team in resolution of technical issues and interpretation of design criteria.
- ≠ Review and provide comments and recommended disposition of design variance reports submitted by the CP contractors.
- Develop RFI responses and design directive memos to PCM managers as required to document change or clarification of design criteria, directive drawings, and other technical requirements.
- ✓ Perform the due diligence review of final design technical submittals for overall conformance with program-wide design criteria and other technical standards.
- ✓ Provide support to PCM teams as requested in negotiation of design cost for construction change orders.

Civil/Structures

This area focuses on the key actions that will be the focus of the civil/structures engineer group for the FY.

- Review PEPD draft and final submittals and provide support to regional teams in developing scope of work for PE4P phase.
- Provide support for review of third-party utilities that may have construction, protection or relocation activities within or affecting the Authority right-of-way.
- ≠ Review submittals for overall compliance with Authority policy, procedure and guidance documents.
- ✓ Update, as needed, the civil/structure-related technical requirements to support preliminary designs and update the technical documents in support of procurement contracts.
- Host and participate in the Technical Advisory Panel quarterly meetings in August and December 2017 and web conferences relative to geotechnical, structure, seismic and tunneling chapters of the Design Criteria Manual.
- ✓ Prepare programmatic technical documents in support of procurement contracts.
- ≠ Develop final civil and structural directive drawings.
- ✓ Support architectural and aesthetic review and input for Type 1 and Type 2 structures and other non-station structural elements subject to aesthetic treatments.
- ✓ Advance general criteria and updates for shared corridor structural criteria dependent on environmental priorities and procurement timelines.

- ✓ Coordinate with track/system teams to clarify the system interface requirements to support preliminary and final designs of infrastructure.
- ✓ Provide infrastructure-related documents as required to support Track and Systems contract procurement.

Geotechnical

The geotechnical team will be focused on support of the environmental documentation and furthering the analysis related to tunneling sections in the north and south sections.

Actions

- ✓ Provide ongoing review and support of early and expanded geotechnical site investigation services in support of preliminary engineering process for geotechnical-related deliverables.
- ✓ Transition geotechnical design criteria into new integrated format, establish interfaces with integration team and complete cross-disciple review with all chapters.
- ≠ Define site response sites and geo-hazard special sites and criteria.
- \neq Advance and develop transition zone criteria.
- Develop and perform a testing program to evaluate the performance of abutment backfill material for high-speed rail viaducts. Work covers the test program, including the review and interpretation of the test program results to develop final design guidelines for seismic performance. Work is to be done by Brigham Young Uniersity in Utah.
- Participate in the Authority's Geotechnical Steering Committee to establish policy and provide support on both a program wide and project basis; provide technical input and recommendations to guide the committee's work.
- ✓ Support completion of remaining subsidence studies undertaken by the United States Geologic Survey and AMEC.
- Review and coordinate the remaining survey (LiDAR, magnetic and gravity survey) prepared by the University of California at San Diego to be completed this year for consideration in geotechnical site exploration.

Tunneling/Tunnel Aerodynamics

This team will focus on the following activities in the coming FY.

- ✓ Provide support on PEPD design of tunneling, including long tunnel segments through areas of high groundwater and high seismicity.
- Monitor the regional consultants in establishing the limits of tunnel sections by evaluating the available geotechnical data to assess proposed tunneling methods and other key factors, such as site access and construction staging.
- ✓ Transition tunnel design criteria into new integrated format, establish interfaces with integration team and complete cross disciple review with all chapters.
- Develop final tunnel directive drawings addressing current tunnel configuration. Coordinate with other disciplines (track, train control systems, communications, traction power, ventilation, etc.) to discuss and to finalize requirements for tunnel directive drawings.
- Support Tunnel Safety Steering Committee on evaluation of tunnel ventilation concepts for applicable tunnel configurations. Coordinate analysis with Office of the State Fire Marshall (OSFM).

Seismic Design, Earthquake Engineering and Modeling

The team will be focused on the development of standards for implementation in seismic active areas of the high-speed rail system.

Actions

- ≠ For purposes of seismic design, clarify infrastructure component classifications across infrastructure design criteria (Chapters 10 through 13).
- Provide analysis of representative standard designs, support other disciplines in addressing technical issues in regions of high seismicity and fault crossings for aerial structures, earth retaining structures, buried structures and tunnels.
- ✓ Manage the seismic specialist team, review and advance fault characterization and fault displacement guidelines.
- Manage the seismic specialist team, review and advance guidelines for development of preliminary and final ground motions in the Central Valley and conduct special studies to develop procedures for ground motion site conditions such as hard rock, near fault, basin effects, etc.
- \neq Support the Authority in preparation for the Seismic Advisory Board workshop in fall of 2017.
- ✓ Advance seismic performance criteria requirements for tall/long span/long continuous viaducts and tunnels as required.
- ✓ Support development of an earthquake warning system.

Task Budget

The following identifies the projected expenditures over the next year to support this effort. Information is summarized from the Q2-17 Funding Contribution Plan.

Table 8 Summary Budget Task 2

Description	Task Number	FY17/18 Projected Expenditures
Regional Consultant PE	2.1	\$52,223,713
Program Management	2.2	\$24,301,756
RDP Engineering	2.3	-
Total		\$76,525,470

*Data based on June 30, 2017 Funding Contribution Plan forecast

Other Related Work Needed to Start of Construction

Introduction

The Authority performs additional work required prior to the start of construction for each section. The areas covered under this task include:

- Station Area Planning Work to support the environmental documentation phase as well as support to local jurisdictions to evaluate land use and access planning around stations.
- Right-of-Way (ROW) Work Work to identify the right of way requirements for environmental evaluation and the development of guidance documents for the right of way acquisition, relocation and management.
- Ridership Forecasting Updates to ridership forecasts to support financial planning and operational development needs related to concessionaire planning.
- ≠ **LAUS/SoCal Investments** Master planning to support future high-speed rail investment.

Review of Grant Required Deliverables

The table below outlines the deliverables anticipated in FY16/17 and provides a FY 17/18 update.

Deliverable	Schedule from FY 16/17	FY 17/18 Update
Station Area Plans	2 nd Qtr 2017	4 th Qtr 2018
ROW Procedures Manual	2 nd Qtr 2017	Complete
ROW Acquisition Plan for the FCS	Quarterly	Provided Quarterly
FCS Contingency Plan (Update)	4 th Qtr 2016	Complete

Additional FY17/18 Deliverables

Deliverable/Section	FY 17/18
ROW Procedures Manual Update	2 nd Qtr 2018
Ridership Forecasting Analysis	2 nd Qtr 2018

Deliverables for FY 17/18

There are three main areas of work within this task for the next fiscal year. The primary activity will be advancing station area planning in identified cities along the Phase 1 alignment. Two additional tasks that will be completed over the next year will include the completion of the ROW Procedures Manual Update (due December 2017) and an update to the ridership forecasting analysis in support of operations and financial planning (due May 2018).

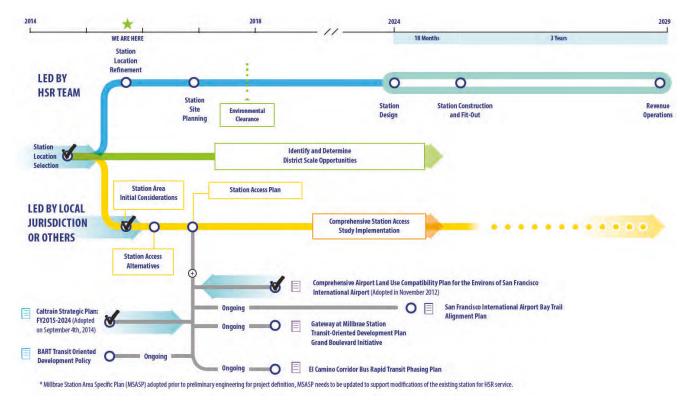
Work will also continue related to right-of-way identification for environmental documentation. This work is included in the environmental task discussed previously. Deliverables are included as part of

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environmental documents as they are published. The schedule for draft and final EIR/EIS publications are outlined in the Environmental Review chapter.

Station Area Planning

Station area planning activities are underway in all identified station cities. All station area planning contracts between the Authority and cities/operators have been executed except for Millbrae, which is anticipated to be executed in late 2017. Creating partnerships with local agencies has been an important and valuable component of the station area planning contracts.



