

California High-Speed Rail Authority
770 L Street, Suite 620 MS 2
Sacramento, California 95814
Attn: Rebecca Harnagel

Re: Response to Request for Expression of Interest Regarding the Delivery of an Initial Operating Segment

Dear Ms. Harnagel,

Meridiam Infrastructure North America Corporation (“Meridiam”) is pleased to submit to the California High-Speed Rail Authority its response to the Request for Expressions of Interest for the delivery of an Initial Operating segment (the “Project”).

This response is an Expression of Interest (“EOI”) intended only to articulate our interest in participating in any resulting procurement process and provide relevant information to be used in developing governmental policy and structuring a formal procurement process and Project agreements.

Meridiam is highly experienced in forming effective partnering arrangements with public entities in the context of the development of complex projects such as the California High-Speed Rail. Within a portfolio of close to 40 private-public partnership projects worldwide, we have achieved financial close on 9 projects in North America and 2 high-speed rail projects in Europe.

We would be pleased to provide any further information that you may require and would welcome the opportunity to participate in a market sounding or one-on-one session. Below is the Information for Meridiam’s Contact Individual should you have any further questions:

Contact Individual:

Lindsay Taylor
Meridiam Infrastructure North America Corporation
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Best Regards,



Thilo Tecklenburg
Chief Operating Officer
Meridiam Infrastructure North America Corporation



California High-Speed Rail Authority

PROJECT | Delivery of an Initial Operating Segment

RESPONSE TO REQUEST FOR EXPRESSIONS OF INTEREST

September 28, 2015

| RESPONDENT |

MERIDIAM INFRASTRUCTURE NORTH AMERICA CORPORATION

| CONTACT |

Lindsay Taylor

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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.

As one of the most active and market-leading participants in the US Public-Private Partnership ("P3") market and an internationally experienced P3 developer, Meridiam is very interested in pursuing the California High-Speed Rail ("CA HSR") Project, if it is procured via a design, build, finance, and maintain ("DBFM") delivery method. Meridiam is a long-term equity investor and asset manager and therefore only participates in projects that require long-term private financing, such as DBFM projects or DBFOM projects. Meridiam will form part of a consortium of companies to design, build, finance and maintain the IOS North and/or the IOS South segments of the California High-Speed Rail (the "Project"). Meridiam's role in such consortium will be that of a developer, long-term equity investor and asset manager, remaining at all times in partnership with the public sector through the entire contract term. Meridiam has chosen to respond to this expression of interest ("EOI") individually and will team with other firms to form a consortium closer to the beginning of the procurement.

Meridiam specializes in investment in P3 infrastructure assets in countries belonging to the Organization for Economic Co-operation and Development ("OECD"). Meridiam with its investment horizon of 25 years, is one of the very few infrastructure funds that has a truly long-term investment strategy making it an ideal partner for public entities who want to partner with private sector entities who share their long-term approach to asset development and management. Geographically, Meridiam is mainly focused on investment opportunities within North America and Europe, specifically within the transportation, health, education, environmental and public accommodation sectors. Just recently, Meridiam raised its first fund for African projects, which will in addition to the above mentioned sectors also invest in certain types of energy projects. Meridiam promotes a hands-on approach with a strong focus on technical, environmental, and social aspects as well as an active engagement with project stakeholders and all team members to achieve the goals set forth by the public sector.

Meridiam Awards:

- ✓ *Global Transport Investor of the Year 2014 (Infrastructure Investor Awards)*
- ✓ *Transport Investor of the Year-North America 2014 (Infrastructure Investor Awards)*
- ✓ *Best Infrastructure Fund of the Year 2011-2013 (Infrastructure Journal Awards)*
- ✓ *European High Speed Rail Deal of the Year 2012 (Project Finance Magazine)*
- ✓ *Rail Deal of the Year Europe 2011 (PFI Awards 2011)*

Since its inception in 2005, Meridiam has successfully financed 41 projects globally and contributes expertise from over 150 infrastructure investment professionals in North America and Europe. With committed funds under management of approximately \$3.5 billion, and current investments in excess of \$35 billion in capital value, Meridiam has a distinct position in

the industry as a long-term developer, investor and asset manager in P3 social and transportation projects. Meridiam believes our long-term focus, as well as long-term stable partnerships with the public sector, are crucial to providing high-quality public infrastructure.

Meridiam’s team has developed extensive expertise in managing large-scale transportation projects within multi-stakeholder environments. Meridiam has a long track record of arranging complex financing for these projects as all of our transportation projects involve significant public sector funding through US DOT, the European Investment Bank (“EIB”), or other public sector partners. Meridiam has developed four rail projects internationally including two high speed rail projects in Europe. In the US, Meridiam has successfully developed five road transportation projects procured under the DBFOM model and each including a Transportation Infrastructure Finance and Innovation Act (“TIFIA”) loan and/or Private Activity Bonds (“PABs”) allocation. Below are some examples of Meridiam’s transportation project experience including both rail and road projects.

Meridiam Rail Project Experience:

1. Nîmes-Montpellier Bypass High Speed Railway Line, France

Client: Réseau Ferré de France (RFF)	Financial Close: June, 2012
Concession Term: 25 years	Cost: \$2.052 billion
Current Status: Construction	Sector: High Speed Rail

Project Description: Nîmes-Montpellier Bypass is a 25 year Public Private Partnership with Réseau Ferré de France (RFF), the government-owned entity in charge of the national French rail network. The project consists of the design, construction, maintenance, renewal and financing of 50 miles of a new line between Manduel, at the East of Nîmes, and Lattes, at the West of Montpellier. The new line will serve by both freight and passengers traffic.

Project Finance: The project uses an availability-based DBFM contract. The project is funded by \$677 million of subsidies \$133 million of equity and \$1.2billion of senior facilities comprised of a \$944 short-term commercial bank loan and a \$257 million long-term bank facility. The short-term tranche will be refinanced by EIB and DFE facilities upon commissioning.

2. Southeast Atlantic High Speed Railway Line, France

Client: Réseau Ferré de France (RFF)	Financial Close: June 2011
Concession Term: 50 years	Cost: \$8.9 billion
Current Status: Construction	Sector: High Speed Rail

Project Description: The project consists of the design, construction, financing, operation and maintenance of the high-speed rail line from Tours to Bordeaux in the southwest of France. It includes the construction of a new 188 miles high-speed double track rail line and 25 miles of access tracks to the existing railway network and stations. The project comprises about 400 structures including 19 viaducts and 7 cut-and-cover tunnels, and is providing 4500 jobs during the construction period (73 months).

Project Finance: The project is a revenue risk DBFM contract. The Project is funded by \$4.6 billion (51.5%) subsidy, \$880 million (9.8%) equity and \$3.45 billion (38.6%) senior debt. The

subsidy is contributed by RFF in six monthly payments during construction. Project risk senior debt consists of \$228 million provided by the EIB and \$698 million provided through a 10 year bank facility under the assumption that it will be replaced and refinanced by a long-term bank loan. The remaining \$2.5 billion of senior debt is guaranteed by the French State and RFF and includes \$456 million of EIB guaranteed facility, \$863 million of DFE facility, \$1.21 billion of commercially guaranteed facility, and \$228 million of LGTT facility provided by the EIB.

3. Region of Waterloo Stage 1 Light Rail Transit (Waterloo), Canada

Client: The Regional Municipality of Waterloo	Financial Close: May, 2014
Concession Term: 33 years	Cost: \$472 million
Current Status: Construction	Sector: Light Rail

Project Description: Waterloo is an 11.8 mile light rail transit (“LRT”) line between Conestoga Mall and the City of Waterloo and Fairview Park Mall procured under an availability payment DBFOM Model. The project consists of a new light rail line and associated infrastructure, including 16 stops in both the north and south direction, with 13 stops being co-located. The route utilizes a mixture of on-street running and existing railway corridors, and generally uses a twin track cross-section with one track in each direction. The vehicles will be provided by the public sector client.

