In the Request for Information (RFI), potential proposers were invited to provide response letters to help refine VDOT’s and HRTAC’s assumptions related to Project procurement and delivery. Twelve contractor and developer entities submitted the following letters by April 20, 2017 in accordance with Section 9 of the RFI:

http://www.virginiadot.org/business/industry_outreach_i-64_hampton_roads_bridge-tunnel_expansion.asp

ACS/Dragados
Bechtel
Cintra/Ferrovial
Condotte America
FCC
Fluor
John Laing
Lane
Macquarie
Skanska/Kiewit/Weeks
Transurban
VINCI
April 20, 2017

Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434
Email: HRBTPR@vdot.virginia.gov

Re:  I-64 Hampton Roads Bridge-Tunnel Expansion Project RFI Response

To Whom It May Concern:

On behalf of ACS Infrastructure Development, Inc. (ACS) and Dragados USA, Inc. (Dragados), we are pleased to deliver a response to the Request for Information (RFI) issued by Virginia Department of Transportation (VDOT) on March 17, 2017 for the I-64 Hampton Roads Bridge-Tunnel Expansion Project (the Project). We hope that our attached response will serve a benefit to VDOT in the further development of the procurement process.

Our team members are part of the ACS Group, a leading international infrastructure development and construction group, and collectively bring extensive experience in partnering with public authorities in developing some of the largest and most complex transportation projects in North America. ACS and Dragados partner on all P3 pursuits in North America. Since 2006, we have been awarded 14 complex transportation P3 projects across the U.S. and Canada representing a combined investment value of over $16 billion. ACS invests equity into its projects and leads the developer from bid to, and including, the long-term O&M of the projects. Dragados participates as a member of the design-build joint venture, often as the lead partner managing the design and construction activities.

Combined, we bring unparalleled experience and capacity in transportation P3 and design-build projects. The ACS Group is one of the largest P3 developers and infrastructure contractors in the world having reached financial close on over 90 P3 projects worldwide. The ACS Group’s North American entities, ACS and Dragados, have an extensive track record of developing transportation infrastructure projects across the continent which complements the Group’s global efforts. This provides us with the requisite experience to find innovative and pragmatic solutions for the successful planning, structuring and implementation of large and complex infrastructure projects, including highways, bridges, tunnels, and rail. These include high-profile highway P3 projects such as the $1.06 billion SH 288 Toll Lanes Project in Harris County, Texas and the $1.7 billion I-595 Corridor Improvements in Broward County, Florida. Dragados’ design-build portfolio also includes the $756 million Chesapeake Bay Bridge-Tunnel, just East of the future Project site, and the $1.2 billion SR99 Alaskan Way Viaduct Replacement in Seattle, where the excavation and lining of the tunnel was recently completed using the largest (57’-5” diameter) EPB TBM in the world today.

We remain available should you have any question on our comments. You may contact us through the following designated representatives.

Respectfully submitted,

François Wasselin, Senior Vice President, Project Development
ACS Infrastructure Development, Inc.
One Alhambra Plaza, Suite 1200 | Coral Gables, Florida 33134
Telephone: (305) 424-5400 | Fax: (305) 424-5401 | Email: fwasselin@acsinfra.com
CC: Steve DeWitt, Senior Vice President, Business Development | Email: sdewitt@acsinfra.com
Attachment

*Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals, and why? Which option(s) would be infeasible or less suitable for your firm, and why?*

The vertical integration of our aligned corporate interest between developer/equity member (ACS) and contractor (Dragados) enables us to undertake projects regardless of procurement method outlined in Section 4. The advantages of such vertical integration, however, are best realized when we can optimize the lifecycle efficiency opportunities offered within a design-build-finance-operate-maintain (DBFOM) scope of work. It is our experience that requiring the private partner to plan and perform the design, construction and maintenance activities and to produce a committed price for the maintenance and rehabilitation of the facility for the length of the concession promotes very cost effective innovative solutions. A key concept necessary for development of these innovative solutions is the use of an Alternative Technical Concepts (ATCs) process during the RFP phase. ATCs can bring significant value to owners and the public.

As it relates to a DBFOM approach, there are a number of benefits to implementing a long-term P3, including the transfer of key performance risks during the term and opportunities to increase efficiency and cost reduction on a whole life basis. The allocation of operations and maintenance and lifecycle responsibility to the private sector incentivizes a cost-effective approach to the design, construction, and long-term O&M considerations through the optimization of technical solutions over the life of the Project.

A well-structured P3 agreement, when P3 is found to be the optimal procurement method, ensures the most efficient allocation of risks and responsibilities to the parties in the best position to mitigate such risks, resulting in the best-value solution for the Project owner. The private sector is responsible for managing the highest level of project risks under a DBFOM delivery approach. While a variety of project delivery approaches can be utilized on the Project, cohesive, integrated project teams, like ours, can provide a maximum amount of innovation, efficiency and overall value to VDOT through a long term DBFOM approach due to the risk transfer and long term obligations on the part of the developer team.

While it appears that the magnitude and nature of the Project could make it a great candidate to benefit from the innovation and long term integrated vision that the P3 delivery method offers, a demand risk DBFOM approach for this particular project is a concern, given the current projection that toll revenue would only cover approximately 5% of construction costs. This funding stream may not be sufficient for long term major rehab of the facilities under the DBFOM structure and could struggle to cover routine O&M costs as well.

We recognize that the traffic revenue study for the Project is in the process of being updated and that will better-inform the decision considering DBFOM procurement. The consideration of HOT-3 conversion of the existing I-64 eastbound median lane from LaSalle Avenue to Settlers Landing Road and HOT-3 conversion of the existing I-64 high-occupancy vehicle (HOV) lanes outside the area considered under the Hampton Roads Crossing Study may help the viability of the DBFOM option as well.

We would not recommend a design-build-operate-maintain (DBOM) procurement given our current understanding of the Project. Without financing, there is limited capacity in the surety market to support long term rehab of the facility. Without long term rehab, the incentives to optimize technical solutions on a whole life basis are lost, thus significantly limiting the efficiencies and value to be gained in the operations and maintenance period, as compared with the DBFOM procurement method.
The design-build (DB) procurement method would very likely be successful in achieving the Project goals. Among its many attributes, the DB procurement method offers the opportunity for innovative technical solutions, particularly for design and construction means and methods. Under a DB procurement, we strongly encourage VDOT to facilitate a process for developing and submitting ATCs during the procurement. The ATC process needs to include a confidential approach to encourage proposers to develop innovative and cost saving concepts that were not otherwise reflected or contemplated in the initial baseline design, allowing proposers to generate additional value through innovative designs and construction methods – all which ultimately benefit the project owner and users. Dragados has significant experience successfully delivering DB projects of similar size and scope to the Project, including ongoing work with VDOT on the $756 million Chesapeake Bay Bridge-Tunnel, which experience will serve to benefit the Project.

ACS and Dragados are keenly interested in the Project. As discussed throughout our response, our team is equipped to deliver the Project regardless of the ultimate procurement method and will continue to carefully consider this opportunity as VDOT further develops it.

Notice
The information and any analyses contained in this response to the Request for Information (“RFI”) are taken from, or based upon, information contained in the RFI for the delivery of the I-64 Hampton Roads Bridge-Tunnel Expansion Project (the “Project”) or otherwise received from the Virginia Department of Transportation (“VDOT”) or from publicly available sources. Neither ACS Infrastructure Development, Inc. (“ACS”) nor Dragados USA, Inc. (“Dragados”) (ACS and Dragados together, the “Respondents”) have independently verified or investigated the completeness or accuracy of any such information, unless otherwise explicitly stated herein. The information and any analyses in these materials reflect prevailing conditions and our views as of the date hereof, all of which are subject to change. Should the Respondents participate in subsequent stages of the procurement process of the Project, further investigations and due diligence analyses will be required in order to more precisely define the overall approach to the Project. Additionally, the information contained herein, in particular, our ability to finance the Project, assumes a standard allocation of risk reflective of recent market precedents (including, without limitation, customary provisions regarding appropriations and funding, environmental permitting, geotechnical risks, right of way acquisition, maintenance, etc.).
April 20, 2017

Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434

Bechtel Response to Request for Information Regarding the Hampton Roads Bridge-Tunnel Expansion Project

Dear Ms. Gross:

Bechtel Infrastructure Corporation, a member of the Bechtel group of companies, with its North American headquarters in Reston, Virginia is pleased to submit our response to the subject Request for Information regarding the procurement process for the Hampton Roads Bridge-Tunnel Expansion project.

Bechtel is a global leader in engineering, construction, and project management services with more than a century of experience building and delivering some of the most complex projects in the world. The company has its roots in large transportation projects, with extensive experience in highway, bridge, tunnel, rail, airport and related intermodal transportation infrastructure.

Today, we employ more than 55,000 people worldwide in 40 offices located in 25 countries. Our presence in Virginia spans nearly 75 years with the establishment of the first Bechtel office in the nation’s capital in 1943. Bechtel Infrastructure’s corporate offices and key resource center is located in Reston, Virginia where Bechtel employs over 1,500 people.

The Hampton Roads Bridge-Tunnel Expansion Project brings with it significant implementation challenges as a transportation project in a vibrant, growing Virginia shore community. Expanding the I-64 corridor between I-664 in Hampton and I-564 in Norfolk to provide consistent six-lane capacity, requiring marine bridge work, highway widening, bridge reconstruction and a new parallel Hampton Roads crossing is a massive design, construction and financial undertaking. We would be very pleased to contribute to its successful completion and have the opportunity to engage our engineering and construction experts to provide innovative design approaches and construction solutions.

In addition to our experience as a contractor, Bechtel has extensive experience as a developer, designer, investor, and operator of large, complex infrastructure projects encompassing all project delivery models being considered by VDOT and HRTAC for the Hampton Roads Bridge-Tunnel Expansion Project. Bechtel would propose to lead or co-lead the project as a Design-Build (DB) contractor, a Design-Build-Finance-Maintain (DBFM) contractor, or a Design-Build-Finance-Operate-Maintain (DBFOM) contractor capitalizing on our in-house project development, financial, environmental, design and construction expertise.
The Bechtel point of contact for this project is:

Kyle Henry
Business Development Manager
Bechtel Infrastructure Corporation
12011 Sunset Hills Road
Reston, VA 20190
Office: 1 (561) 329-9263

I trust our response will be of benefit to your evaluation of alternative delivery models. We look forward to the opportunity to assist VDOT and HRTAC as you move forward with implementation on this important and exciting project.

