CALIFORNIA
High-Speed Rail Authority

Request for Expressions of Interest for the Delivery of an Initial Operating Segment

RFEI HSR#15-02

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INTRODUCTION AND GENERAL INFORMATION

1.0 California High-Speed Rail Authority

The California High-Speed Rail Authority (Authority) is responsible for the planning, design, construction and operation of the first high-speed rail system in the nation. The California High-Speed Rail System (System) will connect the mega-regions of the State, contribute to economic development and a cleaner environment, create jobs, and preserve agricultural and protected lands. Phase 1 of the System will connect the San Francisco Bay Area to the Los Angeles Basin in under three hours at speeds of over 200 miles per hour. The System will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with regional partners to implement a statewide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the State's 21st century transportation needs.

In November 2011, the Authority Board of Directors (Board) approved resolution 11-22 identifying two options for an Initial Operating Segment (IOS). An IOS identifies the segment over which the Authority plans to initiate revenue high-speed rail service that adheres to the requirements set out in Proposition 1A and other Authority policies and goals. The IOS-South stretches from Merced to the San Fernando Valley while the IOS-North extends from San Jose and Merced to Bakersfield. The southern terminus of the IOS-South has been extended to Burbank through planning efforts since 2011. Both IOS options share a section in the Central Valley and the Authority is delivering that section through a series of design-build (DB) contracts.

The current construction in the Central Valley is the first step in completing an IOS and eventually the entire high-speed rail system in California. Successfully implementing a high-speed rail system requires the delivery and integration of numerous high-speed rail components, including civil works, track, infrastructure, stations, rolling stock, and train operations. The Authority plans to limit its role to oversight and management and will rely on the private sector to develop, deliver, and integrate these components.

The next series of procurements planned by the Authority will address future needs and move toward the implementation of an IOS. The purpose of this Request for Expressions of Interest (RFEI) is to solicit feedback and interest from the private sector on the development and maintenance of the remaining civil works, track, and infrastructure for IOS-South, IOS-North, or both.

1.1 Next Steps

While the "backbone" of the System is being delivered under a series of DB contracts through the Central Valley, the Authority is planning for the delivery of the remainder of the civil works not yet under procurement and all railway infrastructure (track, traction power, systems) for one or both of the IOS options outlined above.

Industry experience has shown that innovative delivery models, such as a design-build-finance-maintain (DBFM), can help the Authority achieve its objectives of minimizing the whole-life cost of the System, securing private sector investment, accelerating System completion, and transferring key delivery and long-term maintenance risk to the private sector. The Authority is also focused on the following issues related to delivering high-speed rail in California:

- Delivering and operating a high-speed rail system is complex as it involves interfacing and integrating many technical components across a series of geographical segments. Each geographical interface and technical component introduces interface and integration risk that must be managed adequately to ensure safe and timely operation of the System. By combining the civil works and infrastructure components across multiple geographic segments the Authority hopes to mitigate key integration and interface risks in order to result in better overall operating performance. The private sector has expertise and experience in interfacing and integrating high-speed rail systems and the Authority is interested in understanding how the Authority could benefit (e.g., cost savings, schedule acceleration) from combining numerous high-speed rail components across multiple geographic segments into a single procurement and what commercial and financial terms are required in order to deliver these benefits.

- Recently, the Legislature provided the Authority with a new funding source – Cap-and-Trade Proceeds (C&T) – to complement the existing Federal funding sources, the American Recovery and Reinvestment Act of 2009 (ARRA) and Fiscal Year 2010 (FY10) funding, and the State's Proposition 1A funding.

  The Legislature provided C&T Proceeds as a continuous and long-term funding stream to the Authority and specified that those proceeds can be used on a cash/pay-go basis and in financing. The Authority is examining methods to deliver the program including the use of C&T Proceeds as security for financing to help accelerate capital funding, accelerate the program, and leverage innovative delivery models that include private sector financing. The Authority is interested in receiving feedback and interest on raising financing secured by C&T Proceeds.

- The System traverses difficult topography, including many miles of mountains and valleys. However, this topography is similar to other regions of the world where high-speed rail has been successfully constructed. The Authority seeks input from private sector parties with expertise in developing high-speed rail through mountainous regions. The Authority is interested in understanding how construction methods and value engineering techniques could reduce construction costs.

- The Authority published its delivery schedule for the program in its 2012 and 2014 Business Plans. The Authority is interested in learning how the private sector, through an integrated delivery contract, can accelerate the project delivery schedule to meet or exceed the Authority's deadlines.

2.0 Purpose and Overview of RFEI

The Authority is issuing this RFEI to receive Expressions of Interest (EOIs) from firms (Respondents) interested in participating in the IOS-South, IOS-North, or both. The Authority is also interested in receiving information from Respondents on other potential sections that would meet its objectives.

Issuing this RFEI does not commence a procurement process or obligate the Authority to commence a procurement or award a contract. EOIs received from Respondents will not be scored, but will be used to identify firms interested in participating in a future procurement for one or both IOS projects.

The purpose of this RFEI is to refine the Authority's delivery strategy through consultation with the industry. Specifically, the Authority is looking for detailed feedback on the technical, commercial, financial, and procurement aspects of its preferred delivery strategy, as well as

industry's view on the potential benefits and challenges from combining large remaining portions of the System into one or more DBFM or similar contracts, as further detailed in this document. The Authority is particularly interested in opportunities for cost savings and schedule acceleration and the key commercial and financial requirements that would be required in order to achieve those objectives. The Authority is also open to receiving feedback from the industry on other delivery models that may allow it to meet these objectives. The Authority may use the feedback received from industry to update its delivery strategy in its 2016 Business Plan and to schedule and commence one or more procurements in the future. All of the feedback to this RFEI should be mindful of the Authority's statutory and legislative requirements and obligations as described in Proposition 1A, Senate Bill (SB) 1029, Public Utilities Code Section 185030-185038, and in other legislation that governs the Authority's operations.