Project Finance: The external financing includes \$78.3 million in long-term, widely distributed senior secured amortizing bonds—rated BBB+ by S&P, \$30.9 million in short-term credit facility, and \$21 million of equity. During the construction period the project is funded by two forms of payments received from the owner, a series of milestone payments and a substantial completion payment. Totaling \$342 million, these payments represent 90.4% of the construction value and 77.5% of total project costs during construction.

4. Nottingham Express Transit Phase II, UK

Client: Nottingham City Council	Financial Close: December, 2011
Concession Term: 23 years	Cost: \$918.5 Million
Current Status: Operations	Sector: Light Rail

Project Description: Nottingham Express Transit (“NET”) Phase Two project is the extension of an existing tramline by two additional lines and the operation and maintenance on the existing line. The existing line consists of an 8.7 mile route with 15 Bombardier trams in operation along the 23-stop route. The two new lines are 6.2 and 4.6 miles in length and the Meridiam consortium is responsible for the design, build, finance, operation and maintenance of the new tracks, infrastructure and rolling stock, which has been expanded to 35 trams. At financial close, the project company smoothly took responsibility for running the entire existing system (rolling stock, ticketing, infrastructure, etc.) and enhancing the customs experience through operational enhancements. The Project entered operations in August 2015 following three and half years of design, construction and more recently commissioning and testing phases.

Project Finance: The project is structured over a 23-year concession, including a construction period of 3 years, with a combination of availability-based and fare box-based revenues. The project has a complex funding structure consisting of \$500.8 Million in long-term senior debt

(from commercial lenders and the loan), \$46.8 Million in mezzanine debt, and \$418.1 Million of equity funds.

Meridiam North American Experience:

A pioneer in the US P3 market, Meridiam has achieved a number of firsts including the first performance based availability P3 project, the first private placement on a greenfield developed asset in the US, and the first use of Public Activity Bonds to finance a P3. Meridiam's unrivaled success in North America is evidenced by the closing of nine P3 projects since early 2009, seven of which are transportation projects. In addition, Meridiam was recently named preferred bidder on the ground-breaking LaGuardia Airport Central Terminal Building Replacement project. Each project presents its own technical challenges and complexities with solutions developed by Meridiam that showcase schedule and cost benefits to P3 projects.

In the US, Meridiam has successfully developed 5 transportation projects, procured under the DBFOM model and each including a Transportation Infrastructure Finance and Innovation loan ("TIFIA") and/or Private Activity Bonds ("PABs") allocation. The \$2.1 billion North Tarrant Express Motorway Segment 1-2 ("NTE 1-2") project was the first use of unwrapped PABs on a Greenfield DBFOM project. Following in the footsteps of NTE 1-2, Meridiam closed the \$1.3 billion North Tarrant Express Motorway Segments 3A3B. IH-635 (LBJ) Managed Lanes a \$2.6 billion project in Texas, closed in 2010 and was the largest privately funded road development in US history. In addition to the three managed lanes projects highlighted above, Meridiam has also reached financial close on the \$361 million Presidio Parkway in California and the \$903 million Port of Miami Tunnel project in Florida. Meridiam believes in active engagement with the community in all phases of the project. The President recognized Meridiam's Port of Miami Tunnel Project, currently in operations, for being a mirror of community and diversity as the project company has worked with over 50 local organizations including mentoring programs, internships, volunteering and donations. Over \$200 million has been committed to local Miami Dade Contractors and Vendors through "Operation 305".

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 shall also include any innovative ideas for delivery both projects.

Meridiam is interested in the scope of work for both the IOS-North and the IOS-South. As the scope of work is currently outlined in the RFEI, it would present a number of challenges to the market, whether it was procured under separate contracts for each of the segments or under one large contract for the segments combined. We therefore believe that it is in the best interest of the public and private sector to structure the Project in multiple segments in order to attract a competitive field of expert firms. For example, with respect to equity investors, P3

specialist firms that have the required development capabilities for a project such as the CA HSR, can typically provide several hundreds of millions of dollars in equity – not the billions that would be required for the Project as presented in the RFEI. Larger pension and sovereign wealth funds would be able to contribute large sums of capital amounting to multi-billion dollar equity investments to a single project, but typically lack the development capabilities or capacities required of such a complex project involving intricate structuring and multiple stakeholders. A firm like Meridiam who would take an active role in the development, structuring, and long-term asset management of the Project should be California High Speed Rail Authority’s (the “Authority”) ideal Partner for a project with such immense implications on the California economic and environmental landscape.

In order for the Project to attract a competitive field of expert firms the project size will need to align with lender’s capacity to provide debt, equity member’s ability to commit capital, and design build (“DB”) and operations and maintenance (“O&M”) contractors’ ability to perform the work and put it on their balance sheets. Each of these issues is highlighted below:

Debt Market Capacity: The capacity of the debt markets will play a large factor in the size of the Project that CA HSR is able to procure. Based on the size of recent debt issuances, Meridiam believes that the ideal project size for CA HSR is in the range of \$3-5 billion, on an availability payment basis, with a gearing of 90% debt to 10% equity. The factors that will play into the capacity of the debt market will be further outlined in Section 11.7, Funding and Financial Questions.

Equity Capacity: Equity capacity will not be as large of a constraint as the procurement of debt for this Project. It would be common for firms like Meridiam to team with others; therefore it is conceivable that \$1 billion of equity availability could be demonstrated for each of 3 competing teams in a procurement. A typical top-tier P3 investor like Meridiam can commit \$300-600 million of equity into a single project. A project with a total capital value of \$5 billion would therefore be within the constraints of the equity market.

Design-Build Contractor Capacity: The entire scope of work prescribed for the IOS- South or IOS-North as it is currently outlined in the RFEI would most likely present capacity issues for the construction industry. In order to perform the scope of design-build work on any given project a contractor or contractors, who have together formed a contractor joint venture, need to have the capacity to provide the professional staff, skilled labor / trades, subcontractor relationships, bonding capacity and liquid performance security. In consideration of these aspects, a project in the range of \$5 billion in construction costs would be the upper limit of what the construction industry could reasonably be expected to deliver in the context of a public-private partnership.

Maintenance Provider Capacity: The entire scope of work as prescribed for the IOS-South or IOS-North for maintenance and lifecycle would likely present capacity issues for a single maintenance/lifecycle provider. Similar to the requirements for a DB contractor, a maintenance provider or providers would need to have the capacity to provide the

professional staff and the performance security requirements for the Project. Maintenance/lifecycle contractors typically do not work at this scale and their availability may constitute a constraint. It may be that the risk for maintenance and lifecycle is best taken by the SPV.

Alternative Approaches to Project Delivery:

Below we have outlined three different P3 procurement approaches which we believe meet the objectives of the California High Speed-Rail Authority and which would fit within the market's capacity constraints as described above. Under each of the approaches described below, the equity members, design build contractors, and maintenance provider would form a consortium in order to participate in the procurement. The equity members would, in case of a successful bid, create a project company (that lenders would issue debt to) that the Authority would partner with for the life of the contract. Under each of the approaches outlined below the Project has been broken up into maximum \$5 billion dollar segments based on the constraints outlined above.