Millbrae Station Area Plan

Figure 3 Millbrae Regulatory Updates and Related Planning Studies

San Jose Station Area Plan

San Jose and the Santa Clara Valley Transportation Authority (VTA) are working with the Authority, Caltrain and BART to develop a vision for the future of Diridon Station. Google recently announced its plans to develop office, retail, commercial and housing centered on the transit hub in partnership with the City of San Jose. They have acquired land and are proceeding with an integrated design approach for the station area that will contribute and complement the future station design. The rail service providers are engaged in dialogue and sharing their individual operating requirements and needs in terms of station facilities. This work has just started, but is expected to result in a unified vision and implementation plan for urban regeneration around the San Jose station that reflects the anticipated changes in ridership from today at less than 20,000 riders a day to over 150,000 riders a day anticipated in 2040.

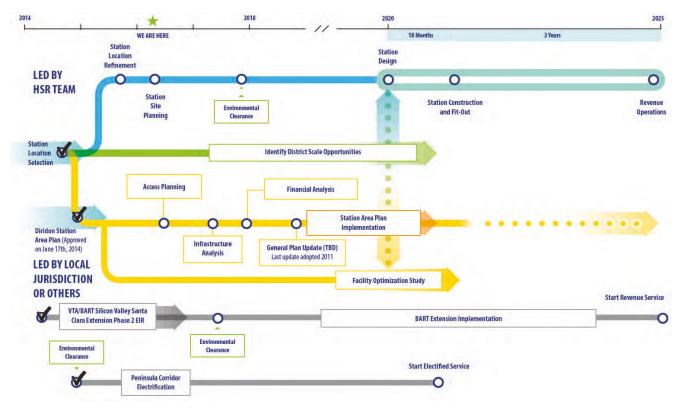


Figure 4 San Jose Regulatory Updates and Related Planning Studies

Gilroy Station Area Plan

The Authority and the City of Gilroy have mutually agreed to put the station area planning work on hold until after the identification of the Preliminary Preferred Alternative for the San Jose to Merced Project Section. The Gilroy City Council has requested a focus on alignment details and impacts evaluation over land use planning for downtown. The work will resume in 2018 to address changes in the Downtown Gilroy Specific Plan and General Plan, and will be completed in late 2019.

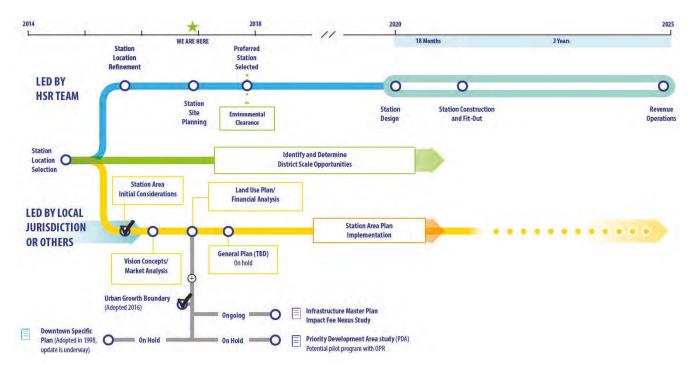


Figure 5 Gilroy Regulatory Updates and Related Planning Studies

Merced Station Area Plan

Merced is working on a Downtown Vision Plan to partner with the University of California, Merced (UC Merced) and other local stakeholder efforts to provide services and amenities in downtown Merced that will attract thousands of college students and working professionals to the downtown station area. Goals include making downtown Merced more bike and pedestrian friendly, and updating the existing land uses to allow for more mixed uses, higher densities and building heights. Creating and fostering long term partnerships with UC Merced and other stakeholders in Merced will be an important part of successfully delivering and implementing the pending Downtown Vision Plan. Work is expected to be finalized in 2019.

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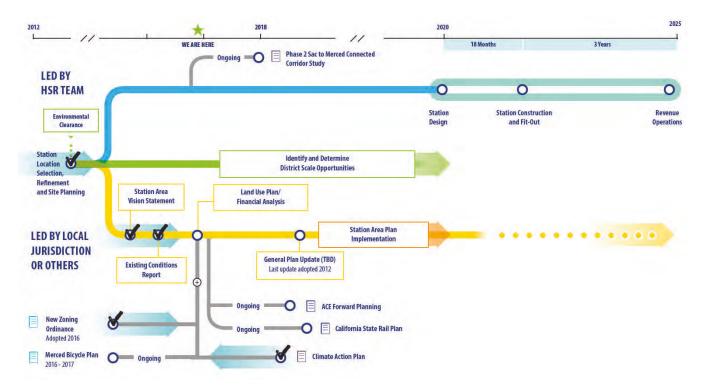


Figure 6 Merced Regulatory Updates and Related Planning Studies

Fresno and Bakersfield Station Area Plan

The cities of Fresno and Bakersfield are the furthest along in station area planning efforts, with draft plans likely for FRA review in early 2018. The plans will include phased implementation over time, aligned with the Authority's business planning.

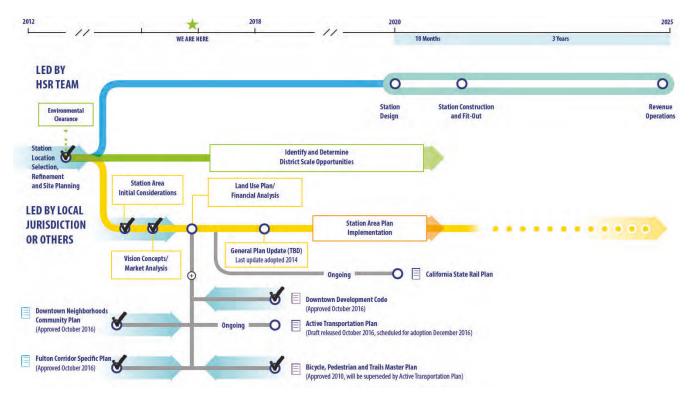
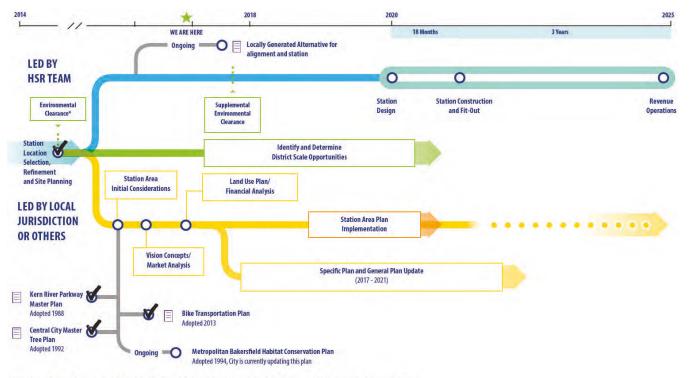


Figure 7 Fresno Regulatory Updates and Related Planning Studies



*Platform Option 2 approved by Federal Railroad Administration and Surface Transportation Board in Summer 2014

Figure 8 Bakersfield Regulatory Updates and Related Planning Studies

Kings/Tulare Station Area Plan

The Tulare Council of Governments (TCAG) is partnering with the Authority and several local agencies to finalize a regional connectivity plan to link more than 400,000 Central Valley residents to the Kings/Tulare high-speed rail station. Their efforts will be complete in early 2018. The former San Joaquin Railroad that runs east/west through the cities of Visalia, Hanford, Lemoore, Tulare, Exeter, Lindsay and Porterville, referred to as "cross valley railroad," provides the connectivity that can access the Kings/Tulare Regional high-speed rail station without creating additional development in the agricultural land surrounding the Kings/Tulare station.

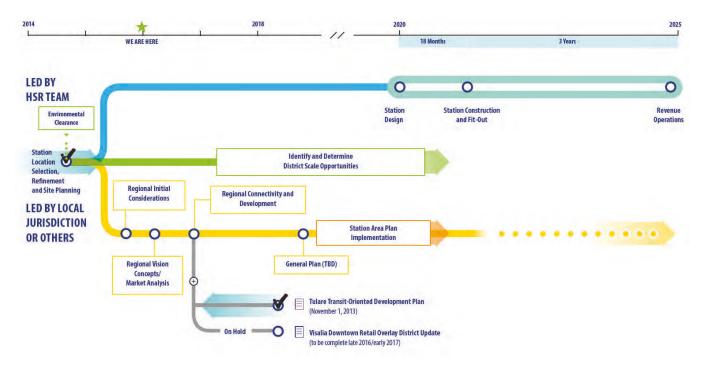
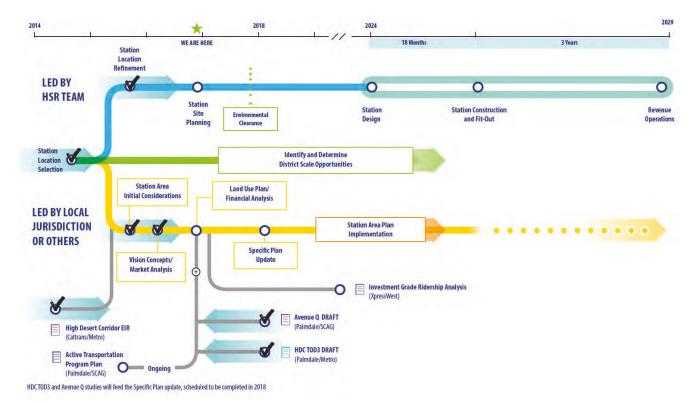


