

# VDOT

**Virginia Department of Transportation**

## **REQUEST FOR PROPOSALS**

**ADDENDUM No. ~~1~~2**

**A DESIGN-BUILD PROJECT**

**I-95 SAFETY IMPROVEMENTS AT ROUTE 3**

**From: 0.115 Miles South of Int. Route 3**

**To: 1.220 Miles North of Int. Route 3**

**City of Fredericksburg, Virginia**

**State Project No.: 0095-111-278**

**Federal Project No.: OC-095-2(535)**

**Contract ID Number: C00107715DB91**

**DATE: ~~October 14, 2016~~ November 10, 2016**

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## PART 1

### INSTRUCTIONS FOR OFFERORS

#### 1.0 INTRODUCTION

The Virginia Department of Transportation (VDOT) submits this Request for Proposals (RFP) to solicit design-build Proposals (Proposals) from those entities (Offerors) interested in contracting to serve as the Design-Builder for the I-95 Safety Improvements at Route 3 in the City of Fredericksburg, Virginia (Project). The purpose of this RFP is to determine which Offeror (the “Successful Offeror”) will be awarded the Design-Build contract (Design-Build Contract) for the Project.

The Project priorities are:

- Cost - provide the best price for the scope of work identified in this RFP

#### 1.1 Project Overview

The Project is located in the City of Fredericksburg, Virginia and involves improvements to the safety and operations at the I-95 and Route 3 interchange. The southbound I-95 to westbound Route 3 exit ramp will be modified to provide a three lane approach to a two-phase signalized intersection at Route 3 (for westbound traffic) and a single free-flow lane to Carl D. Silver parkway. The eastbound Route 3 to northbound I-95 on-ramp will be replaced with a triple left turn from eastbound Route 3 onto the existing westbound Route 3 to northbound I-95 on-ramp. The triple left turn will be signalized stopping westbound Route 3 traffic, but not eastbound Route 3 through traffic. This improvement removes the northbound I-95 weave and the eastbound Route 3 weave. The realignment of the I-95 North to the Route 3 East ramp to improves ramp performance and safety by increasing the length of the merge area. The total project length is approximately 1.34 miles.

The Project includes, among other things the Design and Construction of (a) modification and realignment of the I-95 and Route 3 Interchange on-ramps and off-ramps, (b) pavement demolition and obscuring roadway (c) right of way acquisition, (d) drainage, (e) signals, (f) CCTV camera installation (g) signing and pavement marking, (h) stormwater management, (i) Transportation Management Plan, (j) erosion and sediment control, and (k) utility relocations within the Project limits. Refer to Part 2 of the RFP (Technical Requirements) for the scope of work, technical information and requirements.

#### 1.3 Procurement Overview

VDOT will use a single-phase selection process on the Project. In accordance with the requirements of this RFP, interested Offerors will submit a Proposal consisting of a Letter of Submittal, Attachments to the Letter of Submittal, and Price Proposal consistent with Part 1,

Section 4.0. Additionally, the Offeror who submitted the lowest Proposal Price will submit the Post Notice of Intent to Award Submittals consistent with Part 1, Section 4.4.

An Offeror’s Proposal must meet all requirements established by this RFP. Requirements of this RFP generally will use the words “shall”, “will”, or “must” (or equivalent terms) to identify a required item that must be submitted with an Offeror’s Proposal. Failure to meet an RFP requirement may render an Offeror’s Proposal non-responsive.

The Offeror whose Proposal is deemed responsive, who submitted the lowest Price Proposal, and whose Price Proposal is within VDOT’s budget for design and construction will be recommended to the Chief Engineer for an award of a fixed price Design-Build Contract by the Commonwealth Transportation Board (CTB) The award of the contract will be made to the Successful Offeror in accordance with Part1, Section 8.0 of the RFP.

## 2.0 BACKGROUND INFORMATION

### 2.1 Legislative Authority

§33.2-209(B) of the Code of Virginia authorizes VDOT and the Commonwealth Transportation Board (CTB) to develop and award contracts using the Design-Build contracting method. In accordance with the law, VDOT completed the Finding of Public Interest (FOPI) dated September 26, 2016. The FOPI is available for inspection upon request.

### 2.2 Estimated Contract Value

VDOT’s current estimated contract value for this Project is approximately \$15,800,000.

### 2.3 Procurement Schedule and Project Milestones

2.3.1 VDOT currently anticipates conducting the procurement of the Project in accordance with the following list of milestones leading to award of the Design-Build Contract. This schedule is subject to revision and VDOT reserves the right to modify this schedule as it finds necessary, in its sole discretion.

.1	Advertise RFP	09/27/16
.2	Pre-Proposal Meeting w/ Offerors	10/03/16 (9:00 AM prevailing local time)
.3	Utility Meeting w/ Offerors	10/03/16 (10:00 AM prevailing local time)
.4	RFP Questions Due to VDOT	10/18/16 (4:00 PM prevailing local time)
.5	VDOT responses to Questions or Clarifications	11/01/16
.6	Letter of Submittal & Price Proposal Due local time)	<del>11/15/16</del> 12/08/16 (4:00 PM prevailing
.7	Open Letters of Submittal & Price Proposals	<del>11/17/16</del> 12/12/16
.8	Notice of Intent to Award	<del>12/01/16</del> 12/16/16

.9	CTB Approval/ Notice to Award	01/18/17
.10	Design-Build Contract Execution	02/15/17
.11	Notice to Proceed	02/21/17
.12	Final Completion	12/14/18

**2.3.4** VDOT has established the following milestones for contract completion dates for the Project, and Offerors shall base their proposals on such milestones.

- .1 Final Completion shall be no later than the date set forth in Part 1, Section 2.3.1.
- .2 If an Offeror proposes a Final Completion date earlier than that shown in Part 1, Section 2.3.1 above, then such proposed date will be deemed by VDOT as the contractual completion date for the Design-Build Contract for all purposes, including liquidated damages.

## **2.4 VDOT’s Point of Contact**

VDOT’s sole point of contact (POC) for matters related to the RFP shall be Stephen D. Kindy. VDOT’s POC is the only individual authorized to discuss this RFP with any interested parties, including Offerors. All communications with VDOT’s POC about the Project or this RFP shall be in writing, as required by applicable provisions of this RFP.

Name:	Stephen D. Kindy, P.E.
Address:	Alternative Project Delivery Division Virginia Department of Transportation 1401 East Broad Street Annex Building, 8 <sup>th</sup> Floor Richmond, VA 23219
Mailing Address:	1401 East Broad Street Richmond, VA 23219
Phone:	(804) 786-6016
Fax:	(804) 786-7221
E-Mail:	stephen.kindy@vdot.virginia.gov

VDOT disclaims the accuracy of information derived from any source other than VDOT’s POC, and the use of any such information is at the sole risk of the Offeror.

All communications and requests for information shall be submitted by the Offeror’s Point of Contact identified in the Letter of Submittal. Written communications to VDOT from Offerors shall specifically reference the correspondence as being associated with “I-95 Safety Improvements at Route 3, Project No. 0095-111-278.”

## 2.5 RFP Information Package

An RFP Information Package is available for interested Offerors on CD or DVD ROM for \$50.00. Interested Offerors should complete the RFP Information Package Order Form included as Attachment 2.5. The instructions for submittal and payment are included on the form.

The contents of the RFP Information Package are listed in Part 2 of the RFP.

## 2.6 RFP Documents

**2.6.1** The documents included in this RFP (collectively the RFP Documents) consist of the following parts and any addenda, as well as any attachments and exhibits contained or identified in such sections:

PART 1 – REQUEST FOR PROPOSALS, INSTRUCTIONS FOR OFFERORS  
PART 2 – PROJECT TECHNICAL INFORMATION AND REQUIREMENTS  
INCLUDING RFP INFORMATION PACKAGE (CD-ROM)  
PART 3 – LUMP SUM DESIGN-BUILD AGREEMENT  
EXHIBIT 1 TO PART 3 – PROJECT SPECIFIC TERMS  
PART 4 – GENERAL CONDITIONS  
PART 5 – DIVISION I AMENDMENTS TO STANDARD SPECIFICATIONS

VDOT has developed standard template Part 3, 4 and 5 (July 2013) documents. These documents have been compiled into a standard package available for download at the following location: <http://www.virginiadot.org/business/design-build.asp>. Standard template Parts 2, 4 and 5 will be incorporated into the Final Contract by reference.

**2.6.2** Each Offeror shall review the RFP Documents and provide questions or requests for clarification, including but not limited to terms that it considers to be ambiguous or to which it takes exception. Such questions or requests for clarification will be submitted to VDOT's POC within the time specified in Part 1, Section 2.3.1 of this RFP. VDOT will review all questions and/ or requests for clarification received and, if it deems appropriate, in its sole discretion, may modify the RFP Documents through an Addendum. Offerors shall base their Proposals on the terms and conditions of the RFP Documents included in the latest issued Addendum.

**2.6.3** Addenda to the RFP Documents, if any, will be posted on the VDOT Project website. Hard copies of the RFP Documents and Addenda on file will be available upon request. If there is any conflict between the electronic format and hard copy of any RFP Documents or Addenda, the hard copy on file shall control.

## **2.7 Deviations from the RFP Documents**

No deviations from the requirements of the RFP Documents will be valid unless they are set forth in an Addendum prior to receipt of the Offeror’s Letter of Submittal.

## **2.8 Obligation to Meet All of the Requirements of the RFP Documents**

If awarded the Design-Build Contract, the Design-Builder will be obligated to meet all of the requirements of the RFP Documents for the Contract Price and within the Contract Time(s). Offerors are on notice that VDOT’s review of Attachments to the Letter of Submittal, as well as its issuance of any Addendum, shall not be construed as relieving the Design-Builder of this obligation. Offerors are on further notice that VDOT will review, comment and/or approve the Design-Builder’s final design after the award of the Design-Build Contract, in accordance with Part 4, Article 2.

## **3.0 GENERAL PROCEDURES AND REQUIREMENTS**

Part 1, Section 3.0 provides general information, procedures and requirements related to the pre-submittal period to be followed by all Offerors.

### **3.1 Offeror’s Pre-Submittal Responsibilities and Representations**

**3.1.1** Each Offeror shall be solely responsible for examining the RFP Documents, including any Addenda issued to such documents, and any and all conditions which may in any way affect its Proposal or the performance of the work on the Project, including but not limited to:

- .1 Examining and carefully studying the RFP Documents, including any Addenda and other information or data identified in the RFP Documents;
- .2 Visiting the Project Site and becoming familiar with and satisfying itself as to the general, local, and Site conditions that may affect the cost, progress, or performance of its work on the Project;
- .3 Contacting each utility owner with facilities existing within the project limits to determine the scope of work for each owner’s utility relocation. The Offeror shall address all potential impacts with each affected utility owner and ensure resolution of all such impacts have been included in the Offeror’s Letter of Submittal and Attachments and Price Proposals;
- .4 Addressing all potential impacts with third parties and ensuring all such impacts have been included in the Offeror’s Letter of Submittal and Attachments and Price Proposals;



- .5 Becoming familiar with and satisfying itself as to all federal, state, and local laws and regulations that may affect the cost, progress, or performance of its work on the Project;
- .6 Determining that the RFP Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance of Offeror's work on the Project; and
- .7 Notifying VDOT in writing, in accordance with the processes set forth in Part 1, Section 7.0, of all conflicts, errors, ambiguities, or discrepancies that Offeror discovers in the RFP Documents.

Any failure to fulfill these responsibilities is at the Offeror's sole risk and no relief will be provided by VDOT.

### **3.2 Pre-Proposal Meeting**

VDOT will hold a Pre-Proposal meeting of potential Offerors on the date and time set forth in Part1, Section 2.3.1 at the Fredericksburg District Office of the Virginia Department of Transportation, 86 Deacon Road, Fredericksburg, VA 22405 in the district auditorium.

### **3.3 Utility Meeting**

VDOT will hold a Utility Meeting of potential Offerors on the date and time set for in Part1, Section 2.3.1 at the Fredericksburg District Office of the Virginia Department of Transportation, 86 Deacon Road, Fredericksburg, VA 22405 in the district auditorium.

### **3.4 Acknowledgment of Receipt of RFP, Revisions and Addenda**

Offeror shall provide VDOT the Acknowledgement of Receipt of RFP, Revisions, and/or Addenda (Form C-78-RFP), set forth as Attachment 3.4, signed by the Offeror's Point of Contact or Principal Officer, with submission of the Proposal, which will serve as acknowledgement that Offeror has received this RFP.

## **4.0 CONTENTS OF PROPOSALS**

Part 1, Section 4.0 describes specific information that must be included in the Letter of Submittal, Attachments to the Letter of Submittal, Price Proposal, and Post Notice of Intent to Award Submittal. The format for the presentation of such information is described in Part 1, Section 6.0.

### **4.0.1 Offerors will submit a two part Proposal:**

- .1 The Letter of Submittal will consist of all information required under Part 1, Section 4.1 and Section 4.2 and will be submitted in a sealed package by the date and time set forth in Part 1, Section 2.3.1, and separate from that submitted for the Price Proposal. Offerors shall complete the Letter of Submittal Checklist, Attachment 4.0.1.1, and include it with their Letter of Submittal. The purpose of the Letter of Submittal checklist is to aid the Offeror in ensuring all submittal requirements have been included in the Offeror's Letter of Submittal and to provide a page reference indicating the location in the Letter of Submittal of each submittal requirement. It shall also include an original signed copy of Acknowledgement of Receipt of RFP, Revisions and/ or Addenda (Form C-78-RFP), Attachment 3.4.
- .2 The Price Proposal will consist of the information required by Part 1, Section 4.3, and will be submitted in a sealed package by the date and time set forth in Part 1, Section 2.3.1, and separate from that submitted for the Letter of Submittal. Offerors shall complete the Price Proposal Checklist, Attachment 4.0.1.2, and include it with their Price Proposal. The purpose of the Price Proposal Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the submittal.

**4.0.2** Offerors shall be aware that VDOT reserves the right to conduct an independent investigation of any information, including prior experience, identified in a Proposal by contacting project references, accessing public information, contacting independent parties, or any other means. VDOT also reserves the right to request additional information from an Offeror during the evaluation of that Offeror's Proposal.

**4.0.3** If an Offeror has concerns about information included in its Proposal that may be deemed confidential or proprietary, the Offeror shall adhere to the requirements set forth by Part 1, Section 11.1.2.

#### **4.1 Letter of Submittal**

**4.1.1** The Letter of Submittal shall be on the Offeror's letterhead and identify the full legal name and address of the Offeror. The Offeror is defined as the legal entity who will execute the Contract with VDOT. The Letter of Submittal shall be signed by an authorized representative of Offeror's organization. All signatures on the Letter of Submittal shall be original and signed in ink.

**4.1.2** Declare Offeror's intent, if selected, to enter into a contract with VDOT for the Project in accordance with the terms of this RFP.

**4.1.3** Pursuant to Part 1, Section 8.2, declare that the offer represented by the Price Proposal will remain in full force and effect for one hundred twenty (120) days after the date the Proposal is submitted to VDOT ("Letter of Submittal & Price Proposal Due Date").

**4.1.4** Identify the name, title, address, phone and fax numbers, and e-mail address of an individual who will serve as the Point Of Contact for the Offeror.

**4.1.5** Identify the name, address and telephone number of the individual who will serve as the Principal Officer for the Offeror. (e.g., President, Treasurer, Chairperson of the Board of Directors, etc.).

**4.1.6** Identify whether the Offeror will be structured as a corporation, limited liability company, general partnership, joint venture, limited partnership or other form of organization. Identify the team members who will undertake financial responsibility for the Project and describe any liability limitations. If the Offeror is a limited liability company, partnership or joint venture, describe the bonding approach that will be used and the members of such organizations who will have joint and several liability for the performance of the work required for the Project. A single 100% performance bond and a single 100% payment bond shall be provided regardless of any co-surety relationship.

**4.1.7** Identify the full legal name of the Lead Contractor, the Lead Designer, and QAM firm for this Project. The Lead Contractor is defined as the Offeror that will serve as the prime/ general contractor responsible for overall construction of the Project and will serve as the legal entity who will execute the Contract with VDOT. The Lead Designer is defined as the prime design consulting firm responsible for the overall design of this Project. The QAM firm is defined as the firm proposed by the Offeror to provide the Quality Assurance Manager for the Project.

**4.1.8** State the Offeror’s VDOT prequalification number and current VDOT prequalification status (active, inactive, etc.) in the Letter of Submittal. An 8.5” x 11” copy of the Offeror’s VDOT prequalification certificate or evidence indicating Offeror is currently prequalified will be provided in the Attachments to the Letter of Submittal. The Offeror must be in good standing and prequalified to bid on the Project as outlined in VDOT’s Rules Governing Prequalification Privileges at the time of the Letter of Submittal & Price Proposal Due Date. In order to prequalify as a Joint Venture, a completed “Joint Venture Bidding Agreement” must be submitted to and approved by VDOT and evidence of the approval shall be included in the attachments to the Letter of Submittal.

**4.1.9** Provide a written statement within the Letter of Submittal that the Offeror is committed to achieving a fourteen percent (14%) DBE participation goal for the entire value of the contract.

**4.1.10** Provide Final Completion Date. The proposed date herein shall be no later than the date set forth in Part 1, Section 2.3.1. Earlier Final Completion date will be deemed by VDOT as the contractual completion date for the Design-Build Contract for all purposes, including liquidated damages in accordance with Part 3, Section 5.5.

## 4.2 Attachments to the Letter of Submittal

**4.2.1** Provide the full legal name and address of all affiliated and/or subsidiary companies of the Offeror on Attachment 4.2.1. Indicate which companies are affiliates and which companies are subsidiaries. An affiliate shall be considered as any business entity which is closely associated to another business entity so that one entity controls or has power to control the other entity either directly or indirectly; or, when a third party has the power to control or controls both; or where one business entity has been so closely allied with another business entity through an established course of dealings, including but not limited to the lending of financial wherewithal, engaging in joint ventures, etc. as to cause a public perception that the two firms are one entity. Firms which are owned by a holding company or a third party, but otherwise meet the above conditions and do not have interlocking directorships or joint officers serving, are not considered to be affiliates.

If the Offeror does not have any affiliated and/or subsidiary companies, other than the Offeror's legal business entity, indicate this on Attachment 4.2.1.

The Offeror shall not submit more than one Proposal for this Project. If more than one Proposal is submitted by an individual, partnership, Corporation, or any party of a Joint Venture, then all Proposals submitted by that individual, partnership, Corporation or Joint Venture shall be disqualified. If more than one Proposal is submitted by an affiliate or subsidiary company of an individual, partnership, Corporation or any party of a Joint Venture, then all Proposals submitted by that individual, partnership, Corporation or Joint Venture shall be disqualified.

**4.2.2** Execute and return the attached Certification Regarding Debarment Form(s) Primary Covered Transactions, set forth as Attachment 4.2.2(a) and Certification Regarding Debarment Form(s) Lower Tier Covered Transactions, set forth as Attachment 4.2.2(b) for the Lead Contractor, Lead Designer and QAM firm.

If Lead Contractor, Lead Designer and QAM firm are unable to execute the certification, then prospective participant shall attach an explanation to its Certification Regarding Debarment Form. Failure to execute the certification will not necessarily result in denial of award, but will be considered in determining the Offeror's responsibility. Providing false information may result in federal criminal prosecution or administrative sanctions.

**4.2.3** Provide an 8.5" x 11" copy of the Offeror's VDOT prequalification certificate or evidence indicating Offeror is currently prequalified as outlined in Section III H in VDOT's Rules Governing Prequalification Privileges shall be satisfied.

**4.2.4** Include a letter from a surety or insurance company (with a Best's Financial Strength Rating of A minus and Financial Size Category VIII or better by A.M. Best Co.) stating that the Offeror is capable of obtaining a performance and payment bond based on the current estimated contract value referenced in Part 1, Section 2.2, which bonds will cover the Project and any warranty periods. The letter of surety shall clearly state the rating categorization noted above

and reference the estimated contract value as identified in Part 1, Section 2.2, in a manner similar to the notation provided below:

*“As surety for [the above named Contractor], [XYZ Company] with A.M. Best Financial Strength Rating [rating] and Financial Size Category [Size Category] is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.”*

**4.2.5** All business entities on the Offeror’s proposed team must comply with the law with regard to their organizational structure, any required registration with governmental agencies and/or entities, and any required governmental licensure, whether business, commercial, individual, or professional in nature, and nothing herein is intended to contradict, nor to supersede, State and Federal laws and regulations regarding the same. All business entities on the Offeror’s proposed team shall be eligible at the time of their Proposal, under the law and relevant regulations, to offer and to provide any services proposed or related to the Project. All business entities on the Offeror’s proposed team shall satisfy all commercial and professional registration requirements, including, but not limited to those requirements of the Virginia State Corporation Commission (SCC) and the Virginia Department of Professional and Occupational Regulations (DPOR).

For the Lead Contractor, Lead Designer and QAM firm, provide full size copies of DPOR licenses and SCC registrations, or evidence indicating the same, should be included in the appendix of the Letter of Submittal. Additionally, the following information should be provided on Attachment 4.2.5:

- .1 The SCC registration information for the Lead Contractor, Lead Designer and QAM firm. Provide the name, registration number, type of corporation and status.
- .2 For this Project, the DPOR registration information for each office practicing or offering to practice professional services in Virginia. For the Lead Designer and QAM firm, provide the business name, address, registration type, registration number and expiration date.

Failure to comply with the law with regard to those legal requirements in Virginia (whether federal or state) regarding your organizational structure, any required registration with governmental agencies and/or entities, and any required governmental licensure, whether business, individual, or professional in nature may render your Proposal, in the sole and reasonable discretion of the Department, non-responsive and in that event your Proposal may be returned without any consideration or evaluation.

#### 4.2.6 Complete the Work History Forms for both the Lead Contractor and Lead Designer.

Identify on the Lead Contractor Work History Form (Attachment 4.2.6(a)) three (3) projects that have completed construction in the last fifteen (15) years and were constructed by the Lead Contractor for this Project as identified in Part 1, Section 4.1.7. Relevant experience to be identified on the Lead Contractor Work History Form shall include:

1. Two (2) primary roadway construction projects with a minimum construction value of \$10,000,000 for the roadway work.
2. One (1) interstate construction/reconstruction project with demonstrated experience coordinating and monitoring maintenance of traffic (MOT).
3. Demonstrated signal or intersection work with construction phasing on one of these projects.

If work identified on the Lead Contractor Work History Form was performed by an affiliated or subsidiary company of the Lead Contractor, explain the justification for utilizing an affiliated or subsidiary company to satisfy the relevant project experience on this Project and the control the Lead Contractor will exercise over the affiliated or subsidiary company on this Project. Additionally, identify the full legal name of the affiliated or subsidiary company, describe their role on this Project, and discuss how the Lead Contractor will be responsible for the work performed by the affiliated or subsidiary company on this Project. For all projects on the Lead Contractor Work History Form, identify the prime design consultant responsible for the overall project design of the projects listed on the Lead Contractor Work History Form.

Identify on the Lead Designer Work History Form (Attachment 4.2.6(b)) three (3) projects that the construction is in progress or that have completed construction within the last fifteen (15) years and were designed by the Lead Designer for this Project identified in Part 1, Section 4.1.7. Relevant experience to be identified on the Lead Designer Work History Form shall include:

1. Two (2) primary roadway design projects with a minimum construction value of \$10,000,000 for the roadway work.
2. One (1) at grade interstate interchange design project.
3. Demonstrated signal or intersection work on one of these projects.

For all projects on the Lead Designer Work History Form, identify the prime/ general contractor responsible for overall construction of the projects listed on the Lead Designer Work History Form.



**4.2.7** Provide Conceptual Roadway Plans showing the general Project layout. Include 11” x 17” copies of (a) plan view indicating the number of lanes specified in the RFP Information Package, and (b) typical sections of the proposed improvements to I-95, I-95 Ramps, and Route 3. Minimally, the Conceptual Roadway Plans shall meet the requirements of the Design Criteria Table (Attachment 2.2 of Part 2), indicate that the limits of construction are within the existing/proposed right-of-way limits shown in the RFP Conceptual Plans, and, as applicable, identify:

- .1 Lane widths
- .2 Shoulder widths
- .3 Areas of pavement demolition
- .4 Areas of obscuring roadway
- .5 Median widths
- .6 Minimum pavement sections
- .7 Cross slopes
- .8 Noise barrier locations

### **4.3 Price Proposal**

The information and attachments provided in Part 1, Section 4.3 shall be submitted on the due date and time set forth in Part 1, Section 2.3.1. If the sealed Price Proposal is not submitted on the above specified date and time, then the Offeror shall be deemed non-responsive and will be disqualified from participating in the design-build procurement for this Project. Offerors shall complete the Price Proposal Checklist, Attachment 4.0.1.2, and include it with their Price Proposal. The purpose of the Price Proposal Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the submittal. Additionally, the Offeror shall:

**4.3.1** Specify, on the form set forth in Attachment 4.3.1, a Cost Breakdown Summary in whole numbers and the Proposal Price, in both numbers and words. Offerors are advised that the prices set forth above shall be considered full compensation to Offeror for all design and construction of this Project, to include: labor, material, equipment, permits, taxes, overhead, profit and any other expenses of any kind applicable to the work to be undertaken by Offeror associated with such work, including but not limited to any escalation, extended site overhead, acceleration of schedule, and/or shift of construction sequencing.

**4.3.2** Provide the required information set forth in Part 3, Section 6.3, Adjustments to Asphalt and Fuel Prices.

**4.3.3** Provide the Proposal Guaranty required by Section 102.07 of Division I Amendments of the VDOT Road and Bridge Specifications. A copy of the Proposal Guaranty Form C-24 may be found at <http://vdotforms.vdot.virginia.gov/>. **If the Price Proposal Guaranty is not submitted with the Price Proposal, then the Offeror shall be deemed non-responsive and will be disqualified from participating in the Design-Build procurement for this Project.**

**4.3.4** Provide the Sworn Statement Forms (C-104, C-105), as set forth in Attachments 4.3.4(a) and 4.3.4(b) respectively.

#### **4.4 Post Notice of Intent to Award Submittals**

Within three (3) calendar days of Notice of Intent to Award, the Successful Offeror shall deliver to VDOT documents required by this Section for its review and approval. VDOT may seek clarifications on any such documents. If VDOT disapproves any such submittal, VDOT may, in its sole discretion, disqualify the Successful Offeror.