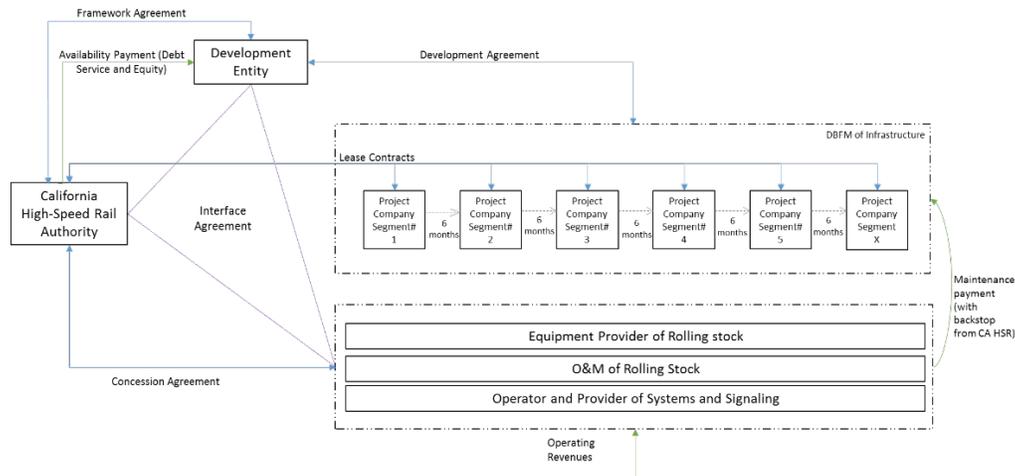
Approach #1: Development Entity Sourced P3 Contracts

The contractual structure as outlined in figure 1 below is derived from projects that have been procured globally in which a single development entity is able to invest in similar projects procured by the same Authority. Meridium has a similar project based in the UK that utilizes a similar mechanism called the Local Improvement Finance Trust ("LIFT") project. The objective of the LIFT model is to deliver high quality primary and community healthcare facilities for the National Health Service. Financial close was achieved in May 2007 and the project currently has 40 centers in operations. The project is contractually structured such that a development entity is able to invest in similar projects via a project company also referred to as a Liftco undertaken by the Local Council and Health Authorities. The development entity's role is to manage the project and act as an intermediary between the authority and the individual project companies. This agreement gives the development entity exclusivity but not obligation over financing, developing and operation of all major capital projects in the local area/region that are identified by the Strategic Partnership Board. Each hospital is procured by a separate project company also referred to as a Liftco in which the development entity will invest a portion or all of the equity. Each Liftco or project company enters into a separate lease contract with the authority. If a Project company does not meet its obligations under the lease contract with the authority the individual lease contract could be terminated without fault to the other project companies under their respective lease contracts. While the LIFT project is different in both scope and size, the basis of the contractual framework would translate well for this Project.

In the contractual structure below we have combined the approach used on Lift with an innovative structure implemented on another one of Meridium's recent P3 projects, the Port of Calais in France. On this project, Meridium implemented a hybrid structure that utilizes both availability and revenue based payments. For the Port of Calais project, Meridium has created two separate project companies, one which is responsible for the operations of the port and the other which is responsible for the expansion of the infrastructure of the port. The

operations portion of the project is structured under a concession agreement whereby the project company collects revenues and makes an availability payment to the project company that is responsible for designing, building, financing and maintaining the infrastructure of the port. The availability payment made by the project company responsible for the operations of the port is back-stopped by the authority. This structure is outlined in the figure below.

Figure 1: Approach #1 Contractual Structure



As outlined in the figure above, each project company will enter into a DBFM contract that will include the combination of civil works, tracks, and infrastructure. A separate entity will procure the signaling and systems, the rolling stock and the operations and maintenance of the rolling stock. One significant difference from the LIFT model is that the hospitals are fully independent of each other. Here each contract interfaces with the adjacent contract and is the base upon which the signals/systems/communications infrastructure is installed. The master developer must bear the burden to fully describe how those interfaces (in time and space) will be managed and take responsibility for that. Here we would imagine a similar interface that would exist between the Authority, the rolling stock/operating entity, and the development entity. In order to mitigate interface risk between these parties, the interface agreement will define roles and responsibilities, ensure risks are appropriately managed between parties, and monitor compliance and performance requirements.

Similar to the LIFT project referenced above, each project company will raise its own debt and provide equity both from members of the development entity and other investors (if needed) that are sourced by the development entity, together making up the shareholders of each project company. The project structure as outlined above splits the Project into multiple segments that will allow the project company to raise financing in the debt markets. We believe that the market has capacity to issue anywhere from 6 to 10 billion (equivalent to two project segments) in debt per year, with the main limiting factor being the capacity to raise debt against the credit of the state and other limiting factors outlined in Section 11.7, Funding and Financial Questions, Question #7. By sequencing the Project and raising debt in 6 month increments the project can be appropriately financed and will fit within the capacity constraints

of each of the entities required to procure the project. While it will be possible to complete the entire High-Speed Rail it may be difficult to have the Project be operational by 2022 as outlined below in the hurdles section.

The development agreement entered into by California High Speed Rail and the development entity should include at the minimum the general terms (potentially a base project agreement that can be used on each segment) that will govern each of the project agreements that are entered into by the project companies that will design, build, finance, and maintain each respective segment. The development entity will be comprised of a firm like Meridiam and potentially other investment entities, who will develop the Project and help form each of the project companies for each of the segments. Members of the development entity typically would also be required per the development agreement to invest a minimum amount of equity into each of the project companies. California High-Speed Rail is able to terminate and/or replace the development entity in the contractual structure described above. This is beneficial to the Authority in that it would allow for replacement in the event that the development entity does not meet performance requirements. In the event of termination of the development entity, the Authority who enters into lease contract with each of the development entities, would still have a sound contractual framework in place without having any issues of cross default or the need to terminate each project company. Likewise, a single project company who defaults while performing the works on one segment would not cause cross default for the other project companies performing work on the other segments. In order to maintain competitive pressure, competitive procurement can continue to exist throughout execution. By example the master developer can become obligated to bid D/B/M contracts, compete debt financing and be obligated to match (perhaps with an agreed premium) the pricing of equity that the master developer would be obligated to provide to the market.

There are a variety of ways to structure the payment mechanism under this structure.

Option #1 (Figure #1): Given the inability to allocate federally appropriated funds or the first allocation of Proposition 1A funds to pay for operations and maintenance, Meridiam would propose a payment mechanism as outlined above. The Authority will make an availability payment sourced from cap and trade revenues to the development entity that will cover debt service and equity. In addition, the rolling stock/operating entity would enter into a concession agreement with the Authority whereby their payment would be contingent upon collection of fare box and operating revenues. The operating/rolling stock entity would make a payment to the development entity (who would disperse payment to each project company) for the maintenance of the infrastructure. The maintenance payment would be back-stopped by the authority.

Option #2: The structure in figure 1 can also be implemented without a payment from the operator/rolling stock entity to the development entity. With this modification the Authority would be required to pay the full availability payment (including maintenance)

to the development entity. With this approach, the Authority would determine the payment method (availability or revenue based) for the rolling stock/operator.

Option #3: A gain share mechanism could be utilized between the Authority and the rolling stock/operating entity for operating/fare box revenues whereby revenues collected by the operating entity will be shared with the authority above a prescribed threshold. The gain share mechanism would be outlined in the Agreement between the Authority and rolling stock/operating entity.

This approach fulfills the Authority's desire to have a single point of contact via the development entity, who will ensure performance specifications will be applied across the Project. A development entity as the single point of contact will provide management oversight and quality control, and will allow the Authority to avoid typical interface issues among designers, builders and maintenance contractors. A single point of contact will create synergies in the planning and design of the project and provide assurance that deficiencies or failing components will be corrected promptly leading to better performance over time.