Participation in this RFEI is not required for participation in a future procurement.

3.0 Submittal of the Expression of Interest

The following summarizes the submission and format guidelines of the EOIs. In addition to the information described below, the Authority may request confirmation or clarification of information furnished by a Respondent, request additional information from a Respondent concerning its EOI, and/or request additional evidence of qualifications to perform the work described in this RFEI. Formatting requirements for the EOI are listed in Section 11.0.

Please conduct all communications for this RFEI through and submit all EOIs to the contact below:

Rebecca Harnagel

California High-Speed Rail Authority
770 L Street, Suite 620 MS 2
Phone: (916) 324-1541
Fax: (916) 322-0827
Email: deliveryapproach@hsr.ca.gov

EOIs are requested by September 14, 2015 but may still be considered if received after that date.

4.0 One-on-One Meetings

After receipt of the EOIs, the Authority plans to conduct a series of one-on-one meetings with Respondents. The one-on-one meetings will be conducted in order to discuss and ask questions about the EOIs. One-on-one meeting discussions will be confidential and will not be disclosed to other parties.

One-on-one meetings will be limited to those Respondents capable of leading a bidding team for one or both of the project scopes described in this RFEI.

One-on-one meetings are expected to occur in September 2015. Respondents are encouraged to contact the Authority point of contact to schedule one-on-one meetings as soon as possible, if interested.

The Project

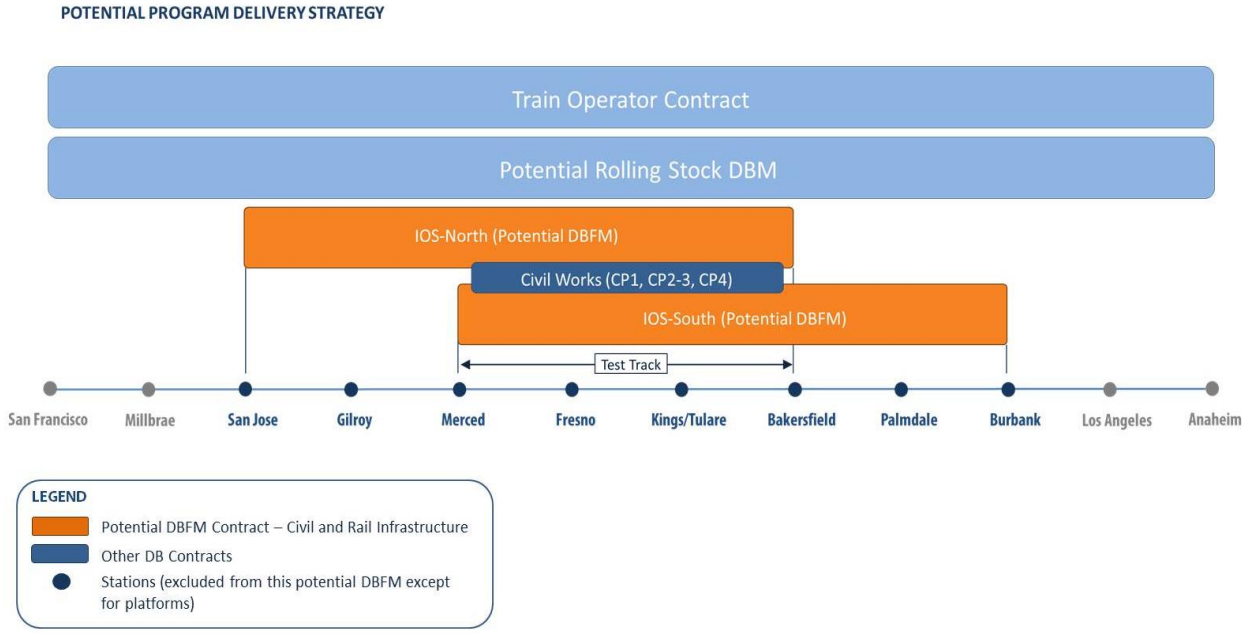
5.0 Program Delivery Strategy

5.1 Overview

The Authority is seeking input on delivery models for the design, construction, finance, and maintenance of civil works (excluding building the CP1, CP2-3 and CP4 design-build projects – see below for more information), track, infrastructure, and traction power components on the two IOS project scopes (Merced to Burbank and San Jose/Merced to Bakersfield). The IOS-North may also be extended to San Francisco through the interface with Caltrain's electrification project at Diridon Station. The Authority welcomes feedback on delivery approaches for one or both of the IOS options (described in Sections 5.3 and 5.4) or a different operating segment that could meet the Authority's goals and requirements for an IOS. The Authority also welcomes feedback on other elements that will be required to begin operations on an IOS described in Sections 5.2, 5.5, and 5.6 and other delivery models.

The Authority is considering pursuing a delivery strategy that combines highly technical elements of high-speed rail delivery into a large, single contract to be performed by one or more private sector entities (Developer) while delivering other elements, including the CP1, CP2-3 and CP4 design-build projects, rolling stock, stations and train operations, under separate contracts.

The figure below illustrates the Authority's potential delivery strategy for the two IOS project scopes.



5.2 Design-Build for Civil Works in the Central Valley

- Construction Package #1 (CP1) is being delivered under a DB model. The contract was awarded to Tutor-Perini/Zachry/Parsons, a joint venture, and was executed for a total contract price of approximately $1 billion. Notice to proceed was issued in October 2013. The scope of CP1 consists of design and construction of civil works for a 29-mile stretch from Avenue 17 in Madera County to East American Avenue in Fresno County.