Sincerely,

Kyle Henry

Attachment 1: Bechtel Response to RFI
Please be assured that regardless of the chosen delivery model, if engaged by VDOT / HRTAC, Bechtel will bring years of program management, design and construction experience to the Hampton Roads Bridge-Tunnel project. In this regard, we have successfully delivered projects under all three identified methods and expect VDOT / HRTAC understand the inherent benefits and drawbacks associated with each structure and the applicability to the specifics of this project.

From a Bechtel perspective, and although we are comfortable working under each method, as a company whose core business is the engineering and construction of large complex infrastructure projects, we believe we can best contribute to achieving the project goals through the Design-Build option. The comprehensive integration of the design, construction and project management are the hallmark of successful projects. We believe the Design-Build option offers VDOT and HRTAC the best opportunity for enhanced participation in not only the design process but also to continue that engagement throughout the construction and commissioning phases. The greater interactivity and collaboration between the DB contractor and the sponsors ensures the project design and implementation delivers on the stated goals and promotes flexibility to address key stakeholder issues as they evolve over the course of the construction period.

Additionally, a design-build delivery could provide an improved schedule from RFP to Financial Close with a more streamlined contract formation process compared to DBFOM or DBOM contracts, potentially advancing delivery of the project.

<table>
<thead>
<tr>
<th>Example Projects</th>
<th>Scope/Delivery</th>
<th>Location</th>
<th>Key Attributes</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dulles Corridor Metrorail</td>
<td>Design, Build</td>
<td>Virginia</td>
<td>Bridges, tunnels, ROW restrictions, highly congested areas</td>
<td>$1.8B</td>
</tr>
<tr>
<td>Springfield Interchange</td>
<td>Construction Management</td>
<td>Virginia</td>
<td>Multi-phase, multi-contract project management, 135 lane miles, 50 bridges</td>
<td>$690M</td>
</tr>
<tr>
<td>Riverside County Transportation Program</td>
<td>Program Management</td>
<td>California</td>
<td>21 highway and freeway projects, consisting of 18 interchanges, viaducts, and bridges, and commuter rail.</td>
<td>$2.0B</td>
</tr>
</tbody>
</table>

We understand VDOT and HRTAC are evaluating the potential benefits of alternative structures such as a DBFOM or DBOM model. Bechtel has experience and is fully capable of delivering through these methods. As with DB delivery, the project will benefit from Bechtel’s design and construction skills under these structures. Unlike DB, commercial arrangements for long-term DBFOM/DBOM contracts are inherently more complex and time-consuming to negotiate and administer than they are for design-build contracts that do not include O&M and/or financing. Alternative delivery models add complexity in the form of a need to partner with financial organizations and/or O&M providers, which require the creation of joint ventures for the project execution. These actions take time and consume resources increasing the cost of participation and project execution.

In alternative delivery models like DBFOM and DBOM, Bechtel prefers to lead or co-lead in a joint venture delivery thus we can provide our extensive project management skills to efficiently sequence design, construction, and maintenance of traffic, among other critical items, while promoting efficient utilization of economies of scale and minimizing costly and complex interfaces with other parties. We believe this management advantage will further contribute to achieving the Hampton Roads Bridge-Tunnel project goals.
We note that VDOT and HRTAC have a preference that, should DBFOM delivery be selected, the scheme would be a revenue risk model whereby the concessionaire would bear the risk of recovery. We have not participated in projects using this commercial model and believe such a model would be of more interest to financial / investment firms rather than traditional engineering and construction firms such as ourselves. As such under this type of commercial model, our participation would be limited to consideration of a DB role within a consortium led by others. Although under this approach Bechtel would still bring many of the benefits it would provide under the DB model, we would not seek to participate in the financing related aspects of the project.

We would however consider leading and fully participating in an availability-payment concession, which we believe could improve the probability of financing, lower financing costs and reduce the development timeline compared to a revenue risk structure.

<table>
<thead>
<tr>
<th>Example Projects</th>
<th>Scope/Delivery</th>
<th>Location</th>
<th>Key Attributes</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey Light Rail Transit</td>
<td>Design, Build,</td>
<td>New Jersey</td>
<td>34 miles, 50 grade crossings, O&amp;M partnership, innovative geotechnical designs, economic conversion of existing rail assets</td>
<td>$615M</td>
</tr>
<tr>
<td>System</td>
<td>Operate, Maintain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edmonton Valley Line Light</td>
<td>Design, Build,</td>
<td>Edmonton Alberta,</td>
<td>Sustainable Urban Integration, congested urban environments, seamless stakeholder communications, Bechtel participation across all facets of delivery model</td>
<td>$1.0B</td>
</tr>
<tr>
<td>Rail</td>
<td>Finance, Operate,</td>
<td>Canada</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintain</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

We are certain VDOT, HRTAC and the Hampton Roads stakeholders will take all options into careful consideration and make the best decision on implementation model for the Hampton Roads Bridge-Tunnel Project. As outlined above, Bechtel has experience in all models under consideration and is very interested in contributing to the project for the advancement of the Hampton Roads area and of the Commonwealth of Virginia.
VI R G I N I A  D E P A R T M E N T  O F  T R A N S P O R T A T I O N

RESPONSE TO REQUEST FOR INFORMATION

APRIL 20, 2017

RESPONDENT

C I N T R A  G L O B A L  L T D.
F E R R O V I A L  A G R O M A N ,  U S  C O R P.
Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals and why? Which option(s) would be infeasible or less suitable for your firm, and why?

Cintra and Ferrovial Agroman appreciated the opportunity to meet with members of VDOT and HRTAC during our recent one-on-one meeting for the I-64 Hampton Roads Bridge Tunnel Expansion Project (the “Project”). As we stated during our meeting, we believe the Project as envisioned under Alternative A of the Draft SEIS, may not be a good candidate for a DBFOM revenue-risk toll concession. We believe that toll revenues would be insufficient to warrant a revenue risk approach, and would accordingly carry too high a public subsidy.

We have outlined below two possible options that VDOT and HRTAC should consider with regard to the selection of a delivery model for the Project.

**Option 1 (Combined DB and DBFOM)**

As we mentioned during our one-on-one meeting, it may be possible to bifurcate the project into a combined design-build contract for just the tunnel, with a corresponding DBFOM revenue risk contract for the highway/approach components of the Project. Under this approach, VDOT would launch a RFQ for an integrated consortium with experience in P3 development, design-build services and O&M. The design-builder would bid for the design-build contract for the tunnel. The concessionaire (together with the design-builder), would bid for the DBFOM contract for the highway component. The concessionaire under this approach, would be responsible for performing O&M for the DBFOM highway component, the new tunnel, and potentially the two existing tunnels. We have intentionally qualified assuming O&M responsibilities on the two existing tunnels, as it appears that their current condition is poor to average. In addition, the potential lifespan of tunnels may require complete replacement substantially prior to the end of a 50 year concession.

This combined approach would allow VDOT and HRTAC to reap the substantial benefits of the DBFOM model which include:

- Risk transfer to the private sector including traffic and revenue risk, O&M etc.
- Higher innovation potential with a P3 which would allow the concessionaire to look at different approaches to reducing congestion, improving connectivity and thus enhancing revenue.
- The P3 will limit potential change orders (versus DB), thereby ensuring on budget and on time performance.
- Improved customer service and guaranteed O&M.
As we mentioned during our meeting, were VDOT and HRTAC interested in this option, Cintra would be happy to assist with some financial modeling to show the potential viability of this model.

**Option 2 (Build Two New Four-Lane Tunnels)**

As we mentioned under Option 1, we are concerned with the current physical condition of the two existing tunnels and bayways, as well as the tunnels geometrically deficient condition, including narrow median shoulders and below standard low vertical clearances.

We believe that it may be more cost effective to build two new four-lane tunnels and then decommission the old two tunnels. For the highway components to the east and west of the tunnel, we believe that two additional lanes can be added into the configuration through a combination of using 11 foot (instead of 12) lanes and some limited shoulder running. This approach should fall within the current Draft SEIS. This would leave 2 free general purpose lanes in each direction and 2 tolled managed lanes in each direction.

The benefits of Option 2 are:

- Addresses the real long-term congestion needs of the Hampton Roads area by providing a 4x4 instead of the 3x3 solution.
- Provides 8 tunnel lanes, that are new and meet all interstate and VDOT design standards.
- Provides true 2x2 managed lanes, which increases safety and reliability and significantly increases traffic and revenue.
- Replaces the two old tunnels now versus deferring the problem to the medium-term future.
- Provides substantially lower O&M as all infrastructure will be new.
- Provides all of the P3 benefits listed above in option 1.

The major drawback for Option 2 is the higher upfront required subsidy, as a result of building a new 8 lane tunnel. We believe that VDOT/HRTAC should consider Option 2, and also run a value for money analysis to look at its potential present value costs, versus Alternative A (3x3), and replacing the two old tunnels at some point in the future. We believe that the present value costs of Option 2 may be lower than Alternative A.

We remain available to have further discussions with VDOT and HRTAC to discuss either Option 1 or 2.
Rome, April 20, 2017

Sent via email to: HRBTproject@vdot.virginia.gov

Messrs.
HRBT Project Team
c/o Virginia Department of Transportation
1401 E. Broad St.
Richmond, VA 23219

TO THE KIND ATTENTION OF MR. JAMES S. UTTERBACK

RE: RESPONSE LETTER

Dear Mr. Utterback,

It has been a real pleasure meeting you and the Team in Hampton earlier this month: we would like to reiterate our sincere thanks for your warm welcome and the kind attention you gave to the issues we presented.

As you will probably remember from our meeting, Società Italiana per Condotte d’Acqua (http://www.condotte.com/it/index.aspx) is an international contracting company which operates in the USA through a fully owned subsidiary, Condotte America Inc. (http://www.condotteamerica.com/). Condotte American was established in 1987 and is active in bridges and road construction: among other projects it carried out, as subcontract, the bridge work on the Route 895 Pocahontas Parkway in Richmond, VA.

Our Group is really interested in the HRBT initiative and we would like to ask you to kindly continue to keep us informed about your Project’s progress.