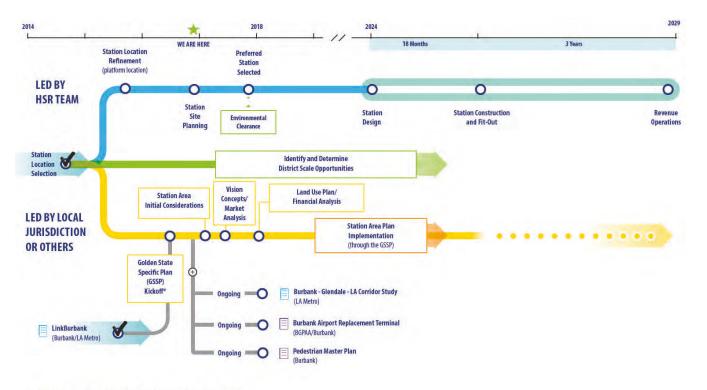
Figure 9 Kings/Tulare Regulatory Updates and Related Planning Studies

Palmdale and Burbank Station Area Plans

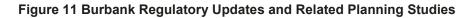
Palmdale and Burbank have been partnering with the Authority and other local stakeholders to develop their corresponding plans. Both cities are using funds to link downtown planning efforts together. They are working toward developing a program of improvements and projects for phased implementation.







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*The Station Area Plan will feed the GSSP, scheduled to be completed in 2018
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The anticipated dates for Station Area Planning reports for FRA review and comment are listed below:

Station City	HSR Contract Number	Period of performance for the contract	Anticipated SAP draft date	Partners (intermodal working group members)
City of Millbrae	N/A	2018-2019	Q4 2019	Caltrain, BART, SFO
City of San Jose	15-64	2016-2018	Q2 2018	VTA/BART, Caltrain
Santa Clara VTA	15-173	2016-2018	Q2 2018	City of San Jose, VTA/BART, Caltrain
City of Gilroy	13-47	2014-2019	Q4 2019	VTA
City of Merced	11-10	2013-2018	Q3 2019	Merced County, MCAG
City of Fresno	11-09	2012-2018	Q1 2018	
Tulare Council of Governments	15-123	2016-2018	Q2 2018	Hanford, Visalia, Porterville, and others
City of Bakersfield	15-22	2015-2018	Q2 2018	
City of Palmdale	14-50	2015-2018	Q2 2018	Metro/Metrolink, XpressWest
City of Burbank	15-17	2015-2019	Q4 2018	

Table 9 Station Area Planning Deliverables

The Authority is building from these successes by creating working groups and partnerships that will continue long after the station area planning efforts are complete. The groups and partnerships will help guide future station design work and district-scale development.

Right-of-Way Manual

The Authority uses the Caltrans Right-of-Way Procedures Manual as the base document to guide work. Sections have been updated as appropriate to meet Authority specific requirements. This document is currently being updated and a revised version will be complete December 2017.

Ridership Forecasting

The Authority reviews and updates its ridership and revenue forecasting model based on feedback provided by external organizations and updates with the latest available travel data information. The ridership and revenue forecasts are updated as information is available and based on the implementation schedule set in the Business Plan. These forecasts are used to demonstrate compliance with Proposition 1A and are used to provide planning information in station area development. A risk analysis is also conducted as part of the Business Plan forecasting to provide a range of potential ridership and revenue outcomes.

The statistical projections in the ridership and revenue forecasts support the Phase 1 final environmental documents and the selection of station locations, service plan development, and

evaluation of maximum reasonable impacts (local traffic, regional & local air quality, parking requirements, etc.).

LAUS/SoCal Investments

The Authority is jointly working with LA Metro on the Link US master planning effort for LA Union Station. This work is to identify an integrated solution to improving regional and commuter rail services and accommodating future high-speed rail service through the station. The work will also identify passenger concourse area improvements including expanded passenger waiting area, new retail amenities, and enhanced circulation. A Draft EIR/EIS is anticipated to be released by LA Metro on the project in early 2018.

Staffing

Station Area Planning

The Authority is a substantial partner in the station area planning contracts with each of the cities listed above in Table 9. Work includes regular coordination activities on district-scale planning, rolling out the vision plan for stations system-wide, design opportunities for local jurisdictions and aesthetic requirements, and workshops for networking and idea-sharing venues for the Authority and local governments. The program is led by the Authority's Transportation/Commercial Planning section with planning staff in the regions. Two contract managers work under the planning director and are supported by RDP staff as required.

Right-of-Way Manual

ROW staff as identified in the Real Property Acquisition and Environmental Mitigation chapter are all involved in the completion and updating of the manual. The final publication will be completed by staff in Sacramento but input on updating various sections involves input from staff working in all aspects of the right of way delivery program.

Ridership Forecasting

The ridership and revenue forecasting is conducted by Cambridge Systematics. It is supported by three Authority and RDP staff who oversee the work and provide information to agency groups using information in their work.

Resource	Description
Cambridge Systematics	Subcontractor; day-to-day manager of travel demand forecast model
Rail Delivery Partner	Data Scientist
Rail Delivery Partner	Travel Demand Forecasting Manager
Authority Staff	Deputy Director of Business Analytics and Strategic Planning

Table 10 Staffing Requirements for Ridership Forecasting

The ridership forecasting team holds bi-weekly coordination meetings with Cambridge Systematics and weekly Business Plan meetings.

LAUS/SoCal Investments

This joint project between the Authority and LA Metro. Authority engagement in the project include various staff from the Southern California office include the regional director, the deputy director and various program staff for specific project elements.

Key Challenges and Mitigation

Station Area Planning

Access improvements, specifically parking, has been one of the initial areas of interest for station cities and proposed initial investment prioritization. Cities are trying to advance development and seeking other public funds to provide the required parking spaces for that development to occur. The challenge is to ensure that the high-speed rail stations are developed to ensure that access investments prioritize walking, biking and transit and other options over single occupancy vehicle access and storage. The goal is to ensure that land in and around stations is developed to meet various goals and objectives of both the city and the Authority.

Incentivizing land uses that allow mixed land uses, maximizing density and building height, and achieving high value mixed land uses around high-speed rail stations. Other key changes include mode of access priority, shifting the focus away from single occupant automobiles, and requiring improvements to bike and pedestrian infrastructure, as well as improving transit connectivity. Gap financing for development of weaker markets is an area of concern for several cities. The Authority is working to identify financing mechanisms and public funding options to facilitate sustainable development in and around stations that are in support of high-speed rail.

The Authority has identified a variety of challenges facing station planning as it moves forward, including:

- The Authority relies on local jurisdictions to procure and manage consultants. Some local jurisdictions are limited in technical capacity and under resourced for management of the work. Local jurisdictions can confuse station area planning work with the Authority's environmental clearance and preliminary engineering work. For example, this led to the pause on station area planning in Gilroy.
- ✓ Where there is a lack of strong local champion/leadership, we often suffer from a lack of vision for the station area and what it should transform into with high-speed rail service.
- ✓ If not well-crafted with a plan and creative opportunities for input, public engagement can be counter-productive, creating a forum for project opponents and "nimbyism".

To mitigate these challenges, the authority will:

Continue work with station cities to plan for and implement projects and land use changes as early as possible around high-speed rail stations. Start early identifying district-scale opportunities with energy, water, infrastructure delivery, etc. These sustainable development ideas need to be baked into the future high-speed rail station design as well as code/zoning changes and development agreements.

- ✓ Continue coordinating with station cities for station area elements and local values that will influence future station design.
- Identify early opportunities for development and investments that are consistent with Authority goals and objectives. This includes the Authority's high performance design criteria for its stations and our sustainability policy, and our future vision plan for stations state-wide (which will identify how we will meet our sustainability goals).
- ✓ Work with station cities to identify infrastructure and other needs at a district-scale. Form working groups, resource the focus on district-scale development (currently unfunded).
- ✓ Work with station cities to incorporate high-performance design criteria into the development around the station.
- Early and frequent communication and confirmation of scope and expectations with city/partners to align efforts and values. It is important for locals to prioritize access investments and land use changes within their authority and develop implementation strategies that the community will be excited to see.

The Authority's station area planning program is fully funded and fully subscribed. There are additional cities that would benefit from station area planning funds. The team continues to pursue additional funding to support station area planning efforts and was recently awarded a Brownfields grant from EPA for the LAUS Station. The Authority will continue to pursue grants and other funding in partnership with station cities.

