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RE: RFEI HSR #15-02 Release Date June 22, 2015

Please find attached response to the RFEI dated June 22, 2015 published by the California High-Speed Rail Authority. John Laing is submitting this EOI individually. We look forward to discussing this project with the California High-Speed Rail Authority in greater detail. If you have any questions regarding our response or would like to arrange a one-on-one meeting please contact the following team members from John Laing Group's New York office:

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We look forward to working with you on this opportunity.

Regards,



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11.3 Firm Experience and Team Structure

11.3.1. 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.

John Laing is submitting this response to the RFEI as an equity investor or developer with the intent to participate as part of a consortium as the procurement structure becomes more defined.

John Laing is a dedicated P3 investor and a leading developer in the infrastructure space. Since the inception of the P3 model, John Laing has successfully developed more than 100 privately financed P3 schemes for the public sector and won the PFI Developer of the Year award four times. John Laing has particular specialization in developing and financing large transit schemes, having successfully closed the InterCity Express Programme (IEP) (U.K., circa \$3.6 billion in debt and equity), the largest rolling stock P3 in the world, and was recently nominated as the preferred bidder on the New Generation Rolling Stock project (Australia, expected circa \$1.04 billion in debt and equity). Of particular note, John Laing is the co-majority equity investor in the Eagle P3 Project (U.S., circa \$1.6 billion), which is the first transit DBFOM project in the U.S. John Laing is a long-term investor in infrastructure assets. As an example of whole-of-life commitment, John Laing recently handed back the E4 Motorway in Finland to the Finnish Transport Authority following the conclusion of the full concession term. John Laing currently manages or owns 99 privately financed P3 schemes for the public sector globally. In July 2012, following the successful close of the first phase of the IEP, John Laing reached its 100th financially closed infrastructure investment worldwide.

11.4 Project Approach

11.4.1. 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.

We are interested in participating in a consortium for both the IOS North and IOS South projects as an equity investor and developer. Considering the scale of the HSR initiative as further articulated in the responses, we believe the projects can be procured separately with work packages focused on the discrete elements of the scope. A PPP model will be an effective approach to project delivery in order to achieve the goals and objectives of the HSR Authority. Utilizing private capital under a long term concession

structure, the HSR Authority will be able to structure the project to transfer responsibilities and risks to a consortium of experienced international rail investors, operators and developers. The HSR Authority needs to consider its goals and objectives in developing the specific framework of risk transfer in the project agreements, holding the private sector accountable for delivering on those goals.

11.5 Response to Questions

See sections 11.6-11.8 below.

11.6 Commercial Questions

11.6.1. 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.

We believe the optimum delivery strategy for the Authority is to follow a structure similar to what Portugal had developed prior to the global financial crisis and what France has moved to in the continued development of their TGV system. This structure includes having multiple sub-structure PPP packages to build out the network while separating out the signaling systems as a separate network wide PPP. The resulting structure would be:



The number of qualified signaling and communications providers is small compared to the pool of qualified contractors that can perform with civil infrastructure work. By combining these contracts, the Authority will limit competitiveness as teams will be formed based on the availability of signaling/communications partners, despite the fact that signaling/communications only represents approximately 10% of the total cost of a typical system. The separation of these components will allow for greater competition ultimately leading to better pricing received by the Authority.

Secondly, the separation of the signaling and communications component will allow the Authority greater future flexibility to change, alter or upgrade the systems as the Authority will only have one point of contact as well as an integrated network as opposed to a potential patchwork system if the signaling/communications is part of each infrastructure package.

The separation will also mitigate some of the more complex interface risks as different teams won't have to coordinate and integrate potentially different technologies. This will limit integration risk on the civil works packages to physical interfaces (i.e. at the junction of IOS-North and IOS-South) which are easier to manage which will also provide a pricing advantage to the Authority.

This separation would also give the Authority flexibility to reduce the size of the civil works packages (from IOS-North and IOS-South to multiple contracts) to not only increase competition but also potentially accelerate development as multiple teams could construct civil works packages concurrently.