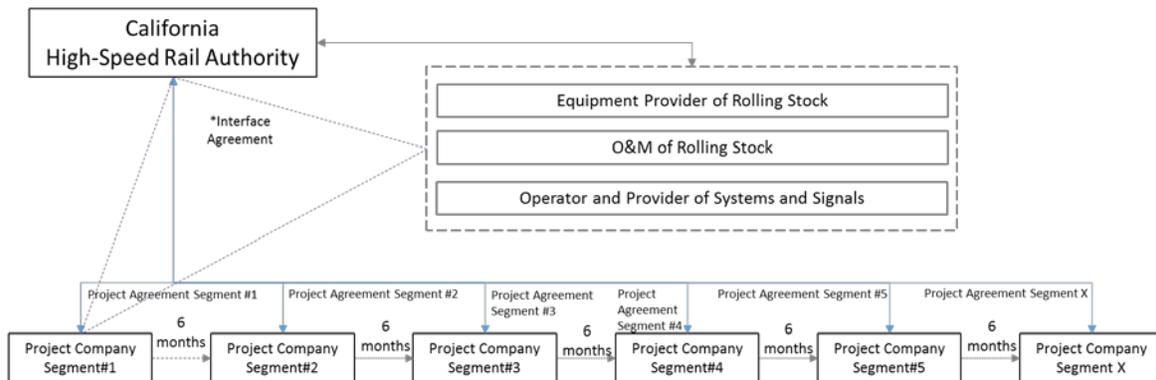
Approach #2: Separate P3 Contracts for Each Segment

Approach #2 is similar to Approach #1 in that CA HSR would split up the tracks into several different segments (dictated by the maximum capacity of the debt market) as outlined in the figure below. However, under this approach a different project company would procure each segment and a development entity would not act as the intermediary between the Authority and the project company. While the project agreements would be fundamentally the same in terms of scope and size, the authority would be required to tender and re-negotiate a new contract for each segment with a new project company and without the help of a development entity. The teams would design, build, finance and maintain each segment of the Project. Without a development entity, it would be critical that the Authority prescribe very specific testing and quality control mechanisms such that each segment of the track meets the same performance standards. A development entity as prescribed in other approaches, would be involved in each segment, and would provide management oversight and quality control mechanisms in addition to those provided by the Authority. In this approach, a development entity would not be involved in each segment to provide this oversight and therefore it would be prudent that the Authority enforce prescriptive quality control standards that must be met on each segment to ensure uniformity across every segment. Each project company would be compensated by availability payments from the Authority.

Similar to Approach #1, the equipment of the rolling stock, operations and maintenance of the rolling stock, and systems and signaling will be procured under one contract. An Interface agreement will exist between the Authority, operator/rolling stock entity, and each of the project companies. This differs from Approach #1 in that there will be multiple interface agreements because a different project company will be performing each segment. It will be up to the authority to manage interface risk from segment to segment and prescribe specific

performance specifications that are applied in every segment to ensure consistency across the entire Project.

Figure 2: Approach #2 Contractual Structure



*Interface Agreements will exist between the Authority, Rolling Stock/Operating Entity, and each Project Company

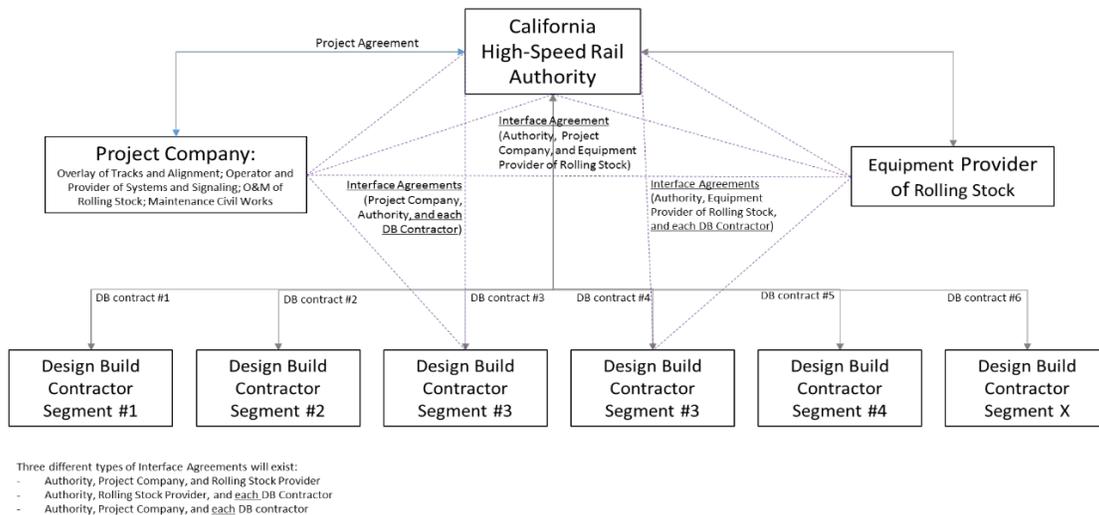
Approach #3: O&M P3 Contract with Design Build Segments

Under Approach #3 the Authority would procure all segments via DB contracts as they have already done for CP1, CP2, CP3, and CP4. The P3 project company would take on the responsibility for systems/signals, overlay of the track and track alignment, operations and maintenance of the rolling stock, and the maintenance of civil works for the entire IOS South and IOS North scope. In order to mitigate interface issues, it is important for the project company that is operating the rolling stock to provide the systems and signals. Similarly since the project company would be operating the trains it is important that they also provide the overlay of the tracks and alignment to prevent the most critical interface issues. Under this approach the Authority would buy the rolling stock. The project company would be responsible for accepting rolling stock as it is provided.

Given that all tracks would be procured under design build contracts it is crucial that the Authority implement stringent quality control and testing measures to ensure that the civil works meet the performance requirements and that these requirements are the same across all segments likely constructed by several different contractors. Given that this structure would have less capital expenditures upfront and more operational and maintenance expenditures we would expect the financing structure use a lower gearing than that for a typical availability contract with a higher ratio of equity to debt. Meridiam believes that a financing structure that requires a larger amount of equity 30% to be feasible in the market, this type of structure would limit the amount of debt to be raised and would require additional equity which as outlined above is less of a limiting factor in the market than raising debt. With two to four equity members investing into a project company and each equity investor capable of providing \$300 million or more of equity, the Authority can be assured that there will be equity capacity to fund the Project under this financing approach. Interface agreements will help to ensure that the rolling stock and systems are fully compatible with each other and takes responsibility for that interface over the long term. This can be solved through a variety of contractual

mechanisms. In this approach there will be three types of interface agreements: (i) the Authority, Project Company, and Rolling Stock Provider; (ii) Authority, Project Company, and each DB contractor; and (iii) Authority, Rolling Stock Provider, and each DB contractor. These interface agreements will help mitigate interface in a structure with several different entities and no single point of contact with each interface agreement appropriately assigning roles and responsibilities and helping to manage risk.

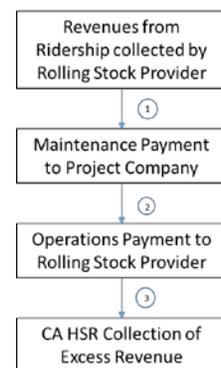
Figure 3: Approach #3 Contractual Structure



Allocation of Federally Appropriated Funds:

Meridiam is aware of the legislation that precludes federally appropriated funds and the first allocation of Proposition 1A state funds from being used for the payment of operations and maintenance. Meridiam believes that there are several ways to comply with the legislation and properly allocate funds in order to make payments to the project company for the completion of performance obligations under the contract.

Option #1: we propose a payment mechanism whereby revenues from ridership are used to pay: 1.) maintenance payment to the project company; 2.) operations of the rolling stock; 3.) excess revenue collected by the State. This payment mechanism is outlined in the figure to the right. This payment mechanism approach for operations and maintenance is beneficial to lenders in terms of the risk profile of the Project. With first right to payment from the operating revenues, Lenders should be comfortable that the project company will receive payments and be able to repay debt service to the lenders.



Option #2: Based on the 2014 business plan, we are aware that CA HSR has projected that there is enough revenues from ridership to cover the payment of operations and maintenance. Another approach would be to implement a revenue sharing mechanism whereby the state would appropriate funds to the Project for operations and maintenance based on ridership.

Option #3: An alternative to the payment mechanism outlined above, would be for CA HSR to use federally appropriated funds to cover progress payments and appropriate funds from ridership to cover operations and maintenance with cap and trade funds covering the remaining of the availability payment.