  Long-term maintenance of the package is not included in the CP1 design-build contract and would be the responsibility of the Developer. For more information on CP1 please refer to:

  http://www.hsr.ca.gov/Programs/Construction/about_construction_package_1.html

- Construction Package #2-3 (CP2-3) is being delivered under a DB model. A contract with Dragados/Flatiron, a joint venture, was executed in June 2015 for a total price proposal of approximately $1.2 billion. The scope of CP2-3 consists of design and construction of civil works for a 65-mile stretch from the terminus of CP1 at East American Avenue in Fresno to approximately one mile north of the Tulare-Kern County line.

  Long-term maintenance of the package is not included in the CP2-3 design-build contract and would be the responsibility of the Developer. For more information on CP2-3 please refer to:

  http://www.hsr.ca.gov/Programs/Construction/about_construction_package_2_3.html

- Construction Package #4 (CP4) will be delivered under a DB model. The Request for Qualifications for CP4 was issued on November 21, 2014 and Statements of Qualifications were received by the Authority on February 27, 2015. The RFP was issued to qualified teams on May 27, 2015. The estimated cost of CP4 is $400 million to $500 million. Work on CP4 will extend approximately 22-miles through the Central Valley beginning one mile north of the Tulare-Kern County line at the southern terminus of CP2-3 to Poplar Avenue.

  Long-term maintenance of the package is not included in the CP4 design-build contract and would be the responsibility of the Developer. For more information on CP4 please refer to:

  http://www.hsr.ca.gov/Programs/Construction/about_construction_package_4.html

These construction packages do not include any track, railroad infrastructure, traction power, systems, or station works.

5.3 DBFM or Other Delivery Model for Civil Works, Track, and Infrastructure between Merced and Burbank – IOS-South

For this project scope, a Developer would be responsible for the following scope of work:

- Design, build and maintain the civil works between Merced and the northern terminus of CP1 and the southern terminus of CP4 and Burbank;
- Maintain the civil works being delivered under separate design-build contracts for CP1, CP2-3, and CP4;
- Install and maintain the track between Merced and Burbank;

- Design, construct/install, and maintain the communications, signaling, and traction power systems between Merced and Burbank;
- Provide financing based on an availability payment mechanism;
- Ensure full integration of all components across the alignment.

5.4 DBFM or Other Delivery Model for Civil Works, Track, and Infrastructure between San Jose/Merced and Bakersfield – IOS-North

For this project scope, a Developer would be responsible for the following scope of work:

- Design, build and maintain the civil works between San Jose, Merced, and Bakersfield besides those civil works being delivered under separate DB contracts for CP1, CP2-3, and CP4;
- Maintain the civil works being delivered under separate DB contracts for CP1, CP2-3, and CP4;
- Install and maintain the track between San Jose, Merced, and Bakersfield;
- Design, construct/install, and maintain the communications, signaling, and traction power systems between San Jose, Merced, and Bakersfield Station;
- Provide financing based on an availability payment mechanism;
- Ensure full integration of all components across the alignment.

Should the Authority elect to move forward with both IOS projects, then the Authority will include the responsibility for maintaining the civil works for CP1, CP2-3, and CP4 in only one of the contracts.

5.5 Design-Build-Maintain for Rolling Stock

The Authority plans to procure the rolling stock under a separate performance-based design-build-maintain (DBM) contract that will require the rolling stock manufacturer (RSM) to meet certain performance criteria and subject the RSM to payment adjustments if the criteria are not met.

The RSM will be responsible for manufacturing, delivering, and testing and commissioning of the rolling stock, design and construction of the maintenance and stabling facilities, including heavy maintenance facility, and maintenance of all rolling stock and facilities over a 30-year maintenance period.

Additional information can be found at: http://www.hsr.ca.gov/Programs/trainsets/index.html.

5.6 Train Operator

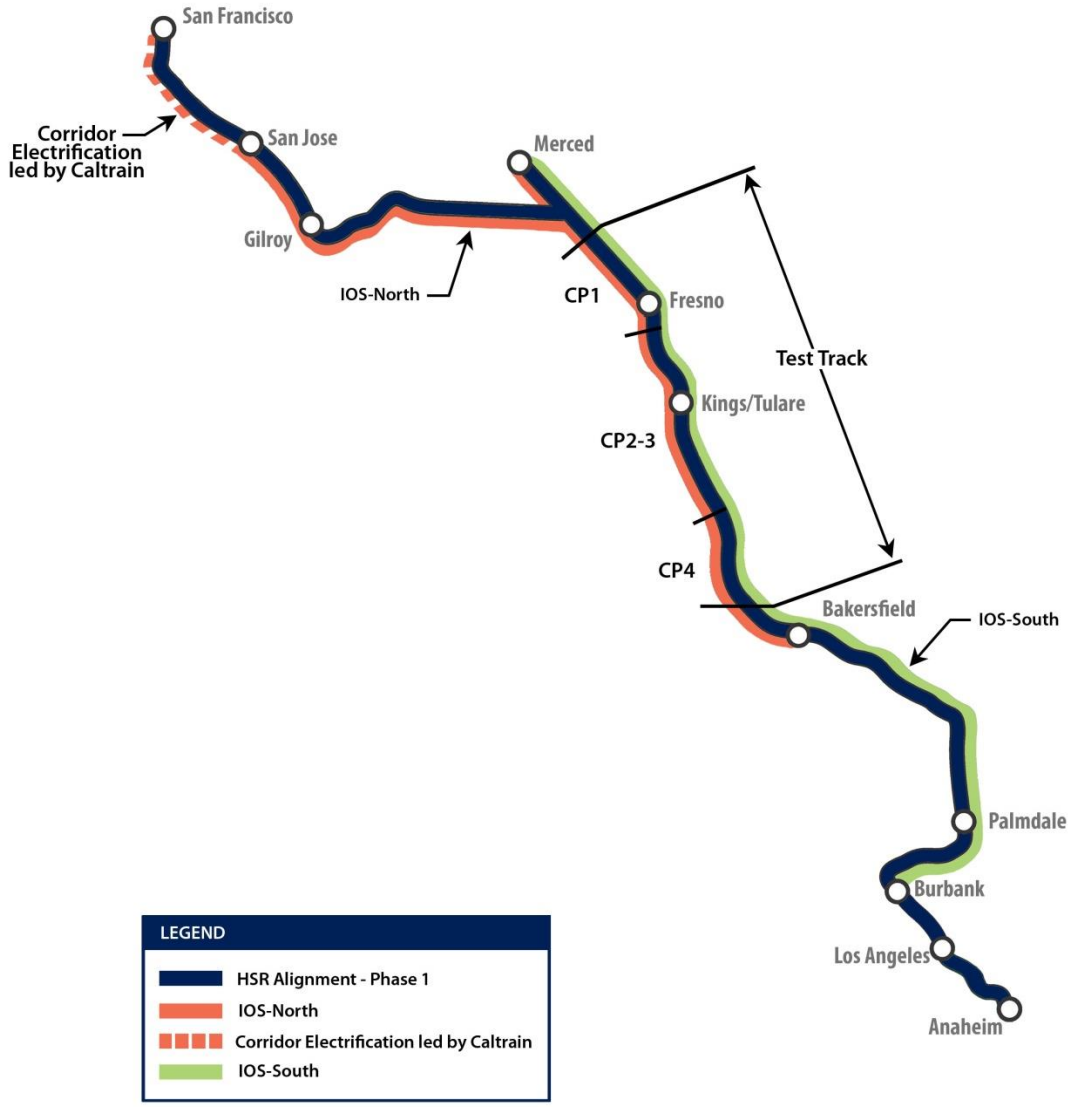
The Authority anticipates procuring a Train Operator to provide revenue service under a separate agreement. As outlined in the 2012 and 2014 Business Plans, ultimately the Authority will enter into a long-term operating concession after the operating ramp-up period has concluded.