If the Authority did want to bundle the Signaling/Communications systems with another contract, it is our suggestion that it be bundled with the rolling stock contract as the interface there is better understood than with the civil infrastructure.

11.6.2. 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 largest concern for all parties developing a HSR network is the management of interface and integration risks. As stated in the previous response, a properly structured scope can assist in mitigating some of these issues. Furthermore, it is imperative that the HSR Authority clearly define the required standards and hold the various parties to complying with them.

Ultimately, to provide the best value for money the HSR Authority should act as the single point of contact for managing all the interfaces but should pass down penalties and damages to parties who do not fulfil the requirements of the contracted scope. There may be some exceptions to this rule in instances of less complex interfaces (i.e. station platforms and civil works).

For example, if the civil works provider successfully meets the requirements and standards of the HSR Authority to provide the tracks but the system is non-operational due to issues with the rolling stock or signaling, the civil works contractor should still receive its availability payment from the HSR Authority (or the relevant credit worthy counterparty). At the same time, the HSR Authority should seek equivalent liquidated damages from the defaulting party that will fully cover its costs.

11.6.3: 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?

We believe that the ideal structure separates the network into five different contract groups:

- Multiple civil infrastructure DBFM contracts
- Network wide Systems / Signaling PPP
- Rolling Stock DB(F)M
- Station Development
- Operations

We believe this structure will maximize competitiveness for the state while also providing adequately sized contracts for all parties and allowing teams to focus on their core competencies.

Bundling these packages will lead to the formation of teams that potentially dilute the value delivered to the State as the State will no longer necessarily receive the best value in each component but rather the best average across all components.

11.6.4. 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)?

The contract term should be between 30 and 50 years. This will ensure appropriate risk transfer as the traction power and systems provided by the private sector will need to be replaced prior to the 30 year mark, thereby transferring lifecycle risk to the private sector.

A contract at the longer end of the 30 to 50 year range highlighted above will provide for the optimal risk sharing with the private sector. It is likely to encourage more competitive pricing from developers, both in terms of cost of capital and lifecycle pricing. A longer operating period provides a longer duration for distributions to equity, meaning that

equity returns are less sensitive to a single “shock” such as a construction or operating cost overrun. This should translate to more aggressive pricing in comparison to a 25 or 30 year concession where equity returns would be considerably more sensitive to cost overruns.

Given the constraints ultimately associated with cap and trade (“C&T”) and fare box funding, a longer concession period would allow for returns to be spread over a longer period and could result in a lower overall annual payment to the private sector.

A shorter contract term would be appropriate for the provision of the rolling stock. The contract length should be coterminous with the expected lifecycle of the rolling stock. John Laing is currently engaged in several DBFM contracts for the provision of electrified intercity rolling stock, with contract terms ranging between 25 and 27.5 years of guaranteed usage, followed by options for continued service exercisable by the authority.

Similar comments would apply with any contract for the operation of the system. Such a contract should be structured to provide the Authority with maximum flexibility, with a term of between 5-10 years. This would allow for continuous expansion of the system on the basis of a system-wide operator (as opposed to being engaged with a single provider for 20-30 years on the IOS segments, and having to extend their remit to cover expansion segments or contract with a new operator resulting in a patchwork of operators throughout the wider system).

11.6.5. 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?

Based on the cost estimates for the IOS North and IOS South published by the Authority, the size of each is large in comparison to privately financed high speed rail projects in other jurisdictions which have reached financial close. Looking at the broader infrastructure market in North America, each of IOS North and IOS South civil/structural components alone would rank with mega-projects in the LNG sector as some of the largest project financings to be undertaken in North America.

From a construction capacity point of view, we consider it unlikely that a single contractor or even a joint venture comprised of 2-3 very large contractors, could take on both project scopes combined. A construction joint venture that could take on a combined project IOS North-IOS South project would have so many partners as to be unwieldy. Further, there are only 6-8 global international contractors capable of delivering only the North or South segments stand alone.

With that in mind, we recommend procuring IOS North and IOS South as separate projects, and even breaking up each of the IOS North and IOS South into packages that

can be managed by a large enough group of contractors to attract a strong field of bidders.