Please find attached our answer to the question contained in the RFI, which we addressed to the best of our knowledge and capabilities at this point in time: we could be more precise once we have finalized the
agreements with the perspective partners of the Joint Venture we are willing to put together to pursue your Project.

Looking forward to meeting you again in the near future, I remain.

Sincerely Yours

Francesco Noya

ASSISTANT MANAGING DIRECTOR
SOCIETÀ ITALIANA PER CONDOTTE D’ACQUA SPA
VIA SALARIA 1039 – 00138 ROMA (ITALY)
TEL.: +39.06.88334243 / FAX: +39.06.88334295
CELL.: +1.786.202.5455
DELIVERY OPTIONS AND PROCUREMENT MODEL

1. Comments on the project delivery options and their possible implementation are, in our view, related with the Procurement Model which will be adopted in the Tender. In fact, the financial setup/backup required to enter in some form of P3 arrangement with the Owner will largely vary with the size of the packages in which the whole Project will be eventually subdivided and, obviously, with the percentage amount of private financing required out of the total value of each package.

2. In fact the overall project could be probably subdivided in three typologies (for example, tunnelling; bridges construction; roadworks) and/or in geographically identifiable segments, where the best of the available know-how from specialised contracting companies could be implemented.

3. We understand however that the underlying Owner’s policy is to issue a bid for the overall project, probably under a P3 form of contract. It is common knowledge that large P3 projects require strong financial relationships; local resources; technically competent teams. It goes unsaid, a sizeable joint venture would be required.

4. For the sake of discussion on the probable required size, we may assume that the Project will have a duration (D) of approximately 5 years and a Contract Price (CP) above a billion USD (probably 2 / 3 billions). Considering that a Contractor (either a Construction Company or a Joint Venture) can normally manage a physiological 20-25% increase of its turnover (YT) without suffering disruption in the ability to deliver its scheduled yearly workload, the Contractor size we are considering is:

$$YT = \frac{CP}{D \times (20-25)\%} \approx CP$$

In other words, the yearly Contractor’s turnover should ideally be of the same order of magnitude of the Contract Price.

5. Only very large Prime Contractors or sizeable Joint Venture (considering an optimum shareholding structure not exceeding three Partners) would be eligible to successfully participate to the bid: being a large JV probably better fit for possibly achieving tangible Value Engineering
benefits from the experience of specialised, medium size national and international contractors being parties to those JVs: if the Project were not split in packages also our Group, i.e. an international contractor specialised in tunnelling (TBM, NATM, Submerged); bridges; roadways; etc., would need to team up with at least another large Contractor.

6. The above is certainly true whichever delivery option model is selected (either DB or DBFOM w/revenue risk or DBOM), with the substantial difference that a Financial Advisor/Arranger and/or a large Concessionaire Company should be part of the Team in case one of the two envisaged P3 forms of contract should be selected. In particular:

7. If the Project would be issued as DB, our company (and/or the Joint Venture we are currently working on) will not need any additional help.

8. If the Contract will be in a DBOM form, we (or our perspective JV) could in theory be able to put together a financial and operational proposal that could be worth being analysed.

9. For a DBFOM we would definitely require the input of a Financial Advisor and/or a large Concessionaire, which is premature to involve in our plan at this early stage and on the basis of the available information: however, the risk of tolling revenues would be a factor that could be detrimental to a successful bid.

10. Finally, as a consequence of the perspective large size of the project that could be put out for tender and due to the relevant cost for the preparation of the Bid Design (at least 0.3% of Project amount) we believe that for any qualified, compliant participant to the whole tender process a reimbursement of the costs and expenses borne should be considered by the Owner (stipend).

11. In summary, while Condotte Group is very interested in the project and will develop a strategy to be strongly present in the next phases of the Project regardless of the delivery method selected by VDOT, in our view a company like ours could probably participate alone only if the Project were split in Design-Build packages (around $1B each), each characterised either by areas of expertise (tunnel / bridges) or geographically. If VDOT were not entertaining that option, our firm would prefer a Design-Build option rather than a P3 form of contract, the former representing a procurement strategy that would (a) increase the number of competing teams thus increasing competition and (b) reduce the number of required “layers” in any JV thus lowering the final price level: both effects bringing additional benefit to the Owner.
Dear Sir/Madam,

FCC is a world leader in transport infrastructure development and welcomes this opportunity to assist VDPT and HRTAC’s in determining the optimum delivery model for the I-64 Hampton Roads Bridge-Tunnel Expansion Project (the I-64 Project).

- FCC is the parent company of one of the world’s leading infrastructure and citizen services groups, with headquarters in Madrid, Spain. We operate across a wide but complimentary range of businesses.
- FCC generated over $6.4 billion (6 billion euros) in revenues in 2015, of which 47% came from international markets, mainly Europe and America. We have a footprint in 52 countries worldwide.
- The family of the Mexican entrepreneur Mr. Carlos Slim, is the majority shareholder in FCC. Mr. Carlos Slim is considered as a highly influential global investor.
- FCC Construction is the FCC group entity responsible for construction business activities, including infrastructure development.
- FCC Construction understands the challenges of building bridge and tunnel infrastructure and has participated globally as design-build contractor, concessionaire, operator and maintenance contractor on comparable highway and rail projects.
- FCC’s construction portfolio includes over 375 miles of tunnel works, SEM, TBM and immersed tunnels.
- Our relevant project experience includes: M30 Madrid Highway Tunnel (capex $520 million, TBM method); Coatzacoalcos Highway Tunnel P3 in Mexico (capex $245 million, submerged tunnel method), Mersey River Gateway Bridge P3 in the UK (capex $580 million); Riyadh Metro (capex $6.4 billion, TBM method), Bucharest Metro (capex $543 million, TBM method), Lima Metro P3 (capex $4.3 billion, TBM method), Panama Metro Line 1 (capex $1.83 billion, TBM method), Barcelona Metro P3 (capex $570 million, TBM method), and 440 miles of the high-speed rail network in Spain (with significant viaduct and tunnelling works).
- In North America FCC Construction is currently building the $775 million Gerald Desmond Bridge in California and the $320 million Spadina Subway Extension in Toronto. FCC Group is currently expanding in the US.

As requested, we have attached a response to the questions posed in your RFI dated the 17th of March 2017. Thank you for providing us with this opportunity to express our interest in the I-64 Project, and we look forward to discussing the project with you further in the future.

Yours faithfully,

Jesús M. de la Fuente
VP Business Development for North America
FCC Construction
I-64 Hampton Roads Bridge-Tunnel Expansion Project

1  Project Delivery Options

1.1  Question

Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project's goals, and why?

1.2  FCC Response

As described in our cover letter, FCC has the experience and resources to successfully deliver the I-64 Project, no matter what the final delivery model is. We have prepared the table and commentary below to summarize FCC's potential contribution.

<table>
<thead>
<tr>
<th>Project Goals</th>
<th>FCC Contribution</th>
<th>Private Partner Key Success Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Mobility Enhancement &amp; Travel Time Reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage congestion</td>
<td>Collaborative Partner &amp; Experienced Highway Operator</td>
<td></td>
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<tr>
<td>Improve mobility by enhancing efficiency of bus transit</td>
<td></td>
<td></td>
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<tr>
<td>Provide integrated solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Minimize adverse impacts on adjacent communities</td>
<td>Innovative tunnel/bridge builder with stakeholder mgmt. expertise</td>
<td></td>
</tr>
<tr>
<td>Minimize impacts to historic and cultural resources</td>
<td></td>
<td></td>
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<tr>
<td>Maximize the use of existing right-of-way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage construction operations to minimize disruption</td>
<td></td>
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<tr>
<td>C Improve transportation operations and safety</td>
<td>Integrated team who understand the challenges associated with future operation.</td>
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<tr>
<td>Reduce the effect of geometric deficiencies</td>
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<tr>
<td>Compliance with current design standards</td>
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<tr>
<td>Improve emergency evacuation</td>
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<tr>
<td>Adaptable transport solution with future capacity</td>
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<tr>
<td>D Develop public infrastructure in a financially responsible manner</td>
<td>Innovative team applying best practice and latest technologies</td>
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<tr>
<td>Quality project delivered safely, on schedule, to budget</td>
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<tr>
<td>Apply value-engineering innovation</td>
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<tr>
<td>Optimize long-term quality, lifecycle, cost, efficiency.</td>
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Legend - FCC Contribution Success Levels

- Very successful: FCC will use its extensive experience in the design, build, finance, operation and maintenance of transportation projects to directly or indirectly influence the achievement of this goal – with varying degrees of success depending on the level of control that the private sector has over the risk.

- Successful: FCC can support the goal, but will not have a significant influence on the outcome.

- Moderately successful: FCC can contribute to the development of a carefully considered stakeholder management plan, communications plan and traffic management plan. FCC can therefore assure VDOT and HRTAC that the latest in bridge and tunnelling innovation and technology from around the world will be brought to the I-64 project allowing the project to be designed and built around the project constraints and effectively targeting elimination of all right-of-way impacts. This approach can only be successfully implemented by experienced highway developers. FCC has that experience. We are seasoned tunnellers, with a track record of mobilising experienced teams in three continents. Staff and knowledge retention is a key part of our business model, and therefore our tunnelling and bridge teams carry their experiences from project to project.

- Neutral: FCC can support the goal, but will not have a significant influence on the outcome.

1.2.1  Mobility Enhancement & Travel Time Reliability – FCC Added Value

FCC has direct experience operating highway and tunnel projects, maintaining the highest standards of safety and availability.

We are currently maintaining more than 1,250 miles of highway, incorporating 60 tunnels (with a 31 mile combined length). For example, our Cedinsa concession near Barcelona, Spain, includes the operation and maintenance of 168 miles of highway, with 34 tunnels, the longest of which, the Joanet twin-tube tunnel, is one mile long. FCC has an excellent level of service and availability record on this project.

We work collaboratively with our Clients and the emergency services to ensure that the infrastructure is operated effectively as part of an integrated wider network and to promote knowledge sharing across the network. For example, on the Cedinsa concession we are currently collaborating with the councils of local towns connected by Cedinsa routes to provide advice on efficient operation of highways and provide resources for local college courses about highway design and construction.

FCC, through its subsidiary FCC Industrial, is a leader in the design, installation and maintenance of tunnel electromechanical installations which will be a key delivery component of the I-64 Project – both in terms of safety and operational efficiency.