The Train Operator will be responsible for developing an operating plan, marketing, ticketing, on-board safety and security, and other passenger services, in addition to its core duty of running trains.

The Authority welcomes feedback on different approaches to this delivery strategy (e.g., combining rolling stock and/or train operations with the Developer).

6.0 Map of Project Scopes

Below is a map that illustrates the geography of the two IOS options outlined above.



7.0 Description of the IOS-South Project Scope

This section provides a geographical and technical description of IOS-South. The detailed descriptions have been provided for the purpose of receiving feedback on the Authority's delivery strategy, are preliminary in nature, and subject to change.

The Records of Decision (RODs) for the Merced to Fresno section (excluding the Central Valley Wye section) and the Fresno to Bakersfield section (excluding the approach into Bakersfield) have already been secured. The RODs for the environmental sections that comprise the remainder of the Merced to Burbank scope are expected by the end of 2017. Respondents are advised that the environmental review process could result in the selection of a no-build alternative or an alignment that would change the geographical and technical descriptions provided below. Nothing contained in this RFEI is intended to modify, limit, or otherwise constrain the environmental process.

7.1 Geographical Description

The IOS-South spans from a Merced station to a station at the Burbank Airport. The alignment from Merced connects at Madera to the civil works being completed in CP1-4. Between Madera and the southern terminus of CP4, the Developer would not be required to provide civil infrastructure but the other components would be required to be delivered sooner so that this section can serve as a test track to commission trains before being put into revenue service. From the southern terminus of CP4, the alignment goes through Shafter to a Downtown Bakersfield station. Heading south from Bakersfield, the alignment stretches over mountainous terrain to Palmdale and Burbank. These mountainous sections will include significant amounts of tunneling, viaducts, and bridges. The entire IOS-South is approximately 300 miles in length.

Detailed alignment evaluations are provided in the Authority's RODs and Supplemental Alternatives Analysis (SAA) for each environmental section. Links to the RODs and SAAs are included in the Reference Documents section of this RFEI.

7.2 Technical Description

Throughout the IOS-South, the project consists of new construction (civil works, track, traction power, systems) of dedicated two-track high-speed rail infrastructure with design speeds of 250 mph and operating speeds of 220 mph. The specific high-speed rail components that will be delivered under a potential DBFM or other contract are described in detail below.

7.2.1 Civil Works

Civil works will be designed and constructed on certain sub-segments, as described above, and maintained across the entire alignment including the civil works being delivered under the DB contracts for CP1, CP2-3, and CP4. The design and construction of civil works on certain sub-segments will include approximately 40-50 miles of viaduct and bridge construction, approximately 40-45 miles of tunnel construction, approximately 15-20 miles of retained fill construction, approximately 5-10 miles of retained cut construction, and approximately 180 miles of at-grade construction.

7.2.2 Track

Track work will be installed and maintained across the entire alignment. The track work installed must be capable of achieving design speeds of 250 mph and operating speeds of 220 mph.

7.2.3 Traction Power Including OCS

A complete traction power system, including overhead contact system, will be installed and maintained across the entire alignment. The traction power systems must be capable of achieving design speeds of 250 mph and operating speeds of 220 mph. The Developer would be required to provide 10 substations each consisting of two 60 MVA 115kV/2x 25 kV power transformers, 10 switching stations each consisting of two 20 MVA autotransformers, and 41 paralleling stations each consisting of one 20 MVA autotransformer. Note that the connection between the Authority's 115 kV traction power substations and the utility providers will not be provided by the Developer.

7.2.4 Systems

7.2.4.1 Communications

A communications system will be installed and maintained across the entire alignment. The communications system must be a fully redundant and diversely routed fiber-optics backbone for the exclusive use of the Authority. Two additional fiber-optic cables in a separate cable containment will be provided for use by third parties. Radio communications (voice and data) will be provided for ½ mile on either side of the alignment. The Authority will make the communications frequency spectrum available to the Developer at no cost. The preferred spectrum is in the 450 MHz range. The Developer would be responsible for the provision of radios for each trainset (the radios would be integrated and installed onto the trainsets by the RSM).

