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Cover Letter

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ATTN: David Stark, PE, Manager of the Priority Projects Office, North Carolina Department of Transportation
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Stantec is pleased to provide a Request for Information (RFI) response to the North Carolina Department of Transportation's (NCDOT) industry wide request for Alternative Delivery Concept Options for the replacement of the Cape Fear Memorial Bridge in Wilmington, North Carolina.

Stantec has tracked the Cape Fear Memorial Bridge replacement as well as the U-4738 Cape Fear Crossing in Division 3 for years and is excited about the opportunity to provide input to NCDOT and the Wilmington Urban Area Metropolitan Planning Organization (WMPO). The topic of Stantec's RFI response is an alternative delivery method that has the potential to engage a public and private partnership in a new way – Performance-Based Availability Payment Public-Private-Partnership. This project delivery method does not rely on toll revenue and traffic forecasts for funding, rather it allows the private sector to secure funding for design, construction, operations, and maintenance of transportation projects and is paid back in the form of availability payments from the public sector.

Stantec's experience pursuing large design-build projects in the Southeast includes pursuit of projects utilizing the Performance-Based Availability Payment P3 delivery method. Experience on those projects, along with our understanding of the Cape Fear Memorial Bridge replacement project, led us to believe this alternative delivery option may be worth consideration by NCDOT and the WMPO. Please let us know if we can provide additional information to supplement our RFI response.

Regards,

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Alternative Delivery Contract Option – Cape Fear Memorial Bridge

The North Carolina Department of Transportation (NCDOT) released a Request for Information (RFI) regarding alternative delivery contract options (APD) for Wilmington, North Carolina's Care Fear Memorial Bridge (CFMB). NCDOT outlined the continued increased costs and population increases leading to increased degradation of the CFMB. NCDOT also outlined the current funding constraints restricting NCDOT's ability to fund, design, construct, and maintain the proposed replacement. It is our understanding that NCDOT received an unsolicited proposal from a Public-Private-Partnership (P3) team prepared to design and build a replacement bridge using a P3 conventional toll delivery. Conventional toll delivery projects have the potential to put strain NCDOT's ability to develop unplanned revenue impacting facilities throughout the life of the P3 contract. The I-77 High Occupancy Toll Lanes (HOT Lanes) project is a good example of potential conflicting interests between a P3 and NCDOT. The below contract language was included in the 2014 final executed version of the Comprehensive Agreement between NCDOT and the I-77 Mobility Partners LLC.

11.3.2 Exclusive Covenants and Remedies Regarding Unplanned Revenue Impacting Facilities

This Section 11.3.2 sets forth Developer's sole and exclusive rights and remedies with respect to Unplanned Revenue Impacting Facilities, and supersedes any provisions of the CA Documents to the contrary. Such rights and remedies are subject to Section 11.3.3.

11.3.2.1 The Compensation Amount, if any, owing from NCDOT to Developer on account of the Unplanned Revenue Impacting Facility shall be equal to the loss of Toll Revenues, if any, attributable to the Unplanned Revenue Impacting Facility less the increase in Toll Revenues, if any, attributable to (a) the Unplanned Revenue Impacting Facility and (b) future additions or expansions of access points to the HOT Lanes by NCDOT or a Governmental Entity that are not included as part of the Work, if they are in operation at the time Developer first delivers its Claim for compensation to NCDOT. The Compensation Amount also shall include (i) the loss of Toll Revenues due to traffic disruption during, and directly caused by, construction, reconstruction, renewal, replacement or expansion activities for the Unplanned Revenue Impacting Facility and (ii) the increase or decrease, as the case may be, in Developer's costs directly caused by construction or operating activities for the Unplanned Revenue Impacting Facility. The foregoing Compensation Amount, if any, shall be determined in the same manner, and subject to the same conditions and limitations, as for a Compensation Event under Section 13.2; as well as the procedures in this Section.