Some useful guidance may be examples of recent large rail projects which attracted a competitive field of bidders. The LGV Tours-Bordeaux PPP in France was a similar high speed rail concession with a total project value of \$8.5 to \$9 billion and it obtained three bids, despite poor financial market conditions during its procurement. The Eglinton Crosstown LRT in Canada, while not high speed rail, had a similar scope of work involving civil works and provision of systems, with a project value in the range of \$5 billion. This project also reached successful financial close, although only two bids were submitted and the project benefited from considerable public subsidy. These examples demonstrate that IOS North and IOS South, on their own, would represent very large projects in light of recent precedent.

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

The scope of work does not limit teaming opportunities. There are sufficient numbers of large civil contractors and providers of rail systems to assemble several competing consortia.

One potential risk to competition would be if IOS North and IOS South were procured at the same time. Contractors might be wary of participating in both procurements on the basis that they would not have the capacity to carry out both projects at the same time. The procurements should be staggered so as to afford maximum participation.

11.7 Funding and Financing Questions

11.7.7. 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?

Based on available information and accepting expected future revenues as given, the funding sources would appear sufficient to facilitate raising the necessary financial capital for the project scope.

This presupposes the actual HSR service achieves a net revenue surplus and does not require ongoing subsidy from the HSR Authority. Furthermore, we assume the available resources during construction would be sufficient to offset some significant share of total construction costs.

Recent precedents in Europe, such as the Tours to Bordeaux project, featured public sector capital contributes in excess of 50% of total construction budget. Further, a

recent literature review, as of 2012, there were no successful examples where public contributions were less than 50% of total capital costs. Thus, we would anticipate the project would require comparable levels of capital contributions during construction.

As mentioned in 11.6.5, the scale of the combined civil works presents a unique challenge in a yet untested market for project financing of this scale, with some of the larger project financing occurring in LNG developments at around \$10 billion. Most importantly, the availability of the funding sources would require further due diligence to properly assess the sustainability of proposed sources.

In particular, we would point to the significant role anticipated for the recently enacted Cap & Trade (“C&T”) program. While a potentially important source of near-term financing, the HSR Authority cannot rule out, nor will funders, the prospect of the scheme working “too well” (i.e., driving increased capital investment and further innovation in the alternative energy sector thereby reducing the carbon credit market) at least as a funding source for the HSR venture. Indeed, we would anticipate some probability, the C&T program would create sufficient incentive to drive the long-term policy objectives of reduced dependence on non-renewable energy sources.

With the uncertainties around the long-term prospects for the C&T revenue stream, we would anticipate some level of state-support to underpin the Availability Payment regime to ensure sufficient comfort for all capital-providers, whether debt or equity, or at least adequate coverage over a proven C&T revenue stream to ensure repayment of capital under severe downsides.

The limiting factors for project financing ultimately relate to the predictability of project net revenue and the intended structure and sources of capital, including debt and equity. In private sector-led project financing, the primary objective is the achieving lowest cost of capital available to the Concessionaire.

To this end, the Concessionaire must demonstrate to the investment community and other interested parties, such as rating agencies, capacity for the available financial resources to achieve adequate coverage over operating expenditures and ongoing maintenance expenditures, while delivering an adequate return to capital providers, both debt and equity.

We would anticipate securing debt financing from multiple sources in order of priority, including: (1) public finance, via US Railroad Rehabilitation and Improvement Financing Program (RRIF) and potentially, from US Transportation Infrastructure Finance and Innovation Act (TIFIA) direct loan program; and, (2) private finance, via traditional commercial bank financing and capital market debt, likely one or more forms of private placement. On the equity side, we would anticipate some combination of developer and/or infrastructure fund capital commitments paired with equity contributions directly from the contractor or via an affiliate developer to ensure proper alignment of interest.

At present, funding via RRIF with its available capacity of up to \$35 billion and scope to finance upwards of 100% of construction costs offers the most attractive terms. Even

with existing commitments and requirements to allocate to freight railroads, the RRIF program as currently structured stands ready to fund a substantial portion of construction costs.