1.2.2  Minimize adverse impacts on adjacent communities – FCC Added Value

This approach can only be successfully implemented by experienced highway developers. FCC has that experience. We are seasoned tunnellers, with a track record of mobilising experienced teams in three continents. Staff and knowledge retention is a key part of our business model, and therefore our tunnelling and bridge teams carry their experiences from project to project.

FCC’s centralized technical services team, work on all FCC tunnelling projects throughout the world and therefore act as a central power-house for technical tunnelling challenges and solutions. This team work closely with our third party designers to ensure constructability and the latest methodologies are fully considered in the design. We also operate a lessons learnt process, where information is collated on projects through lessons learnt workshops and fed back into FCC’s knowledge platform, staff training and continuous improvement initiatives.

FCC can therefore assure VDOT and HRTAC that the latest in bridge and tunnelling innovation and technology from around the world will be brought to the I-64 project allowing the project to be designed and built around the project constraints and effectively targeting elimination of all right-of-way impacts. FCC achieved this on the project – Gerald Desmond Bridge, CA, where we designed the project within the existing right of way, using construction methodologies that haven’t been widely used before in the US (i.e. movable scaffold systems) but that have been successfully adopted by FCC on other projects worldwide.

FCC will promote a partnering culture, which will ensure a sustainable legacy for Virginia and be underpinned through honest and open dialogue with the project’s diverse stakeholders. This will require the development of a carefully considered stakeholder management plan, communications plan and traffic management plan. FCC have applied this approach on the 1-95 Managed Lanes project in Miami-Dade County, FL, where due to the collaboration with FDOT and the construction phasing implemented, we were able to accelerate the project construction while minimizing the impact to the heavy traffic on the I-95, completing the project four months earlier than scheduled.

1.2.3  Improve transportation operations and safety – FCC Added Value

We have seen first-hand the benefits of having the person responsible for operating, maintaining and upgrading infrastructure in future years sitting at the same table as the designer and builder from an early stage in the project. Whilst this can be achieved using a Design-Build delivery approach where there is a collaborative working relationship with the Client, we believe that the operational benefits are maximized using a DBOM or DBFOM model. These models ensure that decisions are made on a “What’s best for the project” basis. FCC have expertise in the construction, operation and maintenance of highway infrastructure and can therefore deliver expertise on all phases of the project from within their own team.

Close co-operation between designers, operators and the emergency services is also required. For example FCC normally instigates risk analysis workshops between key stakeholders to assess the risk to life safety, structural integrity and business operations associated with tunnel fires. The output of these workshops is then used to agree the emergency and evacuation strategies. The operational strategies inform the design of the tunnel escape routes and control systems and are used as a basis for the multi-level emergency and evacuation protocols that are put in place during the operations phase. This approach was adopted on the one mile long Joanet twin-tube tunnel...
I-64 Hampton Roads Bridges-Tunnel Expansion Project

mentioned previously. In March 2016 the RACC Automobile Club audited the tunnel and determined the operational safety standards in the tunnel to be "excellent". FCC are currently building tunnel infrastructure in three different continents, including North America, and are therefore familiar with internationally recognized design and operational standards. We endeavor to provide new facilities that are compliant with current engineering design standards. In circumstances where site constraints do not allow this, we look for alternative site specific safe solutions that can be justified using empirical evidence.

Where required, the ability to easily provide future capacity enhancements can be built-in to the project. We will work with the VDOT and HRTAC to understand your requirements in this regard and assist you in undertaking cost-benefit analysis on future capacity measures. We adopted this approach on the I-95 Managed Lanes project in Miami-Dade, Florida, where with the aim of not precluding future developments, our team worked to fit the new configuration within the existing ROW, allowing future expansions of the highway over adjacent land.

1.2.4 Develop public infrastructure in a financially responsible manner – FCC Added Value

Cost effectiveness and cost certainty can be achieved through:

- Clearly defined/understood scope and procedures
- Innovation/Value engineering
- Careful planning
- This approach can only be successfully implemented by experienced highway developers. FCC has that experience as demonstrated in previous sections of this document.

FCC utilizes a number of value engineering techniques to capture innovation. In addition to project specific constructability reviews, we also undertake a review of our previous project lessons learnt platform and call on expertise from our internal company subject matter experts and our 3rd party design team. The design is developed to ensure that the project is optimized in terms of programme, constructability, lifecycle, best practice and use of the latest technologies. For example, on the 44ft internal diameter M30 Ring Road Tunnel in Madrid, the Client had originally targeted a 39ft/day advance rate. FCC’s team worked with the TBM supplier to design a bespoke machine, Tizona, which delivered a long average advance rate of 60ft/day, with a 150ft/day maximum rate achieved.

The three different delivery models proposed deliver various levels of cost optimisation as summarised in the table below.

<table>
<thead>
<tr>
<th>Initial Capital Expenditure</th>
<th>Construction Efficiency</th>
<th>O&amp;M Costs</th>
<th>Upgrade/Replacement Capital Expenditure</th>
<th>Life Cycle Cost</th>
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<tr>
<td>Design-Build</td>
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<td>DBOM</td>
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<td>DBFOM</td>
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</table>

A Design-Build delivery approach will optimize the initial capital expenditure costs for the project. However, a DBFOM model will provide greater cost certainty and optimize long-term quality and life-cycle cost as bidders will be incentivized to ensure that their lifecycle plan is streamlined and delivers value for money to VDOT, but is sufficient to provide a high level of service.

Lifecycle cost risk lies predominantly in the quality and suitability of the infrastructure and systems being adopted by the operator. When developing a lifecycle strategy FCC insist on excellence in design and construction, with the considered input and requirements from the future operator, maintainer and infrastructure renewal provider. On a DBOM or DBFOM project, having the maintenance team embedded in the bidding process ensures that lifecycle design is optimized. For instance on the Mersey Gateway Bridge P3 project in the UK (due to be completed in 2017), FCC’s construction team worked closely with our in-house maintenance experts to analyse the optimum typology for the 2,398 feet long cable-stay bridge which forms part of this project. Based on the criteria of construction efficiency and life-cycle cost, concrete was chosen over steel, and movable scaffold systems/formwork travellers were used to minimize the disruption to the Mersey River.

FCC work with our Clients to ensure that this cost optimisation is realized on their projects, no matter the delivery model.

2.0 FCC Preferred Option

2.1 Question

Which option(s) would be infeasible or less suitable for your firm, and why?

2.2 FCC Response

FCC understands the challenges of building in a constraint environment and has participated globally as developer, equity provider, design-builder, operator and maintenance provider on transportation projects with billion dollar capital expenditure budgets. By teaming with local partners we will complement this international and North American experience with Virginia specific knowledge thereby delivering a high quality, sustainable, cost effective and deliverable end product.

FCC’s highway development experience, approach to innovation and ability to deliver could be invaluable to VDOT and HRTAC in achieving their goals for the I-65 Project, no matter what delivery model is finally chosen. To provide constructive feedback we have listed below some key factors which our board will consider when evaluating the project’s potential.

- Project Viability: If at an early stage the project is perceived as a “real” project with a defined procurement model and timeline, we will devote the time and resources of our experienced international and local teams to develop a proposal.
- Optimized Procurement Timeline: The project programme should consider the benefits of giving bidders the time to value engineer the project thereby achieving value for money.
- Number of Candidates: The number of shortlisted candidates should be sufficient to ensure competition, whilst not being too large to reduce the developer’s incentive.
- Process: We would encourage a clear and transparent RFP process with clearly defined goals and proposal deliverables along with an objective and detailed scoring criteria.
- Dialogue: A delivery and meeting schedule, which is designed to promote ongoing dialogue and ongoing development of final proposal documents through the dialogue period, is essential.
- Appropriate level of survey information to inform the proposals: Money spent up front on advance works/surveys can reduce risk pricing and improve construction schedules.
- Stipend: A reasonable stipend that covers as a minimum 3rd party bidding costs with the remainder to contribute to VDOT and HRTAC of intellectual property and bidders’ design ideas.
- Clearly defined and appropriate risk allocation: Base contracts should be developed at any early stage in the process, with on market terms. To achieve value for money, risks should be assigned to the party who has more control/ leverage over it.
- Payment Mechanism: FCC considers the payment mechanism as a key issue in assessing the risk profile of projects. FCC currently manages P3 projects with all kinds of payment risks, such as demand, availability or a mix of those. However, we prefer to promote projects with an availability payment structure instead of “revenue risk” for the following reasons:
  - Because of its lower risk profile, this type of payment mechanism attracts more interest from the debt market and therefore reduces financial close risk.
  - One of the advantages of developing infrastructure projects under a P3 scheme is the potential to attract private equity. One of the best ways to access this is from multinational pure equity investors focused on infrastructure projects. However, many of these companies are reluctant to take part in projects with revenue risk.
  - One of the biggest issues of a demand risk project is the need to develop a thorough demand study that helps forecast the future revenue flow. These due diligence studies have schedule and cost implications. No matter how detailed the study is some level of uncertainty is unavoidable resulting in increased risk allowances by the private sector.

In summary, FCC’s preference is for a DBFOM with an availability payment mechanism model. We will however be open to reviewing and potentially participating in other delivery models which may be considered appropriate by VDOT.
April 20, 2017

Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434
via email: HRBTproject@vdot.virginia.gov

RE: Request for Information Regarding an Innovative Project Delivery Approach for the I-64 Hampton Roads Bridge-Tunnel Expansion Project

Dear Ms. Gross,

Thank you for the opportunity to provide feedback to VDOT and HRTAC regarding the procurement and delivery method for the I-64 Hampton Roads Bridge-Tunnel Expansion Project (the “Project”). Fluor is very interested in the Project and has assembled a core team that is considering participating in the procurement.

We support VDOT’s approach of considering alternative delivery options that generate best value for the Commonwealth. Each of the three identified options (DB, DBOM, and DBFOM) could confer material benefits that would be unrealizable under a traditional design, bid, build approach.

As you may be aware, Fluor has the in-house capabilities to deliver the Project under any of these three approaches and has successfully executed similar mega-projects in Virginia and around the globe. Our feedback and recommendations, therefore, are not driven by self-interest, but rather by a desire to support the Commonwealth in determining the optimal approach.