Figure 1 I-77 HOT Lanes Contract Language

Under this Comprehensive Agreement, NCDOT was required to compensate the Developer the cost of lost roll revenues from previously unplanned revenue impacting facilities. This limited NCDOT's ability to provide adjacent facility upgrades or the construction of additional facilities. The Developer's desire to limit revenue impacting facilities is born out of the inherent risk taken on by the Developer in a conventional toll delivery P3. The conventional toll delivery project delivery method puts the risk of toll forecasts solely on the Developer. If the toll revenues greatly exceed that of the Developers forecasts, then that is to the Developer's financial benefit. However, if traffic forecasts on the facility is much lower

than expected, especially for extended periods of time (COVID-19 pandemic), the Developer could suffer financial losses including bankruptcy (SH 130 Concessionaire Company). NCDOT is familiar with the history of the SH 130 P3 in Texas as the SH 130 Concessionaire Company, comprised of Cintra (and others), filed bankruptcy after "traffic on the facility was lower than expected". The bankruptcy filing occurred during the time when NCDOT was evaluating the I-77 High Occupancy Toll Lanes project as NCDOT's first P3. There is a history of failed conventional toll delivery P3 projects. To limit the Developer's risk in these conventional toll delivery projects, a performance-based availability payment P3 was born. This performance-based availability payment P3 is the subject of this RFI response.

Performance-Based Availability Payment Public-Private-Partnerships (PBAP P3)

Availability Payments

The PBAP P3 project delivery method follows a similar Design-Build-Finance-Operate-Maintain (DBFOM) or P3 project delivery method, but with some major differences that make these projects more amenable to the private sector. The major difference between a DBFOM or traditional toll delivery P3 project delivery method is financing. Rather than depending on the realization of toll revenues for the life of the contract (35 to 50 years), the Developer or Concessionaire (Developer) receive availability payments from the Public Authority (Authority) based on the availability of the project, i.e., the ability of the traveling public to utilize the facility without operations, maintenance, or emergency delays. Availability payments to the Developer are independent of toll revenue risk. Availability payments are made monthly to the developer for design, construction, maintenance, and financing of the proposed project. During the procurement phase of the project, the Developer will determine an availability payment payout schedule per month for the length of the contract that considers all design, construction, operations, maintenance, and financing activities for the life of the contract. Fluctuations of interest rates can be to the risk or benefit of the public authority, depending on the base interest rates used during rate protection periods or at the time of pricing. This is another instance where typical P3 risk is shed to the public authority from the Developer. Availability payments are split into Capital Availability Payments (ACP) and Maintenance Availability Payments (APM). The ACP and the APM are added to obtain the Maximum Availability Payment (MAP). The MAP is what the Developer would receive monthly, if there are no deductions for noncompliance events, lane closures, etc. The formulas and financial models used to determine the financing portion of this project delivery method are complex and can vary from project to project.

Performance-Based Availability Payments

The Request for Proposals (RFP) for PBAP P3 projects would outline noncompliance events that may occur during the construction or maintenance portions of the project. These noncompliance events are defined by the Authority and given a deduction amount based on the impact to the availability of the project. Noncompliance events can vary from hazard mitigation to emergency response to performing timely maintenance and inspections on elements within the project limits. The RFP would then outline specific deductions for each noncompliance event, depending on the severity of the noncompliance event. These deductions would be subtracted from the monthly MAP that would be due to the

Developer. The presence of these performance-based deductions provides incentive for the Developer to meet certain needs and desires of the Authority or local shareholders, if applicable. During a month where a developer had a high number of noncompliance events, the MAP could be deducted down to $0. The lower the availability of the project, the lower the MAP. Both the MAP and the deductions function as performance-based incentives to the Developer.

The same can said for lane closures. Lane closures during construction or maintenance activities reduce the availability of the project and also come with a deduction to the MAP. Lane closure deductions are similar to Intermediate Contract Times (ICTs) typically included in design-build projects. Lane closure deductions could vary depending on the facility impacted, the time of day of the closure, and the closure duration.

Design Build Finance Operate Maintain (DBFOM) Availability Payment Concessions:

- **Central 70** - *Denver, Colorado*
- **Eagle Project** - *Denver Metro Area, Colorado (transit project)*
- **Goethals Bridge Replacement** * - *Staten Island, New York to Elizabeth, New Jersey*
- **Gordie Howe International Bridge** - *Windsor, Ontario to Detroit, Michigan*
- **I-4 Ultimate** - *Orlando, Florida*
- **I-69 Section 5** - *Bloomington to Martinsville, Indiana*
- **KentuckyWired** - *Kentucky (statewide)*
- **I-75 Modernization Project Segment 3** * - *Detroit Metropolitan Region, Michigan*
- **I-595 Corridor Roadway Improvements** - *Broward County, Florida*
- **Metro Region Freeway Lighting P3 (Michigan)** - *Detroit Tri-County Area*
- **Northampton County Bridge Renewal Program** * - *Northampton County, Pennsylvania*
- **Ohio River Bridges East End Crossing** - *Southern Indiana/Louisville, Kentucky*
- **Pennsylvania Rapid Bridge Replacement Project** * - *Pennsylvania (statewide)*
- **Port of Miami Tunnel** - *Miami, Florida*
- **Presidio Parkway (Phase II)** - *San Francisco, California*
- **Purple Line Project** - *Washington DC Metro Region / Central Maryland (transit project)*
- **Southern Ohio Veterans Memorial Highway (Portsmouth Bypass)** - *Portsmouth to Lucasville, Scioto County, Ohio*
- **State Street Redevelopment Project** * - *West Lafayette, Indiana (local road project)*

* Design-build-finance-maintain

Figure 2 List of Availability Payment Concession DBFOM Projects (FHWA)

Construction Payments & Maintenance Availability Payments

The use of a PBAB P3 project delivery method would permit NCDOT to fund and pay for this critical infrastructure in the form of monthly annuity payments over the life of the operations and maintenance (O&M) period, typically 30 – 50 years depending on the design and construction period. The O&M period could be shortened based on industry or NCDOT input. At the end of the O&M period, the infrastructure would be transferred back to the ownership of NCDOT like other P3 project delivery methods. The RFP would have the freedom to specify certain payments during the design and construction period at milestones such as substantial completion or the completion of certain portions of the project. An industry forum or white paper would be helpful in understanding the level of interest among potential developers for a project of this size, complexity, and construction value using the proposed alternative delivery method. Typically, this project method is used for projects with larger construction values (over $1B+, however, it has been used on some smaller projects with shorter O&M periods (15 years). Federal infrastructure grants or state bond bunding, if available, could be applied to any design and construction period payments with the remaining financing the responsibility of the Developer. Questions for NCDOT's consideration:

1. Could NCDOT pay the Developer's Maintenance Availability Payment out of the "Highway Maintenance and Small Construction" Operations fund?
2. What stakeholders would benefit from a providing a rail component to the bridge? Would those parties be willing to provide funding to NCDOT or the Developer to help finance the project?
3. What stakeholders benefit from having access north of the Cape Fear Memorial Bridge crossing? Would those parties be willing to provide funding to NCDOT or the Developer to help finance the project?
4. Would the Wilmington Urban Area Metropolitan Planning Organization (WMPO) be willing to contribute any funds with the surety that they will made whole (plus interest) at the end of the O&M period?
5. I what capacity could NCDOT provide funding in future years, beyond 2030? What year would NCDOT expect to have available funding to be applied to this project in the form of availability payments?

Any stakeholders willing to provide funding to the successful developer would be paid back along with the Developer (plus interest) through availability payments. As noted above, this could be any private equity bonds, Port Authority milestone payments, TIFIA loans, or local stakeholders who would benefit via a rail, port, or vehicular access that the new Cape Fear Memorial Bridge provides.

Risks

The typical risks associated with design-build projects are similar to the risks of PBAP P3 projects. NCDOT (the Authority) would bear the risk of increased interest rates or escalation, however, they would not be required to secure funding for 100% of the construction value at this time. With the financial risks shed to the NCDOT, Developers would build contingencies in their bids for construction and operation risks. For a project of this size and complexity, we see geotechnical exploration and preliminary foundation designs as the largest construction risk item. Prior to issuing an RFP for this project, we believe it would be prudent for NCDOT to provide geotechnical exploration data in the form of boring logs. These boring logs would need to be in the correct location and to a sufficient depth for accurately size and quantity foundations prior to the bid. Other risk factors are present, such as obtaining an environmental permit, right-of-way, utility coordination, railroad coordination, etc. Reducing the risk profile to the extent possible would hopefully provide reasonable construction and O&M cost estimates.

Conclusion

While no alternative delivery method will be perfect, we hope that the information contained in this RFI response will be helpful to NCDOT and the WMPO. We are happy to discuss Stantec's past experience on projects using this type of delivery method and encourage NCDOT to reach out to other Departments of Transportation to gauge their feedback on the viability of this APD method for the Cape Fear Memorial Bridge replacement project.