**4.4.1** Furnish an organizational chart showing the “chain of command” of all companies (including affiliated or subsidiary), including individuals responsible for pertinent disciplines, proposed on the Offeror’s team. Identify major functions to be performed and their reporting relationships in managing, designing and constructing the Project. The organizational chart should show a clear separation and independence of a contractual relationship of any kind with the Quality Control (QC) and Quality Assurance (QA) programs for construction activities. This includes separation between QA and QC inspection and field/ laboratory testing in accordance with the Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, January 2012.

**4.4.2** Provide the identity of and information about the following Key Personnel listed below. This information is to be provided on the Key Personnel Resume Form attached hereto as Attachment 4.4.2.

- .1 **Design-Build Project Manager (DBPM)** – This individual shall be responsible for the overall Project design and construction and shall have the necessary expertise and experience required to supervise and exercise a degree of control of the Work. Work is comprised of all Design-Builder’s design, construction, quality management, contract administration and other services required by the Contract Documents, including procuring and furnishing all materials, equipment, services and labor reasonably inferable from the Contract Documents in a timely manner. The individual should be capable of answering questions/inquiries relevant to the project. The DBPM shall be responsible for meeting the Design-Builder’s obligations under the Contract and avoiding and resolving disputes under Section 10.2.2 of RFP Part 4 - General Conditions of Contract. This individual shall also coordinate any required public outreach and public meetings.
- .2 **Quality Assurance Manager (QAM)** – This individual shall be from an independent firm that has no contractual relationship of any kind with the Quality Control (QC) firm and no involvement in construction operations (to include QC inspection and testing) for the Project. The QAM shall be responsible for the quality assurance (QA) inspection and testing of all materials used and work performed on the Project, to include monitoring of the contractor's quality control (QC) program. The QAM will ensure that all work and materials, testing, and



sampling are performed in conformance with the contract requirements and the "approved for construction" plans and specifications. This individual shall be a registered, licensed, Professional Engineer in the Commonwealth of Virginia.

- .3 **Design Manager (DM)** – This individual shall be responsible for coordinating the individual design disciplines and ensuring the overall Project design is in conformance with the Contract Documents. The Design Manager shall be responsible for establishing and overseeing a QA/QC program for all pertinent disciplines involved in the design of the Project, including, review of design, working plans, shop drawings, specifications, and constructability of the Project. This individual shall be a registered, licensed, Professional Engineer in the Commonwealth of Virginia.
- .4 **Construction Manager (CM)** – This individual, **who will be required to be on the Project site for the duration of construction operations**, shall be responsible for managing the construction process to include all Quality Control (QC) activities to ensure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications. This individual shall hold a Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) or a statement shall be included indicating this individual will hold these certifications prior to the commencement of construction.

**4.4.3** In accordance with the requirements set forth in Part 1, Section 4.2.5, the following information should be provided on Attachment 4.4.3:

- .1 The SCC registration information for each business entity on the Offeror’s proposed team. Provide the name, registration number, type of corporation and status.
- .2 For this Project, the DPOR registration information for each office practicing or offering to practice professional services in Virginia for each business entity on the Offeror’s proposed team. Provide the business name, address, registration type, registration number and expiration date.
- .3 For this Project, the DPOR license information for each Key Personnel practicing or offering to practice professional services in Virginia. Provide the name, the address, type, the registration number, expiration date and the office location where each Key Personnel member is offering to practice professional services in Virginia.
- .4 For this Project, the DPOR license information for those services not regulated by the Board for Architects, Professional Engineers, Land Surveyors, Certified

Interior Designers, and Landscape Architects (i.e. real estate appraisal). Provide the name, address, type, the registration number, and the expiration date of the individual offering services in Virginia.

**4.4.4** Provide a Proposal Schedule for the entire Project outlining the Offeror’s proposed plan to accomplish the Work. The Proposal Schedule submission should include:

- .1 **Proposal Schedule:** The Proposal Schedule should depict the Offeror’s proposed overall sequence of work, and times during each work task and deliverable required to complete the Project will be accomplished. This shall include all Work necessary to achieve Final Completion by the date set forth in Part 1, Section 2.3.1. The Proposal Schedule should be organized using a hierarchical Work Breakdown Structure (WBS), broken down into major phases of the Project (i.e. project milestones, project management, Scope Validation Period, design, public involvement, environmental, right-of-way, utility, and construction, etc.) The Proposal Schedule should depict the anticipated project critical path (based on the longest path), reviews by Department, FHWA, other regulatory agencies; and work by suppliers, subcontractors, and other involved parties, as applicable.
- .2 **Proposal Schedule Narrative:** A Proposal Schedule Narrative shall be provided for the Proposal Schedule submitted that describes the Offeror’s proposed overall plan to accomplish the Work and, if applicable, to attain incentive(s) including, but not limited to the overall sequencing, a description and explanation of the Critical Path, proposed means and methods, and other key assumptions on which the Proposal Schedule is based.

In addition to hard copy, the Offeror shall provide “PDF” copies of the Proposal Schedule and narrative; as well as a back-up copy of the Proposal Schedule’s source document in any of the following electronic file formats: “XER”, “PRX”, “MPP”, or “MPX”, on a CD-ROM. Offerors are to note that in addition to the Proposal Schedule, the Design-Builder will develop and submit a Preliminary Schedule and a Baseline Schedule in accordance with Part 3, Section 11.1.

**4.4.5** Provide a Schedule of Items for the Price Proposal utilizing the Schedule of Items Form attached hereto as Attachment 4.4.5. This Schedule of Items shall identify the material quantities and costs of each proposed pay item that make up the total Contract Price. The material quantities and costs listed for each proposed pay item shall, to the extent possible, correspond to VDOT’s list of standard and non-standard pay items. Any items considered for price adjustments shall be identified. The value associated with each pay item shall be inclusive of all direct and indirect costs, overhead, profit and any other expenses of any kind. The values and quantities shall be clearly supported by the escrowed pricing documents.

Payment for mobilization shall not be scheduled prior to the initiation of construction work. The pay item for mobilization shall be distributed between two separate installments. The first

installment of fifty percent (50%) of the Design-Builder's total mobilization cost may be scheduled following partial mobilization and initiation of construction work. The second installment may be scheduled following completion of substantial mobilization, including erection of the Design-Builder's offices and buildings, if any. Preliminary engineering items including, but not limited to, surveying, geotechnical investigations and utility coordination shall not be considered as construction work for the purpose of mobilization.

**4.4.6** Submit, for the Price Proposal, a proposed monthly payment schedule showing the anticipated monthly earnings schedule on which funds will be required.

**4.4.7** Provide the Escrow Proposal Documents in accordance with Part 1, Section 11.7

## **5.0 PROPOSAL EVALUATION AND RESPONSIVENESS REVIEW**

**5.0.1** VDOT will open and read the Price Proposals publicly on the date and time set forth in Part 1, Section 2.3.1.

**5.0.2** After opening the Price Proposals, VDOT will determine if the Proposal of the Offeror with the lowest Proposal Price for the Project is responsive.

**5.0.3** If VDOT considers the Proposal of the Offeror with the lowest Proposal Price to be non-responsive, then VDOT will determine if the Proposal of the Offeror with the next lowest Proposal Price is responsive.

## **6.0 PROPOSAL SUBMITTAL REQUIREMENTS**

Part 1, Section 6.0 describes the requirements that all Offerors must satisfy in submitting Proposals. Failure of any Offeror to submit its Proposal in accordance with this RFP may result in rejection of its Proposal.

### **6.1 Due Date, Time and Location**

**6.1.1** All Proposals must be received by the Due Date and time set forth in Part 1, Section 2.3.1. All submissions, including hand-delivered packages, US Postal Service regular mail, US Postal Service express mail, or private delivery service (FEDEX, UPS, courier etc.) must be delivered to the following individual at the following address:

Commonwealth of Virginia  
Department of Transportation (VDOT)  
Central Office Mail Center  
Loading Dock Entrance  
1401 E. Broad Street  
Richmond, Virginia 23219  
Attention: Stephen D. Kindy, P.E. (APD Division)

Neither fax nor email submissions will be accepted. Offerors are responsible for effecting delivery by the deadline above, and late submissions will be rejected without opening, consideration, or evaluation, and will be returned unopened to the sender. VDOT accepts no responsibility for misdirected or lost Proposals.

## 6.2 Format

**The Proposal format is prescribed below. If VDOT determines that a Proposal does not comply with or satisfy requirements of this Section, VDOT may find such Proposal to be non-responsive and may be disqualified from participating in the design-build procurement for this Project.**

**6.2.1** Two (2) separate sealed parcels, one (1) containing the Letter of Submittal and Attachments to the Letter of Submittal and one (1) containing the Price Proposal shall be submitted by the due date and time set forth in Part 1, Section 2.3.1. Parcels shall be clearly marked to identify the Project and the Offeror, and to identify the contents as the “Letter of Submittal and Attachments” or “Price Proposal” as applicable.

**6.2.2** Each Offeror shall deliver one (1) copy of the Letter of Submittal and Attachments to the Letter of Submittal, which must bear original signatures, and one (1) CD-ROM or DVD-ROM containing the entire Letter of Submittal and Attachments to the Letter of Submittal in a single cohesive Adobe PDF file.

The Letter of Submittal and Attachments to the Letter of Submittal shall be securely bound and contained in a single volume with an identity on its front cover. **Three ring binders are not permissible.**

The Letter of Submittal and Attachments to the Letter of Submittal shall be:

- Typed on one (1) side only.
- Separated by numbered tabs with sections corresponding to the order set forth in Part 1, Section 4.0, except for that required by Part 1, Section 4.3 and 4.4.
- Be prepared on 8.5” x 11” white paper (Charts, schedules, exhibits and other illustrative information may be on 11” x 17” paper, but must be folded to 8.5” x 11”).
- Include page number references in the right hand corner.
- The Letter of Submittal Checklist and Form C-78-RFP shall be provided in the front of the Letter of Submittal

The format and appearance of the Work History Forms should not be modified. The Work History Forms shall not exceed one (1) page per project for each the Lead Contractor and the Lead Designer.

All printing, except for the front cover of the Letter of Submittal and any appendices, should be Times New Roman, with a font of 12-point. (Times New Roman 10 point font may be used for filling out information on charts, tables and/ or exhibits).

**6.2.3** Each Offeror shall deliver one (1) paper copy of the Price Proposal, which must bear original signatures on the Price Proposal Form, and one (1) CD-ROM containing the entire Price Proposal in a single cohesive Adobe PDF file.

The Price Proposal shall be securely bound and contained in a single volume. **Three ring binders are not permissible.** Additionally, the Price Proposal shall be typed on one (1) side only and separated by numbered tabs with sections corresponding to the order set forth in Part 1, Section 4.3. The Price Proposal Checklist shall be provided in the front of the Price Proposal

**6.2.4** Within three (3) calendar days of Notice of Intent to Award, the Successful Offeror shall deliver a sealed parcel containing one (1) paper copy of the Post Notice of Intent to Award Submittals, excluding the Escrow Proposal Documents, and one (1) CD-ROM containing the entire Post Notice of Intent to Award Submittals, excluding the Escrow Proposal Documents in a single cohesive Adobe PDF file.

The Post Notice of Intent to Award Submittals shall be securely bound and contained in a single volume. **Three ring binders are not permissible.** Additionally, the Post Notice of Intent to Award Submittals shall be typed on one (1) side only and separated by numbered tabs with sections corresponding to the order set forth in Part 1, Section 4.4.

Except for charts, schedules, exhibits, and other illustrative and graphical information, all information shall be prepared on 8.5” x 11” white paper. Charts, schedules, exhibits, and other illustrative and graphical information may be on 11” x 17” paper, but must be folded to 8.5” x 11”. The format and appearance of the Key Personnel Resume Form should not be modified. The Key Personnel Resume Forms shall not exceed two (2) pages for each Key Personnel.

All printing, except for the front cover of the Post Notice of Intent to Award Submittals and any appendices, should be Times New Roman, with a font of 12-point. (Times New Roman 10 point font may be used for filling out information on charts, tables and/ or exhibits).

## **7.0 QUESTIONS AND CLARIFICATIONS**

**7.0.1** All questions and requests for clarification regarding this RFP shall be submitted to VDOT’s POC in writing in electronic format (submission by email is acceptable). All questions and requests for clarification shall be submitted in Microsoft Office Word format. No requests for additional information, clarification or any other communication should be directed to any other individual. **NO ORAL REQUESTS FOR INFORMATION WILL BE ACCEPTED.**

**7.0.2** All questions or requests for clarification must be submitted by the due date and time set forth in Part 1, Section 2.3.1. Questions or clarifications requested after such time will not be answered, unless VDOT elects, in its sole discretion, to do so.

**7.0.3** VDOT's responses to questions or requests for clarification shall be in writing and may be accomplished by an Addendum to this RFP. VDOT will not be bound by any oral communications, or written interpretations or clarifications that are not set forth in an Addendum.

**7.0.4** VDOT, in its sole discretion, shall have the right to seek clarifications from any Offeror to fully understand information contained in the Proposal.

## **8.0 AWARD OF CONTRACT, PROPOSAL VALIDITY AND CONTRACT EXECUTION**

VDOT has determined that the Negotiation and Award of Contract will be made in the following manner:

### **8.1 Negotiations and Award of Contract**

**8.1.1** VDOT will review the Proposal submitted by the Offeror with the lowest Proposal Price. If the Proposal is responsive and the Proposal Price is within VDOT's budget for design and construction services, then VDOT will issue a Notice of Intent to Award to the Successful Offeror.

**8.1.2** Pursuant to 23 CFR 636.513, VDOT may conduct limited negotiations with the Successful Offeror to clarify any remaining issues regarding scope, schedule, financing or any other information provided by the Successful Offeror.

**8.1.3** Pursuant to 23 CFR 636.404, if the Proposal Price submitted by the Offeror with the lowest Proposal Price is not within VDOT's budget for design and construction services, VDOT may establish a competitive range among the Offerors who have submitted a responsive Proposal.

**8.1.4** Pursuant to 23 CFR 636.402, 636.404, and 636.406, prior to VDOT establishing a competitive range, VDOT may hold communications with only those Offerors whose exclusion from or inclusion in, the competitive range is uncertain. Communications will (a) enhance VDOT's understanding of Proposals; or (b) allow reasonable interpretation of the Proposal.

**8.1.5** Pursuant to 23 CFR 636.404, after VDOT establishes the competitive range, VDOT will notify any Offeror whose Proposal is no longer considered to be included in the competitive range.



**8.1.6** Pursuant to 23 CFR 636.506, 636.507, and 636.508, VDOT will hold discussions with all Offerors in the competitive range. Offerors are advised that VDOT may, in its reasonable discretion, determine that only one Offeror is in the competitive range.

**8.1.7** Pursuant to 23 CFR 636.510, VDOT may determine to further narrow the competitive range once discussions have begun. At which point, VDOT will notify any Offeror whose Proposal is no longer considered in the competitive range.

**8.1.8** Pursuant to 23 CFR 636.509, at the conclusion of discussions, VDOT, will request all Offeror(s) in the competitive range to submit a final Proposal revision, also called Best and Final Offer (BAFO). Thus, regardless of the length or number of discussions, there will be only one request for a revised Proposal (*i.e.*, only one BAFO).

**8.1.9** Pursuant to 23 CFR 636.512, VDOT will review the final Proposals in accordance with the review and selection criteria and complete a final ranking of the Offerors in the competitive range, and then VDOT will issue a Notice of Intent to Award to the Successful Offeror.

**8.1.10** Pursuant to 23 CFR 636.513, VDOT may conduct limited negotiations with the Successful Offeror to clarify any remaining issues regarding scope, schedule, financing or any other information provided by the Successful Offeror.

## **8.2 Proposal Validity**

**8.2.1** The offer represented by the Proposal will remain in full force and effect for one hundred twenty (120) days after the Letter of Submittal/Price Proposal Due Date set forth in Part 1, Section 2.3.1. If Award of Contract has not been made by the CTB within one hundred twenty (120) days after the Letter of Submittal/Price Proposal Due Date, each Offeror that has not previously agreed to an extension of such deadline shall have the right to withdraw its Proposal.

## **8.3 Submittals after Notice of Intent to Award**

**8.3.1** Within three (3) calendar days of Notice of Intent to Award, the Successful Offeror shall deliver to VDOT all of the information required by Part 1, Section 4.4.

**8.3.2** Within fifteen (15) days of Notice of Intent to Award, the Successful Offeror shall deliver to VDOT all pertinent documents in accordance with Section 103 of the Division I Amendments to the Standard Specifications.

**8.3.3** Failure to comply with submittal requirements provided in Part 1, Sections 8.3.1 and 8.3.2 above may result in disqualification of the Offeror by VDOT in its sole and reasonable discretion.

## **8.4 Contract Execution and Notice to Proceed**

**8.4.1** Upon Award of Contract, VDOT will deliver an executed copy of the Design-Build Contract to the Successful Offeror, who shall execute and deliver such copy to VDOT within seven (7) days of receipt.

**8.4.2** VDOT reserves the right to issue Notice to Proceed within fifteen (15) days after execution of the Design-Build Contract.

## **9.0 RIGHTS AND OBLIGATIONS OF VDOT**

### **9.1 Reservation of Rights**

**9.1.1** In connection with this procurement, VDOT reserves to itself all rights (which rights shall be exercisable by VDOT in its sole discretion) available to it under applicable law, including without limitation, the following, with or without cause and with or without notice:

- .1 The right to cancel, withdraw, postpone or extend this RFP in whole or in part at any time prior to the execution by VDOT of the Design-Build Contract, without incurring any obligations or liabilities.
- .2 The right to issue a new RFP.
- .3 The right to reject any and all submittals, responses and Proposals received at any time.
- .4 The right to modify all dates set or projected in this RFP.
- .5 The right to suspend and terminate the procurement process for the Project, at any time.
- .6 The right to waive or permit corrections to data submitted with any response to this RFP until such time as VDOT declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- .7 The right to issue addenda, supplements, and modifications to this RFP.
- .8 The right to permit submittal of Addenda and supplements to data previously provided with any response to this RFP until such time as VDOT declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- .9 The right to hold meetings and conduct discussions and correspondence with one or more of the Offerors responding to this RFP to seek an improved understanding of the responses to this RFP.



- .10 The right to seek or obtain data from any source that has the potential to improve the understanding and evaluation of the responses to the RFP, including the right to seek clarifications from Offerors.
- .11 The right to permit Offerors to add or delete firms and/or key personnel until such time as VDOT declares in writing that a particular stage or phase of its review has been completed and closed.
- .12 The right to add or delete Offeror responsibilities from the information contained in this RFP.
- .13 The right to waive deficiencies, informalities and irregularities in a Proposal, accept and review a non-conforming Proposal or seek clarifications or supplements to a Proposal.
- .14 The right to disqualify any Offeror that changes its submittal without VDOT approval.
- .15 The right to change the method of award at any time prior to submission of the Proposals.
- .16 The right to respond to all, some, or none of the inquiries, questions and/or request for clarifications received relative to the RFP.
- .17 The right to negotiate the allocation of prices identified for specific portions of the work depicted within a Price Proposal.
- .18 The right to disqualify and/or cease negotiations with an Offeror if VDOT, in its sole discretion, determines that the Offeror's Post Notice of Intent to Award Submittals are not acceptable or its Price Proposal contains unbalanced pricing among the specific portions of work identified therein.

## **9.2 No Assumption of Liability**

**9.2.1** VDOT assumes no obligations, responsibilities, and liabilities, fiscal or otherwise, to reimburse all or part of the costs incurred or alleged to have been incurred by parties considering a response to and/or responding to this RFP. All of such costs shall be borne solely by each Offeror and its team members.

**9.2.2** In no event shall VDOT be bound by, or liable for, any obligations with respect to the Project until such time (if at all) a contract, in form and substance satisfactory to VDOT, has been executed and authorized by VDOT and, then, only to the extent set forth therein.

## 10.0 PROTESTS

This Section simply summarizes protest remedies available with respect to the provisions of the Code of Virginia that are relevant to protests of awards or decisions to award Design-Build Contracts by VDOT. This section does not purport to be a complete statement of those provisions and is qualified in its entirety by reference to the actual provisions themselves.

In accordance with §2.2-4360, of the *Code of Virginia*, if an unsuccessful Offeror wishes to protest the award or decision to award a contract, such Offeror must submit a protest in writing to VDOT's POC no later than ten (10) calendar days after the award or the announcement posting the decision to award, whichever occurs first. The written protest shall include the basis for the protest and the relief sought. No protest shall lie for a claim that the selected Offeror is not a responsible bidder.

Public notice of the award or the announcement of the decision to award shall be given by the public body in the manner prescribed in the terms or conditions of the Invitation to Bid or Request for Proposal. However, if the protest of any Offeror depends in whole or in part upon information contained in public records pertaining to the procurement transaction that are subject to inspection under § 2.2-4342, of the *Code of Virginia*, then the time within which the protest must be submitted shall expire ten (10) calendar days after those records are available for inspection by such Offeror under § 2.2-4342, of the *Code of Virginia*.

VDOT shall issue a decision in writing within ten (10) calendar days of the receipt of any protest stating the reasons for the action taken. This decision shall be final unless the Offeror appeals within ten (10) calendar days of receipt of the written decision, by instituting legal action in accordance with § 2.2-4364, of the *Code of Virginia*.

Pursuant to § 2.2-4362, of the *Code of Virginia*, an award need not be delayed for the period allowed a bidder or Offeror to protest, but in the event of a timely protest, no further action to award the Contract will be taken unless there is a written determination by the Commissioner, or his designee, that proceeding without delay is necessary to protect the public interest or unless the Design-Build Proposal would expire. Further, pursuant to §2.2-4361, of the *Code of Virginia*, pending a final determination of a protest or appeal, the validity of the contract awarded and accepted in good faith shall not be affected by the fact that a protest or appeal has been filed.

## 11.0 MISCELLANEOUS

### 11.1 Virginia Freedom of Information Act

**11.1.1** All Proposals submitted to VDOT become the property of VDOT and are subject to the disclosure requirements of Section 2.2-4342 of the Virginia Public Procurement Act and the Virginia Freedom of Information Act (FOIA) (Section 2.2—3700 et seq.). Offerors are advised to familiarize themselves with the provisions of each Act referenced herein to ensure that

documents identified as confidential will not be subject to disclosure under FOIA. In no event shall the Commonwealth, the Commissioner of Highways, or VDOT be liable to an Offeror for the disclosure of all or a portion of a Proposal submitted pursuant to this request.

**11.1.2** If a responding Offeror has special concerns about information which it desires to make available to VDOT but which it believes constitutes a trade secret, proprietary information, or other confidential information exempted from disclosure, such responding Offeror should specifically and conspicuously designate that information as such in its Proposal and state in writing why protection of that information is needed. The Offeror should make a written request to the Alternate Project Delivery Office. The written request shall:

- .1 Invoke such exemption upon the submission of the materials for which protection is sought.
- .2 Identify the specific data or other materials for which the protection is sought.
- .3 State the reasons why the protection is necessary.
- .4 Indicate that a similar process with the appropriate officials of the affected local jurisdictions is or will be conducted. Failure to take such precautions prior to submission of a Proposal may subject confidential information to disclosure under the Virginia FOIA.

**11.1.3** Blanket designations that do not identify the specific information shall not be acceptable and may be cause for VDOT to treat the entire Proposal as public information. Nothing contained in this provision shall modify or amend requirements and obligations imposed on VDOT by applicable law, and the applicable law(s) shall control in the event of a conflict between the procedures described above and any applicable law(s).

**11.1.4** In the event VDOT receives a request for public disclosure of all or any portion of a Proposal identified as confidential, VDOT will attempt to notify the Offeror of the request, providing an opportunity for such Offeror to assert, in writing, claimed exemptions under the FOIA or other Commonwealth law. VDOT will come to its own determination whether or not the requested materials are exempt from disclosure. In the event VDOT elects to disclose the requested materials, it will provide the Offeror advance notice of its intent to disclose.

**11.1.5** Because of the confidential nature of the negotiation process associated with this Project, and to preserve the propriety of each Offeror's Proposal, it is VDOT's intention, subject to applicable law, not to consider a request for disclosure until after VDOT's issuance of a Notice of Intent to Award. Offerors are on notice that once a Design-Build Contract is executed, some or all of the information submitted in the Proposal may lose its protection under the applicable laws of the Commonwealth.

## 11.2 Conflict of Interest

**11.2.1** Implementation guidelines for VDOT’s policy on organizational conflicts of interest relating to Design-Build procurement are documented in the Alternate Project Delivery Office Memorandum IIM-APD-2.

<http://www.virginiadot.org/business/resources/LocDes/IIM-APD-2.pdf>

Each Offeror shall require its proposed team members to identify potential conflicts of interest of a real or perceived competitive advantage relative to this procurement. Offerors are notified that prior or existing contractual obligations between a company and a federal or state agency relative to the Project or VDOT’s design build program may present a conflict of interest or a competitive advantage. If a potential conflict of interest or competitive advantage is identified, the Offeror shall submit in writing the pertinent information to VDOT’s POC.

VDOT, in its sole discretion, will make a determination relative to potential organizational conflicts of interest or a real or perceived competitive advantage, and its ability to mitigate such a conflict. An organization determined to have a conflict of interest or competitive advantage relative to this procurement that cannot be mitigated, shall not be allowed to participate as a Design-Build team member for the Project. Failure to abide by VDOT’s determination in this matter may result in a Proposal being declared non-responsive.

**11.2.2** Conflicts of interest and a real or perceived competitive advantage are described in state and federal law, and, for example, may include, but are not limited to the following situations:

1. An organization or individual hired by VDOT to provide assistance in development of instructions to Offerors or evaluation criteria for the Project.
2. An organization or individual hired by VDOT to provide assistance in development of instructions to Offerors or evaluation criteria as part of the programmatic guidance or procurement documents for VDOT’s Design-Build program, and as a result has a unique competitive advantage relative to the Project.
3. An organization or individual with a present or former contract with VDOT to prepare planning, environmental, engineering, or technical work product for the Project, and has a potential competitive advantage because such work product is not available to all potential Offerors in a timely manner prior to the procurement process.
4. An organization or individual with a present contract with VDOT to provide assistance in Design-Build contract administration for the Project.

**11.2.3** VDOT reserves the right, in its sole discretion, to make determinations relative to potential conflicts of interest on a Project specific basis.