Right-of-Way Manual

Authority staff, supported by right-of-way consultants, are continually assessing the current processes and procedures to the acquisition, delivery and management of real estate resources. The manual is in the process of being updated.

Ridership Forecasting

For ridership forecasting, setting the parameters and key assumptions for business plan forecasting has proven to be critical to meet forecast deadlines; delays in Business Plan development can have a significant impact on the travel demand forecasting process.

To mitigate this, the travel demand forecasting team remains in close contact with Business Plan managers and sit-in on key Business Plan delivery meetings. Those managing travel demand forecasting sit in on Business Plan delivery meetings and are responsible for writing the forecasting chapter of the Business Plan and producing the relevant Technical Appendices. This requires staff to remain in close coordination to ensure the content is delivered accurately and on-time.

Established Priorities for FY 17/18

Station Area Planning

Station area planning includes the Authority's contracts with local jurisdictions to make land use and zoning changes that are necessary prior to high-speed rail stations development. It is also a relationship building tool in working closely with our jurisdictions and other mobility service providers that will

enable more district-scale development to occur at and around the high-speed rail stations. Many of these contracts have resulted in the development of "intermodal working groups" with all the service providers who will be serving each station, as well as more detailed conversations with the cities and service providers on needs at the station and how to provide first and last mile connectivity projects. The Authority is leveraging FRA funding toward these activities with state funding sources including Capand-Trade and local monies to develop a program of investments in the station area that will support ridership and revenue for the Authority and other service providers, and urban regeneration, especially in our state's weaker markets. The station area planning work provides an arena for partnerships that will focus public dollars and entice private sector participation earlier. We are seeing the results of these relationships in the Bay Area, where the markets are stronger and considering ways, with theSilicon Valley to Central Valley Line, to connect the markets in such a way that helps spur development in the Central Valley cities served.

Right-of-Way

By December, the Authority will provide an updated ROW Procedures Manual that includes the content necessary to identify all right-of-way processes are consistent with applicable federal and state law including the Uniform Relocation and Real Property Acquisition Policies Act of 1970.

Ridership Forecasting

The Authority prepares ridership and revenue forecasts to support the Phase 1 final environmental documents and the selection of station locations, service plan development, and evaluation of maximum reasonable impacts (local traffic, regional and local air quality, parking requirements.)

Actions

≠ In the upcoming fiscal year, the Authority will update ridership and revenue forecasts and conduct a new risk analysis.

LAUS/SoCal Investments

Work related to the Link US master planning will continue in the upcoming FY. This work will include analysis of track alignments and coordination with existing regional services. In addition, the work will identify additional concourse improvements to be implemented as service investments are made. The Authority will work cooperatively to develop this major hub with current owners and rights holders and influence and benefit from future station development initiatives.

Actions

 Continue to support analysis of future improvement necessary to support high-speed rail service. This will include participation in public outreach and completion of a draft environmental document in early 2018.

Task Budget

The table below summarizes the projected expenditures as outlined in the Q2-17 Funding Contribution Plan.

Table 11 Summary Budget Task 3

Description	Task Number	FY17/18 Projected Expenditures
Regional Consultant Station Area Planning (RC)	3.1	\$ 3,939,782
Regional Consultant ROW Work (RC)	3.2	\$ 518,649
RDP ROW Work (RDP)	3.3	_
Ridership Forecasting (RDP)	3.4	_
Construction Planning / Procurement Support (RDP)	3.5	-
Station Area Planning	3.6	\$ 7,185,462
LAUS / So California Investments	3.7	\$33,600,000
Legal Services - Pre-construction	3.8	\$43,741,705
Total		\$88,985,598

Program, Project and FCS Construction Management

Introduction

This chapter covers elements related to general program oversight as well as construction oversight activities. Deliverables in this area focus on the overall program and project management and construction oversight provided by the Project Construction Managers (PCM). Implementation of the program will be performed by documenting the work processes, training the people and delivering systems/tools to assist in the tracking of progress against the plan. The organization is broken down into four primary areas:

- Program Management: Includes recommendations and support related to program delivery approach and master program planning such as oversight of program controls including program scope, cost, and schedule.
- Program Delivery: Includes providing the specialized technical resources which may include, but not be limited to, tunneling, seismic design, high-speed rail systems (track electrification, train control, signaling, and communications), trainsets, track work, heavy maintenance facilities, high-speed rail system testing and commissioning, and facility operations and maintenance.
- ≠ **Project Delivery**: Includes the overall planning, coordination, and control of construction.
- Project and Construction Management: Includes assistance in coordination with agencies and utility companies, and in making field decisions to address conditions and/or activities that could impact budget or schedule.

Review of Grant Required Deliverables

The table below outlines the deliverables anticipated in FY16/17 and provides a FY 17/18 update.

Deliverable	Schedule from FY 16/17	FY 17/18 Update
Annual Work Plan (Annual Update)	4th Qtr 2016	Complete
Program Management Plan (Annual Update)	4th Qtr 2016	Complete
Central Valley Project Financial Plan (Annual Update)	4th Qtr 2016	Complete
Phase 1 Program Financial Plan	4th Qtr 2016	Complete
CP 5 RFP	4th Qtr 2016	Postponed
Network Integration Plan	3rd Qtr 2016	Complete
Updated Service Development Plan	2nd Qtr 2017	Postponed
Infrastructure Maintenance Plan (update)	2nd Qtr 2017	Postponed
Rolling Stock Maintenance plan (update)	2nd Qtr 2017	Postponed

Deliverables for FY 17/18

Table 13 FY 17/18 Deliverable Dates

Deliverable	FY 17/18 Update
Annual Work Plan (Annual Update)	3 rd Qtr 2017
Program Management Plan (Annual Update)	4 th Qtr 2017
Central Valley Project Financial Plan (Annual Update)	3 rd Qtr 2017
CP 5 RFP	TBD

Staffing

Together, the Authority and the RDP form an integrated organization. The deliverables identified above are produced using various resources throughout the organization that have extensive knowledge of the program and current project implementation. Authority operations and procurement staff have also been working on the development of the CP 5 RFP. The release of this RFP is pending the completion of the Authority's cost and program implementation review as part of the 2018 Business Plan. That review will be complete in early 2018.

Program/Project Controls

The Authority provides overarching program oversight and policy direction, and the RDP manages, monitors and oversees the program's operations and progress. Currently, the Authority is reevaluating program controls key roles and staffing assignments. While many tasks are currently conducted in Sacramento, discussions are underway in assessing field oversight functions to better assess project level implementation. As part of the governance structure, there will be a series of meetings established at different layers of the organization to assist in decision making and assessing progress toward the plan.

Program Management: Program management is overseen by the Chief Program Officer. This position is currently filled by the RDP Program Director under the Authority Chief Operating Officer's leadership.

Program Delivery: This area is overseen by the Chief Program Officer who covers both program and project delivery to ensure coordination between program technical support and construction project support. This area is supported by Regional Directors that are responsible for project and community coordination and delivery in the Northern, Southern and Central Valley regions. Regional program teams provide functional support in each of the regions.

Project Delivery: The Chief Engineer and Director of Infrastructure Delivery report to the Chief Program Officer and have overall responsibility for the execution of the construction program. Construction project managers are responsible for overseeing the construction contracts and provide direction to program functional resources assigned to help manage construction.

Project and Construction Management: The Authority has retained the services of specialty project and construction management (PCM) firms to provide on-site management expertise and staff to oversee the DB contracts. The PCM oversees and directs field inspectors, and work closely with the DB teams to assist in coordination with agencies and utility companies. PCM's also assist the design-builder in making field decisions to address conditions and/or activities that could impact budget or schedule. The PCM's for each construction project are:

- \neq CP 1 PGH Wong Engineering
- \neq CP 2-3 ARCADIS U.S. Inc.
- \neq CP 4 HNTB Corporation

The Authority primarily manages oversight activities from the Sacramento program offices in Sacramento; project managers, project staff, the PCM and the DB are in local construction project offices. This co-location enhances communication between all parties, expedites the DB approach and provides onsite oversight and coordination.

Key Challenges

Table 14 Key Challenges

Section	Risk Title	Risk Description	Risk Mitigation
Programmatic	Organizational integration and clarity	 Risk related to integration, roles and responsibilities and requirements clarity Integration - Process, procedures, and work instructions not fully integrated across the entire organization, resulting in delays, redundancy, and rework Requirements Clarity – Unclear quality and contractual requirements throughout the Program could lead to redundancy or rework 	Delivery and Operations focused organization Performing a regular program review Actively engaging staff in the Regions and Sacramento Organization underpinned with key decision-making meetings and committees Quality team working with functional area managers throughout organization to develop metrics to drive delivery excellence
Programmatic	Failure to obtain financing for the project, either public or private financing or both.	The ability to finance the project is largely dependent upon the stability of future revenue sources. For project financing, this is normally net project revenue (revenue less operating costs).	Continue to work with Federal partners, members of Congress and state legislators, the US DOT and other stakeholders to maintain support for funding and financing programs. Continue to evaluate alternative delivery models and commercial mechanisms.