7.2.4.2 Signaling

A signaling system will be installed and maintained across the entire alignment. The signaling system must be a proven high-speed rail system. The Developer would be responsible for providing and maintaining the on-board signaling equipment for the trainsets; however, the equipment would be integrated and installed onto the trainset by the RSM.

7.2.4.3 Operational Control Center (OCC)

A fully integrated OCC will be provided and maintained for the alignment. The OCC will be used by the Train Operator for the dispatching of trains, by the Developer for the monitoring of the civil works and infrastructure and for the dispatching of maintenance and inspection crews, among other things. The OCC will be located in a facility provided by a third party under a separate contract (most likely in one of the high-speed rail stations) and the Developer would not be responsible for building or maintaining the facility apart from the OCC equipment itself.

7.2.4.4 Local Operational Control Center

Fully integrated and localized OCCs will be provided and maintained at each high-speed rail station along the alignment. These OCCs must allow local control of the adjacent railway in the event that the centralized OCC is unavailable.

7.2.4.5 Warning Systems

An integrated warning system that detects, reports, and, where appropriate, autonomously implements mitigation measures for safety events will be installed and maintained across the entire alignment. Safety events include, but are not limited to, earthquakes, intrusion by unauthorized persons/objects, high winds, and flooding.

7.2.4.6 Supervisory Control and Data Acquisition System (SCADA)

A SCADA system will be provided and maintained across the entire alignment.

7.2.4.7 Closed Circuit Television (CCTV) System

A CCTV system will be provided and maintained in certain key safety areas along the alignment, such as station platforms, tunnel portals, and emergency egress areas, among others. The security CCTV systems within the high-speed rail stations will be provided by third parties under separate contract.

7.2.4.8 Direct Line Telephone System

A direct line telephone system will be installed to allow direct communications with the OCC.

7.2.4.9 Passenger Information Systems

A passenger information system will be provided and maintained at each high-speed rail station. The passenger information system must be integrated with the OCC and signaling systems to ensure that the data displayed at the high-speed rail stations is current and accurate.

7.3 Stations

High-speed rail stations will not be provided under the potential DBFM contract; however, the Developer would provide and maintain the station platform, including walking surface and approach warning lights, among others, as part of the DBFM contract.

8.0 Description of the IOS-North Project Scope

This section provides a geographical and technical description of the IOS-North. The detailed descriptions have been provided for the purpose of receiving feedback on the Authority's delivery strategy, are preliminary in nature, and subject to change.

The RODs for the Merced to Fresno section (excluding the Central Valley Wye section) and the Fresno to Bakersfield section (excluding the approach into Bakersfield) have already been

secured. The RODs for the environmental sections that comprise the remainder of the San Jose/Merced to Bakersfield scope are expected by the end of 2017. Respondents are advised that the environmental review process could result in the selection of a no-build alternative or an alignment that would change the geographical and technical descriptions provided below. Nothing contained in this RFEI is intended to modify, limit, or otherwise constrain the environmental process.

8.1 Geographical Description

The project scope spans from Diridon Station in San Jose and a station in Merced to downtown Bakersfield. North of Diridon Station, the rolling stock will operate on the Caltrain corridor which is being upgraded and electrified as part of a separate contract. The scope of work for the project scope begins north at the interface between the Caltrain corridor at Diridon Station and ends in downtown Bakersfield.

The alignment from San Jose stretches south to Gilroy before turning east toward the Central Valley. The alignment goes over the Pacheco Pass to the Fairmead/Chowchilla area where it splits at a wye with one leg going north to Merced and the other connecting at Madera to the civil works being completed in CP1-4. Between Madera and the southern terminus of CP4, the Developer would not be required to provide civil infrastructure but the other components would be required to be delivered sooner so that this section can serve as a test track to commission trains before being put into revenue service. From the southern terminus of CP4, the alignment goes through Shafter to a downtown Bakersfield station. The entire IOS-North is approximately 290 miles in length.

Detailed alignment evaluations are provided in the Authority's RODs and Supplemental Alternatives Analysis (SAA) for each environmental section. Links to the RODs and SAAs are included in the Reference Documents section of this RFEI.

8.2 Technical Description

Throughout the IOS-North segment, the project consists of new construction (civil works, track, traction power, systems) of dedicated two-track high-speed rail infrastructure with design speeds of 250 mph and operating speeds of 220 mph. The maximum operating speed between Diridon Station and Gilroy is set separately at 175 mph. The specific high-speed rail components that will be delivered under a potential DBFM or other contract are described in detail below.

8.2.1 Civil Works

Civil works will be designed and constructed on certain sub-segments, as described above, and maintained across the entire alignment including the civil works being delivered under the DB contracts for CP1, CP2-3, and CP4. The design and construction of civil works on certain sub-segments, as described above, will include approximately 70 miles of viaduct and bridge construction, approximately 10-15 miles of tunnel construction, approximately 15 miles of retained fill construction, approximately 5 miles of retained cut construction, and approximately 180 miles of at-grade construction.

8.2.2 Track

Track work will be installed and maintained across the entire alignment. The track work installed must be capable of achieving design speeds of 250 mph and operating speeds of 220 mph.

8.2.3 Traction Power Including OCS

A complete traction power system, including overhead contact system, will be installed and maintained across the entire alignment. The traction power systems must be capable of design speeds of 250 mph and operating speeds of 220 mph. The Developer would be required to provide approximately 10 substations each consisting of two 60 MVA 115kV/2x 25 kV power transformers, approximately 10 switching stations each consisting of two 20 MVA autotransformers, and approximately 41 paralleling stations each consisting of one 20 MVA autotransformer. Note that the connection between the Authority's 115 kV traction power substations and the utility providers will not be provided by the Developer. .