Fluor has reviewed the Project and the HRTAC regional financial plan (presented September 15, 2016) which, in part, evaluated tolled and un-tolled options for the Hampton Roads Harbor Crossing SEIS alternatives. The plan found that for SEIS Alternative A, “HRTAC project HOT revenues support approximately 4.9% of associated project costs.” The plan concluded that “HOT revenues plus I-564/I-664 Connectors’ fixed toll revenues are not relatively significant.”
The potential benefits of a DBFOM approach have been well documented, as have the associated high procurement costs, lengthy procurement schedules, and relatively high cost of capital (i.e. private equity vs. state or municipal debt). Further, tolling public assets is controversial generally in the U.S., and is particularly contentious in the Hampton Roads area. Given that toll revenues are forecast to support less than 5% of the Project costs, and considering the efforts of the administration and the agency to mitigate prior concerns with tolling locally, the negatives of a toll revenue concession appear to far outweigh any positives.

With a DBOM approach, VDOT and the citizens of the Virginia would still get the benefit of innovation and life-cycle focus that is recognized on DBFOM projects. Fluor supports and would be very likely to participate in a DBOM or a DB procurement.

Thank you again for your consideration of our feedback. We would be glad to provide additional information upon request.

Sincerely,

Keith Sommer
Fluor Response

to the

Request for Information

Regarding an Innovative Project Delivery Approach for the I-64 Hampton Roads Bridge-Tunnel Expansion Project

Fluor has reviewed the Project, the potential delivery approaches, and the HRTAC regional financial plan (presented September 15, 2016). The financial plan, in part, evaluated tolled and un-tolled options for the Hampton Roads Harbor Crossing SEIS alternatives. The plan found that for SEIS Alternative A, “HRTAC project HOT revenues support approximately 4.9% of associated project costs.” The plan concluded that “HOT revenues plus I-564/I-664 Connectors’ fixed toll revenues are not relatively significant.”

The potential benefits of a DBFOM approach have been well documented, as have the associated high procurement costs, lengthy procurement schedules, and relatively high cost of capital (i.e. private equity vs. state or municipal debt). Further, tolling public assets is controversial generally in the U.S., and is particularly contentious in the Hampton Roads area. Given that toll revenues are forecast to support less than 5% of the Project costs, and considering the efforts of the administration and the agency to mitigate prior concerns with tolling locally, the negatives of a toll revenue concession appear to far outweigh any positives.

With a DBOM approach, VDOT and the citizens of the Virginia would still get the benefit of innovation and life-cycle focus that is recognized on DBFOM projects. Fluor supports and would be very likely to participate in a DBOM or a DB procurement.
April 19, 2017

Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434

RE: Request for Information - Regarding an Innovative Project Delivery Approach for the I-64 Hampton Roads Bridge-Tunnel Expansion Project

We appreciate the opportunity to submit a formal response to questions raised in the Request for Information ("RFI Response") for the I-64 Hampton Roads Bridge-Tunnel Expansion Project. John Laing Investments Limited and its affiliates ("John Laing") is an international infrastructure investor and manager with a long history, strong reputation and a proven track record of delivering transportation, social and environmental infrastructure and projects across the globe.

In the US, John Laing is delivering three major transportation P3 projects, including the recently opened Denver Eagle P3, the first DBFOM mass transit P3 in the US, along with two highway projects, both of which are still in construction, the I-4 Ultimate in Orlando, Florida and the I-77 Managed Lanes project in Charlotte, NC. Our transportation experience includes both availability-based and revenue-risk payment mechanisms. In addition, we are actively delivering projects across the UK, continental Europe, Australia and New Zealand, as well as actively participating in several transport infrastructure procurements with leading consortia in the United States and Canada.

In providing our RFI Response, we have relied on our experience delivering transportation infrastructure projects and the materials made available on the project website. Once the procurement approach is confirmed, we would undertake an independent assessment of the traffic situation to determine the best options for value enhancement.

In closing, we would be delighted to be invited to speak further with VDOT and going forward, to participate in the procurement to the extent VDOT elects to progress with the DBFOM model. We look forward to hearing from you in the coming weeks. Having recently attended the Industry Forum and participated in the one-on-one meetings, John Laing is pleased to provide further feedback and reiterate its strong interest in the project. If you require any additional information, please do not hesitate to contact me or members of the team.

Kind regards,

Anthony Phillips
Managing Director, Primary Investments, North America
John Laing Investments Ltd
RFI Response

Introduction
John Laing is an international originator, active investor and manager of infrastructure projects. Our business is focused on major transport, social and environmental infrastructure projects awarded under governmental public-private partnership (P3) programs and renewable energy projects, across international markets including the United States, Canada, the United Kingdom, continental Europe and Asia Pacific.

Formal Responses
Hereafter, John Laing provides detailed responses to the two questioned contained in the RFI.

(1) Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals, and why?

As an independent developer and investor, John Laing is best-placed to participate in the I-64 Hampton Roads Bridge-Tunnel Expansion Project procurement via a Design, Build, Finance, Operate and Maintain contract. Our specialized skills-set is dedicated to the origination and structuring of equity investment in large-scale, complex transportation infrastructure projects and arranging the most competitive public-private pricing solution.

Through the DBFOM contractual framework, we are able to deliver fixed-price, turnkey project delivery with appropriate incentives for full lifecycle cost management. The integration of DB and O&M obligations maximizes the opportunity for an integrated consortium to develop innovative solutions to project delivery. Alternative forms of procurement without comprehensive integration, including DB, DBF and DBOM, will not necessarily ensure appropriate optimization of construction and operation periods cost and risk nor provide sufficient incentives to consider lifecycle cost in the design and construction solution.

In our experience, a concessionaire led by dedicated equity investors serves three critical functions: (1) coordinating all aspects of project delivery and ensuring all consortium members and related sub-contracts are competitively priced and appropriately structured (2) arranging project finance; and, (2) a single point of contact and accountability for the procuring authority. An independent equity member can act as the keystone in the consortium, integrating the various parties and delivering a competitive solution for the authority, while achieving an acceptable return on the equity investment.

Thus, in our view, the DBFOM contract format is best-placed to advance Project Goal: D. Developing infrastructure in a financially responsible manner. Furthermore, the Public-Private Partnership framework employing a DBFOM contract is uniquely positioned to achieve the remaining objectives detailed the RFI. Through effective contract provisions, VDOT can ensure achievement of Project Goal: B. Minimizing adverse impacts on adjacent communities. Scoping parameters, such as right of way access and adverse impact minimization, are incorporated easily into typical Concession Agreement requirements. Ongoing compliance may be further assured with an appropriate performance regime in the Concession Agreement.
Managed Lanes

Given the unique nature of the alignment and the desire to make better use of scarce capacity in the corridor, John Laing views the installation of High-Occupancy Toll (HOT) Lanes as the preferred technical solution. We view the HOT lane solution as the preferred alternative to address the Project Goals detailed in Section 3 of the RFI.

In particular, new capacity featuring HOT lanes is the most efficient means for addressing the objectives outlined in Project Goal: A. Providing mobility enhancements and travel-time reliability. The ML solution will provide additional travel choices and an alternative with faster, more predictable travel times in the I-64 corridor.

Further, with the inclusion of HOV access rights, HOT lanes provide an additional benefit with respect to mass transit through the provision of shared ROW for express bus service in the corridor. Thus, congestion management with HOT lanes provides a direct benefit to mass transit patrons through express service in the corridor and to the extent available, further enhanced service with direct access to park and ride locations on either end of the corridor.

Finally, through specific construction scope and express lanes, VDOT would advance Project Goal: C. Improving transportation operations and safety. With appropriate design guidelines, the Comprehensive Agreement can transfer remediation obligations to the Private Partners for the existing facilities, while ensuring the new facilities comply with all necessary engineering and design standards. Once constructed, the upgraded crossing and added capacity with dynamic tolling systems installed, will offer greater choice to travelers in the corridor under normal circumstances and overall capacity improvement during emergency situations necessitating coastal evacuation.

Revenue Risk Transfer

HOT projects with revenue risk transfer have the added benefit of offering another opportunity for private sector innovation. In undertaking due diligence on the corridor’s commercial profile, VDOT will benefit from additional independent reviews of the traffic and revenue potential of the new facilities. To the extent public subsidy is required, a competitive tender process through the DBFOM procurement will ensure such upfront subsidy is minimized and future upside revenue potential is shared, while full lifecycle cost is provisioned for both in DB and OM phases.

Alternative Financial Concepts

Recognizing the prohibition on both the tolling of existing capacity and availability payments, we do see additional scope for innovation in the remuneration framework. One potential means for mitigating real toll risk is a minimum revenue guarantee sized to sustain senior debt facilities. An open, competitive procurement will enable these and other alternatives to be fully explored.

(2) Which option(s) would be infeasible or less suitable for your firm, and why?

As an investor and developer, John Laing does not have capacity to participate in alternative structures, such as DB, DBF or DBOM contracts. Therefore, John Laing is focused exclusively on delivering infrastructure assets under DBFOM arrangements. In our experience, the three pillars of DBFOM: (1) DB project delivery with (2) long-term O&M contract are best married with (3) long-term private finance; ensure on-time project delivery at a fixed-price, while full provisioning for life-cycle costs.
**Transmittal Letter**

Response to the Request for Information

by the Virginia Department of Transportation

Regarding an Innovative Project Delivery Approach

for the I-64 Hampton Roads Bridge-Tunnel Expansion Project

Submission by: The Lane Construction Corporation

Respectfully: Giuseppe Quarta, Executive Vice President

Joseph P. Lark, Senior Vice President

Point of Contact: Robert E. Alger Jr. <RAlger2@LaneConstruct.com>

Transmission to: HRBTproject@vdot.virginia.gov

CC: Martha.Gross@vdot.virginia.gov

Date: April 20, 2017
Response Letter

Executive Summary:

Following the Industry Forum and One-on-One Meeting, it is our opinion that the Hampton Roads Bridge Tunnel (HRBT) should be procured in a “Design-Build” procurement model for the following reasons:

1) The front-end pursuit costs of a full PPP procurement, including the due diligence of an equity partner, would detract from expenditures that could be focused on technical efforts aimed at lowering overall project costs, increasing capacity, and improving the facility lifespan.