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

Among the key challenges as presented by the existing funding sources is the reliance on the still relatively untested C&T program. To bolster the investment case, we would anticipate some level of state-support for Authority obligations to ensure adequate capacity for financing the project scope.

As an alternative, there may be an opportunity for the state to provide financial support to the HSR operator. The HSR operator, in turn, would be assured of sufficient financial capacity to cover its own operating budget, including track access charges. Through this framework, international HSR projects have created a mechanism for some revenue risk sharing, but not on a standalone basis to cover off all construction costs.

To supplement the existing funding sources, we would recommend considering the potential for various value-capture regimes, such as Tax Increment Financing (TIF) and joint development, as well.

We see the prospect for value-capture as particularly relevant at station areas in close proximity to existing urban areas. The value-capture regime would enable the securitization of prospective tax revenue increases attributable to the economic development benefits anticipated in and around HSR station areas. A substantial body of research exists to document the property value uplift associated with increased rail connectivity which drives transit oriented development.

In the first instance, though, we would recommend a clear statement from the HSR Authority clarifying its current and future financial commitments and the order of priority therein. In turn, the HSR Authority should segregate pools of resources for each capital project. As currently proposed, the multiple construction contracts and other commitments relating to railcar procurement and station area development creates a degree of complexity, which may hinder funders' ability to properly underwrite the risks associated with capital contributions and future availability payments.

11.7.9. 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?

Based on the facts and circumstances identified in the RFEI, the appropriate remuneration model is an availability payment mechanism. The ability for the project to

directly accept patronage and revenue risk is extremely limited and will not result in a financeable project.

Availability Payments should be sized to ensure adequate coverage on a net revenue basis (i.e., after operating costs and maintenance expense) to meet required credit metrics for an optimal rating, while ensuring sufficient long-term equity distributions to meet required returns.

Without precedent in the US, we are skeptical of the prospect for a pure patronage-based, revenue-backed remuneration model. There are far too many uncertainties, notably with respect to overall patronage due to fare-setting policies, price elasticity and the resultant market capture for current and future travel demand in the corridor. As such, we would not expect to secure sufficient financing on the basis of fare box revenues alone.

Indeed, the experience in the US with long-distance rail, high-speed or otherwise, is relatively limited and even with the Northeast Corridor example, fare box revenues are rarely sufficient to offset anything more than ongoing operating expenditures.

In aggregate, the Northeast Corridor does not generate sufficient net revenue to meet minimum capital charges (as measured by depreciation), nor compensate funding sources, such as debt and equity. The profitability analysis holds for the Acela service, as well, although the operating surplus is much more substantial for Acela relative to the North Corridor regional service.

While we do appreciate the business case for reduced travel times and greater frequency, we would caution that funders may well be reluctant to commit to the first pure revenue risk transaction in the US.

Internationally there is some precedent for revenue concessions for HSR passenger services, notably where railroad operations and infrastructure are managed under separate frameworks.

One example worth contemplating is the HSR link between London and Paris/Brussels via the Channel Tunnel. Therein, passenger rail services are offered by Eurostar, whereas Eurotunnel Groupe is responsible for the provisioning of rail infrastructure.

As the infrastructure provider, Eurotunnel Groupe is compensated for network access on a combined fixed-fee and variable per passenger basis from Eurostar. In turn, Eurostar generates the majority of its revenue from the fare box and ancillary on-board services.

In recent years, both entities have achieved net revenue breakeven on a pure fare box basis with Eurotunnel Groupe achieving profitability on a pre-tax basis in 2012. Cash flow generation at Eurotunnel Groupe has been even more impressive with the business commencing dividend distributions to shareholders in 2009 and debt amortization payments in 2013.

The longer-term view of the Channel Tunnel project, however, is a cautionary one featuring multiple debt restructurings and near complete write-off of the equity contribution to the original project financing. Thus, the applicability of the pure revenue model for a Greenfield project with uncertain patronage is far less satisfying than current operations would suggest. Indeed, in a recent survey of 27 PPP rail projects (Dehornoy, 2012), the authors contend there was no successful example (at the time of publication) of a new-build rail facility completely self-sustaining on fare box revenue alone.

11.8 Technical Questions

Intentionally omitted

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