**11.2.4** VDOT may, in its sole discretion, determine that a conflict of interest or a real or perceived competitive advantage may be mitigated by disclosing all or a portion of the work product produced by the organization or individual subject to review under this section. If documents have been designated as proprietary by Virginia law, the Offeror will be given the opportunity to waive this protection from disclosure. If Offeror elects not to disclose, Offeror may be declared non-responsive.

**11.2.5** VDOT has not identified any firms that would not be allowed to participate as a Design-Build team member due to a conflict of interest.

### **11.3 Ethics in Public Contracting Act**

VDOT may, in its sole discretion, disqualify the Offeror from further consideration for the award of the Design-Build Contract if it is found after due notice and examination by VDOT that there is a violation of the Ethics in Public Contracting Act, § 2.2-4367 of the *Code of Virginia*, or any similar statute involving the Offeror in the procurement of the contract.

### **11.4 Requirement to Keep Team Intact**

The team proposed by Offeror, including but not limited to the Offeror's organizational structure, the lead contractor, the lead designer, Key Personnel, and other individuals identified pursuant to Part 1, Section 4.4, shall remain on Offeror's team for the duration of the procurement process and, if the Offeror is awarded the Design-Build Contract, the duration of the Design-Build Contract. The Offeror shall not change or substitute any Key Personnel except due to voluntary or involuntary termination of employment, retirement, death, disability, incapacity, or as otherwise approved by the Department. Any proposed change of Key Personnel must be submitted in writing to VDOT's POC, who, in his sole discretion, will determine whether to authorize a change. Unauthorized changes to the Offeror's team at any time during the procurement process may result in the elimination of the Offeror from further consideration. Job duties and responsibilities of Key Personnel shall not be delegated to others for the duration of the Design-Build Contract.

### **11.5 Disadvantaged Business Enterprises (DBEs)**

**11.5.1** Any Design-Builder, subcontractor, supplier, DBE firm, and contract surety involved in the performance of work on a federal-aid contract shall comply with the terms and conditions of the United States Department of Transportation (USDOT) DBE Program as the terms appear in Part 26 of the Code of Federal Regulations (49 CFR as amended), the USDOT DBE Program regulations; VDOT's DBE Program rules and regulations, VDOT's Road and Bridge

Specifications and Part 5 Exhibit 107.15 (Special Provision for Use of Disadvantaged Business Enterprise for Design-Build Projects).

**11.5.2** It is the policy of VDOT that DBEs, as defined in 49 CFR Part 26, shall have every opportunity to participate in the performance of construction/consultant contracts. The DBE contract goal for this procurement is identified in Part 1, Section 4.1.9. Offerors are encouraged to take all necessary and reasonable steps to ensure that DBEs have every opportunity to compete for and perform services on contracts, including participation in any subsequent supplemental contracts. If a portion of the work on the Project is to be subcontracted out, Offerors must seek out and consider DBEs as potential subcontractors. DBEs must be contacted to solicit their interest, capability and qualifications. Any agreement between an Offeror and a DBE whereby the DBE promises not to provide services to any other Offeror or other contractors/consultants is prohibited.

**11.5.3** After Award of the Contract the Design-Builder shall submit documentation related to the use of DBEs for the Project in accordance with the procedures set for in Part 5 Exhibit 107.15 (Special Provision for Use of Disadvantaged Business Enterprise for Design-Build Projects). The DBE must become certified with the Virginia Department of Small Business and Supplier Diversity (SBSD) prior to the performance of any work for the Project. In the case where the DBE is to be utilized to achieve the DBE participation goal, the DBE must be certified prior to the submission to VDOT of Forms C-111 (Minimum DBE Requirements), C-112 (Certification of Binding Agreement with DBE Firms) and Form C-48 (Subcontractor/Supplier Solicitation and Utilization). If the DBE is a prime, the firm will receive full credit for the planned involvement of their own workforce, as well as the work they commit to be performed by DBE subcontractors. DBE primes are encouraged to make the same outreach. DBE credit will be awarded only for work actually performed by DBEs themselves. When a DBE prime or subcontractor subcontracts work to another firm, the work counts toward the DBE goals only if the other firm itself is a DBE. A DBE must perform or exercise responsibility for at least 30% of the total cost of its contract with its own workforce.

**11.5.4** DBE certification entitles a firm to participate in VDOT's DBE Program. However, it does not guarantee that the firm will obtain VDOT work nor does it attest to the firm's abilities to perform any particular type of work.

**11.5.5** When preparing bids for projects with DBE goals, VDOT encourages prospective bidders to seek the assistance of the following offices:

Department of Small Business and Supplier Diversity  
101 N. 14<sup>th</sup> Street  
11<sup>th</sup> Floor  
Richmond, VA 23219  
Phone: (804) 786-6585  
<http://www.sbsd.virginia.gov/>

Department of Supplier Diversity  
Equal Opportunity Programs Department  
1 Aviation Circle  
Washington, DC 20001  
Phone: (703) 417-8625  
[www.metwashairports.com](http://www.metwashairports.com)

Contractors are also encouraged to seek help from the VDOT Districts Equal Employment Opportunity (EEO) Offices, Central Office Civil Rights Office and the VDOT Business Opportunity and Workforce Development (BOWD) Center as listed below:

VDOT Central Office  
1221 East Broad Street  
Richmond, VA 23219  
(804) 786-2085

Lynchburg District  
4219 Campbell Avenue  
Lynchburg, VA 24506  
(434) 856-8169

Bristol District  
870 Bonham Drive  
Bristol, VA 24203  
(276) 669-9907

Northern Virginia District  
4975 Alliance Drive  
Fairfax, VA 22030  
(703) 259-1775

Culpeper District  
1601 Orange Road  
Culpeper, VA 22701  
(540) 829-7523

Richmond District  
2430 Pineforest Drive  
Colonial Heights, VA 23834  
(804) 524-6091

Fredericksburg District  
87 Deacon Road  
Fredericksburg, VA 22405  
(540) 899-4562

Salem District  
731 Harrison Avenue  
Salem, VA 24153  
(540) 387-5453

Hampton Roads District  
1700 N. Main Street  
Suffolk, VA 23434  
(757) 925-2519

Staunton District  
811 Commerce Road  
Staunton, VA 24401  
(540) 332-7888

BOWD  
1602 Rolling Hills Drive  
Suite 110  
Richmond, VA 23229  
Phone: (804) 662-9555

The following informational websites may also be of assistance:



[www.virginia.gov/business/bu\\_bizDev.asp](http://www.virginia.gov/business/bu_bizDev.asp)

[www.virginia.gov/business/bu-civil-rights-home.asp](http://www.virginia.gov/business/bu-civil-rights-home.asp)

**11.5.6** This Project has federal funding. In accordance with the Governor’s Executive Order No. 20, VDOT requires utilization of Small, Women and Minority (SWaM) Businesses to participate in the performance of state funded projects. A list of Department of Small Business and Supplier Diversity (SBSD) certified SWaM firms is maintained on the SBSD web site ([www.sbsd.virginia.gov](http://www.sbsd.virginia.gov)) under the SWaM Vendor Directory link. Offerors are encouraged to take all necessary and reasonable steps to ensure that SWaM firms have the maximum opportunity to compete for and perform services in the design-build contract. If the Offeror intends to subcontract a portion of the services on the Project, the Offeror is encouraged to seek out and consider SWaM firms as potential subconsultants. The Offeror is encouraged to contact SWaM firms to solicit their interest, capability and qualifications. Any agreement between an Offeror and a SWaM firm whereby the SWaM firm promises not to provide services to other Offerors is prohibited.

## **11.6 Trainee and Apprenticeship Participation**

**11.6.1** VDOT will require trainee and apprenticeship participation for this Project. The on-the-job trainee goal for this Project is three (3) individuals.

## **11.7 Escrow Proposal Documents**

### **11.7.1 Scope**

Pursuant to Part 1, Section 11.7.5.1 below, the Successful Offeror shall submit to the individual set forth in Part 1, Section 6.1.1 , one copy of all documentary information generated in preparation of its Proposal within three (3) calendar days of Notice of Intent to Award. This material is hereinafter referred to as Escrow Proposal Documents (EPDs). The EPDs will be held in a secure location at the VDOT Central Office until immediately prior to award of the Project. The EPDs of the Successful Offeror will be transferred to and then held in escrow at the banking institution specified in Part 1, Section 11.7.6.

An Escrow Proposal Documents Checklist has been provided for reference in Attachment 11.7.1

### **11.7.2 Ownership**

- .1 The EPDs are, and shall always remain, the property of the Successful Offeror, subject to joint review by VDOT and the Successful Offeror, as provided herein.
- .2 VDOT stipulates and expressly acknowledges that the EPDs constitute trade secrets. This acknowledgement is based on VDOT's express understanding that the



information contained in the EPDs is not known outside Successful Offeror's business, is known only to a limited extent and only by a limited number of employees of the Successful Offeror, is safeguarded while in Successful Offeror's possession, is extremely valuable to Successful Offeror and could be extremely valuable to Successful Offeror's competitors by virtue of its reflecting Successful Offeror's contemplated techniques of design and construction. VDOT further acknowledges that Successful Offeror expended substantial sums of money in developing the information included in the EPDs and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. VDOT further acknowledges that the EPDs and the information contained therein are made available to VDOT only because such action is an express prerequisite to Award of Contract. VDOT further acknowledges that the EPDs include a compilation of the information used in Successful Offeror's business, intended to give Successful Offeror an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation.

### 11.7.3 Purpose

EPDs may be used to assist in the negotiation of price adjustments and change orders and in the settlement of disputes and claims.

### 11.7.4 Format and Contents

- .1 Successful Offerors may submit EPDs in their usual cost estimating format provided that all information is clearly presented and ascertainable. It is not the intention of Part 1, Section 11.7 to cause the Successful Offeror extra work during the preparation of the Proposal, but to ensure that the EPDs will be adequate to enable complete understanding and proper interpretation for their intended use. The EPDs shall be submitted in the language (i.e., English) of the Specifications.
- .2 It is required that the EPDs clearly itemize the estimated costs of performing the work of each item contained in Successful Offeror's schedule of values. Cost items shall be separated into sub-items as required to present a detailed cost estimate and allow a detailed cost review. A hard copy of the quotes for the Lead Contractor, Lead Designer and for all subcontractors and subconsultants in the Offeror's Organization Chart shall be provided. The EPDs shall include: estimates for costs of the design professionals and consultants itemized by discipline both for development of the design, all quantity take-offs, crew size and shifts, equipment, calculations of rates of production and progress, copies of quotes from subcontractors and suppliers, and memoranda, narratives, drawings and sketches showing site or work area layouts and equipment, add/deduct sheets, geotechnical reviews and consultant reports, and all other information used by the Successful Offeror to arrive at the prices contained in the Proposal. Estimated costs shall be broken down into estimate categories for each bid items such as direct labor, repair labor, equipment ownership and operation,

expendable materials, permanent materials and subcontract costs as appropriate. Plant and equipment, indirect costs, bond rates and calculations, insurance costs and financing should be detailed. The Successful Offeror's allocation of indirect costs, contingencies, and mark-up shall be identified.

- .3 All costs shall be identified. For bid items amounting to less than \$10,000, estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials and subcontracts, as applicable, are included, and provided that indirect costs, contingencies, and mark-up, as applicable, are allocated.
- .4 RFP Documents provided by VDOT should not be included in the EPDs unless needed to comply with these requirements.

### 11.7.5 Submittal

- .1 The EPDs shall be submitted in a sealed container to the individual set forth in Part 1, Section 6.1.1 above, which container shall be clearly marked on the outside with the Offeror's name, date of submittal, Project name, and the words "Escrow Proposal Documents."
- .2 Prior to Award of Contract, EPDs of the Successful Offeror will be transferred to the banking institution referenced in Part 1, Section 11.7.6 and will be examined, organized, and inventoried by representatives of VDOT, together with members of the Successful Offeror's staff who are knowledgeable in how the Proposal was prepared. This examination is to ensure that the EPDs are legible and complete. It will not include review of, and will not constitute approval of proposed construction methods, estimating assumptions, or interpretations of any RFP Documents or the Design-Build Contract. Examination will not alter any condition or term of the Design-Build Contract.
- .3 If all the documents required by this section, Part 1, Section 11.7, have not been included in the original submittal, additional documentation may be submitted, at VDOT's discretion, prior to Award of Contract.
- .4 If the Design-Build Contract is not awarded to the Successful Offeror, the EPDs of the next Offeror to be considered for award shall be processed as described above.
- .5 Timely submission of complete EPDs is an essential element of the Successful Offeror's responsibility and a prerequisite to Award of Contract.
- .6 If Successful Offeror's Proposal is based upon subcontracting any part of the work, each subcontractor whose total subcontract price exceeds ten percent (10%) of the Total Proposal Price proposed by the Successful Offeror, shall provide separate Escrow Documents to be included with those of the Successful Offeror. Such

documents shall be opened and examined in the same manner and at the same time as the examination described above for the Successful Offeror.

- .7 If the Design-Builder wishes to subcontract any portion of the work after Award of Contract, VDOT retains the right to require the Design-Builder to submit Escrow Documents from the subcontractor before the subcontract is approved.

### **11.7.6 Storage**

The Successful Offeror's EPDs shall be stored at SunTrust Bank (Escrow Agent) at the following address:

SunTrust Bank  
ATTN: Charles Henderson  
919 East Main Street, 7<sup>th</sup> Floor  
Richmond, Virginia 23219  
(804) 782-7087

Generally, the EPDs will be delivered to the Escrow Agent after the Escrow Review Meeting with VDOT. The Successful Offeror shall provide or have on file with the Escrow Agent a copy of the firm's current Tax Form W-9, Certificate of Incumbency, and Articles of Incorporation. The cost for storing the EPDs will be paid by the Successful Offeror to the Escrow Agent. This annual fee is currently \$2,500 with initial payment due at the time of document delivery to the Escrow Agent.

### **11.7.7 Examination**

- .1 The EPDs shall be examined by VDOT and the Design-Builder, at any time deemed necessary by VDOT.
- .2 VDOT may delegate review of EPDs to members of VDOT's staff or consultants. The foregoing notwithstanding, the EPDs and information contained therein may be used in the resolution of any claim or dispute before any entity selected to resolve disputes and in any litigation or arbitration commenced hereunder. No other person shall have access to the EPDs.
- .3 Access to the documents will take place in the presence of duly designated representatives of both VDOT and the Design-Builder, except that, if the Design-Builder refuses to be present or to cooperate in any other way in the review of the documents, VDOT may upon notice to the Design-Builder, review such documents without the Design-Builder being present.

### **11.7.8 Final Disposition and Return of EPDs**

The EPDs of the Successful Offeror will be returned once the work has been determined to be finally complete and the Successful Offeror has been notified in writing of the determination of Final Acceptance in accordance with RFP Part 4, Section 6.6. This release is contingent upon notification from the Department’s Project Manager to the Department’s Alternative Project Delivery (APD) Division that the Final Application for payment has been submitted by the Successful Offeror in accordance with RFP Part 4, Section 6.6.3. Upon receipt of this notification, APD Division shall contact the Escrow Agent and authorize release of the EPDs. The Escrow Agent shall then contact and coordinate with the Successful Offeror for the transfer of the EPDs at a mutually convenient time at the expense of the Successful Offeror, as applicable.

### **11.7.9 Execution of Escrow Agreement**

The Successful Offeror, as a condition of Award of Contract, agrees to execute the Escrow Agreement in the form set forth in Attachment 11.7.9.

### **11.8 Administrative Requirements**

In addition to the specific submittal requirements set forth in Part 1, Sections 3.0 and 4.0 above, all Offerors shall comply with the following:

**11.8.1** All business entities, except for sole proprietorships, are required to be registered with the Virginia State Corporation Commission. Foreign Professional Corporations and Foreign Professional Limited Liability Companies must possess a Commonwealth of Virginia Certificate of Authority from the State Corporation Commission to render professional services. Any business entity other than a professional corporation, professional limited liability company or sole proprietorship must be registered in the Commonwealth of Virginia with the Department of Professional & Occupational Regulation, Virginia Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Decorators and Landscape Architects. Board regulations require that all professional corporations and business entities that have branch offices located in Virginia which offer or render any professional services relating to the professions regulated by the Board be registered with the Board. Registration involves completing the required application and submitting the required registration fee for each and every branch office location in the Commonwealth. All branch offices that offer or render any professional service must have at least one full-time resident professional in responsible charge that is licensed in the profession offered or rendered at each branch. All firms involved that are to provide professional services must meet this criteria prior to a contract being executed by VDOT.

**11.8.2** VDOT will not consider for award any Proposals submitted by any Offerors and will not consent to subcontracting any portions of the proposed Design-Build Contract to any subconsultants in violation of the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

**11.8.3** All Offerors must have internal control systems in place that meet federal requirements for accounting. These systems must comply with requirements of 48 CFR 31, “Federal Acquisition Regulations, Contract Cost Principles and Procedures,” and 23 CFR 172, “Administration of Engineering and Design Related Service Contracts.”

**11.8.4** VDOT assures compliance with Title VI of the Civil Rights Act of 1964, as amended. The consultant and all subconsultants selected for this Project will be required to submit a Title VI Evaluation Report (EEO-D2) when requested by VDOT to respond to the RFP. This requirement applies to all consulting firms with fifteen (15) or more employees.

**11.8.5** VDOT does not discriminate against an Offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

**11.8.6** Offerors shall note and comply with the requirements relative to the eVA Business-to-Government Vendor system. The eVA Internet electronic procurement solution, web site portal (<http://www.eva.state.va.us>), streamlines and automates government purchasing activities in the Commonwealth. The portal is the gateway for vendors to conduct business with state agencies and public bodies. All vendors desiring to provide goods and/or services to the Commonwealth shall participate in the eVA Internet e-procurement solution through either eVA Basic Vendor Registration Service or eVA Premium Vendor Registration Service. For more detailed information regarding eVA, registrations, fee schedule, and transaction fee, use the website link: <http://www.eva.state.va.us>. All Offerors must register in eVA; failure to register will result in a Proposal being rejected.

**11.8.7** The required services may involve the handling of Critical Infrastructure Information/ Sensitive Security Information (CII/SSI) material. Personnel handling CII/SSI material, visiting Critical Infrastructure (CI) facilities or performing bridge/tunnel inspections are required to sign CII/SSI Non-Disclosure Agreements and pass a fingerprint-based Criminal History Background Check (CHBC). An individual employee’s failure to successfully pass the fingerprint-based CHBC will not negate the selection and Offerors will be allowed to replace those individuals. VDOT reserves the right to conduct fingerprint-based CHBC on all employees of the Design-Builder’s team members, or on any proposed replacements during the term of the contract who will be involved in this Project. All costs associated with the fingerprint-based CHBC are the responsibility of the Offeror or Design-Builder. A VDOT issued photo-identification badge is required for each employee of the Offeror’s or Design-Builder’s team who will need access to VDOT CI facilities or who will be performing bridge/tunnel inspections. Based upon the results of the fingerprint-based CHBC, VDOT reserves the right to deny access to CII/SSI material and issuance of a VDOT security clearance or a VDOT issued photo-identification badge.

CII/SSI material includes box culvert inspection reports. Inspection reports are not included in the Information Package and CII/SSI Non-Disclosure Agreements are not required to respond to the RFP. VDOT’s CII/SSI Policy Guide and the forms necessary to obtain CII/SSI material can be found using the following website link:

[http://www.virginiadot.org/business/bridge\\_safety\\_inspection.asp](http://www.virginiadot.org/business/bridge_safety_inspection.asp). A completed CII/SSI form must be submitted to VDOT's Point of Contact provided in Section 2.4 prior to distribution of CII/SSI material.

## **11.9 Compliance with the Law in Virginia**

Failure to comply with the law with regard to those legal requirements in Virginia (whether federal or state) regarding your ability to lawfully offer and perform any services proposed or related to the Project may render your RFP submittal, in the sole and reasonable discretion of VDOT, non-responsive and/or non-responsible, and in that event your RFP submittal may be returned without any consideration for selection of contract award.

## 11.10 Attachments

The following attachments are specifically made a part of, and incorporated by reference into, these Instructions for Offerors:

- ATTACHMENT 2.5 -- RFP INFORMATION PACKAGE ORDER FORM
- ATTACHMENT 3.4 -- FORM C-78-RFP (ACKNOWLEDGEMENT OF RECEIPT OF RFP, REVISIONS, AND/OR ADDENDA)
- ATTACHMENT 4.0.1.1 -- LETTER OF SUBMITTAL CHECKLIST
- ATTACHMENT 4.0.1.2 -- PRICE PROPOSAL SUBMITTAL CHECKLIST
- ATTACHMENT 4.2.1 -- AFFILIATED/ SUBSIDIARY COMPANIES LIST
- ATTACHMENT 4.2.2(a) -- CERTIFICATION REGARDING DEBARMENT (PRIMARY COVERED TRANSACTIONS)
- ATTACHMENT 4.2.2(b) -- CERTIFICATION REGARDING DEBARMENT (LOWER TIER COVERED TRANSACTIONS)
- ATTACHMENT 4.2.5 -- LICENSE AND REGISTRATION INFORMATION - BUSINESSES
- ATTACHMENT 4.2.6(a) -- LEAD CONTRACTOR WORK HISTORY FORM
- ATTACHMENT 4.2.6(b) -- LEAD DESIGNER WORK HISTORY FORM
- ATTACHMENT 4.3.1 -- PRICE PROPOSAL FORM
- ATTACHMENT 4.3.4(a) -- FORM C-104 (BIDDER'S STATEMENT)
- ATTACHMENT 4.3.4(b) -- FORM C-105 (BIDDER'S CERTIFICATION)
- ATTACHMENT 4.4.2 -- KEY PERSONNEL RESUME FORM
- ATTACHMENT 4.4.3 -- LICENSE AND REGISTRATION INFORMATION - INDIVIDUALS
- ATTACHMENT 4.4.5 -- SCHEDULE OF ITEMS FORM
- ATTACHMENT 11.7.1 -- ESCROW PROPOSAL DOCUMENTS CHECKLIST
- ATTACHMENT 11.7.9 -- ESCROW AGREEMENT FORM
- ATTACHMENT 11.8.8 -- CII/SSI NON-DISCLOSURE AGREEMENT

END OF PART 1  
INSTRUCTIONS FOR OFFERORS



**ATTACHMENT 3.4****COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFP NO. C00107715DB91  
 PROJECT NO.: 0095-111-278, P101, C201, C501

**ACKNOWLEDGEMENT OF RFP, REVISION AND/OR ADDENDA**

Acknowledgement shall be made of receipt of the Request for Proposals (RFP) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Letter of Submittal submission date shown herein. Failure to include this acknowledgement in the Letter of Submittal may result in the rejection of your proposal.

By signing this Attachment 3.4, the Offeror acknowledges receipt of the RFP and/or following revisions and/or addenda to the RFP for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFP – September 27, 2016  
(Date)
2. Cover letter of RFP Addendum No. 1 - October 14, 2016  
(Date)
3. Cover letter of RFP Addendum No. 2 - November 10, 2016  
(Date)

---

 SIGNATURE

---

 DATE

---

 PRINTED NAME

---

 TITLE





**ATTACHMENT 4.4.3 – Addendum No. 2**

**State Project No. 0095-111-278**

**SCC and DPOR Information**

<b>DPOR INFORMATION FOR INDIVIDUALS (RFP Sections 4.4.3.1 and 4.4.3.4)</b>						
<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>



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## **PART 2**

### **TECHNICAL INFORMATION & REQUIREMENTS**

#### **1.0 DESIGN-BUILDER’S SCOPE OF WORK**

##### **1.1 Project Description**

The Project is located in the City of Fredericksburg, Virginia, and involves safety improvements at the I-95 and Route 3 interchange. The limits of the Project are from approximately 0.12 miles south of Route 3 to approximately 1.22 miles north of Route 3, for a total length of approximately 1.34 miles. It is noted that the description and length are approximate only and are based on the RFP Conceptual Plans included in the RFP Information Package. The final Project length may vary depending on the Design-Builder’s final design; however, any change in the project limits requires approval by VDOT.

The southbound I-95 to westbound Route 3 exit ramp will be modified to provide a three lane approach to a two-phase signalized intersection at Route 3 (for westbound traffic) and a single free-flow lane to Carl D. Silver Parkway. The eastbound Route 3 to northbound I-95 on-ramp will be replaced with a triple left turn from eastbound Route 3 onto the existing westbound Route 3 to northbound I-95 on-ramp. The triple left turn will be signalized stopping westbound Route 3 traffic, but not eastbound Route 3 through traffic. This improvement removes the northbound I-95 weave and the eastbound Route 3 weave. The realignment of the I-95 North to the Route 3 East ramp to improves ramp performance and safety by increasing the length of the merge area.

A conceptual design has been developed and made available for public review via a Design Public Hearing held on July 19, 2016. The major design features of the Project were approved by the Chief Engineer on September 1, 2016. The conceptual design contained in the RFP Information Package reflects a basic line, grade, typical sections, minimum pavement structures, major cross drainage pipes, potential locations of stormwater management facilities and sediment traps, and general length and location of the noise barrier. These elements are considered to be the basic Project configuration. The Design-Builder is responsible for final design in accordance with the Contract Documents. The PDF copy of the RFP Conceptual Plans shall supersede the electronic drawing files (DGN) contained in the RFP Information Package.

##### **1.2 Anticipated Scope of Work**

The anticipated scope of work to be undertaken by the Design-Builder under the Design-Build contract for this Project will include, but is not limited to:

- Survey
- Developing and completing the design
- Acquiring the necessary environmental permits
- Acquiring rights of way and easements

- Coordinating and performing, or causing to be performed, required utility relocations, additions, and adjustments
- Roadway construction
- Milling and overlaying and/or building up of existing pavement
- Guardrail/barrier
- Retaining walls
- Final noise analysis
- Noise barrier walls
- Signs, sign structures, and foundations
- Traffic signals
- Overhead signs structures and other traffic control measures
- Intelligent Transportation System (ITS) components including Closed Circuit Television (CCTV) Cameras, ITS Infrastructure, ~~Dynamic Message Signs (DMS)~~, Power and Fiber Optic Communications (COMM)-~~Infrastructure~~
- Traffic Signal and ITS System integration, testing, maintenance until final acceptance, and documentation
- Lighting
- Traffic maintenance and management during all phases of construction
- Pavement markers and markings
- Storm drainage
- Storm water management facilities
- Quality Assurance and Quality Control for design and construction
- Stakeholder coordination and public outreach
- Pavement and shoulder demolition
- Obscuring of roadway
- Overall Project management and coordination with other active construction projects in the vicinity.
- Environmental Compliance

Descriptions and technical requirements of the anticipated work are set forth in Part 2, Section 2.