Development of the program baseline schedule will be incorporating a consistent Work Breakdown Structure (WBS) which can be used in other areas consistently (cost, scope). There has been limited

experience in the program staff in utilizing a WBS and a challenge will be to properly use the hierarchy. Program reporting will be performed with the WBS as a base feature, to properly identify cost, schedule or scope issues with performance measured.

Training sessions will be provided to ensure consistent use of the WBS. The schedule management staff will predominantly be filled by RDP and analysis will be provided to Authority. Sacramento staff will predominantly work at the program level, while field staff will focus on project level. Project management training will include identification of training modules; topics to be developed; and a training needs assessment. This will be documented in the training plan which is currently under development.

Established Priorities for FY 17/18

Over the next year, the Authority will focus on the development of rigorous program controls systems and establishment of field oversight teams. This will require extensive training and outlining protocols for communication and coordination. This will include the development of several areas outlined below.

Required Deliverable Documentation

The Authority will complete the required deliverables above based upon the most current information available. The Annual Work Plan and Central Valley Project Financial Plan (completed based upon the Authority's fiscal year) provides the FRA with a snap shot of agency activities, budget and spending related to the federal grant scope of work. The Program Management Plan (PMP) will provide the FRA a sense for how the Authority approaches delivering the program. The PMP will incorporate updated information related to the agency's updated organization and revised approval processes.

Program Management Implementation

This section includes development and implementation of program management framework that will be used. Areas include work process documentation, governance structure that will be used to manage and control systems that will be deployed to assist the team in deploying.

Actions

- ≠ Implement and maintain Work Plan Standards Guide
- ≠ Update and implement the Program Management Plan
- ✓ Update and implement the Resource Management Plan
- Develop and maintain a schematic of various policies, procedures and plans related to program delivery
- ✓ Update and implement Program Baseline Plan

Schedule Management

Schedule management includes development of a baseline schedule plan, communicating the plan with all parties involved, monitoring progress against the plan and analyzing performance.

Actions

- ≠ Develop program baseline schedule in support of the 2018 Business Plan.
- ✓ Develop schedule management plan to identify how progress will be measured and analyzed during regular status updates.

Project Management Training

Project management training includes development of a training program for staff involved in the delivery of specific tasks. The object of the training is to develop best practice measures into the culture of the organization and improve predictability.

Actions

Continue the development of the project management training plan, which will promote and advance new organizational goals and objectives to support consistent implementation of project management. The training plan will identify specific training modules/topics and individual presenters for each topic, and lay out a deployment schedule. The training plan will include obtaining feedback from those trained and establishing performance indicators that will assess the effectiveness of those trained. The feedback obtained and performance assessment will be used to establish a continuous improvement process for future employee development and continuing training plans.

Design/Construction

The Sacramento office will support the field review of contractor claims and provide information related to impacts to overall program delivery.

Actions

- Establish a program-level claims team to provide advisory opinions and oversight of claims management by the regional project management teams, including support for DRB position papers:
 - Program Claims Manager located in Sacramento
 - Regional Claims Manager located in Fresno

Task Budget

Table 15 Overall Budget

Description	Task Number	FY 17/18 Projected Expenditures
Program Management (RDP)	5.1	\$44,891,749
Project Construction Management (PCM)	5.2	\$38,242,434
Legal Services - Construction	5.3	\$ 1,703,131
Total		\$84,837,314

Real Property Acquisition and Environmental Mitigation

Introduction

Task 6 focuses on right-of-way delivery for construction and property associated with environmental mitigation. The ROW team maps, appraises, and acquires parcels and provides relocation assistance (associated with right-of-way) needed for CP1, CP2-3 and CP4. Emphasis in FY 17/18 is to continue to acquire property in support of construction of Merced to Fresno and Fresno to Bakersfield segments. Right-of-way schedules and costs are reported on a quarterly basis.

Review of Grant Required Deliverables

The Authority provides FRA on a quarterly basis a summary of upcoming right-of-way acquisition activities and costs for completion of First Construction Segment (FCS) construction.

In addition, this task also includes acquisition of biological mitigation to meet permitting requirements. The Authority also has developed and provides FRA with access to the Environmental Mitigation and Monitoring Tool. This tool tracks all mitigation requirements outlined in the ROD and permits.

Deliverables for FY 17/18

Right-of-Way Acquisitions Planned for Fiscal Year 17/18

The following table summarizes the remaining ight-of-way acquisition necessary to complete construction of the FCS in the Central Valley. Based upon the ROW Acquisition Plan, the Authority anticipates purchasing up to 550 parcels that represents nearly all the remaining parcels necessary for FCS construction. Approximately 300 of this amount is associated with CP 2-3. Currently, the funding contribution plan projects \$213,309,000 for right-of-way purchases in FY 17/18.

Funding Month	Parcel Count–All Sections	Appraised/Just Compensation Values
July 2017	17	\$ 9,300,000
August 2017	25	\$ 22,000,000
September 2017	28	\$ 2,700,000
October 2017	37	\$ 7,900,000
November 2017	52	\$ 22,500,000
December 2017	108	\$ 12,600,000
January 2018	84	\$ 9,200,000
February 2018	72	\$ 7,500,000
March 2018	42	\$ 1,200,000
April 2018	54	\$ 100,000

Table 16 Right of Way Acquisition Plan (July 2017)

Total	544	\$103,500,000
June 2018	19	\$ 200,000
May 2018	6	\$ 8,300,000

Compensatory Mitigation Planning and Acquisition for 17/18 Fiscal Year

In addition, the Authority will be purchasing property to meeting biological requirements outlined in the environmental documents and stipulated as part of permits received. Final timing of compensatory mitigation plans are under review based upon the adopted environmental documentation schedule and NEPA assignment discussions.

Staffing

FCS Right of Way Acquisition

Right-of-way is managed by the Director of Real Property and reports to the Program Director. The Director is supported by a manager of right-of-way information, and a Deputy Director of Real Property that oversees Authority agents who oversee the work of right-of-way consultants. The Authority's ROW division managers are in the Sacramento headquarters office, in the Central Valley regional office in Fresno, the Southern California regional office in Los Angeles and the Northern California regional office in San Jose. ROW continues to make organizational and process refinements to improve efficiency in support of right-of-way acquisition.

ROW consultants are responsible for performing right-of-way appraisal and acquisition services, including:

- ≠ Issuing initial letters to the property owners (Notice of Determination to Appraise [NODA]
- ≠ Conducting appraisals
- ≠ Issuing the first written offers
- ≠ Conducting negotiations
- ≠ Preparing the administrative settlement memo
- ≠ Issuing revised offers
- ≠ Establishing and providing relocation benefits and educating affected property owners about the benefits
- ✓ Preparing the acquisition quality checklist
- Preparing the memorandum of appraisal updates, the declaration of value and close escrow and the resolutions of necessity (RONs) needed for the condemnation process

Compensatory Mitigation

The identification, acquisition and approval of compensatory mitigation acquisitions is managed by the Environmental Director in coordination with the ROW team. The Authority has utilized two approaches for completing the compensatory mitigation requirement. For Merced-Fresno mitigation properties (acquisition, easements, third party manager, etc) were completed as individual tasks completed 'in house' and using contractors. For the Fresno-Bakersfield section the Authority procured a single

mitigation contractor to provide required mitigation as 'units or credits' using the most efficient to meet project needs (e.g. property development, existing bank). They provide the needed mitigation and maintain the rights to the property(ies) for ongoing management and oversight.

Key Challenges

Right-of-Way Delays

The CP 2-3 DB contractor has submitted a change order request for a significant contract time extension and corresponding delay costs. The Authority is in the process of conducting a time impact analysis. This work includes a detailed schedule analyses, based upon the current critical path activities and right-ofway needs.

Compensatory Mitigation

The Authority continues to pursue locating and securing compensatory mitigation prior to procuring DB contractors as its primary risk mitigation; however, it will also explore various procurement strategies that allow for variations (both in schedule and need) to occur.

The following tables describe some of the specific challenges for each project section.