Project Delivery On-Time and On-Budget:

A DBFM P3 model builds in contractual obligations and incentives to complete a project on-time and on-budget as noted below:

On-Time: Through a DBFM P3 contract schedule certainty is achieved through a date certain design-build contract. Schedule certainty is achieved through a pass through of schedule responsibilities to the design-build contractor. Additionally, the developer has a responsibility to the lenders to meet the project milestones and if the project company is late the lenders are able to take action against the project company. The liquidated damages (“LDs”) that quantify the cost of a delay are built into the contractual arrangement between the design-builder and the P3 project company and provide a huge incentive for the design-builder to finish on time or ahead of schedule. Furthermore, under an availability payment mechanism, the project company does not begin receiving availability payments until the Project is operational.

On Budget: Through a DBFM P3 contract long-term cost optimization and certainty are achieved. The design-build contract is a fixed price contract. Furthermore, long-term maintenance and renewal costs are budgeted from the start in the developer’s financial model allowing for “whole-life” cost optimization and long-term cost certainty for the Authority. While this cost certainty is often criticized as too inflexible from a budgetary point of view, it is exactly this inflexible budgetary discipline that will ensure that at the end of the term of the project agreement and beyond, the asset is in a state that allows its use for years and years to come; all while achieving the most efficient cost possible. The impacts of deferred maintenance should be a critical point of analysis for a project as technically complex as a high speed rail system. Deferred maintenance would not only have significant cost impacts, but there would also be critical safety impacts due to delaying maintenance.

For the design and construction element of the Project, the private developer will take the risk of delivering the Project on time and on budget. This means that the private sector will be responsible for delays and cost overruns where they are the private sector’s fault. There are other elements, further outlined in Section 11.6, Commercial Questions, Question #2, such as pre-existing environmental conditions or permits not under the private sectors control which would need to be analyzed and risks allocated and/or shared appropriately between the Authority and the private sector.

Hurdles to Achieving Operations by 2022

We note that the Authority is looking for both the IOS-North and IOS-South segments to be operational by 2022. Aside from the limitations in terms of project size and approach

mentioned above, we foresee a couple additional hurdles that the Public sector should be aware of as it looks to have two operational segments by 2022. The hurdles mentioned below will be hurdles that the Authority will face in staging a procurement process and which will ultimately affect its ability to achieve operations on the Project by 2022.

Record of Decision (ROD): As noted in the RFEI, there is still additional right-of-way that need to be acquired by CA HSR. As such the Project could be given a no-build alternative or an alignment that would change the current geographical and technical provisions in the current RFEI. Ideally, RODs will be the public sector partner's responsibility and should be procured at a minimum 2 months before bidders are required to submit a proposal. Delay in acquiring the RODs, will shift the procurement process. Starting procurement at a point in time where there are still significant open questions around the ROD approval would likely have a negative impact on the industry's interest and the level of bidders' engagement. Meridiam would recommend that the Authority achieve ROD approval as soon as possible with a particular emphasis placed on achieving ROD approvals surrounding the most critical paths for the High-Speed Rail first.

Appropriation of Funds: For the purposes of this EOI, Meridiam has assumed (based on Addendum #1 issued by CA HSR) that there will be \$500 million of Cap and Trade revenue appropriated to the Project each year. While, we have made this assumption for our EOI, this will remain a significant hurdle for both the public and private sector. While the legislation for the extension of Cap and Trade beyond 2020 remains in flux, it will be extremely difficult for the private sector to consider this a reliable source of funds to make payments to the project company. More importantly raising debt without a reliable long-term source of funds to repay the senior debt for the term of the contract will be challenging in general, expensive and likely not possible for amounts as high as would be required for this Project. Meridiam recommends that the state do everything it can to extend this legislation as soon as possible. A reliable long term source of funding will not only attract more competitive teams but it will also make it easier for firms to raise debt in the market. A key item that lenders will analyze is the source of funding. This issue will be further highlighted in section 11.7, Funding and Financial Questions, Question #8.

Timing of Segments: We believe that segmenting the project into \$5 billion segments with a maximum of \$10 billion being financed per year is the fastest way to procure the projects given the limitations of each of the entities outlined at the beginning of the section. With this approach, it would be difficult to reach full operations by 2022. It may however be possible for some segments to be operational by 2022, if the rolling stock provider, who as outlined above would provide the rolling stock for the entire project, could procure separate fleets of cars to start operations of individual segments or combined segments prior to the full project being constructed. In doing so, revenues from ridership could begin to be collected. The limiting aspect of this mechanism would be structuring a financing for phased procurement of rolling stock. In this case, it may be

possible for a delayed draw mechanism to be implemented into the financing structure to save on interest payments when trains are not procured immediately. Assuming achievement of ROD approvals and an extension of cap and trade legislation, we believe the first financial close could occur as early as mid-2018, assuming that two segments could be procured per year based on the approaches above, and the last financial close could occur in the middle of 2023.

Innovations:

A P3 delivery model would produce innovation for this project throughout the entire project term with the major driver coming from the private sector's long-term interest throughout the Project term. A DBFM combines construction methodologies and maintenance considerations into the design phase where a traditional procurement focuses only on the construction phase. By incorporating lifecycle and maintenance into design, the Project benefits from a holistic approach that better addresses the public sector's long-term needs, improves the end user experience and reduces the project costs over the entire lifecycle. Similar to the points outlined above, if the Authority continues to procure each of the segments via design build contracts, a whole life approach with the long-term viability of the asset in mind will be difficult to achieve.

Under each of the approaches described above, Meridium would recommend that there be room for innovation. Technical specifications that are too prescriptive and provide little room for innovation hamper one of the major benefits of a P3. By allowing for private sector innovations, the Authority can leverage the expertise of the private sector and create a competitive environment that could provide the Authority with more efficient and cost-effective approaches to the Project. Meridium rates those procurements the most attractive that provide us and our partners with the opportunity to innovate, to develop creative ideas and work hard to improve as many project elements as possible, all with the objective to increase the value for money to the client, the user and the taxpayers. In prescribing the procurement process and the evaluation criteria, the Authority should limit its focus on creating a level playing field but rather make the limits of the playing field clear whilst allowing bidders the creative freedom to generate ideas that will provide a competitive advantage.

Taking into consideration project complexity and financing needs, we believe that breaking the Project up into multiple DBFM segments will provide the most efficient procurement process and allow for the earliest asset availability. Overlap of design and construction provides significant synergies that reduce both the cost of the Project and the execution time. The DBFM model will provide CA HSR a consistent level of maintenance and rehabilitation to guarantee that at the end of the concession, CA HSR is handed back a well-designed, well-maintained asset that will continue to provide value to users well into the future.

11.6 Commercial Questions:

1. Is the Delivery strategy (i.e., combining civil works, 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.

Meridium has been involved in large DBFM and DBFOM projects where our teams have demonstrated the ability to be innovative with our design and construction techniques in order to deliver the lowest cost, best life-cycle value solutions to the client. Meridium would therefore have a strong preference for each segment of the Project as outlined in the Approach Section to include the combination of civil works, traction power and infrastructure. In doing so, efficiencies of scale will be maximized and interface risks will be minimized.

Meridium has assumed a capital cost of approximately \$53 billion in \$2013 or \$62 billion in year of expenditure for the entire project excluding the stations. Procuring a project of this size in one procurement would not optimize innovation or risk transfer. By splitting the estimated capital cost of each project into \$3-5 billion segments, the Project would be well-suited to maximize the value for money to taxpayers and achieve the full benefits of the DBFM model, such as private sector innovations and cost and schedule efficiencies. Typically, a project must be of a minimum size (approximately \$500 million - \$1 billion) to achieve the benefits of this delivery model and be sufficiently large to warrant the bid-stage resources and due diligence efforts required. In addition, it is critical that the Project scope and the public funding strategy (i.e. amount of construction milestone/progress payments or bullet substantial completion payment) are structured so as not to dilute the risk transfer, with optimal long-term private financing in the range of 60-100% of Project capital cost to achieve the desired long-term risk transfer.