### 1.3 Anticipated Design Services

Design services shall address all items necessary for construction and operation of the completed facility. Design services are anticipated to include, but are not limited, those services necessary to produce roadway construction plans relative to the technical disciplines listed in Part 2, Section 1.2 above. Other data collection and technical studies anticipated include, but are not necessarily limited to: geotechnical investigation, borings and analysis, materials analysis, pavement design, foundation design, traffic counts and analyses, and additional environmental studies and noise analyses (if warranted as described in Part 2, Section 2.4.8). Offerors should note that all work performed on this Project shall be completed using English Units.



## 1.4 Anticipated Environmental Services

The Design-Builder shall carry out environmental commitments during design and construction, as applicable, as identified in the Programmatic Categorical Exclusion (PCE) dated July 18, 2016; the Plans, the Specifications, and Estimates (PS&E) Re-evaluation Authorization (EQ-200); and the Environmental Certification/Commitments Checklist (EQ-103). All commitment compliance shall be supported by the appropriate documentation, to be provided by the Design-Builder to the VDOT Project Manager. Further details are provided in Part 2, Section 2.4.

The Design-Builder shall acquire all water quality permits for the Project in the Design-Builder's name (i.e. the Design-Builder will be the "Permitee") and shall provide for any necessary stream and/or wetland compensation required by permits to accomplish the work.

The Design-Builder shall be responsible for compliance with pre-construction and construction-related environmental commitments and permit conditions, as well as post-construction monitoring if required by regulatory agencies. The Design-Builder will assume all obligations and costs incurred by complying with the terms and conditions of the permits and environmental certifications. Any fines associated with environmental permit or regulatory violations will be the responsibility of the Design-Builder.

Any changes in scope or project footprint from that contained in the Contract Documents proposed by the Design-Builder, which are acceptable to VDOT, may require additional environmental technical studies and analysis to be performed by the Design-Builder at their cost. VDOT will be responsible for the coordination of any NEPA document re-evaluations with FHWA. The Design-Builder shall then carry out any additional environmental commitments that result from such coordination at its sole expense and at no additional cost and/or time delays to the Project.

## 1.5 Anticipated Right-of-way and Utilities

The Offeror's conceptual design included in its Proposal shall be wholly contained within the right-of-way limits shown on the RFP Conceptual Plans, with the exception of temporary construction, permanent drainage, and utility easements (other than permanent drainage easements for stormwater management facilities). Utility easements have not yet been identified or shown on the RFP Conceptual Plans. Deviations from the proposed right-of-way limits shown on the RFP Conceptual Plans will be subject to VDOT approval in accordance with Part 1, Sections 2.7 and 2.8.

The Design-Builder's final design shall also be contained within the right-of-way limits shown on the RFP Conceptual Plans, with the exception of temporary construction, permanent drainage, and utility easements (other than permanent drainage easements for stormwater management facilities) and where minor adjustments are required during the final design process, and only after approval by VDOT. If the Design-Builder proposes significant change to the right-of-way limits shown on the RFP Conceptual Plans, then this shall be considered a deviation of the Contract Documents and shall be addressed as described in Part 2, Section 2.0.

The Design-Builder's services shall include all work necessary for right-of-way acquisitions and to perform utility coordination, relocations, and/or adjustments as required by the Project. All right-of-way acquisition costs (compensation paid to landowners for right-of-way or permanent easement) will be paid by VDOT, and shall not be included in the Offeror's Price Proposal. All costs for utility relocations, excluding betterments, shall be included in the Offeror's Price Proposal. Utility betterments shall not be included in the Offeror's Price Proposal but shall be reimbursed to the Design-Builder through agreement with the requesting utility owner. Betterments must be requested by and/or approved by the affected utility owner and must meet Buy America requirements as described in Part 5, Exhibit 102.05(g.1) Use of Domestic Material.

The Limited Access shall be placed in accordance with the RFP Conceptual plans, with the exception of minor shifts otherwise allowed for in the Right-of-way provisions of this RFP. The Offeror's Proposal shall account for final approval of the Limited Access line by the Commonwealth Transportation Board, including but not limited to, the development of supporting documentation and schedule impacts. VDOT shall be responsible for making the request to the Commonwealth Transportation Board (CTB). The Design Builder shall be responsible for replacement of limited access fence impacted by the Project and where necessary installing new fence for new Limited Access lines.

## **1.6 Anticipated Construction Services**

The construction services to be undertaken by the Design-Builder for this Project are anticipated to include, but are not limited to: earthwork, roadway, sign and other ancillary traffic structures (including all necessary excavation, and foundation work), retaining walls, noise barriers, the demolition and removal of portions of the existing pavements, milling and overlaying or building up of existing pavement and shoulders, obscuring of roadway, demolition and removal of existing structures, drainage and stormwater management, utility relocations/adjustments and coordination, transportation management plan, traffic control devices, erosion and sediment control, and compliance with all environmental requirements, commitments and permit conditions, as described in Part 2, Section 2.0 of this RFP. The Design-Builder shall provide construction engineering inspection and management, quality assurance and quality control, including plant quality assurance inspection and testing, but excluding items listed under Part 2, Section 2.13.2.

## **1.7 Coordination with Active and Anticipated Construction Projects**

The Design-Builder shall be responsible for coordinating with contractors of other active and anticipated construction projects in the vicinity of the I-95 Safety Improvements at Route 3 Project in accordance with Part 4, Section 3.6. In addition, the Design-Builder shall organize and conduct joint meetings (to which VDOT shall be invited) with other Contractors on a quarterly basis at a minimum, or as requested by VDOT. The ultimate purpose of these meetings is to facilitate achievement of the I-95 construction program milestones. It is expected that progress milestones will be jointly developed and mutually agreed to by the Design-Builder and Contractors for the projects listed below.

**Fall Hill Avenue Widening and Mary Washington Blvd Extension**

Location: Fall Hill Avenue at I-95  
Project No.: U000-111-233, P101, R201, C501, B609, D608 (UPC # 88699)  
Status: Design-Build contract was awarded in March 2014  
VDOT Contact: Michael Coffey (540) 899-4225  
michaelt.coffey@vdot.virginia.gov

**Rappahannock River Crossing Project**

Location: I-95 South and Route 3 West  
Project No.: 0095-111-259, P101 (UPC # 101595)  
Status: Design-Build contract anticipated award December 2017  
VDOT Contact: Bill Arel (540) 899-4494  
bill.arel@vdot.virginia.gov

In all cases, the active construction projects and their respective contractors shall have priority in scheduling activities and the Offeror's should take this into consideration in its Price Proposal.

**2.0 PROJECT TECHNICAL INFORMATION & REQUIREMENTS**

The Offeror's proposed conceptual design shall meet all requirements of the RFP. Any proposed deviations from the requirements of the RFP Documents by the Offerors shall be in accordance with Part 1, Sections 2.7 and 2.8.

The Design-Builder's final design shall meet or exceed all requirements included in the Contract Documents (which in some cases exceeds the minimum design standards). If the Design-Builder proposes any deviation that results in a modification to the Contract Documents then the Design-Builder shall follow the Value Engineering Proposals (VEP) process as described in Section 104.02 of Division I Amendments to the Standard Specifications (Part 5) (even though the proposed deviations may not qualify as a VEP), unless otherwise directed by VDOT. Ultimately, any modification to the Contract Documents requires VDOT approval.

**2.1 References and Information**

The design and construction work for the Project shall be performed in accordance with the applicable federal and state laws and VDOT Standards, Specifications and Reference Documents to include, but not limited to the documents listed herein. The Design-Builder must verify and use the latest version of the documents listed herein as of the date of the RFP or latest Addenda. This excludes the implementation of the 2016 Virginia Road and Bridge Specifications except for Section 801-ITS Infrastructure Components. The Design-Builder must meet or exceed the minimum roadway design standards and criteria.

### 2.1.1 Standards and Reference Documents

If during the course of the design, the Design-Builder determines that a specific Standard, Specification or Reference Document is required but is not listed herein, it is the responsibility of the Design-Builder to identify the pertinent Standard, Specification, or Reference Document and submit to VDOT for review and approval prior to inclusion in the Contract Documents.

The VDOT 2007 Road and Bridge Specifications, and its associated Special Provision Copied Notes, contain pricing language under sections entitled “Measurement and Payment” that is not applicable in the Design-Build context of this RFP. Thus, in accordance with the hierarchy of documents, the Design-Builder will refer to Part 3, Articles 6 and 7, Part 4, Article 6, and applicable portions of the Division I Amendments (Part 5) to the Standard Specifications for more information regarding the pricing and payment to the Design-Builder. Similarly, other references below which contain pricing methodologies for the “Contractor” shall likewise not be used. The requirements as described in the text of Part 2 herein take precedence over the referenced documents listed below, unless otherwise indicated.

The standards and references for the Project are listed below in the following order: (a) Standards and Specifications; (b) Reference Manuals; (c) Special Provisions List including Special Provisions, Special Provision Copied Notes and Supplemental Specifications. Items (a) and (b) are published references that are available publicly, for which copies are not provided to the Offerors in the RFP Information Package, but these items are to be used as manuals for design and construction. Items listed in (c) are included in the RFP Information Package.

#### (a) Standards and Specifications

- 2011 Virginia Supplement to 2009 MUTCD, Revision 1, September 2013
- 23CFR625 – Design Standards for Highways
- 49CFR Part 24 – The Uniform Relocation Assistance and Real Properties Acquisitions Act of 1970
- AASHTO A Policy on Design Standards Interstate System, January 2005
- AASHTO A Policy on Geometric Design of Highways and Streets, 6<sup>th</sup> Edition, 2011
- AASHTO Guide for Design of Pavement Structures (Rigid Pavement and Flexible Pavement), 1993 Edition
- AASHTO Guide for Protective Screening of Overpass Structures, 1990
- AASHTO Guide for Roadway Lighting Design, 6<sup>th</sup> Edition, 2005
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- AASHTO Guide Specifications for Seismic Isolation Design, 2nd Edition, with 2000 Interim Revisions
- AASHTO Guide Specifications for Structural Design of Sound Barriers
- AASHTO Manual for Assessing Safety Hardware, First Edition, 2009
- AASHTO Roadside Design Guide, 4th Edition, 2011
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals, 6th Edition, 2015 Interim Revisions

- Americans with Disabilities Act Accessibility Guidelines for State and Local Government Facilities
- Corps of Engineers EM-1110-2-1906, Laboratory Soils Testing, 1986
- DCR Technical Bulletin 1  
([http://dcr.state.va.us/soil\\_and\\_water/documents/tecbltn1.PDF](http://dcr.state.va.us/soil_and_water/documents/tecbltn1.PDF))
- DCR Virginia Erosion and Sediment Control Handbook, Third Edition, 1992
- DCR Virginia Stormwater Management Handbook, Vol. 1 and Vol. 2, First Edition, 1999
- DCR Virginia Stormwater Management Program Technical Bulletin 1 (See [http://www.dcr.virginia.gov/stormwater\\_management/documents/tecbltn1.PDF](http://www.dcr.virginia.gov/stormwater_management/documents/tecbltn1.PDF))
- Engineering Properties of Clay Shales, Report 1 by W. Heley and B. N. McIver
- FHWA 23CFR752 Landscaping and Roadside Development
- FHWA’s Mitigation Strategies for Design Exceptions, July 2007
- FHWA’s Standard Highway Signs including Pavement Markings and Standard Alphabets, 2004 Edition and 2012 Supplement (For use with the 2009 Manual on Uniform Traffic Control Devices for Streets and Highways), or most current Edition
- Guideline for Context Sensitive Solutions/Design, February 25, 2004
- Highway Traffic Noise Impact Analysis Guidance Manual, dated July 2015
- IEEE National Electric Safety Code
- IES RP-08-14, American National Standard for Roadway Lighting
- IES RP-19-01, Roadway Sign Lighting
- Manual of Uniform Traffic Control Devices (MUTCD), 2009 Edition and latest updates as of date of release of RFP or applicable addenda
- NCHRP Report 350 Recommended Procedures for the Safety Performance Evaluation of Highway Features
- Section 801-ITS Infrastructure Components of the VDOT 2016 Road and Bridge Specifications
- Transportation Research Board Highway Capacity Manual, 2010 Edition
- VDOT Appraisal Guidelines
- VDOT Asbestos Inspection Procedures, May 14, 2004
- VDOT CADD Manual, 2012 (Revised April 2016)
- VDOT Construction Inspection Manual, April 2008
- VDOT Construction Manual, 2005 (including July 2008 revisions)
- VDOT Drainage Manual, Revised July 2016 (including current Errata Sheet)
- VDOT Guardrail Installation Training Manual (GRIT), February 2015
- VDOT Guide Manual for Causes and Repair of Cracks in Bridge Decks, dated September 25, 2009
- VDOT Guidelines for 1993 AASHTO Pavement Design, Revised May 2003
- VDOT Guidelines for the Installation of Marked Crosswalks, May 2012
- VDOT Instructional & Information Memorandums (I&IM), All Divisions
- VDOT Land Use Permit Regulations, 24 VAC 30-151, March 17, 2010
- VDOT Manual of Instruction for Material Division, including revisions through July 2011
- VDOT Materials Division Approved List

- VDOT Materials Division Memorandum Number MD299-07 for Materials Acceptance, October 4, 2007
- VDOT Policy for Integrating Bicycle and Pedestrian Accommodations
- VDOT Policy Manual for Public Participation in Transportation Projects, updated August 2011
- VDOT Post Construction Manual, May 2011 Edition
- VDOT Right-of-way Manual of Instructions, Third Edition, FHWA Update approved January 1, 2016
- VDOT Road and Bridge Specifications, 2007 (all except Section 100), including all revisions
- VDOT Road and Bridge Standards, Vol. I and Vol. II, 2008
- VDOT Road Design Manual, Vol. I, including all revisions
- VDOT Survey Manual, 2010 Edition, including 2011 revisions
- VDOT Traffic Engineering Design Manual, dated September 2, 2014
- VDOT Traffic Engineering Division Numbered Memoranda (Traffic Engineering (TE) and Mobility Management (MM))
- VDOT Traffic Operations and Safety Analysis Manual, Version 1.0, November 2015
- VDOT Utilities Manual of Instructions (January 2011, including October 2014 revisions)
- VDOT Virginia Work Area Protection Manual, June 2011, including all revisions
- VDOT's Minimum Requirements for Quality Assurance & Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012
- VDOT's Project Management Policy PMO-Policy-2011-1, July 1, 2011
- FHWA's Highway Traffic Noise Analysis and Abatement Guidance dated December 2011
- VDOT's Noise Report Development and Guidance Document Version 5

#### (b) Reference Manuals

- AASHTO's Highway Safety Manual, 1<sup>st</sup> Edition, Vol. 1-3, 2010
- American National Standards Institute (ANSI)/Insulated Cable Engineers Association (ICEA) S-87-640-2006 requirements
- American Water Works Associations Standards
- American Welding Society Standards
- Bellcore/ Telcordia Standards
- Duncan, J.M. (April 2000) Factors of Safety and Reliability in Geotechnical Engineering, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Discussions and Closure, August 2001
- Field Partnering Guide for VDOT Projects, November 2005
- FHWA publications HDS-6, HEC-11, HEC-14, HEC-15, HEC-18, HEC-20, HEC-22, and HEC-23
- gINT<sup>®</sup> Manual
- Institute of Electrical and Electronics Engineer (IEEE) Standards
- International Mechanical Code



- International Telecommunication Union (ITU) Requirements
- ISEE Blasters Handbook (Current Edition)
- National Electric Code (NEC)
- National Electric Safety Code (NESC) Standards
- National Electrical Manufacturers Association (NEMA) Standards
- National Transportation Communications for ITS Protocol (NTCIP)
- Society for Protective Coatings (SSPC) Standards
- Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) Standards and Specifications
- U.S. Department of Agriculture Rural Utilities Service (RUS) 7 CFR 1755.900
- Underwriters Laboratories (UL) Standards
- VA Statewide Fire Prevention Code (referenced in Special Provision for Section 107.11 - Use of Explosives)
- VDOT Land Use Permit Regulations Guidance Manual, Revised November 8, 2011
- Virginia Calibration Methods, October 2008
- Virginia State Noise Abatement Policy, July 13, 2011
- Virginia Test Methods Manual, June 2010
- Virginia Uniform Statewide Building Code

(c) Special Provisions List, Special Provision Copied Notes and Supplemental Specifications

*Federal:*

- c100ai05 General Project Requirements, Supplemental Specifications (SSs), Special Provisions (SPs) and Special Provision Copied Notes (SPCNs), June 10, 2015 (SPCN)
- S100B00 Project Communication and Decision Making for Design-Build Projects, January 3, 2005c, Reissued August 2009
- SS51202 Supplemental Section 512—Maintaining Traffic Design-Build Projects, December 2, 2009

*Roadway/Drainage:*

- SPCN c302h00-0708 Precast Drainage Structures, January 14, 2008
- Special Provision for Flowable Backfill, March 11, 2010
- Special Provision for Right-of-way Monumentation and Final Boundary Stakeout, December 2, 2009
- Special Provision for Section 244 – Roadside Development Materials, August 29, 2008
- Special Provision for Pipe Culvert Replacement Or Rehabilitation, March 26, 2008
- Special Provision for Pipe Replacement, February 28, 2013
- Special Provision for Pipe Rehabilitation, December 11, 2013
- SS30204-0613 Supplemental Section 302 – Drainage Structures, March 14, 2013



- S107J20-0914 Special Provision for SWPPP General Information Sheets, September 3, 2014
- S107J31-1215 Special Provision for VPDES Construction Activities, October 26, 2015
- C107j12-1215 VPDES Construction Permits, October 26, 2015
- S107G01-0309 Storm Water Pollution Prevention Plan (SWPPP) General Permit for the Discharge of Storm water from Construction Activities Contractor and Subcontractor Certification Statement, February 19, 2009
- SS23203 – 0912 Supplemental Section 232 – Pipe and Pipe Arches, May 17, 2012

*Structures:*

- Special Provision for Architectural Treatment and Concrete Surface Color Coating, April 24, 2014
- SS40605-0316 Supplemental Section 406 for Reinforcing Steel, March 17, 2016
- Special Provision for Corrosion Resistant Reinforcing Steel, March 17, 2016
- Special Provision for Soil Nail Walls, June 7, 2011
- Special Provision for Drilled Shafts using self-consolidating concrete for Design Build and PPTA Projects, June 17, 2013
- Special Provision for Dynamic Pile Testing for End Bearing Piles for LRFD, December 10, 2009
- Special Provision for Dynamic Pile Testing for Friction Piles for LRFD for Design Build and PPTA Projects, July 16, 2012
- Special Provision for MSE Walls (Modular Cantilever Facing), December 10, 2009
- Special Provision for Quality Assurance/Quality Control (QA/QC) for the Construction of Deep Foundation Systems, December 10, 2009
- Special Provision for T-Wall Retaining Wall System, December 10, 2009
- Special Provision for Wave Equation Analysis for LRFD for Design Build and PPTA Projects, December 10, 2009
- Special Provision for Gravity Filled Polymer Crack Sealing, July 2008c
- Special Provision for Concrete Surface Penetrant Sealant, July 2008
- Special Provision for Metallization of Ferrous Metal Structures, July 2008
- Supplemental Section 408 for Bearing Devices and Anchors, December 20, 2010
- Special Provision for Crack Repair by Epoxy Injection, November 28, 2012
- SS40501-0609 Supplemental Section 405 Prestressed Concrete, December 20, 2010
- SS40703-0912 Supplemental Section 407 Steel Structures, January 2, 2012
- SS41401-0310 Supplemental Section 414, Riprap, January 25, 2010
- SS423 Supplemental Section 423, NBIS Inspection Using Bridge Device, April 16, 2012
- Special Provision for Ornamental Wire Fence, March 29, 2013

- SS40102-0912 Supplemental section 401 – Structure Excavation, April 17, 2012c

*Environmental:*

- S107E02-0910 Special Provision for Volatile Organic Compounds (VOC) Emissions Control Areas, August 12, 2010
- Special Provision for Sound Barrier Walls/Architectural Finishes dated August 5, 2016
- Virginia Department of Transportation Special Provision for Phase I and Phase II Environmental Site Assessments for Design-Build Projects dated June 25, 2013
- Virginia Department of Transportation Special Provision for Inspection of Structures For Asbestos Containing Materials (ACM) on Design-Build Projects dated June 22, 2009
- Virginia Department of Transportation Special Provision Copied Note-Demolition Notification for Structures not Requiring Asbestos Removal dated June 25, 2009
- Virginia Department of Transportation Special Provision for Asbestos Removal and NESHAP-Related Demolition Requirements For Structures on Design-Build Projects dated June 22, 2009
- Virginia Department of Transportation Special Provision for Asbestos-Containing Soil dated February 2, 2000
- Virginia Department of Transportation Special Provision for Removal or Connection of Asbestos Cement Pipe dated November 7, 2005

*Traffic:*

- S704E02-1211 Type B, Class VI Pavement Line Marking, October 21, 2011
- S704F01-1209 Transitory Pavement Markers (TPM), December 14, 2009
- SPCN Locating, Removing and Disposing of Recessed Pavement Markers and Raised Snow-Plowable Markers, October 17, 2010
- SPCN Uniformed Flaggers, September 29, 2008a
- Special Provision for Emergency Preemption Equipment, September 5, 2014
- Special Provision for High Tension Cable Barrier System, March 28, 2013
- Special Provision for Preformed Thermoplastic Pavement Markings, November 29, 2011b
- Special Provision for Replacement of Pavement Line Markings, Pavement Markers and Loop Detectors, September 27, 2011
- Special Provision for Square Tube Steel Sign Post, March 3, 2008
- Special Provision for Temporary Construction and Permanent Pavement Markings, November 8, 2011
- Special Provision for Section 703 – Traffic Signals, June 1, 2015
- Special Provision for Signal Poles (Mast Arm Poles), September 12, 2013
- SPCN for Section 512 – Type III Barricade, October 3, 2012

- SPCN for Section 105 and 512 – Personnel Requirements for Work Zone Traffic Control, June 11, 2009
- Special Provision for CG-12 Detectable Warning Surface, September 18, 2013
- Special Provision for Replacement of Guardrail, Median Barrier, Impact Attenuator, And Guardrail To Bridge Attachments, November 4, 2011
- Special Provision for Work Zone Traffic Control Management, January 14, 2008
- Supplemental Section 221 – Guardrail, January 6, 2012
- Supplemental Section 234 – Glass Beads for ReflectORIZING Traffic Markings, October 16, 2014
- Supplemental Section 247 – Reflective Sheeting, February 10, 2011
- Supplemental Section 512 – Maintaining Traffic, June 11, 2009
- Supplemental Section 700 – General, April 15, 2015
- Supplemental Section 701 – Traffic Signs, April 15, 2015
- Special Provision for Removal of Signal Equipment, January 7, 2015
- Special Provision for Section 238 Electrical and Signal Components (Retroreflective Backplates), August 19, 2015
- Special Provision for Uninterruptible Power Supply, January 12, 2016
- Special Provision for Video Detection System – Type III, October 6, 2015
- SPCN for Concrete Foundations for Signal Poles, July 1, 2012
- SPCN for Electrical Service (Breaker Box), September 17, 2013
- SPCN for Section 238.02 (H) 6. C. Pedestrian Signal Heads, July 16, 2012
- SPCN for Section 238.02 (H) 2. Circuit Breaker Box, November 24, 2014
- SPCN for Section 238.02 (H) 23. Splice Kits, July 26, 2012
- SPCN for Section 238.02 (H) 29. Stainless Steel Cables for Hanger Assemblies, May 29, 2012
- SPCN for Section 700.04(c) Test Bore, November 21, 2013
- SPCN for Section 700.04(c) Vented Rodent Barrier, April 2, 2004
- Special Provision for Model 336S Equipment Cabinet, May 29, 2012
- Special Provision for Field Router, May 29, 2012
- Special Provision for CCTV General Requirements, May 29, 2012
- Special Provision for Managed Field Ethernet Switch, May 29, 2012
- Special Provision for ITS – Ethernet Terminal Server, August 26, 2013

*Geotechnical/Materials:*

- S302B00-0708 Restoring Existing Pavement, January 14, 2008c
- SPCN c109g02-1209 Polymer Modified (PG 76-22 and PG 70-28) Asphalt Cement Adjustment, May 5, 2011
- SPCN c211gg0-0609 Section 211 Warm Mix Asphalt Pavement, December 7, 2009

- SPCN c248fg0-0708 Surface and Intermediate Mixes using Rap, January 14, 2008
- SPCN c315gg0-0609 Section 315 Warm Mix Asphalt Pavement, December 7, 2009
- Special Provision for Design-Build Tracking (DBT) Numbers, June 4, 2015
- Special Provision for Hydraulic Cement, January 28, 2008
- Special Provision for Hydraulic Cement Concrete Admixtures, January 28, 2008
- SS21706 Hydraulic Cement Concrete, July 29, 2013
- SS40402 Hydraulic Cement Concrete Operations, December 17, 2010
- Special Provision for Jack and Bore for DB Projects, October 13, 2009
- Special Provision for Lime Modification of Soils, revised November 23, 2009
- Special Provision for Low Permeability Concretes For Design-Build Projects, September 6, 2009
- Special Provision for Planing Asphalt Concrete Pavement, December 2010
- Special Provision for Section 315 – Asphalt Concrete Pavement, November 25, 2009
- Special Provision for Rideability, November 19, 2013
- Special Provision for Section 317 – Stone Matrix Asphalt (SMA), November 25, 2009
- Supplemental Section 248 – Stone Matrix Asphalt Concrete, April 1, 2012
- Supplemental Section 211 – Asphalt Concrete, December 18, 2012
- Supplemental Section 515 – Planing Or Milling Pavement, September 27, 2011
- C211hg0-1209 SPCN – Polishing Aggregate In Asphalt Concrete - Section 211—Asphalt Concrete, October 7, 2009
- Special Provision for Cold Planing (Milling) Asphalt Concrete Operations, September 27, 2011
- Special Provision for Corrosion Resistant Reinforcing Steel , March 17, 2016
- Supplemental Section 200 – General, September 28, 2012
- Supplemental Section 207 – Select Material, February 19, 2014
- Supplemental Section 208 – Subbase and Aggregate Base Material, February 19, 2014
- S30306-0914 Supplemental Section 303 – Earthwork, September 3, 2014
- Special Provision for Micro Tunneling for Design Build Projects, September 14, 2009
- Special Provision for Crushed Hydraulic Cement Concrete January 14, 2008
- Special Provision for Elastic Inclusion for Design Build Projects, November 24, 2009
- SPCN Crushed Glass, January 17, 2008
- Special Provision for Section 02768 - Hydraulic Cement Concrete Stamped, Colored & Reinforced, September 16, 2013
- Supplemental Section 212 – Joint Materials, June 28, 2011
- Supplemental Section 501 – Underdrains, Crossdrains, and Edgedrains, June 15, 2015

*General Conditions:*

- SS30101-0914 Supplemental Section for Clearing and Grubbing September 3, 2014
- Special Provision for Section 514 – Field Office Design-Build Projects, November 24, 2009
- Special Provision for Work Zone Traffic Control Management Design-Build Projects, revised November, 2009
- SS52200-0708 Supplemental Section 522 – Partnering Design-Build Projects, revised June 1, 2012

The above list of Special Provisions is not intended to be an all-inclusive list. The Design-Builder is responsible for achieving the Work in accordance with all current VDOT standards as of the date of the RFP issuance, including any revisions and/or addenda thereof. If a construction element is not adequately addressed within VDOT Standard Specifications or the Special Provisions listed for the purpose of the Design-Builder's design, it is the responsibility of the Design-Builder to develop an alternative specification that is acceptable to VDOT for that element of work.