2) Based on the results of the Traffic & Revenue Study mentioned in the Industry Forum, the potential revenues would not be significant enough to warrant the additional front end costs of a full PPP procurement. We have begun to see evidence of this as several past equity partners, with whom we are in good standing, are declining to pursue this project as a Public Private Partnership. Our knowledge of the market is that a Design Build procurement would attract the most competition.

3) Keeping in mind the desire to maintain an accelerated procurement schedule, we believe that a Design Build procurement would allow for VDOT’s desired timeframe to remain intact. We do not believe the same to be true with a full PPP procurement.

Question:

Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals, and why? Which option(s) would be infeasible or less suitable for your firm, and why?

We recommend that HRTAC/VDOT adopt a Design-Build (DB) or Design-Build-Maintain (DBM) procurement model for the Project.

It is our understanding that the project can be fully funded with proceeds from HRTF’s issuance of AA rated revenue bonds backed by State Sales & Use Tax and Local Fuels Tax, and a toll revenue backed TIFIA loan to cover up to 33% of qualifying project costs. This would represent the lowest cost financing that can be raised for the Project and as such, it would be advisable for HRTAC/VDOT to adopt a DB or DBM procurement model under this funding plan.

Under a DBFOM procurement model, a private Developer will likely use a mix of tax-exempt Private Activity Bonds (PABs), TIFIA loans, and equity. Ratings on precedent
U.S. P3 projects have not been in the AA category, reflecting risks that are inherent in project finance transactions including construction risk and asset demand risk. As such pricing for PABs will almost certainly be higher than that for revenue bonds backed by tax revenue. Additionally, demand risk projects require substantial levels of Developer equity in the capital structure which will further add to the overall cost of private capital. Additionally, if the anticipated toll revenue can only support approximately 4.9% of the project cost (under Alternative A), a DBFOM procurement model would automatically not be feasible.

By raising more than two-thirds of the required funding from public sources and up to one-third of the remainder via a toll revenue backed TIFIA loan, HRTAC/VDOT can maintain low toll rates on the Project and thereby better manage public expectations with regards to tolling. In the public perception, tolls charged to pay back government loans will be seen more positively than tolls charged to pay a perceived “high” levels of equity return to a private Developer.

By using a DB procurement model, HRTAC/VDOT can derive all the benefits of technical innovation that the private sector can bring for a large and complex project such as the HRBT.

Should HRTAC/VDOT wish to derive additional benefits of having a long-term maintenance contract from the private sector as part of the capital procurement, a DBM procurement model can be used. This will allow for further technical innovation from the standpoint of an optimized design & construction plan that results in the most efficient and cost effective long term maintenance and rehabilitation program. Under a DBM procurement model, in addition to partnering with other construction companies at the CJV level, Lane would also team with one or more specialty maintenance contractors who will develop and price the long-term maintenance scope of works. Such maintenance contractors would have the necessary qualifications for bridge, tunnel and roadway maintenance and rehabilitation, and would provide the necessary security package to back their commitment. It is important to note that a maintenance contract should not include any elements of existing facilities that are not to be completely replaced.

We also believe that the private sector could be made responsible for obtaining and closing the TIFIA loan under a DB or DBM procurement.

Since a significant portion of the project risk lies in design & construction activity, the DB contractor would be well positioned to take the project through the TIFIA loan underwriting process. Additionally, many established construction companies that are active in the U.S. P3 market have significant experience with underwriting traffic & revenue forecasts, managing the rating agency process, as well as conducting negotiations with the TIFIA Loan Office at USDOT.
April 20, 2017

Ms. Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation

Dear Ms. Gross,

Macquarie Capital (USA) Inc. ("Macquarie") is pleased to submit this response to the Request for Information ("RFI") related to the I-64 Hampton Roads Bridge-Tunnel Expansion Project (the "Project"). Macquarie is very interested in the opportunity to assist the Virginia Department of Transportation ("VDOT") and the Hampton Roads Transportation Accountability Commission ("HRTAC") together (the "Authority") in the development of this important Project as a developer, sponsor and equity investor should the Authority elect to procure this Project as a Public Private Partnership ("P3").

Regionally headquartered in New York City, Macquarie has a well-established presence in the Americas with more than 2,500 employees across 23 offices. Macquarie's experience with infrastructure projects is unique and unparalleled in its scale and diversity. Macquarie has experience across multiple asset categories, acting as developer, sponsor, and advisor to companies and governments in P3s. Macquarie is a world leader in P3s with over 70 infrastructure professionals in North America. Since 2009, Macquarie has participated in over $20 billion P3 transportation projects that have closed in the U.S. Transactions that highlight Macquarie’s P3 experience include:

1. Developer and Co-Sponsor for the Downtown Tunnel / Midtown Tunnel / MLK Extension Project, the largest P3 project to reach financial close in 2012;
2. Financial Advisor to the Colorado Department of Transportation for the Central 70 Project;
3. Financial Advisor and Developer for the Goethals Bridge Replacement Project;
4. Procurement and Financial Advisor to the Texas Department of Transportation for the I-35 Capital Corridor Improvement Project;
5. Developer, Sponsor and Financial Advisor for the KentuckyWired, the first telecommunication P3 in the US;
6. Financial Advisor and Developer for the Denver FasTracks Eagle P3, the first transit P3 in the US;
7. Procurement Director and Financial Advisor to Puerto Rico’s P3 Authority and the Puerto Rico Highways and Transportation Authority on the creation of a toll road P3 program and the concession of the PR-22 and PR-5 toll roads, the first P3 concession in Puerto Rico;
8. Financial Advisor for the North Tarrant Expressway Managed Lanes Project and the IH-635 LBJ Managed Lanes Project, the first two managed lanes P3 projects closed in the U.S. since the global financial crisis; and

Macquarie has a deep understanding of the U.S. P3 market and looks forward to working with VDOT and HRTAC in developing and successfully delivering this Project.

Yours faithfully,

Jim Wierstra
Managing Director
125 West 55th Street, New York, NY 10019
E-mail: Jim.wierstra@macquarie.com

Sandeep Gopalan
Senior Vice President
125 West 55th Street, New York, NY 10019
E-mail: Sandeep.Gopalan@macquarie.com
Response Letter

Which Project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals, and why?

While we acknowledge that all the procurement structures under consideration by VDOT and HRTAC will accomplish the goals of relieving congestion and providing connectivity throughout the area, we believe that the use of a DBFOM structure would result in optimal risk transfer between the public and private sector, resulting in greater value for VDOT and delivering a high quality Project for the region.

This value is achieved through the DBFOM structure by grouping design, construction, financing and O&M responsibilities into a fixed-price, date-certain contract while transferring the greatest amount of risk (including traffic risk) to the private sector.

Lenders continue to be welcoming of project financing for infrastructure traffic-risk projects where there is a strong counterparty, such as the case is here. HRTAC’s strong financial position should be used to the greatest extent possible in utilizing TIFIA financing.

- Macquarie has significant experience with all of these, and has helped raise approximately $3.5 billion in TIFIA Loans, $2.7 billion in Private Activity Bonds and $1.4 billion in Bank Debt for P3 projects since 2007.
- Examples: Goethals Bridge - $479 million of TIFIA and $457 million of PABs; Midtown Tunnel - $465 million of TIFIA and $675 million of PABs; IH-635 Managed Lanes - $850 million of TIFIA and $615 million of PABs.

From our perspective, there are substantial advantages to delivery via a P3 model (DBFM or DBFOM), which include:

**Risk Transfer to the Private Sector:** Under a P3, substantially all of the risks of design, construction, operations, maintenance, rehabilitation, and traffic & revenue generation plus the significant risks of integration between the DB contractor and the OM contractor, are borne by the concessionaire and become a point of focus on day 1.

While the revenue potential for the Project is insufficient to solely fund the Project by the private sector, the use of a combination of progress payments, milestone payments during construction and completion payments from the Authority will allow for the full funding of the Project, while ensuring the effective transfer of risk to the private sector. Current market conditions have resulted in a P3 financing markets (both debt and equity) that is extremely flexible, and allows for the cost effective financing of Projects with a combination of traffic & revenue risk and large construction milestone / completion payments, including a number of successful P3s where such construction milestone / completion payments have exceeded 80%-90% of the total project funding. Milestone payments generally have a net beneficial impact on the NPV of a P3 proposal since they may also encourage early completion of construction components.

**Accelerated Project Delivery with Date-Certainty:** With accelerated funding from the private sector, projects can be executed years ahead of when they might otherwise be, providing needed improvements sooner and reducing inflationary costs. A date-certain design-build agreement will be entered into with the design build joint venture which is tied to significant liquidated damages sized to cover financing costs and any Authority requirements. These punitive measures ensure that the DB contractor is incentivized to complete the project on or ahead of time.

Studies of PPPs vs. traditional public delivery in Australia and the UK show that 25% and 70% (respectively) of public sector projects finished behind time, whereas only 1.4% and 24% of PPP projects finished experienced time overruns.

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1 University of Melbourne, UK National Audit Office
**Construction & OMR Cost Savings:** P3 projects are currently delivering in excess of 21% cost savings in infrastructure projects globally, when compared to the cost of procurement through more traditional procurement methods. See the “value for money” report undertaken by KPMG following the procurement of the Valley Line Light Rail Transit in Canada (PPPcanada.ca/valleylinevalueformoneyreport202016.pdf), which concluded that P3 procurement was 21% cheaper than a traditional “Design-Build” procurement model (under which the City of Edmonton would have retained operations and integration risk).

**Fixed Price – Turnkey Solution for the Authority:** Under P3 procurement, the private sector bears all liability for any potential cost overruns (subject to some very limited exceptions, such as the discovery of archeological artifacts during construction – for which the Authority would share the cost). This provides the Authority with a high degree of certainty around project development costs.

**Budget Certainty:** Under a P3 structure, HRTAC’s funding requirements would be minimized.

**Best Participants:** A high profile P3 procurement will attract market leading organizations to participate who will bring global best practices in design, construction, operations, maintenance and customer service delivery (including new technologies) based upon their varied experiences.

**Innovation:** The highly competitive procurement phase under a P3 allows for alternative technical concepts which can reduce the time and cost of construction and/or deliver other benefits that can provide project innovation and cost savings not found in traditional DB procurements. The Florida I-595 project, for example, saved almost $300 million by utilizing an alternative technical concept that utilized more existing structures and shifted additional risks to the private sector. Revenue risk project structures tend to add further innovation through increased design optimization for managed lane mobility and travel efficiencies.