8.2.4 Systems

8.2.4.1 Communications

A communications system will be installed and maintained across the entire alignment. The communications system must be a fully redundant and diversely routed fiber-optics backbone for the exclusive use of the Authority. Two additional fiber-optic cables in a separate cable containment will be provided for use by third parties. Radio communications (voice and data) will be provided for ½ mile on either side of the alignment. The Authority will make the communications frequency spectrum available to the Developer at no cost. The preferred spectrum is in the 450 MHz range. The Developer would be responsible for the provision of radios for each trainset (the radios would be integrated and installed onto the trainsets by the RSM).

8.2.4.2 Signaling

A signaling system will be installed and maintained across the entire alignment. The signaling system must be a proven high-speed rail system. The Developer would be responsible for providing and maintaining the on-board signaling equipment for the trainsets; however, the equipment would be integrated and installed onto the trainset by the RSM.

8.2.4.3 Operational Control Center (OCC)

A fully integrated OCC will be provided and maintained for the alignment. The OCC will be used by the Train Operator for the dispatching of trains, by the Developer for the monitoring of the civil works and infrastructure and for the dispatching of maintenance and inspection crews, among other things. The OCC will be located in a facility provided by a third party under a separate contract (most likely in one of the high-speed rail stations) and the Developer would not be responsible for building or maintaining the facility apart from the OCC equipment itself.

8.2.4.4 Local Operational Control Center

Fully integrated and localized OCCs will be provided and maintained at each high-speed rail station along the alignment. These OCCs must allow local control of the adjacent railway in the event that the centralized OCC is unavailable.

8.2.4.5 Warning Systems

An integrated warning system that detects, reports, and, where appropriate, autonomously implements mitigation measures for safety events will be installed and maintained across the entire alignment. Safety events include, but are not limited to, earthquakes, intrusion by unauthorized persons/objects, high winds, and flooding.

8.2.4.6 Supervisory Control and Data Acquisition System (SCADA)

A SCADA system will be provided and maintained across the entire alignment.

8.2.4.7 Closed Circuit Television (CCTV) System

A CCTV system will be provided and maintained in certain key safety areas along the alignment, such as station platforms, tunnel portals, and emergency egress areas, among others. The security CCTV systems within the high-speed rail stations will be provided by third parties under separate contract.

8.2.4.8 Direct Line Telephone System

A direct line telephone system will be installed to allow direct communications with the OCC.

8.2.4.9 Passenger Information Systems

A passenger information system will be provided and maintained at each high-speed rail station. The passenger information system must be integrated with the OCC and signaling systems to ensure that the data displayed at the high-speed rail stations is current and accurate.

8.3 Stations

High-speed rail stations will not be provided under the potential DBFM contract; however, the Developer would provide and maintain the station platform, including walking surface and approach warning lights, among others, as part of the DBFM contract.

9.0 Cost and Schedule

The Authority's cost estimates and schedule information for the program is available in its 2012 and 2014 Business Plans on the Authority's website at http://www.hsr.ca.gov/About/Business_Plans/index.html

Additional cost and schedule information by environmental section is included in the March 2015 Project Update Report to the State Legislature available at http://hsr.ca.gov/docs/about/legislative_affairs/SB1029_Project_Update_Report_030115.pdf

The Authority welcomes Respondents' input on ways to reduce whole-life cycle costs of either or both IOS projects as well as strategies to accelerate schedules and/or reduce delay risks.

10.0 Payment and Funding

10.1 Availability Payment

The Authority is contemplating a single DBFM or similar contract with a Developer to deliver the IOS-South project scope and a single DBFM or similar contract with a Developer (could be the same or different Developer) to deliver the IOS-North project scope. Both DBFM contracts likely would be delivered under an availability payment structure. Under an availability payment structure, the Developer would be responsible for completing the scope and financing the capital costs in exchange for a series of availability payments over the life of a long-term contract spanning 25-50 years.

At this point, the Authority's long-term funding sources consist of farebox and other operating revenue and C&T Proceeds. For purposes of this RFEI, respondents should assume that C&T Proceeds would be used as the source of repayment for the capital portion of the availability payments.

The availability payments will be subject to adjustments for non-performance or substandard performance according to pre-defined criteria.

The Authority anticipates a series of milestone payments from funds provided by Proposition 1A to help fund a portion of the capital costs. The Developer would be expected to finance the remaining costs.

The Authority is considering an availability payment model in order to focus on achieving outputs and not on prescriptive specifications. This model has shown the ability to allow for the private sector to innovate to meet an owner's objectives.

As an example, the Developer would be responsible for developing its own baseline program to meet the contractual performance criteria, such as the deadline for access for testing and commissioning rolling stock and the start of revenue service. When the project enters revenue service, the Developer would be responsible for developing its own maintenance plan to meet the operating plan set by the Train Operator and approved by the Authority. If the Developer does not meet these performance criteria, the availability payment will be subject to performance deductions.

Examples of performance criteria include meeting construction timelines, availability of the system for operations, safety, train arrival delays (in minutes) caused by the Developer, and passenger comfort impacts caused by the Developer.

The Authority expects that this model could result in a lower whole-life cost for the program and also encourages innovation and performance. The Authority expects to rely on the expertise of the private partner to develop the most appropriate approach to meeting the performance and availability criteria.