In the event of a discrepancy between VDOT and non-VDOT Standards and References listed herein, the VDOT Road and Bridge Specifications, design standards, and manuals shall take precedence, with the following exception. If AASHTO or the MUTCD require that a higher or better standard be applied, then AASHTO and/or the MUTCD shall take precedence. In accordance with Part 2, Section 2.1.3 below, all deviations from AASHTO minimum specified design values shall be documented, justified, and approved by VDOT and FHWA.

Special Provisions included in this contract document or other Special Provisions approved by VDOT shall govern over the VDOT specifications, design standards and manuals. Special Provision Copied Notes approved by VDOT and requirements specified within the text of this RFP shall govern over both the Special Provisions and VDOT specifications, design standards and manuals.

### **2.1.2 RFP Information Package**

An RFP Information Package is available for interested Offerors on CD for \$50. Interested Offerors should complete the RFP Information Package Order Form included as Attachment 2.6 of Part 1. The RFP Information Package includes the following:

- Special Provision List: Special Provisions, Special Provision Copied Notes and Supplemental Specifications
- Conceptual Roadway Plans, including electronic reference files
- Programmatic Categorical Exclusion (PCE) dated July 18, 2016
- Preliminary Document Reevaluation for RW Authorization (EQ-201) dated August 24, 2016

- Preliminary Document Reevaluation for PSE Authorization (EQ-200) dated August 24, 2016
- Preliminary Environmental Certification/Commitments Checklist (EQ-103) dated August 24, 2016
- Cultural Resources Summary Report dated December 4, 2015
- Preliminary VDOT Permit Determination dated August 25, 2016
- Preliminary VDOT Fish, Plant and Wildlife Resources Form dated June 10, 2016
- Hazardous Materials Summary Report and comments dated March 23, 2016
- Final Air Quality Technical Report for the Rappahannock River Crossing, City of Fredericksburg, Stafford County, Spotsylvania County, dated September 2014
- Preliminary Noise Analysis for the Rappahannock River Crossing, City of Fredericksburg, Stafford County, Spotsylvania County, dated September 2014
- VDOT/USFWS coordination dated May 9, 2016
- Design Approval dated September 1, 2016
- Survey Files
- Geotechnical Data Report dated September 6, 2016
- Video inspection of existing roadway culverts crossing under Ramp A and Ramp B
- Interchange Modification Report dated July 6, 2016, and supplemental traffic analysis
- Virginia Department of Environmental Quality (VDEQ) approval of VSMP Grandfathering dated March 29, 2016
- Access Management Waiver dated November 20, 2016
- Sign Structure Inspection Reports
- Signal Inspection Reports dated October 27, 2016
- Plan Sheets Depicting CCTV Locations
- As-built Signal Plan for Route 3/Carl D. Silver Parkway
- TNM Noise Model Files
- I-95 As-built Pavement Sections
- gINT files
- Synchro Files Associated With The IMR

Requirements described in the Technical Information and Requirements (Part 2 of the RFP) shall supersede the information contained in the RFP Information Package, including the information depicted in the RFP Conceptual Plans. In the event that there is a discrepancy between the RFP Conceptual Plans (or other information contained in the RFP Information Package) and the Technical Information and Requirements (Part 2 of the RFP) herein, the Technical Information and Requirements (Part 2) shall take precedence.

Record roadway and bridge plans for this Project and as-built utility plans, which are not deemed a component of the RFP, can be provided to Offerors upon request by email to VDOT's Point of Contact identified in Part 1, Section 2.4. These plans are solely for the information of the Offeror, which each Offeror may use at their own risk and as they deem appropriate. The Department does not represent or warrant that the information contained in the plans is suitable for designing the Project. Offerors interested in obtaining the previously developed record plans should contact the Design-Build POC specified in Part 1, Section 2.4.



Culvert Inspection Reports will be made available to the Offeror with appropriate Critical Infrastructure Information/Sensitive Security Information (CII/SSI) documentation as described in Part 1, Section 11.8.8.

### 2.1.3 Design Exceptions and Design Waivers

Design Exceptions will be required for any element of the design among the fourteen controlling criteria that do not meet AASHTO minimum design standards. Design Waivers will be required for any element that meets AASHTO minimum design standards, but does not meet VDOT minimum standards or for any element other than the fourteen controlling criteria that do not meet AASHTO minimum design standards. The Design-Builder will be required to follow the process as described in the latest version of IIM-LD-227, S&B 70 regarding Design Exceptions and Design Waivers.

VDOT has identified the following design waiver, with respect to the RFP Conceptual Plans:

- Design Waiver No. 1 – Access Management Waiver for the VDOT spacing standards for commercial entrances, intersections and crossovers; for entrances near interchange ramps

Design Waiver No. 1 was prepared by VDOT and is included in the RFP Information Package. VDOT will be responsible for submitting the design waiver to the appropriate authority(-ies) for review and approval.

## 2.2 Mainline and Other Roadway Improvements

The roadway inventory information and major design criteria are summarized in Attachment 2.2. The information contained in the Attachment shall serve as a basis for the Design-Builder to determine the appropriate criteria to apply to the design of the I-95, interchange ramps, and Route 3. Offerors are on notice that the entirety of the information contained in the Design Criteria Table and Part 2, Section 2.2 of this document including but not limited to the design criteria, and other notes and data, contain the minimum roadway geometric design requirements that the Design-Builder shall meet in its performance of the Work. By submitting its Proposal, Offeror certifies that the Project Concept presented in its Proposal is fully compliant with such minimum requirements. Unless otherwise approved by VDOT, no changes to or deviation from the listed criteria shall be allowed. Any schedule delays as a result of changes or deviations are the responsibility of the Design-Builder.

In addition to the I-95, Route 3, and ramp improvements depicted on the RFP Conceptual Plans (contained in the RFP Information Package), the Design-Builder is also responsible for making necessary improvements to Carl D. Silver Parkway.



## Functional Classification

I-95 is functionally classified as an urban interstate. The VDOT geometric design standard that will be utilized for I-95 will be GS-5 in rolling terrain with a minimum design speed of 70 mph.

Route 3 is functionally classified as an urban principal arterial (other). The VDOT geometric design standard that will be utilized for Route 3 will be GS-5 in rolling terrain with a minimum design speed of 45 mph.

Ramps A, B and Loop B, and Slip Ramp B are functionally classified as interchange ramps. The ramps shall be designed in accordance with VDOT geometric design standard GS-R in rolling terrain. The minimum design speed for Ramp A shall be 30 mph with a minimum design speed of 50 mph at the on-ramp merge to I-95. The minimum design speed for Loop B shall be 25 mph. The minimum design speed for Ramp B shall be 25 mph with a minimum design speed of 50 mph at the off-ramp diverge from I-95.

If noise barriers are warranted, then the Design-Builder will locate the noise barrier, such that a future I-95 northbound two-lane collector distributor (CD) roadway can be accommodated. The CD roadway will be functionally classified as an urban interstate. The VDOT geometric design standard that will be utilized for the CD roadway will be GS-5 in rolling terrain with a minimum design speed of 60 mph. The RFP Conceptual Plans provide the horizontal and vertical alignment to locate the limits for the noise barrier grading. Deviations to these elements will require approval by VDOT.

The design vehicle for all I-95, interchange ramps, and Route 3 shall be a WB-67 vehicle. All triple turning maneuvers must be designed to accommodate trucks turning from all three lanes for Ramp B, or special design signing that restricts trucks to the appropriate lane(s) will be required. The Route 3 triple left turning movements onto Ramp A will require that the inside and outside lanes accommodate for WB-67 vehicle and the center lane accommodate for a SU-40 vehicle.

An Interchange Modification Report for the Project was approved on July 6, 2016 and is included in the RFP Information Package, as well as VDOT's Supplemental Traffic Analysis.

### **2.2.1 Route 3 and I-95 Northbound On-Ramp (Ramp A)**

Triple left turn lanes with a flush median shall be provided from eastbound Route 3 to the I-95 northbound on-ramp as shown on the RFP Conceptual Plans. A minimum of a two (2) foot wide flush median will be provided with interstate tubular markings to separate the left turn lanes from the eastbound through lanes. Westbound Route 3 shall provide for a shared right and separate right turn lane to convey traffic onto the I-95 northbound on ramp. This intersection will be signalized. The I-95 northbound on-ramp will require that a dual lane access to I-95 northbound be provided. The dual lanes shall provide a minimum of 500 feet from the painted nose before merging commences and will merge onto I-95 past Cowan Boulevard.

### **2.2.2 I-95 Northbound On-Loop (Loop D)**

The I-95 northbound on-ramp loop shall be demolished. Demolition shall include the removal and disposal of all pavement materials and shall include obscuring the existing roadway. The Route 3/I-95 ramp gore shall be reconstructed to provide for a 300 foot taper and for the construction of a through lane as depicted on the RFP Conceptual Plans.

### **2.2.3 Route 3 and I-95 Southbound Off-Ramp (Ramp B)**

The I-95 southbound off-ramp shall provide a dual lane exit from I-95, with one of the lanes designed as a choice lane. The I-95 southbound off-ramp approaching Route 3 shall provide for triple right turns onto westbound Route 3. The new intersection created by the off-ramp triple right turns to westbound Route 3 shall be signalized. Route 3 at Loop B will be modified to allow for a choice lane that will allow access to both the loop and Route 3. A separate westbound ramp (Slip Ramp B) shall provide direct access to northbound Carl D. Silver Parkway. The slip ramp shall be separated by a two (2) foot wide median and will require the use of interstate tubular markers. Westbound Route 3 at Ramp B shall be reconfigured to accommodate two (2) additional through lanes. The entrance to the I-95 southbound Loop B shall be reconfigured to be a choice lane as depicted on the RFP Conceptual Plans.

### **2.2.4 Route 3 and Carl D. Silver Parkway**

At the intersection with Carl D. Silver Parkway westbound Route 3, an extended westbound left turn lane, three through lanes, a westbound right and a westbound shared through right turn lane shall be provided. The westbound shared through right and right turn lane shall provide access from Route 3 onto northbound Carl D. Silver Parkway.

## **2.3 Retaining Walls**

Retaining wall structures shall be designed in accordance with the following requirements:

- Retaining walls shall be designed in accordance with VDOT and AASHTO specifications and requirements.
- Existing or new retaining walls shall be analyzed or designed for any additional loads imposed by sign structure supports or other structures.
- Only retaining wall systems for which FHWA has developed guidelines will be permitted for this project.
- Only retaining walls presenting an essentially vertical concrete face shall be used. Walls with vegetated and/or sloping faces shall not be allowed for this project.
- All components of the retaining walls shall be contained within VDOT's right-of-way.

- In addition to cast-in-place reinforced concrete cantilever walls, the retaining wall systems indicated on the VDOT Approved Retaining Wall Systems List shall be allowed, except as noted above and as noted on the list itself.
- Mechanically stabilized earth (MSE) walls shall be selected from VDOT’s fully approved panel MSE wall systems (for which special provisions are included in the RFP Information Package).
- MSE walls that require traffic protection at the top shall utilize barriers or railings on moment slabs.
- Parapets located on top of MSE walls shall utilize low permeability concrete in accordance with the VDOT 2007 Road and Bridge Specifications.
- Retaining walls shall have metal railing except where top of wall is located adjacent to a roadway shoulder in which case the concrete barrier shape shall be used. Metal railing shall conform to VDOT Standard HR-1 and shall be galvanized.
- All exposed, vertical faces of retaining wall elements shall receive architectural treatments in accordance with the Special Provision for Architectural Treatment. Architectural treatment shall be dry stack and shall not be stained or painted.
- All retaining walls that require traffic protection shall be designed in accordance with AASHTO Section 13 – Railings.

## 2.4 Environmental

### 2.4.1 Environmental Document

FHWA has issued a NEPA decision for the Project. A copy of the Programmatic Categorical Exclusion (PCE) dated July 18, 2016 is included in the RFP Information Package. VDOT has also completed preliminary document re-evaluations for Right-of-Way (RW) Authorization (EQ-201) dated August 24, 2016; Plans, Specifications and Estimates (PS&E) Authorization (EQ-200) dated August 24, 2016, and a preliminary Environmental Certification/Commitments Checklist (EQ-103) dated August 24, 2016, which are included in the RFP Information Package.

Once the Design-Builder has completed the design, VDOT shall update and finalize the re-evaluation for RW Authorization (EQ-201) prior to RW authorization; and update and finalize the re-evaluation for PS&E Authorization (EQ-200), and update and finalize the Environmental Certification/Commitments Checklist (EQ-103) prior to the VDOT Project Manager releasing the Project for construction. If the Project includes phased work, then final versions of these documents shall be updated and finalized by VDOT prior to authorizing RW and construction for each phase. The VDOT Project Manager shall verify that the EQ-200, EQ-201 and EQ-103 forms have been updated and finalized prior to obtaining approval signatures for each title sheet submittal required for Right-of-way and Construction.

The Design-Builder shall carry out environmental commitments during design, right-of-way acquisition, and construction, as applicable, as identified in the PCE, the final document re-

evaluations for RW and PS&E Authorization, and the final Environmental Certification forms. All commitment compliance shall be supported by appropriate documentation, to be provided by the Design-Builder to VDOT.

Any changes in the scope or footprint of the established basic Project concept, proposed by the Design-Builder and acceptable to VDOT, may require additional environmental technical studies and analysis to be performed by the Design-Builder at their cost. The Design-Builder will be responsible for notifying VDOT of plan revisions, scope changes, and providing any necessary studies and other necessary information to support VDOT's completion and re-evaluation of the NEPA document. VDOT will be responsible for the coordination of any environmental documentation re-evaluation with FHWA. The Design-Builder shall then carry out any additional environmental commitments that result from such coordination at its sole expense and no additional cost and/or time delays to the Project.

The Design-Builder is solely responsible for any costs or schedule delays related to the permit acquisition, permit modifications, and NEPA document re-evaluations associated with Design-Builder's design changes and no time extensions will be granted. All costs associated with complying with these requirements shall be included in the Offeror's Price Proposal.

#### **2.4.2 Cultural Resources**

VDOT, in consultation with the Virginia State Historic Preservation Officer (VA SHPO), has determined that there are no historic properties present or affected by the Project as proposed in the RFP Conceptual Plans.

Please note that any changes to the design, alignment, right-of-way limits, or easements shown on the RFP Conceptual Plans may require review by VDOT and could require additional cultural resources studies and/or coordination with the VA SHPO. The Design-Builder is responsible for conducting all cultural resources studies necessitated by the proposed changes, while the VDOT is responsible for coordinating both the studies and the proposed changes with the VA SHPO. The Design-Builder shall then carry out any additional cultural resources commitments that result from such coordination at its sole expense and at no additional cost to the Project.

#### **2.4.3 Section 4(f) Resources**

There is no use of 4(f) resources on this Project.

#### **2.4.4 Water Quality Permits and Compensatory Mitigation**

The Design-Builder is responsible for obtaining all water quality permits required to construct the Project (including utility relocations by the Design-Builder). The Design-Builder will be the Permittee. Should the Design-Builder propose design changes acceptable to VDOT, permitting requirements may also change; the Design-Builder remains responsible for obtaining any and all necessary water quality permits and permit modifications required by the regulatory agencies.

The Design-Builder will obtain all necessary environmental clearances, permits, and approvals required to accomplish the work as noted in Part 4 (General Conditions of Contract), Article 2.6. The Design-Builder will be responsible for performing necessary design and fieldwork to support the acquisition of necessary water quality permits independently and directly from the regulatory agencies. The Design-Builder will be the Permittee.

VDOT completed a preliminary Permit Determination, dated August 25, 2016, concluding that water quality permits are required for the Project based on the RFP Conceptual Plans. The Offeror should note that the preliminary Permit Determination and wetland delineations are provided for informational purposes only. The Design-Builder will be responsible for verifying permit requirements prior to construction. Regulatory agencies will make the final determination as to which state/federal water quality permits will be required during coordination with the Design-Builder.

The Design-Builder shall determine the applicability of water quality permits for the Project (to include utilities to be relocated by the Design-Builder for the Project). Should it be determined that water quality permits are required, the Design-Builder shall conduct the preliminary field assessment including, but not limited to, wetland delineation, stream assessment, and permit impact sketches. The Design-Builder shall also determine the required sequencing methodology to limit Project impacts to wetland systems. The Design-Builder shall utilize this information to obtain required permits.

If the Design-Builder determines water quality permits are not required based on information generated, the Design-Builder shall notify the VDOT Project Manager in writing, so that VDOT can authorize the Design-Builder to execute the Work. Any deviations that the Design-Builder makes to the Project footprint and/or scope may render the permit determination invalid and will require additional consideration.

If the Design-Builder determines that wetlands and/or stream mitigation is required to secure the permit authorization, the Design-Builder will provide the required compensatory mitigation. The Offeror shall account for all costs associated with water quality permit acquisition, as well as compensatory mitigation, in its Price Proposal.

The Design-Builder shall note that avoidance, minimization, and mitigation measures associated with permit acquisition will require close coordination between the Design-Builder and VDOT. If permit issuance is delayed or permits are denied, the Design-Builder will be responsible for any schedule delays and/or associated costs.

Should the Design-Builder propose design changes acceptable to VDOT, permitting requirements may also change; the Design-Builder remains responsible for obtaining all necessary water quality permits and permit modifications required by the regulatory agencies to accommodate the design changes.

The Design-Builder shall ensure that Project schedules accommodate any Special Provisions, Time of Year Restrictions (TOYR), and the duration of permit acquisition from the regulatory agencies. The Design-Builder shall be responsible for adhering to permit conditions

and Special Provisions, as identified in the permit authorizations including but not limited to TOYR, avoidance and minimization recommendations, restoration of temporary impact areas, and countersinking culverts.

The Design-Builder shall be responsible for compliance with pre-construction, construction-related permit conditions, as well as post-construction monitoring if required by regulatory agencies. This shall include costs associated with acquiring water quality permits and additional compensatory mitigation for the Project if needed.

The Design-Builder shall provide to the VDOT Project Manager copies of all permits, documentation, and correspondence with regulatory agencies. Construction activities shall not impact regulated areas within the Project limits until all applicable water quality permits have been issued to the Design-Builder. The Design-Builder shall not proceed with work covered by the water quality permits until the VDOT Project Manager releases the work in writing. The VDOT Project Manager may release a portion or all of such work not in jurisdictional areas, but may order a suspension of the same work after its release. The Design-Builder shall not be allowed to begin work that pre-determines the work required in the jurisdictional areas until the permits are secured.

After receiving the VDOT Project Manager's release of the work, the Design-Builder shall notify the VDOT Project Manager and the regulatory permitting agencies in writing fourteen (14) days prior to beginning work in the jurisdictional areas covered by the water quality permits.

The Design-Builder shall allow environmental compliance inspections by VDOT, and/or regulatory agencies as required by permits and/or to facilitate any interim compliance reviews/assessments.

At the conclusion of the Project, the Design-Builder shall notify the VDOT Project Manager and the regulatory permitting agencies in writing of the completion of the work in the jurisdictional areas covered by the water quality permits. At the completion of the Project, the Design-Builder is required to transfer any Virginia Marine Resources Commission (VMRC) permit back to VDOT.

The Design-Builder shall carry out any additional permit conditions/commitments that result from change in footprint and/or scope (assuming it is approved by VDOT) at its sole expense and no additional cost to the Project; additionally the Design-Builder will be responsible for any schedule delays and associated costs.

All permitted construction activities shall be identified as hold points in the Design-Builder's CPM Schedule.

#### **2.4.5 Threatened and Endangered Species**

VDOT has performed preliminary database reviews to determine the Project's potential effects on threatened and endangered (T&E) species, indicating that the following state and



federally listed T&E species were identified in the required search area: Dwarf Wedge Mussel and Northern Long Eared Bat (NLEB). A copy of VDOT's preliminary Fish, Plant, and Wildlife Resources Form dated June 10, 2016 is included in the RFP Information Package.

VDOT has recommended a may affect determination and applied the 4(d) rule; excepted from take for the NLEB and recommended a no effect for the Dwarf Wedge Mussel. This determination was coordinated with the USFWS on May 9, 2016. At the conclusion of the 30-day waiting period, on June 10, 2016, the USFWS had no comments and concurred with the effect determination. A copy of the VDOT/USFWS coordination is included in the RFP Information Package.

The Offeror shall be advised that new and updated T&E information is continually added to agency databases. The Design-Builder will be responsible for any subsequent coordination to obtain updated information, requirements, and clearances from environmental regulatory agencies that provide threatened and endangered species oversight. This additional T&E species coordination is also a standard component of the water quality permit acquisition process and may result in permit conditions for which the Design-Builder will be responsible. The Design-Builder is responsible for ensuring that all T&E species are correctly identified and impacts assessed, noting that more or less resources may be present than initially identified. Avoidance and minimization shall be implemented to the greatest extent possible. The Design-Builder shall provide to the VDOT Project Manager copies of all documentation and correspondence with regulatory agencies.

#### **2.4.6 Hazardous Materials**

VDOT Hazardous Materials staff has reviewed the Project and found that there is no evidence of generating hazardous materials of concern or sites of environmental conditions/concerns within the Project area. As such, the Project was cleared on March 23, 2016, and no further hazmat work is required in support of the RFP Conceptual Plans. The VDOT Hazardous Materials Summary Report and comments are included in the RFP Information Package and constitutes Known Pre-existing Hazardous Materials as defined in Part 4, Article 4. Any changes in scope or project footprint from that contained in the Contract Documents proposed by the Design-Builder, which are acceptable to VDOT, requiring additional hazmat investigation, the Design-Builder shall comply with the following contract special provisions and guidance documents, as applicable:

- Virginia Department Of Transportation Special Provision For Phase I And Phase II Environmental Site Assessments For Design-Build Projects – June 25, 2013
- Virginia Department Of Transportation Special Provision For Inspection Of Structures For Asbestos Containing Materials (ACM) On Design-Build Projects - June 22, 2009
- Virginia Department Of Transportation Special Provision Copied Note-Demolition For Structures Not Requiring Asbestos Removal – June 25, 2009



- Virginia Department Of Transportation Special Provision For Asbestos Removal And NESHAP-Related Demolition Requirements For Structures On Design-Build Projects - June 22, 2009
- VDOT Asbestos Project Monitoring And Clearance Air Monitoring Procedures – February 26, 2010
- Virginia Department Of Transportation, Location and Design Division Instructional and Informational Memorandum: Guidelines for the Discharge of Storm Water at Sinkholes - August 15, 2002
- Virginia Department Of Transportation Special Provision For Asbestos-Containing Soil - February 2, 2000
- Virginia Department Of Transportation Special Provision For Removal Or Connection Of Asbestos Cement Pipe - November 7, 2005
- Virginia Department Of Transportation Asbestos Inspection Procedures – February 26, 2010

The Design-Builder shall manage solid waste, hazardous waste, and hazardous materials in accordance with all applicable federal and state environmental regulations and shall implement good housekeeping, waste minimization and pollution prevention practices.

Unless a structure has been otherwise classified, the Design-Builder shall assume all coated structures are Type B.

The Design-Builder shall perform asbestos inspections on all structures (including bridge structures if any) and, as applicable, perform asbestos abatement, abatement monitoring, notifications and demolition in accordance with VDOT procedures and specifications. Prior to demolition, asbestos abatement shall be performed for all structures found to contain regulated asbestos materials (RACM) and non-RACM that is expected to become friable (i.e. RACM) during the course of demolition The Design-Builder shall make all appropriate abatement and demolition notifications as required by federal and state regulations.

Asbestos inspection, abatement and project monitoring shall be performed by individuals and firms licensed by the Virginia Department of Professional and Occupational Regulation. Asbestos abatements shall not be performed by an asbestos contractor who has an employee/employer relationship with, or financial interest in, the laboratory utilized for asbestos sample analysis nor shall the asbestos contractor have an employee/employer relationship with, or financial interest in, the asbestos inspector and project designer working on the Project. Copies of all asbestos inspection, monitoring and disposal records shall be provided to the VDOT Project Manager.

For any asbestos waste and other non-hazardous waste, the Design-Builder shall have the signatory responsibility for the waste shipping manifest(s) and/or bill(s) of lading. For hazardous waste the Design-Builder shall be considered the co-generator and shall be responsible for preparing the hazardous waste shipping manifest(s) for the VDOT representative's signature and as otherwise consistent with the signatory requirement under Section 411 of the VDOT 2007 Road and Bridge Specifications.

The Design-Builder shall be responsible for the development of a Spill Prevention, Control, and Countermeasure Plan as required by regulation and for submission of any required plan to the VDOT Project Manager prior to start of construction. In the event of spills or releases of petroleum products and other hazardous liquids or solid materials, the Design-Builder shall take immediate action to contain and eliminate the spill release, including the deployment of environmental protection measures to prevent the migration of the spill into the waters of the United States and of worker exposure protection measures. The Design-Builder shall notify the VDOT Project Manager immediately of all instances involving the spill, discharge, dumping or any other releases or discovery of hazardous materials into the environment and shall provide all required notifications and response actions.