Some of the key advantages of the DBFM model are the private sector-proposed innovations and alternative approaches to the Project that would meet the Project objectives while also providing the public with additional value-added advantages in the form of lower whole-life cost, shorter schedule or additional Project features. Many DBFM projects however do not take full advantage of these innovations due to the adopted procurement process and evaluation criteria. The public sector can encourage the private sector to allocate resources and develop innovations by ensuring that the following recommendations are implemented:

Procurement Phase:

- Focus on clear output specifications: it is always a challenge to the procuring authority to find the right balance between prescriptive technical specifications that provide a high level of certainty of the final project design but significantly reduce any possible innovations, and performance-based output specifications that maximize the private sector innovation but could produce significantly different solutions that are more challenging to evaluate on a competitive basis and/or may not achieve some of the authority's secondary project objectives. The procuring authority and its advisors should early in the process determine the critical project features that must be included in the

final project solution and make these features clear and prescribed in the output specifications. The private sector however should have the flexibility to propose different solutions for the rest of the Project, as long as they meet the performance criteria, Project objectives and existing environmental commitments.

- An important advantage of a DBFM procurement is the opportunity for proponents to propose innovations in their design, construction, and maintenance means and methods that will bring cost, performance and/or schedule benefits to the Project. These innovations are typically discussed through Alternative Technical Concepts (ATC) meetings whereby the proponents are provided with feedback and are able to obtain preliminary approvals of their proposals prior to expending significant resources to fully develop these designs during the RFP. The ATC meetings would typically commence within a month of issuance of the draft RFP and we would strongly recommend that ATC meetings take place ideally on a bi-weekly basis, or at a minimum on a monthly basis. It will also be important for this Project that representatives from all major stakeholder groups are participants and are empowered to make decisions on proposed innovations.
- The process must ensure the confidentiality of the proposed innovations during the entire process. Each proponent will spend significant resources to produce and develop innovations to gain a competitive advantage over its competition. Therefore, they will rely on assurances related to the confidentiality of the procurement process in order to warrant expending additional resources on developing innovations. A procurement process that focuses on output specifications and provides bidders with reasonable flexibility on how to achieve these output specifications will avoid the requirement for extensive amendments to the procurement documents as a consequence of innovative ATCs being developed throughout the procurement process.

Implementation Phase:

- While innovations are most efficient during the design phase, the private sector will continue to look for ways to make the construction and operations/maintenance more effective, especially if a clear and easy process is in place to fairly share the incremental benefits between the public and private sector. A clear and objective change order procedure is essential to motivate the private sector to continuously look for areas of improvements to enhance operations and reduce costs.

Meridiam is aware that the Authority is interested in the appropriate weighting (Financial/Technical) of a project of this size and technical complexity, as noted in the addendum to the RFEI.

Evaluation Criteria: Meridiam is familiar with projects placing a heavier weighting on the technical criteria for projects that are more complex in technical scope and particularly those which may contain the ability to provide ATC's. However, a project of this size will also contain a complex finance structure. We would recommend for a project of this scope that there be at least 60% allocated to the financial components of the Project.

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?

The optimum risk allocation is achieved when risks are allocated to the party best able to manage them. The P3 or DBFM approach allows the Authority to transfer a significant amount of risk to its private sector partner, thereby shielding CA HSR from certain potential liabilities. The risk allocation in a DBFM method is based on the interwoven documentation that fits together and passes risk to the party best positioned to manage and mitigate it.

The P3 model provides a full transfer of all short and long-term technical performance interface risk to a single entity, i.e. the project company with full accountability to CA HSR. A single point of responsibility will create synergies in the planning and design of the Project and will allow CA HSR to avoid typical interface issues between the design builder, the maintenance contractor and the operator. This contract type provides the assurance that deficiencies of failing components will be corrected promptly leading to better performance over time.

The project company creates an additional buffer between CA HSR and the contractors. Strict quality control measures and performance indicators are included in the subcontracts to ensure early warning for performance issues. Meridiam is specialized in managing design, construction and operations risks through partnerships with leading industrial partners. Meridiam has also partnered directly with public entities on projects based on availability payments and has great expertise in managing the related counter-party and interface issues.

The pure financial risks Meridiam would expect to assume and manage are debt servicing risk (this includes rating risk on its own debt) and inflation mismatches. The key to being able to assume these risks is a clear contractual framework with both the Authority and any other counterparty. Beyond pure financial risks, Meridiam via its investment would be taking on, inter alia, risk of delivery of the Project to schedule and to budget, subcontractor performance and solvency, energy consumption, corporate tax risk, lifecycle risk as well as ensuring that ongoing maintenance and lifecycle requirements are fully met. Meridiam would expect the Authority to bear the risk of interest rate changes between time of the financial offer and financial close.

Further financial risks that should be borne by the Authority include elements such as unlimited and unmitigated inflation risk (e.g. no inflation protection for ongoing operations, unmatched against revenue stream responsibility). The image below demonstrates the overall risk transfer achieved in a DBFM approach:

Milestone	Risk	Public Sector	Private Sector
Plan Development	Political	X	
	Planning	X	
Plan Approval & Contracting Phase	Financing		X
	Long-term interest rates		X
Project Delivery	Completion		X
	DB Contractor Strength		X
Commissioning & Acceptance	Commissioning & Technology		X
	Fit for Purpose Design		X
Ongoing Implementation and Service	Interface		X
	Maintenance Contractor Strength		X
	Refinancing		X
	Lifecycle		X
	Demand	X	
	Un-insurability	X	
	Force Majeure	X	

- 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?

As noted in approach #1 and #2, the rolling stock, O&M provider of rolling stock and systems and signaling can be procured under one contract as noted in the Project Approach Section. An Interface agreement(s) as noted in the approach section will be needed to mitigate interface risk and appropriately assign roles and responsibilities amongst the different entities. Procuring these entities under one contract will minimize the number of entities that the Authority has to contract with in the procurement.

Under approach #3, a contract could be procured whereby the equipment provider of the rolling stock enters into a separate agreement with the Authority. Under another contract, the project company would be responsible for systems and signaling, and operations and maintenance of the rolling stock; under this same contract the project company would be responsible for the overlay of tracks and alignment in order to mitigate for interface risks between the different parties. The Project Company would need to accept and take the risk for the rolling stock provided to it by the Authority or third party contractor.

Each approach is structured so that the project sizes are appropriate for each entity and in order to mitigate interface risk between each entity involved. Contractual mechanisms are implemented to mitigate interface risk. The Project is structured in a way that interface issues are efficiently mitigated by different contractual mechanisms. Regardless of the approach, the stations should be provided by CA HSR as prescribed in the RFI.

- 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)?

Meridiam seeks long-term partnerships with the public sector that are aligned with the long-term risk transfer under the P3 model. We believe a DBFM structure is the most holistic and

cost-effective delivery model for large public infrastructure projects such as the California High Speed Rail. For projects of this size and complexity we would recommend a concession term of 30 to 35 years of operation plus the construction period. Ideally as an investor in an availability-based project, Meridiam seeks to match the term of the contract with the tenor of the debt coinciding with effective risk transfer between the public and private sector. When considering the length of the term, it is important to optimize life-cycle of main elements which need to be aligned with the contract term. A 30 to 35 year term matches the duration of one to two major renovations/replacements of main elements of the asset. This way the project is in a freshly rehabilitated and good condition when it is handed back to the client.

In the hybrid approach that we have proposed in which some of the payments are availability based and some payments are revenue based, a 30-35 year term could also be appropriate as the revenue risk is mitigated for the Infrastructure portion of the project. CA HSR can explore the option of a longer term, if it makes sense from a lifecycle point of view (i.e. how much useful life is left in the major elements after 30-35 years), and/or if the longer term reduces the annual payment. What may be the limiting factor is the availability of such long-term debt, but that is something that could be determined closer to the procurement.