10.2 Funding

The Authority currently has three sources of funding available for capital costs for the Program. Costs incurred during the operating period, such as operating and maintenance costs, will be funded using operating revenue. Detailed breakdowns of funding sources are provided in the Authority's business plans as well as in the relevant Reference Documents (e.g. the original appropriating bills and FRA Grant Agreement). The three sources of capital funding are:

- *Federal Grants* – The Authority is the recipient of over $3 billion in Federal grants, including ARRA and FY10 funds, for program management, planning, environmental clearance, and construction in the Central Valley (CP1, CP2-3, and CP4). These funds are already committed to be expended on these projects.
- *Proposition 1A (Prop 1A)* – Prop 1A was passed by voters in 2008 and establishes $9.95 billion in bond funds to pay for the capital costs of the System and make improvements to regional services which will connect to the system. Approximately $1.1 billion in bond funds have been committed to "bookend" improvements, $1 billion for regional connectivity projects, and $1 billion for pre-construction activities, leaving approximately $7 billion of bond funds for the remainder of the System. The Legislature and Authority committed approximately $3 billion in Prop 1A bond funds to match $3 billion in Federal grants for use in the Central Valley. This leaves approximately $4 billion available for use on other elements of the System.
- *Cap-and-Trade Proceeds* – In 2006, California enacted legislation (Assembly Bill 32) to reduce California's greenhouse gas emissions. To comply with the legislation, the California Air Resources Board (ARB) implemented the California C&T Program. The Program created a market-based mechanism to reduce greenhouse gas emissions by selling carbon emission allowances. Beginning in 2012, the ARB has conducted quarterly auctions to sell allowances to certain industries in order to comply with greenhouse gas emission regulations. The sale of these allowances generates proceeds for the Greenhouse Gas Reduction Fund (GGRF).

  In 2014, the Legislature approved continuous appropriation of funding from the GGRF. The Authority received a guaranteed amount of $250M in FY14/15, another $400M in FY15/16; and starting in FY15/16, the Authority will receive 25% of the proceeds to the GGRF on a continuous basis. As of March 2015, the Governor's budget projects that the 25% will equate to $500M in FY15/16. The 2014 legislation allowed proceeds to be used for repayment of loans made to fund the program.

As discussed above, the Authority anticipates committing some or all of its remaining Prop 1A and future C&T Proceeds to fund the milestone and availability payments on the DBFM contracts. The Authority's other long-term funding sources are farebox and other operating revenue. These revenues are described further in the 2014 Business Plan.

11.0 Expressions of Interest

11.1 Formatting

The Authority requests that each EOI comply with the following requirements:

A. Documents should be prepared in single-spaced type, 12 point font, on 8-1/2" x 11" sheets printed double-sided. A page is considered to be a single side of an 8-1/2" x 11" sheet. Should the Respondent wish to submit materials that benefit from larger format paper sizes such as charts, drawings, graphs and schedules then they should do so sparingly.

B. Pages should be numbered at the bottom to show the page numbers and total number of pages in the response (e.g., Page 1 of 25, Page 2 of 25, etc.).

C. The EOI should be no more than 25 pages in length, exclusive of the transmittal letter and table of contents, if applicable.

D. Brochures and miscellaneous materials should not be submitted.

E. The EOI should be divided into sections and each section be presented in the same order as they appear in this RFEI.

F. The EOI should be submitted by September 14, 2015, though EOIs may still be considered if received after that date.

11.2 Transmittal Letter

The EOI should be transmitted with a letter that should specify a contact person for the Respondent. The contact information should include the following: name, title, mailing address, email address and telephone number. The transmittal letter should specify if the Respondent is submitting its EOI individually or as part of a joint venture or consortium. If the Respondent is submitting its EOI as part of a joint venture or consortium, then it should identify all of the joint venture or consortium members.

11.3 Firm Experience and Team Structure

The EOI should include a brief statement describing the Respondent's experience with similar projects and similar services. To the extent that the Respondent is submitting an EOI as part of a joint venture or consortium, then the EOI shall include a description of the proposed team structure, including what strengths and experience each entity brings to the overall team.

11.4 Project Approach

The Authority would like to know whether each Respondent is interested in the IOS-South scope, IOS-North scope, or both, as well as any recommendations for improvement to its delivery strategy. The EOI shall include a description of how the Respondent will approach each project scope and how each approach will meet the goals and objectives of the Authority and the hurdles to overcome to deliver the project(s) on time and on budget.

This section of the EOI shall also include any innovative ideas for delivering both projects.

11.5 Responses to Questions

The majority of the EOI should focus on the questions submitted below. The Authority is very interested in the feedback provided by industry in response to these questions and encourages Respondents to respond in detail.

11.6 Commercial Questions

1. Is the delivery strategy (i.e., combining civil works, track, traction power, and infrastructure) likely to yield innovation that will minimize whole-life costs and accelerate schedule? If so, please describe how. If not, please recommend changes to the delivery strategy and describe how those changes will better maximize innovation and minimize whole-life costs and schedule.

2. Does the delivery strategy adequately transfer the integration and interface risks associated with delivering and operating a high-speed rail system? What are the key risks that will be borne by the State if such risk transfer is not affected? What are the key risks that are most appropriate to transfer to the private sector?

3. Are there any other components of a high-speed rail system that should be included in the scope of work for each project (e.g., rolling stock, train operations, stations)? If so, how will this help meet the Authority's objectives as stated in this RFEI?

4. What is the appropriate contract term for the potential DBFM contract? Will extending or reducing the contract term allow for more appropriate sharing of risk with the private sector? If the Respondent recommends a different delivery model, what would be the appropriate term for that/those contract(s)?

5. What is the appropriate contract size for this type of contract? What are the advantages and disadvantages of procuring a contract of this size and magnitude? Do you think that both project scopes should be combined into a single DBFM contract?

6. Does the scope of work for each project expand or limit the teaming capabilities? Does it increase or reduce competition?

11.7 Funding and Financing Questions

7. Given the delivery approach and available funding sources, do you foresee any issues with raising the necessary financing to fund the IOS-South project scope? IOS-North project scope? Both? What are the limiting factors to the amount of financing that could be raised?

8. What changes, if any, would you recommend be made to the existing funding sources? What impact would these changes have on raising financing?