The Offeror shall include in the Price Proposal all costs associated with complying with the above listed requirements except that asbestos abatement and abatement monitoring will be paid for, if and when necessary, under a Work Order in accordance with Article 9 of Part 4 (General Conditions of Contract).

The Design-Builder shall not acquire property until any required Phase I Environmental Site Assessment is complete and approved. This shall represent a hold point in the Design-Builder's CPM Schedule.

#### **2.4.7 Air Quality**

The Project has been assessed for potential air quality impacts and conformity with all applicable federal and state air quality regulations and requirements. The Air Quality Analysis for this Project was completed as part of the Rappahannock River Crossing Project (UPC 101595), dated September 2014 is provided in the RFP Information Package. The Air Quality Analysis identifies federal and state regulatory requirements that must be adhered to during construction of the Project.

The Project is located in an area that is currently in Attainment with the National Ambient Air Quality Standards (NAAQS), and in a volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) Emissions Control Area. As such, all reasonable precautions should be taken to limit the emissions of VOC and NO<sub>x</sub> during construction of the Project. In addition, the following VDEQ air pollution regulations must be adhered to during the construction of this project: 9 VAC 5-130-10 et seq., Open Burning restrictions; 9 VAC 5-45-760 et seq., Cutback Asphalt restrictions; and 9 VAC 5-50-60 et seq., Fugitive Dust precautions. The Design-Builder will be required to adhere to the limitations outlined in Special Provision 107E for Volatile Organic Compound Emissions Control Areas.

Construction activities will be performed in accordance with the VDOT 2007 Road and Bridge Specifications. The specifications require compliance with all applicable local, state, and federal air quality regulations.

#### **2.4.8 Noise Mitigation**

A preliminary noise evaluation was performed by VDOT and a more-detailed review shall be completed by the Design-Builder during final design. It was determined from the preliminary noise evaluation that mitigation measures are required for the Project. However, noise abatement measures that were found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction. A copy of the Rappahannock River Crossing Project (UPC 101595) Preliminary Noise Analysis (Preliminary Noise Analysis) dated September 2014 is included in the RFP Information Package.

A Final Design Noise Analysis shall be submitted to VDOT for review and approval. The Final Design Noise Analysis, consisting of a re-analysis of all noise sensitive receptors identified in the project area, will be required to confirm that noise mitigation is required. The final noise analysis shall account for the future I-95 CD lanes.

Noise walls, as shown on the RFP Conceptual Plans and/or the Preliminary Noise Analysis, shall be utilized for Proposal preparation purposes. The Offeror's Proposal shall include the worst-case scenario if there is a difference between the RFP Conceptual Plans and the Preliminary Noise Analysis. A post-award Final Design Noise Analysis, consisting of a re-analysis of all noise sensitive receptors identified in the Project area, will be required to confirm if noise mitigation is required. Based on results of the final noise analysis, one of the following scenarios will occur:

- If the final noise analysis indicates additional noise walls are required in excess of the Offeror's Proposal that's not due to changes in plan and profile as part of the Design-Builder's final design, VDOT shall compensate the Design-Builder for any additional walls above what was proposed.
- If the final noise analysis indicates a reduction of noise walls than that provided in the Offeror's Proposal regardless of any design changes, the Design-Builder shall credit VDOT for the amount of the reduction.
- If the final noise analysis warrants noise walls but some or all the walls are not desired by the public, the Design-Builder shall credit VDOT for the amount of the reduction.
- If the final noise analysis does not warrant noise walls but walls are desired by the public, VDOT shall compensate the Design-Builder for any additional walls above what was proposed.

If the results of the Final Design Noise Analysis dictate; the Design-Builder will provide permanent noise mitigation in compliance with the Virginia State Noise Abatement Policy, the Highway Traffic Noise Impact Analysis Guidance Manual (July 2015), FHWA’s Highway Traffic Noise Analysis and Abatement Guidance (December 2011), the VDOT Noise Report Development and Guidance Document Version 5, the Special Provision for Sound Barrier Walls, and the (updated January 2016) VDOT Road Design Manual. The noise barrier shall be located and constructed in such a manner to accommodate for the construction of a future CD road system as described in Part 2, Section 2.2. This includes all work associated with the design and construction of a noise barrier from Cowan Boulevard to Fall Hill Avenue.

The Design-Builder is prohibited from deviating on VDOT’s noise barrier policy, guidance, or special provisions without allowance granted in this document or prior written approval from VDOT.

The final barrier endpoint(s) and dimension(s) shall be determined during the final design noise analysis. A draft Noise Abatement Design Report (NADR) shall be submitted for review and approved prior to the submittal of a final Noise Abatement Design Report (NADR). The NADR shall be conducted by an individual qualified in the field of highway traffic noise impact analysis as noted in Section 3.0 of the Highway Traffic Noise Analysis and Abatement Guidance Manual. The Noise Abatement Design Report (NADR) shall be furnished by the Design-Builder at its sole cost and expense. The NADR will utilize environmental traffic data (ENTRADA) spreadsheets with the appropriate design year. The Design-Builder shall be responsible for developing the ENTRADA for the Final NADR based on the approved design and/or latest design information. The final noise mitigation design will utilize the design year traffic volumes defined in the Preliminary Noise Analysis unless otherwise directed due to traffic updates.

Final design of noise abatement measures shall be based on the preliminary noise abatement design developed in the Preliminary Noise Analysis as noted in Section 10.5 of the Highway Traffic Noise Analysis and Abatement Guidance Manual.

Upon approval of the Final Design Noise Analysis the Department shall prepare a concurrence letter outlining the results of the analysis for the VDOT’s Chief Engineer and FHWA. Once concurrence is achieved the Design-Builder shall prepare and mail letters “certified return receipt” to benefitted receptors to ascertain the desire to have noise barriers constructed as part of the Project. Upon completion of the citizen survey, VDOT shall prepare a second concurrence letter documenting the results, if necessary. All noise barriers should be named as presented within the NADR.

All noise barriers recommended for construction and concurred with by the Chief Engineer and FHWA are included in the scope of the Construction Project and shall be funded by the Design-Builder at its sole cost and expense. This includes barriers with conditions, as long as those conditions have been met.

Prior to submitting a noise barrier plan for VDOT’s review, the Design-Builder will have the noise consultant that completed the NADR review the plan set and certify that the proposed

design meets the noise abatement requirements. This certification will be included in the plan set when it is submitted to the Department for review.

If deviations in the horizontal or vertical alignment of a noise barrier (or the roadway alignment) are proposed following concurrence from VDOT's Chief Engineer or FHWA, then the Design-Builder shall perform any additional noise analysis and provide the results to the Department for review and approval prior to construction. This will include a plan and profile view of the roadway with the alignments recommended barrier and the proposed design. A justification of the deviation will be included with the plan set. The revised NADR chapter for the noise barrier for which modification is requested will be submitted with this additional information.

A key plan will be clearly labeled to show the location of the ground-mounted combo wall (noise barrier on retaining wall).

Plan view will provide the alignment of the noise barrier with the roadway plan view.

Profiles of the wall alignment will include the noise attenuation line and the existing and proposed elevation. If combo walls or bridge-mounted barriers are present along the alignment, the pattern of the line will be different so that all lines can be distinguished.

Stations of the roadway and noise barrier will be included on both the plan and profile views.

Access shall be provided by access doors for VDOT maintenance personnel. Noise barrier design shall also be coordinated with first responders to ensure access to fire hydrants and other emergency equipment. In lieu of access doors, gaps may be provided in the walls with a minimum 3:1 ratio of barrier overlap.

#### **2.4.9 Environmental Compliance**

The Design-Builder is responsible for compliance with all applicable state and federal environmental laws, regulations, and permits. If, at any time, the Design-Builder is not in compliance with all applicable environmental laws, regulations, Executive Orders, commitments, etc., the VDOT Project Manager has the authority to suspend work, in whole or in part, until such time as the deficiencies or non-compliant items have been corrected. Should any non-compliant item(s) be identified during construction, immediate and continuous corrective action shall be taken by the Design-Builder to bring the item(s) back into compliance. The Design-Builder shall notify the VDOT Project Manager immediately of all non-compliant item(s) and shall provide to the VDOT Project Manager copies of all documentation and correspondence with regulatory agencies related to the non-compliant item(s) and their resolution, concurrent with each submission.

The Design-Builder shall be responsible for any schedule delays and associated costs as a result of any delays and/or shut downs associated with non-compliance. Any monetary fines

associated with violations and/or any environmental restoration activities required for resolving violations shall be the responsibility of the Design-Builder.

The Design-Builder shall carry out environmental commitments during design and construction, as applicable, as identified in the PCE, the final Document Re-evaluations for RW Authorization (EQ-201) and PS&E Authorization (EQ-200), and the Environmental Certification/Commitments Checklist (EQ-103). All commitment compliance shall be supported by appropriate documentation, to be provided by the Design-Builder to the VDOT Project Manager.

The Design-Builder shall be responsible for compliance with pre-construction and construction-related environmental commitments and permit conditions. The Design-Builder shall assume all obligations and costs incurred by complying with the terms and conditions of the permits and certifications. Any fines associated with environmental permit or regulatory violations shall be the responsibility of the Design-Builder.

## 2.5 Survey

The Design-Builder is advised that the preliminary field survey and utility data provided is not represented to be complete for purposes of design and construction of the Project. The Design-Builder's scope of work shall include performing all surveying and utility designation that is necessary to design and construct the Project in accordance with VDOT's Survey Manual.

Preliminary field survey and utility data has been obtained for this Project and contains the general depiction of existing conditions which the Design-Builder is obligated to verify and finalize through survey before completing final design of the Project. The special accuracy of the preliminary survey is at the Class 1 Level with 1-foot contours. The survey is, bounded by photographic and LIDAR limits. The area includes I-95 from 1,500 feet south of Route 3 to Fall Hill Avenue and includes Route 3 from Carl D. Silver Parkway to Gateway Boulevard. The field survey was conducted using conventional and LiDar methods and data was collected within the tolerances defined in the VDOT Virginia Map Accuracy Standards. Preliminary field survey and utility data have been obtained, including, but not limited to the following:

- Vertical control (Based on NAVD88)
- Horizontal control (Based on NAD83)
- Planimetrics
- Property data and R/W
- Utilities (Level B sub-surface utility investigation within mapped limits)
- Digital Terrain Model

The Virginia Code 33.2-1011 requires that Notice of Intent letter “shall be sent to the owner by mail, at the address recorded in the tax records, **not less than 15 days prior** to the first date of the proposed entry. Notice of intent to enter shall be deemed made on the date of mailing.” “The notice shall include the anticipated date such entry is proposed to be made and the purpose of such entry.” Advance notification of property owners is required for all data



collection efforts related to the development of highway plans. Copies of the letters and address labels shall be provided to the VDOT Project Manager for forwarding to the District Survey Manager as soon as they become available for VDOT approval.

The Design-Builder shall be responsible for obtaining any survey data, including all right-of-entry and land use permits, locating and/or designating underground utilities, digital terrain model (DTM), utility test holes and obtaining other related data necessary for the design, right-of-way acquisition, limited access revisions, and construction of the Project. Additionally, the Design-Builder will be responsible for any update (property owner changes, subdivisions, etc.) that may occur; updates need to be reflected on the plans in order to acquire right-of-way and complete the final design. Any survey changes shall be verified and certified, and submitted in final documentation.

The Design-Builder will be responsible to reset or relocate any survey control damaged, destroyed or located within the footprint of the final design construction limits. The control will be established by a land surveyor licensed in the Commonwealth of Virginia with LD-200 information and supporting computations submitted to the VDOT Project Manager.

Prior to Project completion, the Design-Builder shall provide and set final VDOT RM-1 or RM-2 right-of-way monuments within the Project limits. The Design-Builder shall depict the monuments on the Right-of-way Plans in accordance with VDOT's Survey Manual.

## 2.6 Geotechnical Work

A preliminary geotechnical subsurface investigation has been completed for the Project. The results of the subsurface exploration and associated laboratory test results are presented in the Geotechnical Data Report dated September 6, 2016, which is included in the RFP Information Package.

The data included in this RFP is being provided for Offeror's information in accordance with Section 102.04 of Part 5 (Division I Amendments). The Design-Builder shall perform a design-level geotechnical investigation to validate and augment the geotechnical information included in this RFP. The geotechnical engineering investigation performed by the Design-Builder shall meet or exceed both Chapter 3 of the VDOT Material Division's Manual of Instructions (MOI); the current AASHTO LRFD *Bridge Design Specifications*, ~~6<sup>th</sup>~~ 7<sup>th</sup> Edition, ~~2012-2014~~ and VDOT Modifications; and Section 700.04 (c) of the VDOT 2007 Road and Bridge Specifications.

The Design-Builder shall collect appropriate data for geotechnical evaluation of pavements, embankments, soil cuts, soil and rock cuts, culverts, wall structures (retaining/mechanically stabilized earth), noise barriers, storm water management facilities, signal pole, high mast, or overhead signs, minor structures including drainage pipes, and any other earth-supported or earth-retaining structures or elements of highway design and construction required for the Project. The Design-Builder will be responsible for obtaining all necessary permits and utility clearances as required by VDOT, the Commonwealth of Virginia, or any other jurisdictional body or owner prior to accessing public or private property for the



purpose of conducting geotechnical field work and shall provide the necessary traffic control in accordance with the Work Area Protection Manual. The Design-Builder shall complete laboratory tests in accordance with pertinent VTM, ASTM or AASHTO standards and analyze the data to provide design and construction requirements. Soils, rock, aggregate, asphalt, concrete and other materials tests shall be performed by a laboratory accredited through the AASHTO Accreditation Program (AMRL and CCRL) for each test it conducts for the Project, unless otherwise approved by VDOT.

The Design-Builder shall provide VDOT with all records of subsurface explorations and describe the soils encountered and their depth limits in accordance with the requirements outlined in Chapter 3 of the VDOT Materials Division MOI. The Design-Builder shall provide to VDOT electronic copies of all subsurface explorations in accordance with the boring log template available on the website included in Chapter 3 of the VDOT Materials Division MOI. The electronic files shall be provided by a certified professional geologist or a suitably qualified registered professional engineer in the Commonwealth of Virginia, in gINT© software. The gINT© file for the borings contained in Geotechnical Engineering Data Report, dated September 6, 2016, are provided in the RFP Information Package.

Unless otherwise addressed by AASHTO LRFD, the Design-Builder shall incorporate reliability assessments in conjunction with standard analysis methods in accordance with Chapter 3 of the VDOT Materials Materials MOI. An acceptable method for evaluation of reliability is given by Duncan, J.M. (April 2000) *Factors Of Safety and Reliability in Geotechnical Engineering*, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Discussions and Closure August 2001. The Design-Builder may propose to identify specific, non-critical features, and alternative methods for evaluating variability of subsurface conditions, reliability and minimum factors of safety, prior to submission of its design calculations and drawings. VDOT may, in its sole discretion, accept or reject such proposed methods.

The Design-Builder shall submit to the VDOT for its review all geotechnical design and construction memoranda and/or reports that summarize pertinent subsurface investigations, tests, and geotechnical engineering evaluations and recommendations utilized in support of their design/construction documents. This submittal shall be made at least ninety (90) days in advance of the submittal of any final design/construction documents that are dependent upon the geotechnical evaluations and recommendations. Technical specifications for construction methods that are not adequately addressed in the Standard Specifications shall be provided by the Design-Builder as part of the final design/construction documentation. Prior to submittal of any final design/construction documentation, the Design-Builder shall review the final design/construction documents to assure that it appropriately incorporated the geotechnical components and shall submit evidence of this review to accompany the final design/construction documentation. The Design-Builder shall reference the drawings that incorporate the pertinent results. The Design-Builder's Quality Assurance and Quality Control (QA/QC) Plan shall document how each specific geotechnical recommendation or requirement will be addressed in the final design/construction documentation. The results of the geotechnical investigation and laboratory results shall support design and construction efforts to meet the requirements outlined in this Section.

## 2.6.1 Minimum Pavement Sections

Minimum pavement sections and anticipated locations for these sections shall be utilized for Proposal preparation purposes only. The anticipated locations for new pavement, mill and overlay, demolish and replace the pavement sections are provided on the RFP Conceptual Plans included in the RFP Information Package. The Design-Builder shall be required to validate the minimum pavement sections and to notify VDOT of its findings. If the Design-Builder's findings require a deviation from the RFP requirements, it shall notify VDOT during the Scope Validation Period consistent with Part 4, Section 2.2. Acceptable changes to the minimum pavement sections are limited to increasing the thickness of the base or subbase layers specified below. Any changes to the minimum pavement sections provided in Part 2, Section 2.6.1 and/or location for the pavement sections shown on the RFP Conceptual Plans require approval by VDOT. The Design-Builder shall be responsible for the final design and construction of the pavements for this Project in accordance with the Contract Documents.

The Design-Builder shall photographically document the existing condition of all pavements within and adjacent to the Project limits prior to the Design-Builder's submission of final construction plans for VDOT's approval and provide all photos to the VDOT Project Manager. Photos shall be color digital images in .jpg format with 4 megapixels (approximately 2400 pixels wide x 1600 pixels high) or greater resolution. The Design-Builder shall be responsible for full-depth replacement of all pavement damaged resulting from Project construction activities, regardless of the method or location of the pavement damage.

The Design-Builder shall prepare and incorporate into the plans, typical sections, profiles and cross-sections the validated pavement sections in accordance with the applicable manuals noted in Part 2, Section 2.1. This includes drainage and subdrainage requirements to ensure positive drainage both within the pavement structure and on the pavement surface. The minimum pavement sections are as follows:

### **New Pavement and Pavement Widening**

The minimum pavement sections shall be based upon the following criteria: (a) a minimum soil CBR value of 10 within two (2) feet of subgrade, (b) all subgrade is compacted in accordance with the applicable sections of the VDOT 2007 Road and Bridge Specifications and applicable special provisions and, (c) all unsuitable materials have been removed or modified in accordance with Part 2, Section 2.6.3. Pavement designs shall be performed in accordance with AASHTO Design of Pavement Structures (1993) guidelines and Chapter VI of the VDOT Materials Division MOI (2011).

### **I-95 Widening (North and Southbound Lanes)**

**Surface** – 220 lbs/SY Asphalt Concrete Type, SM 12.5 E

**Intermediate** – 220 lbs/SY Asphalt Concrete, Type, IM-19.0D

**Base** – 8 inches Asphalt Concrete Type, BM 25.0 A

**Subbase** – 8 inches Aggregate Base Material, Type I, 21B to be connected to VDOT Standard UD-4 edgedrain

**I-95 Shoulder Design (North and Southbound directions)**

**Surface** – 220 lbs/SY Asphalt Concrete Type, SM 12.5 A  
**Intermediate** – 220 lbs/SY Asphalt Concrete, Type, IM-19.0D  
**Base** – 8 inches Asphalt Concrete Type, BM 25.0A  
**Subbase** – 8 inches Aggregate Base Material, Type I, 21B

**All Ramps (A, B and Loop B), Slip Ramp B, Route 3 east and Route 3 west**

**Surface** – 220 lbs/SY Asphalt Concrete Type, SM 12.5 E  
**Intermediate** – 220 lbs/SY Asphalt Concrete, Type, IM-19.0D  
**Base** – 6 inches Asphalt Concrete Type, BM 25.0A  
**Subbase** – 8 inches Aggregate Base Material, Type I, 21B to be extended and daylighted

In locations where curb and gutter is available, install VDOT Standard UD-4 edge drains and tie to drop inlets for positive drainage.

**Ramps (A and B), Slip Ramp, Route 3, Loop B and Route 3 west Shoulder Design**

**Surface** – 220 lbs/SY Asphalt Concrete Type, SM 12.5 A  
**Intermediate** – 220 lbs/SY Asphalt Concrete, Type, IM-19.0D  
**Base** – 6 inches Asphalt Concrete Type, BM 25.0A  
**Subbase** – 8 inches Aggregate Base Material, Type I, 21B to be extended and daylighted

**All Other Areas**

**Surface** – 220 lbs/SY Asphalt Concrete Type, SM 12.5 D  
**Intermediate** – 220 lbs/SY Asphalt Concrete, Type, IM-19.0A  
**Subbase** – 8 inches Aggregate Base Material, Type I, 21B

**Mill and Overlay**

For salvage/build-up areas, the existing pavement shall be milled two (2) inches and replaced with 220 lbs/SY, Asphalt Concrete Type, SM 12.5E

**Temporary Pavement**

The Design-Builder shall be responsible for any temporary pavement design. Temporary pavements shall be designed in accordance with the AASHTO Guide for the Design of Pavement Structures (1993 edition) and the VDOT Materials Division’s MOI. All temporary pavement designs shall be submitted to VDOT for review. All temporary pavement shall be completely removed once it is no longer in service. All temporary pavement designs shall have a minimum six (6) inches of asphalt concrete and shall meet the following minimum design criteria:

- Design Life – 6 months minimum or as required for construction phasing, whichever is greater

- Reliability – eighty-five percent (85%) minimum
- Initial Serviceability – 4.2 minimum
- Terminal Serviceability – 2.8 minimum
- Standard Deviation – 0.49 minimum
- CBR value for subgrade soils determined through laboratory tests

The minimum pavement sections require that proper grading be maintained to direct surface water away from paved areas and to provide for efficient runoff from surrounding areas.

Any utility excavations or excavations for storm drains within pavement areas shall be backfilled with compacted structural fill in accordance with applicable sections of the VDOT 2007 Road and Bridge Specifications and applicable special provisions.

VDOT Standard Combination Underdrain (CD-1) shall be provided at the lower end of cuts. VDOT Standard Combination Underdrain (CD-2) shall be provided at grade sags and at the lower end of undercut areas.

## 2.6.2 Geotechnical Requirements

Embankments and certain aspects of retaining wall design are not addressed by LRFD. Embankments and cut slopes shall be designed in accordance with Section 305 of the VDOT Materials Division's MOI. The maximum slope ratio to be used for cut and/or roadway embankment fill slopes shall not be steeper than 2H:1V. The Design-Builder is responsible for verifying the stability of all slopes, including those retained by structures.

All retaining walls shall be designed in accordance with applicable VDOT and AASHTO requirements, including Soil Design Parameters for Sound Barrier Walls, Retaining Walls and Non-Critical Slopes included in the RFP Information Package. If the Design-Builder elects to use mechanically stabilized earth (MSE) walls, the fill material used in the reinforced zone shall be a crushed aggregate with properties in accordance with VDOT's special provisions for approved proprietary MSE walls. The Design-Builder shall provide both global and external stability analysis utilizing a computer program acceptable to VDOT and submit the results of the analysis, including boring logs, laboratory data, and any other applicable data, to VDOT geotechnical engineers for review. The wall supplier shall provide to the Design-Builder, for submittal to VDOT, an internal stability analysis that validates the design of the wall. Retaining walls shall be designed to control settlements within tolerances identified by VDOT Guidelines for Preparation of Alternate Retaining Wall Plans.

Material and Construction requirements shall follow the VDOT Manual of the Structure and Bridge Division, Volume V – Part 11 “Geotechnical Manual for Structures” and applicable special provisions listed in Part 2, Section 2.1.1(c). Where undercutting and material replacement is required to reduce settlement or improve bearing capacity/global stability, areas requiring repair shall be clearly identified on the plans with notes provided to aid plan review, construction, and inspection.

Removed pavement material, unsuitable material, and hazardous materials shall be disposed of in approved offsite facility.

### **2.6.3 Unsuitable Materials**

Unsuitable Material is defined as material used as embankment fill, and in cut areas to a depth of at least two (2) feet below subgrade directly beneath pavements and at least two (2) feet beneath the bedding of minor structures and laterally at least two (2) feet beyond the outside edge of the pavement shoulders and bedding limits of the minor structures that meets one or more of the following criteria: classifies as CH, MH, OH and OL in accordance with the Unified Soil Classification System (USCS); contains more than five (5) percent by weight organic matter; exhibits a swell greater than five (5) percent as determined from the California Bearing Ratio (CBR) test using VTM-8; exhibits strength, consolidation, durability of rock or any other characteristics that are deemed unsuitable by the Design-Builders' geotechnical engineer or as denoted in the Contract Documents for use in the Work. All materials within the uppermost three (3) feet of a pavement subgrade that exhibits a CBR value less than that stipulated in the pavement design shall also be considered unsuitable.

The anticipated locations and methods of treatment for unsuitable materials identified by the Design-Builder's qualified geotechnical engineer shall be shown on the design plans and cross sections. Saturated or very dry and/or loose or very soft coarse- and fine-grained soils that exhibit excessive pumping, weaving or rutting under the weight of construction equipment are also considered unsuitable unless they can be moisture conditioned through either mechanical or chemical means to an acceptable moisture content that allows adequate compaction to meet project specifications, and classification testing indicates they are not otherwise unsuitable. Topsoil, peat, coal and carbonaceous shale shall also be considered unsuitable material. All unsuitable material shall be disposed of and/or treated as discussed in Section 106.04 of the VDOT 2007 Road and Bridge Specifications at no additional cost to VDOT. Topsoil or other organic soils are also considered unsuitable for use in embankment fill other than as a cover for slopes for the purpose of establishing vegetative cover. When used as cover for slopes, the thickness of topsoil shall not exceed twelve (12) inches.

### **2.6.4 Acid-Sulfate Soils**

The soils at the site are known to be potentially acidic due to the presence of acid sulfate soils. All structures in contact with on-site soils shall be designed to resist corrosion and to be functional for the design life indicated in the Contract Documents, unless specific testing determines that the soils are not currently or potentially acidic.

The acidic nature of the soils is also problematic for establishing vegetative growth; as such, all cut and fill surfaces shall be treated appropriately such that a high quality vegetative cover can be established and maintained.

The Design-Builder shall investigate for the presence of acid sulfate soils along the alignment (both naturally occurring and as a result of encapsulation) of the proposed construction, assess the potential impacts and implement appropriate avoidance and/or mitigation

measures, if encountered. Prior to final seeding, the Design-Builder shall perform Acid-Base Accounting Tests per EPA Publication 600/2-78-054 at a rate of 20 tests per acre. The samples will be collected from the top six (6) inches of any area designated to receive seeding. Upon completion of the testing, the Design-Builder shall submit a written report containing the test results and plan for the application of lime. Lime shall be applied at 1.25 times the net neutralizer deficiency noted in the test results. As an example, if the net neutralizer deficiency is found to be 12.77 tons (calcium carbonate equivalent in tons per acre/1000 tons of material), lime shall be applied at 15.96 tons per acre. In no case shall lime be applied at a rate of less than four (4) tons per acre, despite the results of the Acid-Base Accounting. In areas where the amount of lime needed is greater than four (4) tons per acre, the Design-Builder shall blend the lime into the upper six (6) inches of soil by disking or similar blending method to fully incorporate the lime in the soil.