A pure revenue risk deal, which Meridiam would not recommend, as noted in, Section 11.7 Funding and Financial Questions, Question #9, would require a longer term closer to 50 years. A revenue risk deal necessitates a longer contract period because of the higher risk profile of this method over others. A typical term of 50 years is appropriate as it gives comfort to both debt and equity player that should there be shortfalls early in the project there is a significant tail later in the concession to allow the parties to re-structure and in time break-even.

As noted in Section 11.5 Commercial Questions, Question #5, Meridiam believes there is availability in the long-term debt market to provide sufficient debt to fund a \$5 billion dollar project. While the short-term debt market including banks is extremely liquid, Meridiam would expect a long term financing solution to provide the best value. Based on our experience in the US market and our understanding of the current state of the banking market, which is not expected to change significantly over the next couple of years in its limited capacity for long-term debt, we expect a long-term solution to provide the best value for money to the project. Having a long-term solution eliminates any refinancing risk and we believe the bond market has the capacity (outlined in tables below) to finance a transaction of this size.

Increasing or decreasing the term will not allow for more appropriate risk sharing with the private sector. Under each of our proposed approaches we believe that a contract with 30 to 35 years of operation plus the construction period provides for the most appropriate risk share between the public and private sector.

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?

As noted in Section 11.4, Project Approach, Meridiam would recommend contract sizes of 3 to maximum \$5 billion. Given this approach we would not recommend that CA HSR combine the IOS-North and IOS-South into one Project or even procure the Project under two separate contracts for the IOS-North and the IOS-South. Under Approach #1 (the DBFM portion) in which

the Authority would enter into a framework contract with a development entity, the individual contract size for a segment that the development entity would source a project company for would be no larger than \$5 billion. Recent availability projects in the US P3 market suggest that the market has a capacity for projects that are closer to the lower end of the spectrum that we have provided. Below are examples of recent US P3 closings in excess of \$1.5 billion.

- I-4 Ultimate P3; financial close September 2014 (\$2.3 billion)
- Goethals Bridge P3; financial close November 2013 (\$1.5 billion)
- North Tarrant Expressway segments 3A/3B; financial close September 2013 (\$1.6 billion)
- Midtown Tunnel; financial close April 2012 (\$2.1 billion)
- IH-635 (LBJ Express) Managed Lanes; financial close June 2010(\$2.6 billion)
- North Tarrant Expressway 1-2; financial close June 2009 (\$2.1 billion)
- I-595 Corridor Roadway Improvements; financial close March 2009 (\$1.76 billion)
- I-495 Capital Beltway HOT Lanes; financial close December 2007 (\$2.068 billion)

Despite the information outlined above, Meridiam believes that there is appetite in the market for a \$5 billion dollar project, for which we would expect the sources of funds to be as follows:

Sources of Funds	% of Sources of Funds	Capacity/ Expectations	\$5 Billion Availability Project
TIFIA	33%	Up to 33%	\$ 1.3 billion
PABs	25 - 40%	\$ 1.25 – 2 billion	\$ 1.6 billion
144a Private Placement / Publically offered taxable bonds	25% - 40%	\$ 1.25 – 2 billion	\$ 1.6 billion
Equity	10 - 15%	10%-15% (90:10 gearing)	\$ 500 million

Meridiam also notes that there are \$4.1 billion of remaining state funds from Proposition 1A that could be used for progress payments during construction. The use of progress payments would decrease the amount of debt that would need to be raised against California’s credit and could increase the rate at which the individual segments could be procured on the basis that the limiting factor of the number of \$5 billion dollar segments procured per year is the amount of debt that can be raised in the market each year.

Sources of Funds	% of Sources of Funds	Capacity/ Expectations	\$5 Billion Availability Project
TIFIA	33%	Up to 33%	\$ 1.15 billion
PABs	25-40%	\$ 1.25 – 2 billion	\$ 1.4 billion
144a Private Placement/Publically offered taxable bonds	25-40%	\$ 1.25 – 2 billion	\$ 1.5 billion
Equity	10-15%	10% (90:10 gearing)	\$ 450 million
Subsidy	0-25%	< 30% of capex	\$ 500 million

The subsidy provided in the table above is an example of how a subsidy could alleviate the amount of debt needed on a given segment. We note that only \$4.1 billion of Proposition 1A

funds remain and a subsidy of this size would not currently be available for every segment. We would be open to having subsidies as large as 30% of the capex price on any segment. Additional money that can be procured to be used as progress payments would be helpful. While the scenario listed above shows the use of a subsidy to alleviate the amount of debt that needs to be raised, the subsidy could be applied to make individual contract segments larger.

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

As the Project is currently structured in the RFEI under one to two contracts, the Project is too large to attract the typical P3 investor and reduces competition by limiting the types and amount of firms that are capable of performing the contract. By splitting the Project into smaller contracts California High Speed Rail Authority will attract P3 investors that are currently investing in DBFM and DBFOM contracts across the United States. Furthermore, the authority will attract contractors like those that have been awarded contracts for Construction Packages CP1, CP2, CP3, and CP4 which range in contract size from \$400 million to \$1.2 billion. Competition on P3 procurements is a key aspect of innovation and driving cost decreases.

11.7 Funding and Financial 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?

As the Project is currently structured in the RFEI, the P3 industry generally would be challenged with raising the necessary financing to procure the IOS –South or the IOS-North individually or both of the Segments combined under one procurement. Based on the list of larger projects in the United States P3 market that achieved financial close as well as trends we have recently observed in the financing markets, we estimate that the maximum amount of financing that could be procured for a single project is in the range of \$3-5 billion. Our estimates have determined that there is enough funding capacity in the market to substantially deliver a \$5 billion dollar project. That being said, progress payments in combination with an availability payment can be helpful on a project of this size. If CA HSR elects to use progress payments, the balance of the progress payments in conjunction with the private sector investment will need to be closely monitored and not be larger than 30% of the capex. Given the different approaches we have provided we would imagine Segments of the Project being funded as outlined in question 6 above and with each funding source more clearly defined below:

PABs financing: We strongly recommend that the Authority seek a PABs allocation as we believe it will provide an effective long-term source of funding. Investment grade senior debt through PABs provides the most viable long-term financing option for P3 transportation project. Based on recent closings in the market (e.g. East End Crossing, Midtown Tunnel, Pennsylvania Rapid Bridge Replacement, I-69) investor demand is high for PABs-financed transportations projects as this type of bond results in reduced financing costs because of the exemption of federal tax. Even though there is high-

investor demand for PABs in the market, PABs are subject to state volume caps which for California is prescribed as \$3.88 billion for 2015. Financing two segments per year with the sources of funds as outlined above would equate to \$3-\$3.2 billion in PABs issuance, such amount would fall underneath the state cap but could potentially cause issue with other PABs debt issuances in the state. Meridiam has a strong record with PABs financed transportation infrastructure projects including NTE 1-2 and 3A3B which utilized \$672 million of long-term PABs. NTE 1-2 was the first use of PABs by a private road concession and received an oversubscription of 2.4 times. LBJ Express, closed in 2010 and was the largest privately funded road development in US history in which \$606 million of long-term PABS were issued on the \$2.6 billion project.

TIFIA: TIFIA financing is one of the cheapest forms of financing available for transportation projects in the United States. Under a TIFIA loan the federal government issues credit at interest rates equivalent to the 30 year Treasury yield and with flexible repayment terms in line with construction completion. Competition for TIFIA loans has become increasingly more competitive and cannot be relied upon to be available and if available it would be unlikely to reach the 49% mark based on MAP-21 guidelines. Based on experience from past closings, we would expect TIFIA to equal a maximum of 33% of the total sources of financing for the Project. The TIFIA loan process will last upwards of five months from start of direct engaging with the winning bidder and will depend in part on the level of comfort the TIFIA office has with the dedicated public revenue source to repay the TIFIA loan. Meridiam recommends that CA-HSR seek a TIFIA allocation for the Project in conjunction with a PABs allocation.