9. Given the delivery approach and available funding sources, is an availability payment mechanism appropriate? Could financing be raised based on future revenue and ridership (i.e., a revenue concession)? Would a revenue concession delivery strategy better achieve the Authority's objectives?

11.8 Technical Questions

10. Based on the Authority's capital, operating, and lifecycle costs from its 2014 Business Plan, describe how the preferred delivery model could reduce costs, schedule, or both. Please provide examples, where possible, of analogous projects and their cost and/or schedule savings from such delivery models.

11. How does this compare to separately procuring each high-speed rail component (i.e., separate contracts for civil works, rail, systems, power separately)? Please discuss design/construction costs, operating/maintenance/lifecycle costs, and schedule implications.

12. For each project, are there any technical changes to the respective scope of work that would yield cost savings and/or schedule acceleration while still achieving the Authority's objectives? If so, please describe.

12.0 The Authority's Standard Procurement Policies

Respondents are advised to review the following specific Authority procurement and contracting policies, as they are likely to be included in any contract resulting from any future procurement issued by the Authority:

1. The Authority's Small and Disadvantaged Enterprise Program
2. The Authority's Organizational Conflicts of Interest Policy
3. The Authority's Community Benefit Agreement

Links to these documents are provided in the Reference Documents section of this RFEI.

REFERENCE DOCUMENTS

Reference Documents	Link
Funding and Governing Statutes/Agreements	
Proposition 1A	http://www.voterguide.sos.ca.gov/past/2008/general/analysis/prop1a-analysis.htm
Senate Bill 1029	http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1001-1050/sb_1029_bill_20120718_chaptered.pdf
American Recovery and Reinvestment Act	http://thomas.loc.gov/cgi-bin/bdquery/z?d111:H.R.1
Senate Bill 852	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB852
Senate Bill 862	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB862
Assembly Bill 32	http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32
FRA Grant Agreement	http://www.hsr.ca.gov/About/Funding_Finance/funding_agreements.html
Authority Business Plans, Project Update Reports, and Board Resolutions	
2014 Business Plan	http://hsr.ca.gov/docs/about/business_plans/BPlan_2014_Business_Plan_Final.pdf
2012 Revised Business Plan	http://hsr.ca.gov/docs/about/business_plans/BPlan_2012_rpt.pdf
2012 Draft Business Plan	http://hsr.ca.gov/docs/about/business_plans/BPlan_2012Draft_web.pdf
March 2015 Project Update Report to the California State Legislature	http://hsr.ca.gov/docs/about/legislative_affairs/SB1029_Project_Update_Report_030115.pdf
Board Resolution #11-22 Resolution Selecting for Construction Certain Usable Segments Pursuant to Streets and Highways Code Section 2704.08, Subdivision (f)	http://hsr.ca.gov/docs/brdmeetings/2011/November/brdmtg1111_agenda4_HSRA_1122.pdf
Authority Environmental and Alignment Documents	
San Francisco to San Jose SAA	http://www.hsr.ca.gov/docs/programs/statewide_rail/proj_sections/SanFran_SanJose/2010_08_05_SF_SJ_Supplemental_AA_Report.pdf
San Jose to Merced SAA	http://www.hsr.ca.gov/docs/programs/statewide_rail/proj_sections/SanJose_Merced/San_Jose_to_Merced_Supplemental_Alternatives_Analysis_Report_5_6_12.pdf
Merced to Fresno ROD	http://www.hsr.ca.gov/docs/programs/merced-fresno-eir/final_EIR_MerFres_FRA09182012.pdf
Central Valley Wye SAA	http://www.hsr.ca.gov/docs/brdmeetings/2013/brdmtg0413_item3_WyeSupplementAA.pdf
Fresno to Bakersfield ROD	http://www.hsr.ca.gov/docs/programs/fresno-baker-eir/final_ERIS_FresBaker_AppDocs_Rec_of_Decision_FINAL.pdf

Reference Documents	Link
Bakersfield to Palmdale SAA Volume 1	http://www.hsr.ca.gov/docs/programs/statewide_rail/proj_sections/Bakersfield_Palmdale/Agenda_Item_5_Attachment_AA_Report_Volume_1.pdf
Bakersfield to Palmdale SAA Volume 2	http://www.hsr.ca.gov/docs/programs/statewide_rail/proj_sections/Bakersfield_Palmdale/Agenda_Item_5_Attachment_AA_Report_Volume_2.pdf
Palmdale to Burbank SAA	http://www.hsr.ca.gov/docs/brdmeetings/2015/brdmtg_060915_Item3_ATTACHMENT_Supplemental_Alt_Analysis_PalmBurb_Project_Section.pdf
Los Angeles to Anaheim SAA	http://www.hsr.ca.gov/docs/programs/statewide_rail/proj_sections/LA_Anaheim/Supplemental_Alternatives_Analysis_Report_July_2010_7_17_10.pdf
Authority Construction and Procurement Documents	
Construction Package 1	http://www.hsr.ca.gov/programs/construction/design_build_construction_contracts.html
Construction Package 2-3	http://www.hsr.ca.gov/programs/construction/design_build_construction_contracts.html
Construction Package 4	http://www.hsr.ca.gov/programs/construction/design_build_construction_contracts.html
Rolling Stock Procurement	http://www.hsr.ca.gov/Programs/trainsets/index.html
Small and Disadvantaged Enterprise Program	http://www.hsr.ca.gov/Programs/Small_Business/index.html
Organizational Conflicts of Interest Policy	http://www.hsr.ca.gov/docs/about/doing_business/Organizational_Conflict_Interest_Policy_Final9152011.pdf
Community Benefit Agreement	http://www.hsr.ca.gov/Programs/Construction/community_benefits_agreement.html
Unsolicited Proposals Policy	http://www.hsr.ca.gov/docs/brdmeetings/2013/brdmtg_item6_unsolicited_proposals_policy_attachment.pdf