Mitigation measures (singularly or in combination) that may be considered by the Design-Builder include, but are not limited to:

#### Avoidance

- Covering unexcavated, undisturbed acid sulfate soils with non-aggressive fill soils.

#### Minimization of Disturbance

- Adjust alignment and cut/fill areas to avoid acid sulfate soils.
- Design drainage structures and piping not to penetrate acid sulfate soil layers.
- Avoid activities resulting in fluctuations (lowering) of the groundwater table as they may lead to the exposure of potential acid sulfate soils to oxygen.

#### Neutralization

- Commonly used mitigation technique where acid sulfate soils are mixed with alkaline materials
- Alkaline materials may include fine agricultural lime, dolomite, magnesite, hydrated lime and sodium bicarbonate
- Must be supported by the appropriate level of field and laboratory testing.

### **2.6.4.1 Vibration Control**

Control vibrations to less than 0.5 ips (inches per second) at the nearest structure. In addition to private/adjacent properties, this includes structures under construction and structures owned by VDOT. The Design-Builder will be responsible for repairing any and all damage to adjacent facilities and structures for construction-induced damage.



#### **2.6.4.2 Coordination and Review by Design-Builder’s Geotechnical Engineer**

The Design-Builder’s geotechnical engineer shall be on-site during grading operations or visit the site at sufficient intervals during construction to review slope excavation operations and verify the planned slope design is suitable or make modifications as approved by VDOT.

#### **2.6.5 Pipe Installation Methods**

Culverts or utility pipes shall be installed by either conventional methods in accordance with Section 302.03 of VDOT’s 2007 Road and Bridge Specifications, or Jack and Bore and/or by Micro-tunneling in accordance with the applicable Special Provisions contained in the RFP Information Package. Trenchless technology other than these methods of installation is not permitted unless otherwise approved by VDOT. Trenchless technology is required on all primary routes unless approval for using another method is given by VDOT. The Design-Builder’s Design Engineer shall choose which of the allowable methods of installation is best suited for the ground and site conditions where the work is to be performed and that will meet the design requirements of the proposed culverts or utility pipes. The Design-Builder’s Design Engineer shall be responsible to establish both the vertical and horizontal tolerances in support of the design. Such tolerances shall be noted on the Construction Plans. The design tolerance may be more stringent than what is called for in the both the Jack and Bore and Micro-Tunneling Special Provisions; however, under no circumstances shall the design tolerances used in design of either culverts or utility pipes exceed those specified in the VDOT 2007 Road and Bridge Specifications and the applicable special provisions. Performance requirements and tolerances stipulated in the special provisions shall also apply to conventional tunneling methods. If trenchless technology is used to complete roadway crossings, surface settlement monitoring must be performed to verify that there is no adverse impact on the stability and performance of the embankment and pavement structure above the pipe alignments in accordance with Section 302.03 of the VDOT 2007 Road and Bridge Specifications and the Special Provisions for Jack and Bore and/or Micro-Tunneling, as applicable.

### **2.7 Hydraulics**

The Design-Builder shall provide and/or perform all investigations, evaluations, analysis, coordination, documentation, and design required to meet all Hydrologic and Hydraulic, Drainage, Stormwater Management, Erosion and Sedimentation Control, Stormwater Pollution Prevention, and Virginia Storm Water Management Program permitting requirements of the standards and reference documents listed in Part 2, Section 2.1.

#### **2.7.1 Drainage**

The drainage work shall include the design and construction of culverts, open channels, storm sewer systems, underdrains, bridge deck drainage assemblies and structures, downstream channel and flood protection measures, stormwater management facilities, and erosion and sediment control measures in compliance with the standards and reference documents listed in Part 2, Section 2.1 and the VDOT Erosion and Sediment Control and Stormwater Management



Programs. All pipe culverts and storm sewer pipe for the Project shall be determined in accordance with the VDOT Drainage Manual and the VDOT 2008 Road and Bridge Standards and all joints shall be determined in accordance with IIM-LD-254. No buried metal pipe culverts shall be permitted. The Design-Builder shall provide VDOT two (2) paper and two (2) electronic copies on compact disc of a final drainage report incorporating all drainage calculations including pre and post development discharges, capacities, and supporting data such as drainage areas (with maps), ground cover calculations, etc. in accordance with the documentation requirements as outlined in the VDOT Drainage Manual.

Included in the RFP Information Package is a video of the existing roadway culverts crossing under Ramp A and Ramp B.

For the purpose of developing the Price Proposal, the Offeror shall assume that all roadway culverts, ~~excluding those video inspected by VDOT that crossing under Ramp A and Ramp B, and stormsewer pipes shown as being replaced with the Project~~ located within the Project limits are structurally deficient and shall be plugged and abandoned in accordance with VDOT Road and Bridge Standard PP-1, removed, or replaced with adequate structures designed and constructed in support of the Design-Builder's final drainage design. If after award the Design-Builder investigates the structural condition of the existing culverts and storm sewer pipes, and as a result proposes use (or repair) of some or all, then it shall be done only with VDOT's approval. Storm sewer pipes and structures located downstream of drainage structures installed with the Project to provide adequate hydraulic capacity and not connected to or modified by the Project shall be considered structurally sufficient for purpose of developing the Price Proposal. Hydraulic capacity shall be evaluated separately for all impacted storm sewer systems and culverts and may require their replacement on that basis as determined by the Offeror. The Design-Builder shall credit VDOT, the differential in cost for utilizing the existing or rehabilitated culverts and storm sewer pipes in lieu of removing and replacing the ~~culverts~~ structures. The Design-Builder shall assess the structural condition and serviceability of the structure by performing a visual/video inspection of the existing culverts and storm sewer pipes utilizing the assessment criteria for Post Installation Inspections presented in VDOT Supplemental Specification 30203. The Design-Builder shall provide VDOT with an inspection report documenting the assessment following the methodology as prescribed in the supplemental specification. The report shall include a certification from the Design-Builder's structural engineer attesting to the structural adequacy of the structures and specific recommendations relative to improvements to the structural condition and serviceability of the structures The Design-Builder shall provide the report to VDOT for review and approval prior to proceeding to final design. With VDOT's approval, culverts and storm sewer pipes deemed repairable shall be rehabilitated in accordance with VDOT's guidelines including, but not limited to those methods outlined in Chapter 8, Section 8.3.6.7 of the VDOT Drainage Manual and Special Provisions SU302001DB Pipe Rehabilitation and SU302002A Pipe Replacement.

~~For the purposes of developing the Price Proposal, the Offeror shall assume that existing storm sewer systems located within the Project limits, as defined in Part 2, Section 1.1 and which are a functional element of the proposed drainage design, are structurally deficient and that it shall be removed and replaced with adequate structures designed and constructed in support of~~

~~the Design-Builder's final drainage design. VDOT has not evaluated the structural condition of the existing storm sewer system and as such does not warrant its structural adequacy.~~

Underdrain outfall locations are not shown in the RFP Conceptual Plans and it shall be the responsibility of the Design-Builder to develop the underdrain design including adequate outfall locations. The Design-Builder may, at its discretion, utilize access structures (i.e. manholes, cleanouts, etc.) in lieu of EW-12's in order to outfall an underdrain according to the guidelines set forth in the 2008 VDOT Road and Bridge Standards and the VDOT Drainage Manual while maintaining the ability for the underdrain to be accessed in the future for maintenance purposes.

## **2.7.2 Stormwater Pollution Prevention Plan (SWPPP)**

A SWPPP, including, but not limited to, an Erosion and Sediment Control (ESC) Plan and Narrative, a Pollution Prevention (P2) Plan, and a post construction Stormwater Management (SWM) Plan shall be prepared and implemented by the Design-Builder in compliance with applicable requirements of the standards and reference documents listed in Part 2, Section 2.1 including the Virginia Erosion and Sediment Control Law and Regulations and the Virginia Stormwater Management Program (VSMP) Law and Regulations.

It shall be the responsibility of the Design-Builder to have a qualified person within their team structure, other than the ESC and post construction SWM Plan designer, who is authorized and/or certified by the Virginia Department of Environmental Quality (VDEQ) to perform plan reviews, independently review and certify that the ESC Plans and Narrative and post construction SWM Plan for the Project are in accordance with VDOT's Approved ESC and SWM Standards and Specifications. Before implementing any ESC or post construction SWM measures not included in VDOT's approved ESC and SWM Standards and Specifications, a variance or exception respectively must be requested through the District Drainage Engineer in accordance with the latest versions of the VDOT Drainage Manual, IIM-LD-195, and IIM-LD-251.

The Design-Builder shall complete and submit the ESC and SWM Plan Certification form (LD-445C) to the VDOT Project Manager. The Design-Builder shall provide VDOT two (2) paper and two (2) electronic copies each on a CD of the final ESC Plan and Narrative, P2 Plan and post construction SWM Plan incorporating all calculations, analysis, documentation and evaluations required. The ESC Narrative shall specifically include calculations (with supporting data) documenting that the design meets the water quantity requirements for downstream channel flood protection in the ESC Law and the VSMP Regulations, as appropriate, for each location where stormwater is discharged from the Project site.

The Project requires coverage under the VPDES General Construction Permit for the Discharges from Construction Activities (VPDES Construction Permit). The Design-Builder is responsible for providing to the Department the necessary information for it to secure permit coverage for the Project. The permit fee will be paid by VDOT and it shall not be included in the Offeror's Price Proposal. The Design-Builder shall complete the applicable sections of the VPDES Construction Permit Registration form (LD-445), the VPDES Construction Permit

Contact Information (LD-445A) along with the completed ESC and SWM Plan Certification form (LD-445C) and submit them to the VDOT Project Manager. The VDOT Project Manager will review the submitted information and, if complete and acceptable, process a request for coverage under the VPDES Construction Permit in accordance with VDOT's guidelines as outlined in the latest version of IIM-LD-242. If any information submitted by the Design-Builder is found to be incomplete and/or unacceptable, the assembly will be returned to the Design-Builder for corrective action and resubmission.

A working conceptual ESC and post construction SWM Plan and SWPPP for the entire Project must be submitted for review and approval with the initial application for permit coverage. This initial conceptual Plan submittal shall include the proposed total expected Land Disturbance Area and Land Development Area, including any off-site facilities, for the entire Project. Where the Project will be constructed in segments, the Design-Builder shall submit a finalized ESC Plan, a post construction SWM Plan and a P2 Plan, including the expected Land Disturbance Area, for the proposed initial work segment in addition to the conceptual plan for the entire Project. It is expected that the individual work segment submittals will be self-sustaining and not incur a deficit in post construction SWM design requirements requiring mitigation on future work segments. Subsequent work segment submittals shall include required modifications to the Land Disturbance Area value. However, these modifications, in total, shall not exceed the initially submitted Land Development Area value. The Design-Builder shall not proceed with work to be covered by the permit until permit coverage is secured and the VDOT Project Manager releases the work in writing. It is noted that permit coverage, and subsequent release of work, can take up to ninety (90) days from the time that the Design-Builder submits a request for coverage that includes all required information. This represents a hold point in the Design-Builder's CPM Schedule. Design-Builder shall provide a completed SWPPP Certification form (LD-455E) before commencement of any land disturbing activity and shall complete and include the SWPPP General Information Sheets in the plan assembly per the latest version of the VDOT Drainage Manual. The SWPPP Certification form (LD-455E) and SWPPP General Information Sheets shall be updated with each work segment submittal as necessary.

The Design-Builder shall be responsible for compliance with construction-related permit conditions and shall assume all obligations and costs incurred by complying with the terms and conditions of the permit. Any fines associated with permit or regulatory violations shall be the responsibility of the Design-Builder. Upon completion of the entire regulated land disturbing activity (including final stabilization of all disturbed areas), the Design-Builder shall provide updated/revised Permanent Best Management Practice (BMP) information in Section VI of the SWPPP General Information Sheets for each post construction BMP placed into service on the Project, complete the VPDES Construction Permit Termination Notice form (LD-445D) and submit both documents (without signature) to the VDOT Project Manager for processing. The Design-Builder shall also have on-site during any land disturbing operations an individual or individuals holding a VDEQ Inspector Certification, a VDEQ Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) to ensure compliance with all VDEQ and VDOT erosion and sediment control plan implementation requirements.

### **2.7.3 Post-Construction Stormwater Management Facilities**

The Design-Builder shall be responsible for the design and construction of stormwater management facilities as required for the Project in accordance with the latest version of IIM-LD-195, and the other standards and reference documents listed in Part 2, Section 2.1 including the Virginia Stormwater Management Program Law and Regulations, and shall comply with the minimum geotechnical requirements contained therein. VDOT has identified potential locations for post construction stormwater management facilities as part of the RFP Conceptual Plans. However, these locations are preliminary and have not been fully evaluated to determine if these locations are suitable, feasible or sufficient to address all of the stormwater management requirements of the project. The Design-Builder, as part of their final design, shall evaluate these locations, and if found acceptable, develop a final post construction stormwater management plan.

If any of the locations are found to be unacceptable, the Design-Builder must identify other acceptable location(s) to meet the post construction stormwater management requirements of the Project. The Design-Builder is to insure proper ingress and egress to any stormwater management facility and that any specific proprietary facilities have proper maintenance details included in the Record (As-Built) Plans. When a stormwater management basin is located outside limited access fencing, maintenance access should be provided from a separate public road where economically feasible. When maintenance access can only be provided from a limited access roadway, a locked gate shall be provided.

The Design-Builder may elect to purchase nutrient credits in accordance with IIM-LD-251 to satisfy the post-construction water quality reduction requirements for the Project. It is the responsibility of the Offeror to investigate the availability of nutrient credits and as such their purchase shall be at their risk. All costs associated with the purchase of the nutrient credits shall be included in the Offeror's Price Proposal. The use of such nutrient credits shall be identified in the Design-Builder's SWPPP. Where the Design-Builder elects to purchase nutrient credits, the Design-Builder shall complete Attachment 2.4, the Nutrient Credit Assignment Agreement and shall submit the agreement to VDOT for execution. The agreement is to be used for the transfer of the ownership of nutrient credits from the purchaser to VDOT. The agreement is to be completed with the appropriate project specific information and a copy of the bill of sale between the Nutrient Credit Bank and the purchaser is to be attached as Exhibit A. A copy of the executed agreement is to be included with the BMP information submitted with the VDPES Construction Permit Termination form LD-445D.

### **2.7.4 Other Drainage Requirements**

All drainage facilities (existing and newly constructed) located within the Project limits that are disturbed or extended as a part of the project and are functional elements of the final design shall be rendered in a serviceable condition, free from debris and physical obstructions. Accumulated debris resulting from project construction activities shall be removed by the Design-Builder, as such maintaining the original line and grade, hydraulic capacity or construction of the facility prior to the final acceptance of the Project.

An assessment of the serviceable condition (cleanness) of the existing drainage structures located within the Project limits should be conducted prior to the commencement of any land disturbing activities by the Design-Builder and provided to the VDOT Project Manager. The Design-Builder shall not be responsible for cleaning out existing debris accumulations in drainage facilities. Preexisting debris will be addressed by VDOT.

## **2.8 Traffic Control Devices**

The Project shall include all Traffic Control Devices (TCD), including temporary and permanent installation of the following: traffic signals, signage, pedestrian actuated warning devices/signals, guardrail, pavement markings/markers, and delineation. All TCD designed and installed under the Project shall be in accordance with standards and references in Part 2, Section 2.1. The Signing and Pavement Marking Plans, Transportation Management Plan (TMP), including Temporary Traffic Control/ Public Information and Traffic Operations Plans are required from the Design-Builder for final approval by VDOT and shall be included as a planned work package. The Design-Builder shall comply with the Special Provision for Personnel Requirements for Work Zone Traffic Control and the Special Provision for Work Zone Traffic Control Management, Design-Build Projects.

All existing TCD impacted by the Project shall be modified, upgraded, or replaced by the Design-Builder to meet current VDOT standards.

### **2.8.1 Signs**

The Design-Builder shall be responsible for modifications to existing signs and sign structures, and furnishing and installing all required new temporary and permanent signs and structures. The final lines of sight and sight distances must be considered in the placement of all Project signage.

An existing sign inventory shall be completed prior to site demolition in accordance with the VDOT Traffic Engineering Design Manual. This existing information shall be submitted at the same time as the first plan submittal for proposed signing.

The Design-Builder shall utilize the conceptual overhead sign plan included in the RFP Conceptual Plans when designing the permanent sign plans for the Project. The overhead signs, as shown in the RFP Conceptual Plans, represent the minimum overhead signing requirements for the Project.

All signs and sign structures to be removed during the construction of the Project shall be disposed of by the Design-Builder. Temporary relocation of signs may be necessary as part of this Project and it is the responsibility of the Design-Builder to perform all the required sign relocations. All existing signs shall remain in service and be legible and visible to the travelling public until such time that the sign is either replaced or the message is no longer applicable. Once a sign message is no longer applicable, the sign shall be immediately removed or covered



by the Design-Builder. All covered signs (temporary or permanent) shall be covered in accordance with Section 6F.04 of the Virginia Work Area Protection Manual.

The Design-Builder shall evaluate overhead signs that are being installed, modified, or relocated for lighting needs per VDOT IIM-TE-380 and provide lighting if required. The sign lighting shall be designed and constructed in accordance with VDOT Traffic Engineering Design Manual, the VDOT 2008 Road and Bridge Standards, the VDOT 2007 Road and Bridge Specifications, Section 705, and the MUTCD. All conductor/communication cables shall be in conduit and junction boxes; no direct burial cable allowed. Power cables and communication cables shall be in separate conduit systems.

### **2.8.1.1 Limits of Project Signing**

Any signs impacted by the work of the Design-Builder within the Project limits shall be evaluated for adequacy per the standards in Part 2, Section 2.1. For any impacted sign structures, the Design-Builder shall either replace the sign structure or repair the sign structure in accordance with the Sign Structure Inspection Reports provided in the RFP Information Package. Any signing on nearby roadways beyond the Project limits that require relocation, replacement, or modification due to the proposed design shall be the responsibility of the Design-Builder, including off-site route shield and trailblazer assemblies along all routes affected by the Project.

### **2.8.1.2 Signing Plan Requirements**

The signing plans shall be designed in accordance with VDOT's Traffic Engineering Design Manual and other references in Part 2, Section 2.1. The signing plans shall be prepared at a one (1) inch = fifty (50) feet scale when plotted full size at thirty-five (35) inches by twenty-three (23) inches. The signing plans shall show the proposed sign message, MUTCD or Virginia Supplement sign designation (if applicable), size and location of all signs. The structure and foundation types used for mounting sign shall be noted on the signing plans. These signing plans shall show the location and messages of all existing signs. All existing sign removals and relocations shall be shown on the signing plans. The signing plans shall show the locations of all pedestrian-actuated warning devices/signals, but the design sheets for these features shall be included in the traffic signal plans. The signing plans also shall include the location and type of delineation devices (including pavement markings, pavement messages/arrows, raised and recessed pavement markers, post- and barrier-mounted delineators).

### **2.8.1.3 Design of Sign Panels and Locations**

Proposed and replaced sign panels shall be in accordance with the VDOT 2007 Road and Bridge Specifications and other references in Part 2, Section 2.1. Overhead sign structures shall be located, designed, fabricated, and constructed in accordance with applicable standards and specifications. The Design-Builder shall coordinate all sign locations with all proposed and existing signing, landscaping, fencing, signals, utility, drainage, and all other roadside features to assure proper clearances and adequate sight distances. Sign sizes shall adhere to the latest edition of the FHWA Standard Highways Signs Book, the current edition of the MUTCD, the 2011 Virginia Supplement to the 2009 MUTCD, and all applicable Traffic Engineering Division

Numbered memoranda. All Advance Guide Signs shall be mounted on overhead sign structures; Supplemental Guide Signs may be ground mounted. No guide signs shall be mounted on bridges.

The Design-Builder shall use standard VDOT sign structures for new and relocated signs located within the right-of-way. Ground-mounted VDOT sign structures on I-95 shall use Standard SSP-VIA or SSP-VA structures, unless otherwise approved by VDOT. For all non-standard signs, the Design-Builder shall use GUIDSIGN software to design the sign panels. The use of non-standard warning and regulatory signs shall require the approval of the Office of the State Traffic Engineer in accordance with section 1A.10, paragraph 25 of the Virginia Supplement to the MUTCD. The Design-Builder shall utilize the 2009 edition of the MUTCD, 2011 Virginia Supplement to the 2009 MUTCD, the FHWA's Standard Highway Signs including Pavement Markings and Standard Alphabets to design all non-standard signs that do not have a MUTCD or VDOT standard sign designation. The Clearview font shall not be allowed as an alternative lettering style for this Project. If overhead sign lighting is required, overhead signage shall be illuminated using luminaire retrieval system in accordance with the VDOT 2008 Road and Bridge Standards. Use of a LED illumination system will not be permitted.

The Design-Builder shall coordinate the permanent location of Supplemental Guide Signs (SGS), Specific Travel Services (Logo) Signs, General Motorist Services Signs (GMSS), Tourist Oriented Directional Signs (TODS), and all other signs maintained by the Integrated Directional Signing Program (IDSP) with the IDSP Manager. All impacts to IDSP signs shall be reviewed and approved by the IDSP Manager before relocation, fabrication, and installation. Whenever possible, all proposed, relocated, or modified IDSP signs shall not be installed in sign assemblies with other non-IDSP signs. IDSP signs shall be installed in accordance with Standards STP-1, Standards SSP-VA structures and foundations, or Standards SSP-VIA structures and foundation as appropriate and as approved by the IDSP Manager. The Design-Builder is responsible for all costs associated with the removal and replacement of IDSP signs. The installation of a ½ mile guide sign for the I-95 southbound approach is not required.

## 2.8.2 Signals

Where provided in the RFP Conceptual Plans, the Design-Builder shall use the conceptual signal plan design to develop the final signal plans for the Project. All traffic signal plans for new or modified permanent signals shall be reviewed and approved by VDOT. All traffic signals shall be designed in accordance with the VDOT 2008 Road and Bridge Standards, the 2009 MUTCD, the 2011 Virginia Supplement to the 2009 MUTCD, and IIM-SB-90.2/IIM TE-382.1.

The traffic signals shall include, but not be limited to, foundations, traffic signal poles, signal heads, conduit system, circuitry, detection devices, signal cabinets and control equipment, and signal related signing. The work shall include the coordination with the utility company for power service and coordination with VDOT for traffic signal installation. The Design-Builder shall be responsible for furnishing and installing all signal related equipment.



The following intersections with Route 3 shall be full traffic-actuated signalized intersections:

- Ramp A (I-95 northbound on-Ramp) – New Signal
- Ramp B (I-95 southbound off-Ramp) – New Signal
- Carl D. Silver Parkway – ~~Modify Existing~~ **Rebuild** Signal

### 2.8.2.1 Requirements for Traffic Signals and Intersection Lighting

- The Design-Builder shall prepare signal plans at a scale of 1" = 25'.
- VDOT will provide the existing signal timings and phasing plans to the Design-Builder for all existing signals in the corridor. Any signal timing adjustments necessary during construction shall be handled by the Design-Builder. Seventy-two (72) hours prior to any adjustments, VDOT shall be notified with the nature of the changes and when they are to be implemented. The Design-Builder shall notify VDOT prior to any planned traffic shifts or signal timing changes associated with the maintenance of traffic during construction.
- The Design-Builder shall be responsible of retiming the signals within the Project limit corridor. The Design-Builder will provide VDOT's Timing Group a Synchro analysis software file with all related documentation as part of the retiming approval process. Subject to VDOT's review and approval, the final signal timings and phasing plans shall be developed and implemented by the Design-Builder. Timing information should be compatible with the controllers being used. The volumes for the intersections submitted in Synchro for the corridor retiming shall use the IMR future year volumes; however, the Synchro files referencing the future conditions need to be actualized. The Design-Builder shall contact James Haegele at (540) 582-7531 to submit the signal timings
- Any existing signal conduit that remains after construction shall be capped and abandoned and all signal cables removed and disposed of by the Design-Builder. All abandoned junction boxes shall be removed and the area restored.
- All unused wires in the signal heads shall be capped individually with crimp type caps.
- The Design-Builder shall use PVC or high density PE conduit for all underground installations. All conduits that are installed using directional boring shall be high density PE conduit. All exposed conduit shall be constructed of galvanized rigid steel. The Design-Builder shall use a box design (i.e. cross all four legs of the intersection). The minimum conduit size shall be two (2) inch diameter. However in all roadway crossings the minimum conduit size shall be three (3) inch diameter and an additional spare two (2) inch diameter conduit shall be installed. All wiring for

intersection lighting shall be installed in a separate two (2) inch conduit. All conduits shall have a fill capacity of less than twenty-five (25) percent.

- Junction boxes shall conform to VDOT 2008 Road and Bridge Standard JB-S2. However, the Design-Builder shall install at least one JB-S3 for the junction box nearest to the signal controller cabinet.
- The Design-Builder shall furnish and install all signal related signing in accordance with the MUTCD.
- The Design-Builder shall salvage and deliver any controller cabinets and cabinet equipment, preemption equipment and detection equipment no longer necessary as a result of this project to VDOT. Prior to beginning construction, the Design-Builder shall meet with VDOT to review all equipment that will be salvaged. All equipment salvaged by the Design-Builder shall be delivered in the same condition as it existed in the field prior to construction. All cable, conduit, junction boxes and all other equipment not salvaged that is no longer necessary as a result of this project shall be disposed of by the Design-Builder. The Design-Builder shall deliver salvaged equipment to VDOT Signal Asset Management Shop, 4920 Mudd Tavern Rd. Woodford, Va. 22581. The Design-Builder shall contact Eugene Moss at (804) 840-7627 at least forty-eight (48) hours prior to intended delivery of the equipment to arrange the delivery dates and times.
- The new traffic signal installation shall not be placed into full color operation on Sundays, Mondays, Fridays, Saturdays, holidays, or days preceding or following holidays, unless otherwise directed by the VDOT Central Region Operations Regional Traffic Engineer.
- A minimum of fourteen (14) calendar days prior to the proposed activation date of the signals, the Design-Builder shall contact both, Willie Gordon at (540) 899-4138 and Eugene Moss (804) 840-7627, to provide the anticipated schedule and to schedule a pre-turn on field review/meeting. All signal related signs and pavement markings shall be installed and all signal timings completed and approved prior to activation of Flash Mode.
- Following a successful pre-turn on review to the satisfaction of the VDOT Central Region Operations Regional Traffic Engineer or his designee, the Design-Builder will be authorized to begin the turn-on process. If the review is unsuccessful, all deficiencies shall be corrected to the satisfaction of the VDOT Central Region Operations Regional Traffic Engineer or his designee before the Design-Builder will be authorized to begin the turn-on process.
- VDOT will issue a press release with the anticipated dates for activation of Flash Mode and conversion to Full Color operation.