Section	Risk Title	Risk Description	Trigger Phase
Merced to Fresno	Delays to acquisition of ROW parcels for CP 1 contract as committed in the DB contract ROW Acquisition Plans may impact the construction schedule.	The Authority owns the risk of delivering ROW to DB Contractor on time. If the ROW acquisition has not progressed as committed in the ROW Acquisition Plan for Design Build Contracts, Authority may incur delay claims.	Construction
Fresno to Bakersfield Delays to acquisition of additional ROW required for CP2-3 contract per the contractor proposed ATCs and additional design changes may impact the construction schedule.		Additional ROW parcels will be required for the CP2-3 contract due to approved Alternative Technical Concepts (ATC) and additional design changes. Once Authority approves the design changes, contractually the Authority needs to deliver additional ROW parcels within 12 months. Actual delivery of certain parcels may take longer due to relocation or condemnation process.	Final Design

Table 17 Key ROW Challenges

Table 18 Key Compensatory Mitigation Challenges

Section	Risk Title	Risk Description	Trigger Phase
Programmatic	Delays to identification and acquisition of compensatory mitigation sites may impact the construction schedule because permits could not be delivered.	The Authority delivers initial permits to DB Contractor. Without those initial permits, some portions of the ROW may not be available for construction. Authority may incur delay claims.	Permitting

Programmatic Compensatory mitigation property need is based on the initial PE design. The final design's actual requirement could be greater or less than was anticipated.	When the DB begins to refine the design (including ATCs and other design refinements) the mitigation requirements may change and require additional properties (or use of mitigation banks) to fulfill. Delays can occur if these changes are not determined early in the design process.	Final Design
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Established Priorities for FY 17/18

FCS Right-of-Way Acquisition

The Authority operates with support from the RDP team, ROW consultants, ROW engineering and surveying firms, and various state agencies to acquire real property under property acquisition law. The team works to determine potential opportunities for improving production rates and to identify and make recommendations to help reduce right-of-way acquisition times. Delivery of real property is impacted by complex relocations regarding commercial and industrial properties as well as design changes from the design-builders.

Actions

The following actions will be performed in FY 17/18 in support of the overall ROW goals and objectives:

- Revising and updating ROW policies, procedures and practices to better serve property management, excess parcel management, asset management and encroachments.
- Maintaining, updating and continuing to expand the capabilities of the Rights-of-Way Database
 Exchange System (ROWDES) to meet the expanding ROW role.
- ✓ Supporting the Authority in the preparation of weekly, monthly and quarterly ROW reports for submittal to the Authority's Finance and Audit Committee and the FRA.
- \neq Supporting the Authority in the preparation of weekly and monthly financial forecasting.
- ✓ Developing and publishing regularly scheduled and ad-hoc reporting for ROW.
- ✓ Analyzing ongoing performance of ROW delivery and contractors.
- ✓ Providing contract management, contract administration which includes task order support and invoice review and processing for payment.
- ≠ Providing revision management and coordination for the ROW manual, forms and exhibits.
- ✓ Striving to accomplish the production numbers required to meet the Authority's overall goals and objectives.
- Tracking pertinent data related to the processing of appraisals, acquisitions and relocations, property management, excess, etc.
- ≠ Providing pre-ROD PTE support for all environmental sections.
- ≠ Providing utility relocation coordination in support of right-of-way acquisition and construction.

Compensatory Mitigation Properties – Environmental

The environmental team determines the habitat impacts of the project during the planning phases based on preliminary design. During the permitting process, a strategy for providing compensatory mitigation for any habitat impacts is developed. The Authority works with the RDP and RCs to determine what options may be available for a given environmental section. A preliminary list of properties and other assets (e.g., existing approved mitigation banks by species) is produced. At this point the Authority works with the RDP (ROW and environmental) to determine the most effective procurement strategy.

Actions

- Support developing and implementing the Authority's Regional Mitigation Strategy, including executive briefings and procurement documentation, to meet mitigation commitments and achieve permits in a proactive, timely manner, which will enable construction.
- Identify and acquire regional conservation sites to implement the statewide network of important natural resources to help satisfy the Authority's biological mitigation commitments and enable permitting, both of which accelerate construction.
- ✓ Develop a component of the EMMA database that will work in coordination with the ROW database to track impacts and compensatory mitigation as construction progresses and through the lifetime of the project.

Environmental Mitigation Management and Assessment (EMMA) 2.0

EMMA is a web-based geospatially enabled application created to document and track compliance with environmental mitigation measures, environmental permit conditions and environmental commitments prescribed by various regulatory agencies. These environmental obligations are contained within environmental permit narratives, treatment plans, regulatory assessments and other environmental documents. Enhancements are planned during the next fiscal year.

Actions

The scope for EMMA 2.0 – Enhancements Project includes:

- ≠ Enhancements:
 - Dashboard and reporting enhancements to develop dashboard contents, metrics and preconfigured queries based on feedback and input from end users to automatically generate environmental commitment memo and quarterly reports and to allow users to select data sets and layout and create a printable PDF to be included in reports.
 - Disconnected Editing to allow the users to access and operate EMMA in areas where no Wi-Fi or cellular data exists (i.e., dead zones).
 - Deadline Tracker to track dates that often do not have a predetermined deadline, rather are dependent on an event occurring that is reported in a daily report such as start of construction.
 - Map Query and Reporting for users to query EMMA records and commitments from inside the map interface.
 - Issue Tracking and non-compliance reporting workflow enhancement to facilitate reporting of potential issues and prescribe corrective actions.
 - Parcel Ready-to-Construct reviews to determine if all of preconstruction commitments have been completed on a parcel.
- \neq Additional Modules:
 - Consultation Tracker for permits, amendments and re-examinations is a formal system where all primary/important communications or decisions with permitting staff and agencies are documented starting with the initial decision to pursue a permit until passing a final inspection.

- Cultural resource records and mapping management to track the entire 106 permit process, manage Native American approved monitors and provide tribal leaders information on locations of culturally sensitive sites.
- Sustainability reporting and dashboards to quickly gauge and report on the status of any Sustainability module, export modular reports and compile monthly and/or quarterly reports.
- Tree and vegetation tracking is required by several permits and agreements both within the construction footprint and off-site as part of compensatory mitigation. This module is needed to keep track of the location of tree planting and vegetation and will eventually be incorporated into the asset management system.
- ≠ Training Materials and User Guidance Documentation:
 - Development of user training materials and presentations to support EMMA2 onboarding and phased rollout to user groups (program, construction management teams, DBs).
 - Development of the EMMA2 User Guidance Manual and Frequently Asked Questions to support ongoing EMMA2 maintenance and operations.

Task Budget

The budget below summarizes the projected costs for the next fiscal year.

Table 19 Right-of-Way Task Budget

Description	Task Number	FY 17/18 Projected Expenditures
Real Property - Preliminary ROW	6.1	-
Real Property - ROW Services & Relocation	6.2	\$ 55,506,421
Real Property - Environmental Mitigation	6.3	\$ 52,915,189
Real Property - ROW Acquisition	6.4	\$104,887,236
Total		\$213,308,846

Final Design and Construction

Introduction

The First Construction Segment (FCS) is approximately 118 miles traversing the Central Valley from northern Madera County to Shafter. The alignment is broken into four civil construction packages (CP) and one track work construction package. The five packages include:

- SR 99 Civil Infrastructure Caltrans is designing and constructing roadway improvements to support the high-speed train infrastructure from Ashlan Avenue to Clinton Avenue in Fresno.
- F CP 1 Civil Infrastructure Avenue 19 (Madera) to East American Avenue (Fresno), 31 miles.
- CP 2-3 Civil Infrastructure East American Ave (Fresno) to one mile north of Tulare/Kern County line, 65 miles.
- CP 4 Civil Infrastructure One mile north of Tulare/Kern County line to Poplar Avenue north of Bakersfield, 22 miles
- ✓ CP 5 Track (also known as Rail Infrastructure, RI1) including systems, communications, signaling, and overhead power for CP1, CP2-3 and CP4.

The following DB contractors have been procured:

- ≠ CP 1 was awarded to Tutor Perini/Zachry/Parsons (TPZP) Joint Venture in 2013.
- ✓ CP 2-3 was awarded to the Dragados/Flatiron Joint Venture in 2015.
- ≠ CP 4 was awarded to California Rail Builders: Farrovial Agroman US Corp in 2016.

Review of Grant Required Deliverables

The table below outlines the deliverables anticipated in FY16/17 and provides a FY 17/18 update.