144A Private Placement: The 144A Private Placement market is quite liquid. We believe that it is possible to secure \$1.25 billion to \$2 billion in funding for a single project from this source of financing.

Equity Financing: Equity financing for the Project, assuming an availability based structure, will make up 10% or approximately \$500 million per project segment (assuming \$5 billion project segments), of the total funding sources. It would also be feasible on approaches 1 and 2 for equity financing to equate to 15% of total funding sources or \$750 million. Equity members will provide upfront capital which is then repaid over the life of the contract ensuring proper risk transfer and alignment between the public and private sector. Meridiam does not foresee the equity market to be a constraining factor amongst the total sources of financing required for the Project.

Limiting Factors:

As noted throughout the paper the credit rating of California will be a limiting factor in the amount of debt that is able to be raised per year. Based on California's credit we believe that it is possible to raise \$10 billion per year. Meridiam would recommend that additional due diligence be performed in the bond market to evaluate the amount that can be raised per year. The amount that can be raised against California's credit will directly impact the number of segments that can be procured each year and the date an operational Project is achieved.

As outlined above we believe there to be sufficient capacity in the market to fund the Project in \$5 billion segments. However, in order for these sources of funds to be procured, the factors listed below will need to be structured appropriately in order to raise financing and achieve optimal pricing. The lenders for each of the senior debt sources outlined in the section above will go through a detailed risk analysis and due diligence process before committing funds to any given project. This analysis will determine the amount and pricing that they are willing to allocate. The following will be analyzed:

Source of Money: In its evaluation of the Project lenders will evaluate the sources of funds that will be used to make the availability payment and ultimately repay the senior debt obligations. The sources of funds will be evaluated based on the entity and subsequent credit rating in which the funding is sourced and the level of priority it is given amongst other appropriations made within a budget.

Team Qualifications: Lenders place high importance on the entity in which they are providing debt. Meridiam as a potential future development entity and Equity Member in a project company will leverage the relationship it has in the market with some of the best design firms, contractors and operators in order to develop a consortium structured specifically to meet the objectives of the Authority in the most cost-effective way. Our approach to teaming is aligned with aspects that Lenders and rating agencies value as key indicators to project success. Meridiam builds a consortium based upon the following principles:

- Contractors with a strong reputation for delivering on-time and on-budget projects
- Extensive experience in designing building and maintaining high-speed rail projects
- A track record for innovation in construction techniques
- A strong balance sheet sufficient to cover liabilities and guaranties required under the contract
- Previous successful working-together experience; and
- Local experience

Balance Sheet/Security Packages/Guarantees: Security packages combine letter of credits, performance bonds, insurance policies and corporate guarantees that relate to the contractors' obligations in the underlying agreements. The Security packages that lenders require for different procurement models depend on the specific details of the project, the amount of risk being transferred to the private sector, and the experience of the developer, design firm, construction contractor and maintenance contractor. The Consortium should have adequate resources to assure Lenders they are not at risk of bankruptcy. To evaluate this, parent company guarantees, balance sheet health and any sureties or letters of credit provided should be considered. The Lenders will look for a security package that mitigates counter party risk.

The Structure of the security package is an important part of the negotiation between the developer and its lenders. The structure of the security package should be determined by the developer, lenders and their respective technical advisors. Having CA HSR prescribe a security package would create issues with lenders and could result in additional security costs to be ultimately repaid by CA HSR or the end users of the High Speed Rail. CA HSR should be assured that the private sector is fully incentivized to perform its obligation under

the project and financing agreements due to the fact that it will incur the following in the event of non-performance: (i) deduction on the annual service payments; and (ii) accruing non-performance points that might lead to default of the private party.

Payment Mechanism: Lenders and Rating agencies alike will find comfort in a well-balanced payment mechanism in which annual and/or monthly deductions are capped, the developer is provided with sufficient grace and cure period for failures to perform, and termination for developer default does not over-penalize the developer for non-performance.

Financial Structure: An investment grade rating (required for most of the financing sources listed above) will be dependent on the robustness of the project structure and resilience of project revenues, as well as the existence of appropriate risk sharing mechanisms between the stakeholders, and technical project complexities such as tunnels etc. The covenant that will be required to support an equity investment will also enhance the likelihood of the Project to achieve an investment grade rating. Structural elements would include appropriate security packages (as outlined above) to support key contracts, typical cover ratio requirements as well as adequate reserves and liquidity in the contracting entity.

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

We believe that altering the funding sources as outlined below will have positive impacts on raising financing for the Project and could potentially accelerate the procurement timeline.

Full Authority Backing: To ensure efficient financing of the Projects, under a full availability payment contract, even though CA HSR is likely to fund the availability payment with fare-box revenues, ridership and cap and trade, these payments should be fully and sufficiently backed by additional state resources so that they are not subject to demand risk. CA HSR should add language to the project agreement that confirms its support of and commitment to prioritizing funding of the Project year after year.

Cap and Trade: For the purposes of this RFEI we have assumed that Cap and Trade revenues will equate to \$500 million per year as requested by the Authority. Meridiam believes that Cap and Trade could be a great source of funding once the legislation is in place for the full term of the contract. However, the legislation for Cap and Trade expires in 2020. Meridiam would recommend a push to get his legislation instated to 2050 as soon as possible. Without this legislation in place it will be very difficult to raise financing. Without extended legislation for Cap and trade and the current lack of a long another long-term funding source, A DBFM contract on an availability basis cannot be procured. The sooner this legislation is in place the sooner the procurement process for DBFM availability contracts can begin.

Federal and State Funds: As currently outlined in the RFEI there are \$4.1 billion of State funds remaining from Proposition 1A. Meridiam would recommend that these funds be used primarily as progress payments to reduce the amount of private sector financing for each segment. Any additional Federal or State Funds that can be obtained to be used as upfront progress payments to the project company would be beneficial up to a limit of 30% of the construction costs on each segment. As noted earlier in the EOI, progress

payments will reduce the amount of private sector financing required and will also reduce the amount of debt against California credit thereby increasing the number of project segments that can be procured each year and accelerating project delivery. Any additional federal and/or funds that could be sought by CA HSR would be beneficial as these could be used as progress payments and decrease the amount of debt that needs to be raised by the private sector and could accelerate the procurement schedule.

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 structure better achieve the Authority's objectives?

Meridiam would recommend an availability payment mechanism. An availability payment mechanism achieves lower cost of financing. Based on our experience in recent closings, the appetite of the lending community for availability projects is large. An availability structure typically allows a greater amount of leverage to finance project costs (market standard usually dictates approximately 10% - 15% equity financing). Additionally, senior lenders often require lower minimum coverage ratios and margins, which together with greater leverage significantly reduces the Project's financing costs.

From a private sector perspective, availability payment mechanisms are attractive because the risk profile is manageable and significantly lower than compared to a demand risk project. From a public sector perspective, availability payment mechanisms are attractive because there will be potential to stimulate significant appetite from many developers resulting in a competitive procurement process.

The California High Speed Rail would be the first high speed rail within the United States. As such, there is no precedent within the US to use as a basis for ridership or fare box revenue forecasts. It would be very difficult to entice debt providers to lend to a greenfield revenue risk project with the source of their debt repayment based on projections that are currently unfounded in the US marketplace.

Furthermore, the risk of ridership is outside of the private sector's control. It can be beneficial (and also politically more palatable) for the CA HSR to take on revenue risk in order to dynamically manage the rates of ridership. Project financing costs will be lower as the Private sector will not price this into their submission.

As mentioned, risk is best allocated to the party with the most control over that particular risk. With respect to key factors that influence ridership such as the economic development of particular areas, CA HSR and the state have more control and would therefore be best suited to retain the ridership risk. Under an availability payment structure, any increases in ridership would present an upside for CA HSR, while the private sector would be focused on meeting and exceeding performance standards

11.8 Technical Questions:

As a developer, equity provider, and long-term asset manager, Meridiam has focused on the questions posed in the Commercial and Financial Sections of the CA HSR RFEI.