**Discipline of Private Finance:** A much higher level of due diligence, technical review and commercial structuring is undertaken on all aspects of the project when private finance is involved, as lenders and equity investors need to understand and quantify the risks that they are accepting through their investment. Investors in P3 transactions require a higher level of security package from DB and OM contractors than are required under a typical Design-Build or even DBOM contract, which serves to focus the contractors’ attention on effectively managing the risks across the project's life.

**Whole-Life Approach:** O&M costs will be better borne by the private sector as they will apply whole-life cost management to the construction and maintenance standards they use. Given the competitiveness of a bid process, the private sector will naturally optimize the combination of initial capital costs, routine maintenance costs, and larger capital expenditures to deliver the optimal whole-life outcome.

**Changing Industry Standards:** Costs associated with changes to industry standards (e.g. AASHTO implements new guardrail specifications) will be borne by the private sector.

**Development & Job Creation:** A World Bank study estimates that under the right conditions, a 1% increase in a country’s infrastructure stock is associated with a 1% increase in the level of GDP\(^2\). USDOT believes US$1 billion in road construction spending generates 34,000 new jobs. Independent studies in Nevada show an economic gain of approximately $1.50 for every $1 invested in transportation\(^3\).

Which options(s) would be infeasible or less suitable for your firm, and why?

Since Macquarie is a developer and equity sponsor in P3 projects, if the Project is procured as a DB or a DBOM we would not have the ability to participate due to the lack of opportunity for equity investment.

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\(^2\) Building America’s 21st Century Infrastructure, Progressive Policy Institute  
\(^3\) Nevada DOT, About PPPs
RE: Letter of Interest response to
March 17, 2017 Request for Information 1-64 Hampton Roads Bridge-Tunnel Expansion Project

The Virginia Beach offices of Skanska USA Civil Southeast, Inc. (Skanska), Kiewit Infrastructure Co. (Kiewit), and Weeks Marine, Inc. (Weeks) (collectively SKW Constructors), are pleased to submit this response to the March 17, 2017 Virginia Department of Transportation (VDOT): Request for Information (RFI) regarding an innovative Project Delivery Approach for the 1-64 Hampton Roads Bridge-Tunnel Expansion Project (Project).

SKW Constructors represents a collaboration of the three largest marine and tunneling contractors in North America. Combined we have built some of the most complex bored tunnels and Immersed Tube Tunnels in the U.S. and abroad, including the Elizabeth River Tunnel Immersed Tube Tunnel project. The ERT project included a new two-lane immersed tube tunnel for the Midtown Tunnel, an extension to the VA 164 MLK Viaduct, and rehabilitation of the existing Downtown and Midtown Tunnels. The overall project was completed one year ahead of schedule.

The SKW Constructors team will be supported in a prime design role by the Virginia Beach offices of WSP USA (formerly Parsons Brinckerhoff).

Should there be a need for Financing and/or Operations & Maintenance on this Project, the SKW Constructors team will be supported by Skanska Infrastructure Development (SID) and Kiewit Development Company (KDC). Skanska ID and KDC are affiliated, but separate operating companies specializing in the development and financing of P3s across North America.

Based on presentations by VDOT and HRTAC during the April 3, 2017 Industry Forum, and an April 4, 2017 One-on-One meeting with VDOT and HRTAC representatives, the SKW Constructors team has prepared the following attachments in response to Article 9 of the March 17th Request for Information.

Should you have any questions regarding the attached please feel free to call my office at: 757-217-6415.

Sincerely,

Wade Watson
Project Director
Which project delivery option(s), including but not limited to those outlined in Section 4, would enable your firm to contribute most successfully toward achieving the Project’s goals, and why?

**Option A.**
- A Design-Build (DB) agreement under the Virginia Public Procurement Act is our preferred method for the project delivery options outlined in Section 4. DB provides a fair amount of participation and will allow VDOT and HRTAC to control the exact scope of project they want at firm delivery date.
- Many project risks, such as geotechnical conditions, permits, and schedule, are able to be shared by VDOT and the contractor under a DB, reducing pricing contingencies inherent with other project delivery methods.
- The number of shortlisted firms would remain the same as typically used by VDOT.
- Buy America provisions and a regional labor emphasis will be better enhanced by the DB method vs a DBFOM scenario. A Toll Risk Concessionaire may not be bound by the same rules as the DB.

**Option C.**
- Design-Build-Operate-Maintain (DBOM) concession under the PPTA would also be preferred.
- A DBOM could assist VDOT in the needed repairs and life safety upgrade to the existing two tunnels.

**Alternative Option**
- A Design-Build-Finance (DBF) agreement builds on the risk transfer effected under Option A, but also transfers an element of financial risk to the private sector. The DBF model is a preferred alternative option for the SKW Constructors team.
- Under a DBF model, short term / construction period financing is included in the procurement, which brings an additional level of oversight from third party lenders and takes into account the financial strength and credit quality of the contractors.
- Members of our team are very familiar with the DBF model, and we believe VDOT and HRTAC could benefit from additional risk transfer to the private sector - enhancing value for money and ensuring an on-time, on-budget delivery of the project.
- We would be pleased to provide more details regarding the DBF model upon request.
Which option(s) would be infeasible or less suitable for your firm, and why?

Option B

- A Design-Build-Finance-Operate-Maintain (DBFOM) revenue-risk toll concession under the Public-Private Transportation Act of 1995, as amended (“PPTA”) does not appear to be feasible.

- The revenue stream generated by tolls as presented at the April 3, 2017 Industry conference does not support the viability of a toll risk project without a significant subsidy.

- Furthermore, the operational leverage resulting from significant subsidies will materially erode the benefits of risk transferred under such model.
Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434

April 20, 2017

Subject: HRBT Response Letter

Dear Martha,

We wish to thank the Commonwealth, the Virginia Department of Transportation (VDOT), and the Hampton Roads Transportation Accountability Commission (HRTAC); collectively the “Project Sponsors”, for the opportunity to submit a response to your request for information (RFI) for the I-64 Hampton Roads Bridge-Tunnel Expansion Project (HRBT, or the Project). The following two pages address sections 8 and 9 of the RFI, as informed by our one-on-one discussion.

Thanks again and regards,

Simon Shekleton
Director, Project Development

Suite T500, 7900 Westpark Drive
Tysons, VA 22102
+1 571 294 0615
sshekleton@transurban.com
Response to RFI

Transurban is pleased to participate in this RFI process and we are encouraged by the early actions of the Project Sponsors in evaluating various procurement options to finance, deliver, operate and maintain the Project. While fully supportive of this effort, there are some fundamental issues that require further definition before we can opine on which project delivery options would be (a) infeasible; (b) less suitable; or (c) enable us to contribute most successfully toward achieving the Project’s goals. An exploration of these issues incorporating Section 9 responses follows.

Tolling and social equity
As a long-term partner to the Commonwealth, VDOT, our customers and the community in general, Transurban has closely monitored the evolution of tolling, violations, and P3 developments in the Hampton Roads area, including the Commonwealth’s actions to postpone, offset and supplement tolls on the Midtown Tunnel. While the two projects differ in many ways, we believe the same fundamental issue of social equity vs. tolling will play out – although it is difficult to predict how and when.

This uncertainty clouds the viability of various procurement methods and should be fully understood prior to RFQ issuance through:

- Extensive surveys of local area residents, businesses, freight carriers, regional and seasonal travellers to assess origin-destination patterns, frequency of travel, vehicle occupancy, opinions on tolling and congestion and willingness to pay at various thresholds including potential peak pricing levels (one-way tolls that could exceed $20)
- Public information campaigns on likely toll rates and corresponding travel times on tolled and free alternatives under various traffic conditions – along with a formal channel for public input to ensure social equity issues surface early; so as to inform procurement rather than delay or threaten it
- The Project Sponsors exploring a range of future public relations scenarios, resulting actions and consequences from local, regional and National experience – including the imposition of toll caps, suspension of tolls at certain times, discount / reimbursement programs for certain groups, violator relief programs and shadow tolls.

These findings should be documented for public and industry reference, and used to inform the evaluation of procurement alternatives. Addressing these critical issues in the early stages of project development will best position the project to proceed successfully under any delivery model.

Truck tolling
It is unclear if trucks will be permitted to use the HRBT Express Lanes, and if so, what toll rates would apply. If allowed, trucks have the potential to increase gross revenues, thereby improving the Project’s viability for a revenue risk DBFOM approach – however, this would also further complicate tolling and social equity risks. We recommend early resolution of the following:

- Confirm trucks as being ineligible or eligible; and if eligible, under what tolling framework (e.g. multiple regime)
- Confirm this decision is consistent with Project approvals and will not constitute a risk during or after procurement
- Confirm this decision is consistent with the Project’s reference design and technical requirements (including but not limited to turning radii, geometry, grades and ramp speeds, noise abatement, signage, D&C standards, etc.)
- Extensive engagement with relevant stakeholders (ports, freight carriers, trucking industry / lobby groups, local residents and corridor users) in the context of the confirmed tolling regime / multiples / likely toll rates and corresponding travel times on tolled and free alternatives under various traffic conditions – along with a formal channel for stakeholder input; to ensure truck tolling issues arise early so as to inform procurement rather than delay or threaten it

The above issues should be fully evaluated prior to RFQ issuance, and summarized for public and industry reference accompanied by the results of industry outreach on tolling and congestion, and willingness to pay at various truck toll thresholds including potential peak pricing levels. We anticipate that if truck tolling risk is placed entirely on the private sector without clarification and documentation of the above issues, this will undermine the viability of a demand risk DBFOM approach.

Opportunity for value engineering
It is unclear the extent to which design alternatives will be permitted. Alternative A of the Hampton Roads Crossing Study Supplemental Environmental Impact Statement, as approved by the Commonwealth Transportation Board on December 7, 2016, potentially restricts design innovation that could significantly enhance Project economics through cost minimization, schedule
acceleration and revenue maximization. Transurban has developed a number of such proprietary concepts and would introduce these if participating in a demand risk DBFOM procurement – acknowledging that some may not be permitted in any case if the approach to alignment and cross section development is overly restrictive.

We recommend that the Project Sponsors seek further private sector input on potential proprietary concepts that may arise under various procurement types – use these in setting clear bounds for innovation that will and will not be permitted, and to inform determination of a procurement approach prior to RFQ release.