Table 20 Grant Required Deliverables for FY 16/17 and FY 17/18 Update

Deliverable	Schedule form FY 16/17	FY 17/18 Update		
Construction Package 1				
Type Selection Reports	4th Qtr 2016	Complete		
60 % Design	4th Qtr 2016	Complete		
90% Design	1st Qtr 2017	3rd Qtr 2017		
Ready for Construction Design	2nd Qtr 2017	4th Qtr 2017		
Construction Package 2-3				
Type Selection Reports	2nd Qtr 2017	Complete		
Construction Package 4				
Detailed Baseline Schedule	4th Qtr 2016	Complete		

Deliverables for FY 17/18

Table 21 Additional FY17/18 Deliverables

Deliverable	FY 17/18 Update
Construct	tion Package 2-3
60% Design	1st Qtr 2017
90% Design	3 rd Qtr 2017
Ready for Construction Design	2 nd Qtr 2018
Construc	ction Package 4
Type Selection Reports	1st Qtr 2018
60% Design	1st Qtr 2018
90% Design	2 nd Qtr 2018
Ready for Construction Design	2 nd Qtr 2018

Staffing

The project director leads each construction section and has overall responsibility for all construction elements including design, construction, ROW, third parties, project delivery, etc. The project director is supported by a project manager whose primary responsibility is to coordinate all external and third party elements. A design and construction manager is the contract manager for each DB and PCM contract. They ensure effective coordination between the project team and the DB contractor. The project director is the Authority's lead representative for each construction project and the design and construction manager is the lead representative for DB and PCM contract issues.

The Authority has hired PCM firms to oversee DB contract compliance. These firms provide on-site project and construction management services covering areas such as project pre-planning and programming; procurement, design and construction support; commissioning; testing; claims; and post construction services:

- ≠ Wong+Harris provides on-site oversight for CP 1
- \neq Arcadis was procured for CP 2-3
- \neq HNTB was procured for CP 4

The Authority recently updated organizational roles and responsibilities to meet the changing needs of the program and to effectively manage program delivery. The new organizational structure (shown in Figure 1) has four primary divisions that report to the Chief Program Officer (CPO): 1. Environmental/ Third Party/ROW/Engineering Division, 2. Rail Delivery and Operations, 3. Infrastructure Delivery, and 4. Program Services Division. The CPO reports to the Chief Operating Officer (COO). The Infrastructure Delivery Division is responsible for delivering the civil infrastructure and the Rail Delivery and Operations Division is responsible for delivering the rail infrastructure. These two delivery divisions are supported by the Environment/Third Party/ROW/Engineering and Program Services delivery division.

Infrastructure Delivery

The Infrastructure Delivery Division is led by the Infrastructure Delivery Director and is supported by the Regional Project Directors, Construction Package Directors, and Project Services Director. The Regional Project Directors manages the Regional Consultant (RC) and Environmental and Engineering Consultant (EEC) contracts and the Construction Package Directors manage construction package delivery.

All FCS construction packages (CP1, CP2-3, and CP4) have a Project Director. The Project Director is supported by a Design and Construction Manager (DCM) and a PCM consultant. Project level issues are addressed and resolved within the projects and issues that are beyond projects' control are escalated to the Infrastructure Delivery Director and/or the Executive Committee as appropriate for resolution and decision making.

The PCM administers the construction contracts under the Project Director's and DCM's direction. The PCM Design-Build Oversight Manager is the Authority/RDP's on-site representative and is responsible for the oversight of all work required in the execution of the design and build contracts. The PCM Design-Build Oversight Manager is the single point of contact for all communication with the design and build contractor. Direction regarding contractual changes follows authorized delegation of the Authority. The PCM Design-Build Oversight Manager works closely with the DCM or designee to communicate and coordinate on the progress, issues, changes, etc. as needed. The PCM has primary oversight and audit responsibility for the administration, management, and quality of the DB Contract which includes (but may not be limited to) the following:

- Design, manufacturing, construction and quality testing is accomplished in compliance with the design and construction contract documents and sound engineering, quality assurance plans and system safety and security plans.
- ✓ All changes, claims and disputes are properly defined, documented, promptly negotiated and processed, or otherwise resolved.
- ≠ Documentation of any contractual obligations and actions.
- ✓ All oversight of the design and construction contract work and enforcement of the contract requirements.

Project Controls Systems

The Authority is in the process of implementing a project management information management system (PMIS) to capture all the project documentation, track, monitor and control the project schedules and costs. This system is being implemented in phases over the next FY.

Oracle Primavera Contract Management (OPCM) software is being used for all the design and build contracts. All the contract correspondence is registered in OPCM to have complete history and evidence to support potential claims. The OPCM is also used to capture submittals, RFIs, payment requisitions, change order notices, change order request such that these are tracked, addressed and responded to in a timely manner. The project controls teams log all the correspondence within PCM and advises the PCM DB Oversight Manager of any necessary actions required to make sure that all the submissions are addressed in a timely fashion.

The Authority has implemented the Design and Build Change Order Procedure to appropriately document any design and build contract changes. In addition to this procedure, the Authority had also implemented a Delegation of Authority matrix that defines the decision level of authority for contract changes of different staff with the Authority. All change notices and change order proposals from the contractor are reviewed and responded to by the PCM, RDP, and Authority.

A dispute resolution board addresses any disputes between the contractors and the Authority. Partnering sessions are held with the contractors on a regular basis with an intention to resolve issues with the contractors before escalating.

The Authority has also established a Change Control Committee (CCC) to deal with critical and major changes in the projects. This committee reviews changes and depending on the delegation level will decide or elevate recommendations to the CEO and/or board for approval.

Key Challenges

Table	22	List	of	Key	Challenges
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Section	Risk Title	Risk Description	Risk Mitigation
FCS	Delays in obtaining agreements with railroads and increased cost of modifications required for railroads.	Many interface agreements are required with UP and BNSF and other railroad agencies related to design, construction methodologies, operational issues, stations and ancillary facilities, integration with rail infrastructure and operating companies. Authority is responsible for providing the Contractors with executed Railroad Agreements that were not executed and provided to the Contractor prior to the Proposal Deadline.	Working with railroads to establish remaining agreements.
FCS	Increase in capital costs due to limited outages from railroads	BNSF has suggested HSR to implement capacity improvements in the BNSF corridor to expand construction windows. BNSF could restrict DB contractors to one closure per week which would significantly delay DB construction schedule.	Evaluating impact of delays to construction and estimating cost of construction.
FCS	Additional /changing third party requirements	Additional or changing third party requirement has already resulted in increased capital costs and likely to lead to further increases. Examples include higher level of mitigation requested by railroads including access requirements for restricted access on one side of Railroad ROW, widening of bridge structures etc.	The staff is carrying out a cost-benefit analysis to support the decision-making process.

FCS	Increased Cost from Railroad Intrusion Protection Barrier Requirements	Increased Cost from Railroad Intrusion Protection Barrier Requirements	Proposing reductions in barrier lengths based on current existing track alignments. Proposing alternatives to installation of concrete barriers to allow for engineering alternatives, such as reducing peak operating speeds in urban area or using dirt berms in lieu of concrete walls.
FCS	Increased Cost of Northern Extension change order work	Increased Cost of Northern Extension change order work	Revising alignment to avoid intrusion protection barrier. Evaluating scope to complete only critical work now and evaluating alternative delivery options.
FCS	ROW Parcel Acquisition Delay	ROW Parcel Acquisition Delay	Time impact analysis of the contractor's schedule to determine merit and identify responsibilities. Continue to focus ROW acquisition efforts on critical parcels to avoid future delays and costs.
FCS	Additional Costs for Excluded Utilities Relocation and Conflicts	Increased costs for excluded utilities relocation and conflicts identified during detail design.	Exploring alternative procurement methods to help reduce costs. Working with the Utilities to develop approved suppliers and contractors to increase competition and reduce costs.

Additional Challenges and Mitigation

Railroad Requirements

The Authority is in discussions with the CP designers to minimize the use of costly concrete intrusion protection barrier (IPB) walls and exploring more cost-effective alternatives such as earthen berms, gabion walls, and other options. IPB is the second largest construction cost impact, after right-of-way delays.

The Authority has recommended significant reductions in the quantity of barrier walls in the three CPs and has reviewed the updated concepts with BNSF. Comments were received from BNSF and staff are working with the CP teams to address so BNSF Agreements can be executed.

BNSF is limiting outages for construction in the Central Valley which affects all CPs. Initial assumptions for outages included three outages a week, excluding fourth quarter which outages are not allowed. BNSF has recently indicated that outages will be limited to one 4-hour window per week. Based on the amount of work requiring BNSF outages throughout the CPs, this change is expected to cause additional construction delays.

BNSF has also requested the Authority fund the planned Una siding project to allow for more outages. In addition, BNSF has requested advance construction of the Shafter yard that is proposed as part of the Fresno – Bakersfield LGA project. Staff is carrying out a cost-benefit analysis on this request.

For track adjacency to UPRR, Authority's legal counsel is also planning to propose further reduction to the IPB length by including slower train speeds of 125 mph along approximately 8 miles through Fresno and/or deferring construction of barrier walls to a future date when UPRR has built out additional railroad tracks within its right-of-way.

CP 1 Northern Extension

The Authority issued DL-00137 on June 23, 2017 directing TPZP to stop the guideway design along the original alignment and start design on an alignment to the west away from the BNSF right-of-way. This change would eliminate the need for an intrusion protection barrier. The environmental re-examination is in final review for FRA consideration. Ongoing ROW acquisition of the remaining 26 (out of a total of 106) parcels will continue per the current plan. Over the next year staff will work to identify all the necessary changes to accommodate this action.

Project and Construction Management

Staff are presently evaluating all construction management oversight activities by the PCM, CP contractor, RDP and Authority to ensure the efficient management of construction oversight costs. This review will assess the current allocated resources for all CP's and ensure clear roles and responsibilities are defined.

Established Priorities for FY 17/18

Over the next year, the Authority will be taking the following actions to assess and improve the overall oversight of construction of the FCS.

Design

- Establish a program-level claims team to provide advisory opinions and oversight of claims management by the regional project management teams, including support for DRB position papers:
 - Program Claims Manager located in Sacramento.
 - Regional Claims Manager located in Fresno.
- Support the Authority's regional staff and project teams in the implementation of the Authority's policies and procedures and identification of available resources.
- ≠ Support the development and revision of construction management policies and procedures.
- Support training for construction management procedures as described in the Project and Construction Management Manual and relevant Authority procedures.
- ≠ Review contract changes and contractor claims for consistency as needed, lessons learned and resolution support.
- Support headquarters staff in the development and collection of reports and data from the regional and project teams.
- Support the Authority in the development and implementation of continuous improvements in policies and procedures.
- ≠ Provide legislative analysis of bills as requested.
- ≠ Support the Authority and project teams in the resolution of design and construction issues.

Construction Support

- ≠ Provide design/construction support to each of the three CP contracts in the Central Valley.
- Participate in partnering, project development team meetings, and other meetings as requested by senior management staff.
- Support the construction team in resolution of technical issues and interpretation of design criteria:
 - Review and provide comments and recommended disposition of design variance reports submitted by the CP contractors.
 - Develop RFI responses and design directive memos to Project Construction Managers (PCMs) as required to document change or clarification of design criteria, directive drawings, and other technical requirements.
- \neq Review and respond to technical RFIs received from the CP contractors and PCM teams.
- ✓ Perform the due diligence review of final design technical submittals for overall conformance with program-wide design criteria and other technical standards, including:
 - Design baseline reports; type selection reports; 60%, 90%; and request for construction submittals.
- ✓ Participate in technical meetings, including:
 - Informal reviews and over-the-shoulder discussions as requested on technical submittals.
 - Joint comment resolution meetings for the submittals.
- ≠ Participate in civil/structure task force meetings.

- ✓ Participate in remaining type selection meetings, including assistance in resolution of technical issues.
- ≠ Participate in monthly system interface workshop meetings.
- ✓ Provide support to PCM teams as requested in negotiation of design cost for construction change orders.

Central Valley Construction Management and Support

- ✓ Oversee construction management services for the central region's construction contracts.
- ✓ Monitor project schedules, manage change-order requests and contingencies and assist with claims management.
- ✓ Monitor the performance and quality of the DB contractor teams for compliance with contract terms and maintain the contractual records and documents.
- ✓ Provide support for the project construction management contracts.
- ≠ Coordinate program-level construction safety activities coordination.

Task Budget

Table 23 Task Budget Expenditures

Task	Title	FY 17/18 Projected Expenditures ²
Task 8.1	SR-99	\$ 67,120,191
Task 8.2	Civil Infrastructure Construction Package 1 (CP1)	\$ 491,944,820
Task 8.3	Civil Infrastructure Construction Package 2-3 (CP2-3)	\$ 563,432,931
Task 8.4	Civil Infrastructure Construction Package 4 (CP4)	\$ 286,119,561
Task 8	Final Design and Construction Contract Work for the FCS	\$1,408,617,503

² Expenditures based upon June 30, 2017 FCP and adopted state budget.

From:	Barnes, Juliana (FRA)
То:	"Malone, Desiree@HSR"
Cc:	Everett, Lynn (FRA); "rlzimmerer@transystems.com"; "mlrule@transystems.com"
Subject:	Feedback: Q3-17 Deliverables (AWP)
Date:	Monday, January 08, 2018 2:58:00 PM
Attachments:	2018-01-05 FY17 18 AWP FRA Review.docx

Hi Desi,

FRA acknowledges receipt of CHSRA's <u>FY17/18 Annual Work Plan</u>, dated November 2017, on 10/30/17. After review of the deliverable, FRA has enclosed comments in the attached document to CHSRA (*ref. FY17/18_AWP_FRA Review*).

We appreciate CHSRA's significant effort made to the AWP and look forward to further development of this deliverable incorporating FRA's comment in the upcoming year.

Thank you,

Juliana Barnes, PMP Project Manager Office of Program Delivery (RPD-15) Federal Railroad Administration 801 | St., Suite 466 Sacramento, CA 95814 Cell: 916-215-9115

From: Malone, Desiree@HSR [mailto:Desiree.Malone@hsr.ca.gov]
Sent: Monday, October 30, 2017 9:13 AM
To: Barnes, Juliana (FRA) <juliana.barnes@dot.gov>
Cc: Everett, Lynn (FRA) <lynn.everett@dot.gov>; Gilliland, Barbara(PB)@HSR
<barbara.gilliland@hsr.ca.gov>; Giovinazzi, Giles@DOT <Giles.Giovinazzi@dot.ca.gov>
Subject: Q3-17 Deliverables

Hi Juliana,

Attached in this email are deliverables due in Q3-17:

- Q3-17 Transmittal #06646
- Task 1: Various Re-exams (links are in the transmittal)
- Task 5: Annual Work Plan and Central Valley Project Financial Plan

Desi Malone Grant Manager California High-Speed Rail Authority J0290

770 L Street, Suite 870 Sacramento, CA 95814 w: (916) 330-5640 c: (916) 291-4121 desiree.malone@hsr.ca.gov www.hsr.ca.gov





CHSRA delivered the <u>FY17/18 Annual Work Plan</u>, dated November 2017, to FRA on 10/30/17. FRA's review comments follow.

• Annual Work Plan (AWP):

- Required Components (ARRA Grant Amendment 6):
 - CHSRA will prepare for FRA's review and comment a detailed staffing plan and cost estimate for the project. The AWP outlines the work necessary to establish and manage project control systems to maintain, manage, and monitor project schedule, budget, documentation, procurement, and tracking of deliverables so that implementation of the project stays on schedule and within budget.
- Key FRA Review Comments from Prior Review:
 - The document is helpful in understanding who is working on a task and what requirements/standards CHSRA has to meet when completing a task. However, the document does not outline "how" CHSRA plans to execute on schedule and within budget. CHSRA needs to develop the deliverable taking into consideration FRA's past review comments (above) as well as the following:
 - How CHSRA is going to complete each task on schedule and within budget.
 - What CHSRA is going to complete this year and how that work is helping CHSRA progress to project completion on schedule and within budget.
 - The AWP should provide specific milestones or deliverables (even if partial/iterative) CHSRA is going to meet or provide to FRA during the timeframe covered in the document as well as the number of people/resources and costs associated with achieving specific milestones or deliverables. For example, if the Program Management Plan indicates that CHSRA is going to finish a given task in say five years, then the AWP would indicate what CHSRA is doing this year (expressed by describing the number/type of people involved and/or the cost) to make sure iterative tasks are progressing as necessary to reach project completion at the end of the five years.
- Comments:
 - FRA appreciates the progress that has been made in the re-formatting of the AWP.
 - Significant progress was made in the discussion of specific milestones or deliverables in detailing the timeframe and the number of people/resources and costs to achieve the milestone or deliverable. This discussion focused on deliverables due this FY.
 - Please further develop the document in the upcoming submission by:
 - For deliverables due beyond this FY, include discussion of progress (even if it may be minimal) being made this FY.
 - The AWP does not discuss some key actions to occur this FY, such as, but not limited to, the following:
 - Early Train Operator (ETO): There is no mention of the ETO who should assist in progressing several deliverables this fiscal year.
 - Construction Package 1 Project & Construction Manager (CP 1 PCM): While the AWP discusses the responsibilities/roles of the PCMs, it does not mention that funding for the CP 1 PCM will end in the middle of this fiscal year nor how CHSRA will proceed.
 - Items to note:





• The Business Plan cannot modify the scope, budget, and schedule for the FRA grants. In the next AWP please discuss the 2018 Business Plan affects CHSRA's ability to deliver the grants' scope of work.