Opportunity for integration with adjacent assets
As an initial component of a planned Express Lanes network, the Project, and the region have the potential to benefit from economies of scale, synergies, risk-transfer and performance guarantees that would result from:

a) bundled operations, maintenance, customer service, tolling (under various procurement methods); and
b) supplemental revenue backed non-recourse financing proceeds (under demand risk DBFOM).

In order to assess the value of a) and b), better understanding of HRBT and adjacent project revenue and cost projections is required. Any bundling decision would also require confirmation that the Project Sponsors have not engaged in any contract or funding commitment that would conflict with the proposed approach.

Procurement method considerations
Further to resolution of the issues identified above, we recommend the Project Sponsors consider the relative merits of a broad range of procurement methods as summarized below.

<table>
<thead>
<tr>
<th>Procurement Method</th>
<th>DB → OM</th>
<th>DB → Privatize</th>
<th>Predevelopment Agreement (PDA)</th>
<th>DBFOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>procure DB separate from a tolling, operations and maintenance contract</td>
<td>turnkey DB then auction long-term lease, O&amp;M and revenue rights</td>
<td>compete right to enter a PDA, co-develop Project details, compete DB</td>
<td>demand risk P3</td>
</tr>
<tr>
<td>Example I-66 Inside the Beltway</td>
<td>WestConnex (Sydney AU)</td>
<td>Denver Airport Great Hall</td>
<td>I-66 Outside the Beltway</td>
<td></td>
</tr>
<tr>
<td>Financing</td>
<td>public</td>
<td>public – partially recouped by auction proceeds</td>
<td>private or hybrid</td>
<td>private</td>
</tr>
<tr>
<td>Private innovation incentive</td>
<td>delivery cost, risk and schedule minimization</td>
<td>delivery cost, risk and schedule minimization</td>
<td>optimize overall viability: (socio-economic, revenue, cost, risk, schedule)</td>
<td>optimize financial viability: (revenue, cost, risk and schedule)</td>
</tr>
<tr>
<td>Adjacent integration</td>
<td>O&amp;M, customer and tolling services</td>
<td>potential to improve HRBT and other project economics through supplemental revenue-backed financing and combined O&amp;M, customer and tolling services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other benefits</td>
<td>suits prescriptive design limits, allows (vs. DBFOM) flexible resolution of tolling and social equity issues</td>
<td>allows (vs. public finance) competition of revenue projections</td>
<td>procurement proceeds parallel to optimization of scope, complex risks and community engagement</td>
<td>successful model for projects with well-defined risk and financing framework</td>
</tr>
</tbody>
</table>

We believe that all of the above procurement methods would enable Transurban to contribute successfully toward achieving the Project goals – and that each could be a potentially feasible approach. Determining the best approach depends on the Project Sponsors’ preferences for further defining and apportioning key risks and responsibilities including those outlined in this response.

As this evaluation continues we recommend the use of a risk adjusted value for money approach calibrated to the best long-term interests of Virginia and the region. We also strongly encourage the Project Sponsors to select a single procurement method prior to Request for Qualification (RFQ) issuance to streamline the private sector’s decisions on teaming and participation.
April 20, 2017

Martha E. Gross, P.E.
Hampton Roads District Major Projects
Virginia Department of Transportation
1700 N. Main Street
Suffolk, VA 23434

RE: VINCI Concessions Transmittal and Response Letters for the Innovative Project Delivery Approach for the I-64 Hampton Roads Bridge-Tunnel Expansion Project

Dear Ms. Gross,

VINCI would like to thank you for the opportunity to meet with the representatives of the Virginia Department of Transportation (VDOT) during our recent one-on-one meeting. VINCI found both the Industry Forum and the one-on-one informative and helpful, and wish you success in the development of this important infrastructure project.

This Transmittal Letter is part of the combined response requested by VDOT in the Request for Information (RFI) dated March 17, 2017. We trust that our response to the question in Section 9 of the RFI will demonstrate our full interest on this project, thereby aiding VDOT on a final decision on the selection of the procurement structure.

VDOT has requested that the industry presents its thoughts on the appropriate delivery model out of the three options which include, but may not be limited to DB, DBOM and DBFOM, based on information available through various resources and the information provided at the Industry Forum held on April 3, 2017. VINCI Concessions has reviewed the available information and will continue to work closely with VDOT in further understanding the specific needs of the stakeholders and the community.

VINCI is committed to collaborating with the Department in providing a cost and schedule efficient delivery model throughout these first stages of this vital piece of regional infrastructure, regardless of the procurement structure selected. We remain available for further discussion to aid in the development of the HRBT.

If you have any questions or need additional information, you may contact Mr. Sidney Florey by phone at (407) 470-6639, or by email at sidney.florey@vinci-concessions.com.

Sincerely,

[Signature]

Sidney Florey
Director of Business Development, North America
VINCI Concessions
Response Letter

RFI, Section 9 Question: Which project delivery option(s), including but not limited to those outlined in Section 4 [DB, DBOM or DBFOM], would enable your firm to contribute most successfully toward achieving the Project’s goals, and why? Which option(s) would be infeasible or less suitable for your firm, and why?

VINCI’s philosophy has always been to work hand-in-hand with the client, stakeholders and the community in general to develop a project that best reflects the regional needs. The delivery options of the HRBT outlined in Section 4 of the RFI all fit within the VINCI framework but they all have different outcomes in providing the desired service expectations. VINCI has the capacity and resources to participate in all three options provided, but in our experience, as worldwide industrial investors and builders, we have seen that the best value is typically obtained from the Design-Build-Finance-Operate-Maintain (DBFOM) model. While VINCI is always fully committed to quality of construction and services regardless of how a project is delivered, a DBFOM would provide VDOT and the community with short and long term benefits that would otherwise not be realized through more traditional structures.

The DB model has many advantages over the traditional design-bid-build (DBB) in that it reduces the number of change orders during the design and construction phase, allows the integration of efficiencies and innovations in terms of cost, schedule and constructability, and shifts some of the design and construction risks over to the design-builder which would otherwise remain with the public sector in a DBB. As demonstrated in all our projects, VINCI’s approach to a DB comes with vast experience in North America and around the world, and an unparalleled commitment to quality, cost, schedule and collaboration with the client. In addition, the HRBT fits our profile of building challenging, highly technical projects.

What the DB model does not account for, however, is the full integration of lifecycle considerations during the design and construction phase; the long-term risk transfer to the private sector of operations, maintenance and rehabilitation of the asset; and a stronger commitment to cost and schedule certainty. For VINCI, it is important to make sure the client’s interest and goals are looked after and respected in any delivery model. Ultimately we treat each of the different options equally reflecting our highest quality and commitment. This said, and understanding the technical complexities both during the construction and the operating period, our preferred delivery method would be a full DBFOM. The DBFOM is a holistic approach to achieve the client’s identified needs and goals which includes and reflects their long term best interest covering the whole lifespan of the project, from design and construction through the long term operations period. We maximize quality of construction in the view of life cycle costs to minimize the maintenance cost leading to an optimized operational period. The foundation elements include but are not limited to the following:

Performance: One of the advantages of the DBFOM model are the contractually enforceable operations and maintenance requirements through which VDOT sets the minimum performance standards of operations and maintenance for the HRBT Project. At this point the private sector puts into place the most optimal solutions to meet the client’s requirements. This is an extremely important issue as our revenues are based on our performance and provide a strong incentive in all phase of the DBFOM model from design and construction through our operational and organizational performance.
Innovation and Efficiency: While the DB model allows VDOT to seek innovations and efficiencies in terms of cost, schedule and constructability from the private sector, a DBFOM structure goes further in that it integrates the long-term operations and maintenance factor into the design and construction considerations. This integration allows for a long term look in the selection of materials, maintenance accessibility, operational considerations, including emergency vehicles accessibility during the lifecycle of the asset, major rehabilitation factors, and the ability to integrate new tolling and traffic management technologies as they become available. These very same principles also apply to the O&M period in that VINCI is constantly evaluating its operational and traffic management procedures to effectively manage the asset. In addition, another aspect of innovation that we implement on all of our projects is the use of social media and dedicated websites for community outreach. These approaches have been successfully implemented by VINCI on many projects where it allows VINCI to keep the community informed of traffic pattern changes due to maintenance activities or emergency situations.

Highly Technical Asset to Operate and Maintain: The Hampton Roads Bridge-Tunnel Expansion will be a highly technical project for which VDOT needs to engage companies with a high degree of expertise and experience on similar assets. As explained above, innovations and efficiencies are not only brought into the project during the design and construction phase, but also during the operational period, and it is precisely in this particular scenario where VINCI excels as a leader and innovator. While VINCI reaches out to the local workforce, we also recognize the need to bring the best and brightest from our worldwide operations to operate and maintain the asset in innovative ways, while being cost-effective. Building highly technical bridges and tunnels is the specialty of our construction arm, VINCI Construction, and with over 26 subsidiaries in the US that specialize on a wide range of building methods, materials and technologies, we are capable of bringing nationwide expertise on bridges, foundations, structural health monitoring technologies, tolling technologies, and tunnel and bridge construction. These short and long term innovations and efficiencies are recognized benefits in the DBFOM structure and will benefit VDOT by obtaining cost, schedule, and asset availability certainty for the short term and during the long term operating period.

Financing: The financing aspect of a DBFOM provides an additional layer of security to the public sector from the perspective that the lenders and equity partners will ensure the asset is performing at optimal levels in order to get their return on investment. P3 agreements often include a “Step-In” clause that would grant lenders the opportunity to “step into the picture” if the SPV, design-builder or O&M provider are not complying with contractual requirements. In addition, third party debt could alleviate public financing needs, while reducing or even avoiding the need for subsidy contributions from VDOT.

Tolling Technology and Customer Service: When considering implementation of tolling technology and services, VINCI places special focus on tolling hardware and technology by ensuring upgradability, integration and interoperability. VINCI fully understands that, for many users, the utilization of managed lanes is a choice, and we make every effort to support the integration and long-term operation of managed lanes systems designed around providing customers with value that they experience a benefit in making that choice. This is evident both through the technology we utilize for our managed lanes projects, as well as through the implementation of a customer service center focused on a full-service client-focused, approach.

We appreciate the opportunity to provide our response to the needs of VDOT and look forward to additional discussions in the near future.