- A minimum of twenty four (24) hours prior to beginning the Flash Mode operation of the signal, the Design-Builder shall install a PCMS on both approaches of the Main Line and/or a Major Roadway with a message consisting of Phase 1 [NEW / SIGNAL / AHEAD] and Phase 2 [ON OR / ABOUT / DAY]. The DAY referenced shall be the day of the week that the Design-Builder expects to begin FULL COLOR operation of the signal. The designation of Major or Minor Roadways shall be at the discretion of the VDOT Central Region Operations Regional Traffic Engineer or his designee. All PCMS messages and abbreviations shall comply with Revision 1 of the 2011 Virginia Work Area Protection Manual.
- A minimum of twenty four (24) hours following the placement and proper operation of the PCMS(s), the Design-Builder may then energize the signal and place it in Flash Mode. The Design-Builder may only begin the Flash Mode operation of the signal on a Monday or a Tuesday, excluding any calendar week which includes a holiday, as defined in Section 108.02(b) of the VDOT 2007 Road and Bridge Specifications. Once the signal is operating in Flash Mode, the Design-Builder shall ensure that the signal continuously operates in Flash Mode for between thirty six (36) and forty eight (48) hours.
- On the scheduled day, following thirty six (36) to forty eight (48) hours of continuous Flash Mode operation, the Design-Builder shall activate Full Color operation of the signal. Activation of Full Color operation may only occur on a Wednesday or a Thursday, determined by the time and day of the beginning of Flash Mode operation, excluding any calendar week which includes a holiday, as defined in Section 108.02(b) of the VDOT 2007 Road and Bridge Specifications. At the commencement of Full Color operation, the PCMS(s) shall have a message of Phase 1 [SIGNAL / AHEAD] and Phase 2 [PREPARE / TO / STOP]. The PCMS(s) shall remain in place for a minimum of forty eight (48) hours following activation of Full Color operation. All PCMS messages and abbreviations shall comply with Revision 1 of the 2011 Virginia Work Area Protection Manual.
- Yellow aluminum signal head assemblies with twelve (12) inch LED lenses and solid aluminumretroreflective backplates shall be provided on the Project.
- The traffic signal hanger assemblies (VDOT Standard SM-3) and traffic sign hanger assemblies (VDOT Standard SMD-2) to be installed on mast arms shall be stainless steel, 7x19, type 304 in accordance with Federal Specification RR-W-410E with a breaking load of 3,700 pounds. Ends shall be swaged to withstand a 4,200 pound pull.
- All signal heads should be aligned in the center of each lane. A dedicated signal head shall be provided for each lane.
- A VDOT Standard TS-2 signal cabinet shall be installed on a VDOT Standard CF-4 Foundation.

- The Design-Builder shall determine the appropriate type of left turn phasing to be used at each intersection. The phasing recommendations shall be submitted to VDOT for approval. The recommendations shall be based on analyses developed by the Design-Builder in accordance with the VDOT document Guidance for Determination and Documentation of Left Turn Phasing Mode, Version 1.0, February 2015.
- Right turn overlaps may be used when appropriate. If used the conflicting u-turn movement shall be prohibited or other type of regulatory sign installed to mitigate the conflict. All overlaps shall be approved by VDOT.
- System Detection Loops are required to be installed in each through lane of the mainline.
- The intersections shall be interconnected with traffic signal communications established with spread spectrum radio (SSR) or wireless Digi Modems.
- Intelligent Transportation System (ITS) cabinets shall be installed on a VDOT Standard CF-3 Foundation at each signal and camera location. The ITS cabinets shall be connected to the signal cabinets utilizing the 2-2” spare conduits in the CF-4 & CF-3 foundations. The Traffic Signal communications subsystem shall be operated and controlled from the VDOT Central Region Operations Traffic Operations Center (CRO TOC). All VDOT Traffic Signal Controllers and communications subsystems shall be connected to VDOT Resource Share Fiber assets within the limits of construction for the Project.
- All activities and requirements pertaining to Traffic Signal communications Devices and subsystems shall be coordinated with and approved by the VDOT Central Region Operations Regional Traffic Operations Manager (RTOM) or his Designee. These activities are to include but are not limited to Fiber-optic equipment approval, Communication Device Placement, determining requirements for temporary Traffic Signal equipment, allowable work hours, work zone activities, work zone conflicts, lane closures, duration of time in which Traffic Signal devices are permitted to be in a non-operational state, all procedures for utility locate requests throughout the Project limits, traffic control plans, Temporary traffic Patterns, Traffic Signal field acceptance Testing requirements and final Traffic Signal device acceptance requirements. Communication with all Traffic Signal systems from the CRO TOC shall be the responsibility of the Design-Builder within the Project limits and shall be operational at all times during the construction of the Project including the use of temporary Traffic Signals. The communication infrastructure is deemed Critical Infrastructure Information/Sensitive Security Information (CII/SSI) material and as such the security requirements in Part 1, Section 11.8.7 will apply to the Design-Builder’s personnel handling the material. The methods of secure communication

shall be submitted at least thirty (30) days before prior to active use on the Project to VDOT for approval by the CRO RTOM or his designee.

- All materials proposed for use with or for Traffic Signal Communication devices shall be submitted to the VDOT Project Manager using VDOT C-25 forms for review and approval by the CRO RTOM or his designee. The VDOT 2008 Road and Bridge Standards shall be used as a guideline for Traffic Signal equipment selection and installation practices however, the CRO RTOM or his designee shall have final approval for the Design-Builder's proposed Traffic Signal Communication device selection, installation and final acceptance requirements based on regional system integration requirements. The Design-Builder shall submit Electronic Traffic Signal Communication Plan Sheets to VDOT for approval by the CRO RTOM or his designee prior to project construction commencement. The CRO RTOM shall have final authority in resolving all disputes related to CRO Traffic Signal Communication Devices, Traffic Signal Communication Plans, Temporary Traffic Plans, Traffic Signal Communication Fiber or Traffic Signal Communication Maintenance activities.
- The Design-Builder shall transmit Traffic Signal Communication data in a format compatible with the current VDOT Controlling Software. The Design-Builder shall be responsible for all related modifications and any changes that are necessary to the existing network or network devices for interoperability with the overall system. The Design-Builder shall furnish a table of devices needing IP addresses by location (latitude and longitude) and device (ports used). VDOT shall integrate all devices at the CRO TOC. The Design-Builder shall furnish, install and integrate any additional equipment software, documentation, manuals, and software drivers necessary for functionality.
- The Design-Builder shall meet with VDOT at least thirty (30) days before beginning system integration or fiber splicing activities. The purpose of these meetings shall be to verify the Design-Builder's Traffic Signal Communication and integration plans by reviewing site survey information, splicing diagrams, IP addressing schemes, troubleshooting issues, and other design issues. In addition, at these meetings the Design-Builder shall identify any concerns regarding the integration and provide detailed information on how such concerns shall be addressed and/or minimized. The Design-Builder shall provide all documentation required to support system integration meetings, including detailed functional narrative text, system and subsystem drawings and schematics. Also included shall be the documentation to demonstrate all elements of the design which includes, but is not limited to: technical, functional, and operational requirements; Traffic Signal Communications protocols; equipment; termination/patch panels; performance criteria; and details relating to interfaces to other Traffic Signal Communication subsystems. System integration meetings shall be held on mutually agreeable dates. All action items resulting from the system integration meeting shall be satisfactorily addressed by the Design-Builder and reviewed and approved by VDOT.

- Upon completion of construction, the Design-Builder shall provide VDOT a comprehensive Traffic Signal Communication system design report in Microstation V8i format and PDF format on a Windows compatible CD/DVD. The report shall be a record set of all As-Built Record Plans verifying the as-built conditions for all installed and constructed Traffic Signal Communication systems including but not limited to final Traffic Signal Communication locations, Fiber-optic conduit and junction box locations, all power conduit and junction box locations, Fiber splice plans, Device Rack Elevation plans. The report shall include all necessary supporting data in accordance with VDOT criteria as specified by the CRO TROM or his designee.
- The Design-Builder shall submit to VDOT, as a separable subpart of the As-Built Record Plans, Five (5) certified 11"x17" copies of As-Built Record Plans verifying the as-built conditions for all installed and constructed Traffic Signal Communication systems.
- The Design-Builder shall submit for VDOT approval written documentation that all personnel involved in any configuration efforts of the Traffic Signal Communications subsystems have had previous experience in the configuration of at least two intelligent transportation and or equivalent Traffic Signal Communications subsystems that have been in satisfactory operation for at least one year. The experience shall include Traffic Signal Controllers, Cameras, IP Network Equipment, DMS, CCTV, MVDS, and all other system components that comprise the existing and new system being installed on this Project. Submission of the written documentation shall be made four (4) weeks prior to installation of the Traffic Signal Communications subsystems.
- The Design-Builder shall furnish Street Name Signs and install them on the mast arm. Street name signs shall be designed in accordance with the 2011 Virginia Supplement to the MUTCD.
- Fourteen (14) AWG – seven (7) conductor wires shall be provided to each five (5) section traffic signal head. Fourteen (14) AWG – seven (7) conductor wires shall be provided to each three (3) & four (4) section traffic signal heads.
- The Design-Builder shall furnish and install vehicle detection at the locations listed in the Table 2.8. All loop detectors shall have their own amplifier channel and be shelf mounted. All loop detectors shall have an individual fourteen (14) AWG – two (2) conductor shielded wire. Prior to installation of any loop detectors, the Design-Builder shall contact Eugene Moss (804-840-7627). Stop Bar – Six (6) foot by fifty (50) foot inductive loops shall be installed for the all left turn lanes and for all lanes on the side street approaches.
- Generally, all stop bar loops shall be installed five (5) feet in front of the stop bar.



- Two six (6) foot by six (6) foot inductive loop for extension/dilemma zone detection shall be installed in each direction and in each lane. The Design-Builder shall follow the extension detector placement of the extension/dilemma zone detectors provided in Table 2.8.

**Table 2.8**

<b>Extension Detector Placement</b>							
Speed	Speed	1st Detector	Time to Stop Bar	2nd Detector	Time to Stop Bar	Time Difference	Minimum Passage Time
(MPH)	(FPS)	(Feet)	(Sec)	(Feet)	(Sec)	(Sec)	(Sec)
35	51.33	255	4.97	405	7.89	2.92	3
40	58.67	285	4.86	445	7.59	2.73	2.8
45	66	330	5	505	7.65	2.65	2.7
50	73.33	355	4.84	535	7.3	2.45	2.5
55	80.67	390	4.83	540	6.69	1.86	1.9

Notes:  
 1) 6' x 6' Loop Detectors should be installed in each approach lane.  
 2) The 1st Detector location is based on Table 13-6 - Dilemma Zone Boundaries for Automobiles in the ITE Traffic Engineering Handbook (5th Ed.).

- For connection of loop wire to the loop lead-in wires, the Design-Builder shall utilize splice kits that shall be packaged containing materials from a single supplier and shall consist of a plastic molded body with a two-part epoxy that provides a water-resistant seal and insulation for the conductor cables for at least 600 volts. All splices shall be located in a junction box.
- SE-5 (Metered) electrical service shall be installed at each signal. The service type will depend on the type of available power source and coordinate with the local electrical company. The Design Builder shall provide a circuit breaker box with each electrical service installed.
- The Design-Builder shall design and construct an intersection lighting system for all Signalized Intersections, including the intersection of Route 3 and Carl D. Silver Parkway. The lighting systems shall be designed in accordance with VDOT’s Traffic Engineering Design Manual, as well as the American National Standard Practice for Roadway Lighting Publication IES RP-8-14. The lighting design shall consist of furnishing and installing LED-all related lighting equipment. Luminaires shall be installed on combination Luminaire Mast Arm signal poles. All luminaires shall be LED. The Design-Builder’s lighting designer shall install conduit from the Electrical Service to the junction box nearest to the intersection and conductor cables



shall be labeled as “Roadway Lighting” and these cables not pass through the signal cabinet. The lighting systems shall be constructed in accordance with the VDOT 2007 Road and Bridge specifications, the VDOT 2008 Road and Bridge Standards and the requirements of the National Electric Code (NEC).

- All approaches shall be monitored. The use of GPS preemption shall be considered at all intersections. ~~If GPS preemption cannot be installed for any reason, the Design-Builder shall bring this to the attention of the VDOT Project Manager. Once the issue has been verified by VDOT traffic engineering staff, VDOT can request to utilize Infrared Red preemption.~~
- The Design-Builder shall refer to the 2005 Road Design Manual for clearzone requirements and lateral offsets for signal pole placements.
- The Design-Builder shall notify Mr. Eugene Moss (804) 840-7627 at least seven (7) days prior to working on the existing signal equipment or beginning any construction of signal work. At this time, the Design-Builder shall provide a primary contact with phone number and a secondary contact with phone number for signal maintenance.
- VDOT’s Signal Asset Management section will perform a final inspection once all signal work has been completed. All punch-list items shall be address before the start of the 30 day burn test. Once all of the punch-list items have been satisfied by VDOT, the Design-Builder shall start the 30 day burn test. Following a successful 30 day burn test, VDOT will assume the maintenance and operations of the signal.
- An Uninterruptable Power Supply (UPS) is required for the signal and shall conform to the requirements set forth in the Special Provision for Uninterruptible Power Supply, ~~October 27, 2014~~ January 12, 2016. The UPS cabinet shall be capable of connecting to a generator and installed next to the signal cabinet on the VDOT Standard CF-4 foundation.
- All signals shall be mounted on mast arms. Span wire mounted signals will not be permitted.
- VDOT’s location plan for four (4) existing installation plans for the closed circuit television (CCTV) cameras installed adjacent to the lanes of I-95 and Route 3 within the Project limits as shown on the RFP Conceptual Plans have been included in the RFP Information Package. Impacts to the existing CCTV cameras along the eastbound lanes of Route 3 and southbound~~northbound~~ lanes of I-95 shall be avoided by all construction activities until such time that temporary or permanent replacement cameras have been installed and put into service. CCTV cameras adjacent to the eastbound~~southbound~~ lanes of ~~I-95~~ Route 3 impacted by this project shall be relocated or replaced by the Design-Builder; this work shall include the relocation or replacement of the camera, pole~~cabinet~~, foundation~~cables~~ and all associated work elements and shall be coordinated with ~~Dustin Alwood, P.E. (571-~~

~~350-2010~~ Christopher Oglevee (703-334-0578) of VDOT's Northern Region Operations. The Design Builder shall ensure that the camera remains at an uninterrupted and equivalent level of service throughout the duration of the Project. The Design Builder shall ensure that the CCTV camera will function with the same amount, or better, view shed of Route 3 and I-95 as the existing condition.

- The Design-Builder shall be responsible for all ITS devices installed and/or modified by the Project until final acceptance by VDOT. Prompt response is required to repair any damage caused by the Design-Builder. In the event the repair is not completed two (2) hours prior to the next traffic peak, VDOT will use its maintenance Contractor to restore critical systems and recover the costs for the work from the Design-Builder by means of a deductive work order.
- All ITS work shall be in accordance with Section 801-ITS Infrastructure Components of the VDOT 2016 Road and Bridge Specifications.

### 2.8.3 Closed Circuit Television (CCTV) Cameras

The Design-Builder shall be responsible for the installation of a functional CCTV subsystem in accordance with the criteria specified below and the other requirements of the Contract Documents.

The CCTV subsystem shall have the following video coverage criteria:

- 100% video coverage of all lanes of the I-95 and Route 3 mainline and ramps throughout the Project limits.
- 100% video coverage of interchanges and ramps throughout the Project limits.
- 100% coverage shall be defined as video coverage of all roadway, shoulder, guardrail, median, clear zone areas, sign structures and supports, and ITS cabinets located within the Project limits.
- All CCTV cameras shall be connected to VDOT Resource Share Fiber assets within the limits of construction for the Project.

The CCTV subsystem shall include, at a minimum, the deployment of the following field subsystem components:

- CCTV camera assembly
- CCTV support structure (standalone pole-type, with foundation, co-located mount to signal mast arm, sign truss, etc.)
- Ground or Pole mounted cabinet (where applicable)
- Video encoder (where applicable)
- Surge protection
- Uninterruptible Power Supply
- Camera lowering system (where applicable)

The Design-Builder shall utilize the optical ports on the field Ethernet switch to deliver the fiber service. VDOT will give consideration to a Design-Builder’s request for the use of field routers in lieu of managed field Ethernet switches.

The Design-Builder shall design, construct, and provide technical field support to integrate the CCTV subsystem into the VDOT TOC Systems and Central Office Software. The design shall include all required infrastructure, power, communication, devices, and supporting hardware and software necessary for full integration to the specified tie-in location of the network as defined in the ITS plan prepared by the Design-Builder and approved by the ~~CRO~~ NRO RTOM or his designee. The tie-in location will be the Richmond TOC, the Northern Virginia TOC, or both depending upon the location of each camera. The Design-Builder shall provide ~~reasonable~~ field technical support and assistance to VDOT with all CCTV elements being added and or modified by the Project to ensure functionality of the CCTV subsystem and all ancillary components. The schedule for the coordination of the network connection installation and any necessary outage is subject to VDOT’s ~~reasonable~~ approval.

The design shall include:

- Final CCTV pole locations
- Support structure design
- Ground or Ppole-mounted CCTV cabinet design
- Utility coordination
- Power service
- Line-of-sight assessments

The CCTV subsystem shall be operated and controlled from the ~~CRO-NRO~~ NRO TOC. The CCTV shall pan-tilt-zoom (PTZ) via the current Central ~~Controlling~~ Software. The CCTV cameras shall feature built-in electronic image stabilization. The CCTV cameras shall be wired for and have all firmware necessary to fully integrate into VDOT current Controlling Software. CCTV poles shall be installed in areas with sufficient room for off-highway staging to allow future maintenance without lane closures.

All activities and requirements pertaining to the ITS Devices shall be coordinated with and approved by the ~~RTOM or his Designee~~ NRO. These activities are to include but are not limited to ITS equipment ~~approval~~ selection, ITS Device Placement, determining requirements for temporary ITS equipment, allowable work hours, work zone activities, work zone conflicts, lane closures, duration of time in which ITS devices are permitted to be in a non-operational state, all procedures for VDOT owned utility locate requests throughout the Project Limits, traffic control plans, ITS Device field acceptance Testing requirements and final ITS device acceptance requirements.

All materials proposed for use with or for ITS devices shall be submitted to VDOT using VDOT C-25 forms for approval by the ~~RTOM or his designee~~ NRO. The VDOT 2008 Road and Bridge Standards and the Pre-approved materials lists shall be used as a guideline for ITS equipment selection and installation practices however, the ~~RTOM or his designee~~ NRO shall

have final approval for the Design-Builder's proposed ITS device selection, installation and final acceptance requirements based on regional system integration requirements. The Design-Builder shall submit Electronic ITS Device Plan Sheets to VDOT for approval by the ~~RTOM or his designee~~ NRO prior to project construction commencement. The Design-Builder shall submit Electronic ITS Fiber splice tables, network diagrams IP addressing scheme, and Pplan Ssheets to VDOT for approval by the ~~RTOM or his designee~~ NRO prior to project construction commencement. The ~~RTOM-NRO~~ shall have final authority in resolving all disputes related to ITS Devices, ITS Plans, ITS Fiber or ITS Maintenance activities.

All ITS equipment supplied by the Design-Builder, with the exception of CCTV, shall be compatible with the latest NTCIP standards and the current TOC Central Controlling Software. The Design-Builder shall transmit data in a format compatible with the current Controlling Software. The Design-Builder shall be responsible for all project related/prompted modifications and any changes that are necessary to the existing network or network devices for interoperability with the overall system. The Design-Builder shall furnish a table of devices needing IPs by location (latitude and longitude) and device (ports used). VDOT shall integrate all devices at the ~~CR0-NRO~~ TOC with field technical support and assistance from the Design-Builder. The Design-Builder shall furnish, install and integrate any additional equipment software/farmware, documentation, manuals, and software drivers necessary for device functionality in support of the integration process.

The Design-Builder shall meet with VDOT at least thirty (30) days before beginning system integration or fiber splicing activities. The purpose of these meetings shall be to verify the Design-Builder's ITS and integration plans by reviewing site survey information, splicing diagrams, IP addressing schemes, plan outages, troubleshooting issues, and other design issues. In addition, at these meetings the Design-Builder shall identify any concerns regarding the integration and provide detailed information on how such concerns shall be addressed and/or minimized. The Design-Builder shall provide all documentation required to support system integration meetings, including detailed functional narrative text, system and subsystem drawings and schematics. Also included shall be the documentation to demonstrate all elements of the design which includes, but is not limited to: technical, functional, and operational requirements; ITS/communications; equipment; termination/patch panels; performance criteria; and details relating to interfaces to other ITS subsystems. System integration meetings shall be held on mutually agreeable dates. All action items resulting from the system integration meeting shall be satisfactorily addressed by the Design-Builder and reviewed and approved by VDOT.

VDOT will be responsible for ITS integration at the TOC; however, the Design-Builder will be responsible for providing sample devices for integration and testing at least ninety (90) days prior to installation. The Design-Builder will also be responsible to provide field technical support, observation, meta data, and configuration management that maybe needed during the integration process. The Design-Builder shall use 12 count SM fiber to make field device connections to the VDOT access cable. The VDOT access cable is a 96 count SM fiber that ties 12 count to the Summit Resource Sharing Fiber. The Design-Builder's design shall maintain this same configuration. VDOT will identify the fiber connections to the existing plant upon submission of the Design-Builder's project network plan and device meta data.

Upon completion of construction, the Design-Builder shall provide VDOT a comprehensive ITS system design report in Microstation V8i format and PDF format on a Microsoft Windows compatible CD/DVD. The report shall be a record set of all As-Built Record Plans verifying the as-built conditions for all installed and constructed ITS systems including but not limited to final ITS locations, Fiber-optic conduit and junction box locations, all power conduit and junction box locations, Fiber splice plans, Device Rack Elevation plans. The report shall include all necessary supporting data in accordance with VDOT criteria as specified by the ~~CRO-TROM or his designee~~ NRO.

The Design-Builder shall submit to VDOT, as a separable subpart of the As-Built Record Plans, Five (5) certified 11”x17” copies of As-Built Record Plans verifying the as-built conditions for all installed and constructed ITS systems.

The Design-Builder shall submit for VDOT approval written documentation that all personnel involved in any configuration efforts of the ITS have had previous experience in the configuration of at least two intelligent transportation systems that have been in satisfactory operation for at least one year. The experience shall include cameras, IP network equipment, DMS, CCTV, MVDS, and all other system components that comprise the existing and new system being installed on the Project. Submission of the written documentation shall be made four (4) weeks prior to installation of the ITS equipment.

#### **2.8.4 Guardrail/Barrier**

The Design-Builder shall ensure that the clear zone within the Project limits is free from hazards and fixed objects. In the event that removal or relocation of hazard and fixed objects from the clear zone is not feasible, the Design-Builder shall design and install an approved guardrail barrier system and end treatments, where appropriate, for protection in accordance with NCHRP 350 or AASHTO Manual for Assessing Safety Hardware, First Edition. The same clear zone requirement applies to existing conditions affected by this Project where guardrail upgrade will be required. Existing sub-standard guardrail within the Project limits must be upgraded by the Design-Builder to meet current standards per Traffic Engineering Memorandum 366 and the VDOT Road Design Manual, Appendix I. This may require the upgrade of guardrail to the nearest logical termination point beyond the current Project limits.

Fourteen (14) days prior to installation of guardrail, the Design-Builder shall stake out proposed guardrail and shall also request VDOT field verification of the proposed layout. Accompanied by the Design-Builder, a VDOT Regional Traffic Operations representative will inspect the locations and advise on any necessary adjustments. All guardrail variations from the Released for Construction Plans must be incorporated into the plans via a formal plan revision. Additionally, the Design-Builder shall provide a copy of the manufacturer’s recommendations for installation of all guardrail terminals to the VDOT Project Manager before the installation of any guardrail end treatment of terminating device.

Asphalt paving under guardrail shall be applied in accordance with VDOT Road and Bridge Standard MC-4 in all areas where guardrail is required.



### **2.8.5 Pavement Markings/Markers**

The Design-Builder shall include all required pavement markings, markers, and delineators. Pavement markings, markers, and delineators shall conform to the requirements of the MUTCD, the 2011 Virginia Supplement to the 2009 MUTCD, and applicable special provisions (included in the RFP Information Package). All pavement marking plans shall be in accordance with VDOT Traffic Engineering Design Manual, dated 2011.

Permanent pavement markings on I-95 and the interstate ramps shall be Type B, Class VI, patterned preformed tape rolled in during paving operations. All other pavement markings shall be Type B, Class I Thermoplastic.

All existing pavement marking and markers that do not conform to the final traffic patterns shall be removed via mill and overlay in accordance with Part 2, Section 2.6.1 and the standard and specifications listed in Part 2, Section 2.1. This work shall include Carl D. Silver Parkway markings which are in conflict between Route 3 and Trade Street.

Where sidewalk or shared use path crosses a side road or other signalized vehicle approach at a signalized intersection, the crosswalk shall be marked.

All new lane markings, edge lines, and center lines along Route 3, I-95, and the interstate ramps shall be supplemented with snow-plowable raised pavement markers. All permanent snow-plowable raised pavement markers shall be installed in accordance with VDOT Standard PM-8 and/or PM-9. Damaged existing snow-plowable raised pavement markers along Route 3 and other roadway, excluding the existing general purpose lanes of I-95 shall be replaced in accordance with VDOT Standard PM-8 and/or PM-9.

The Design-Builder shall modify the existing pavement marking messages on southbound Carl D. Silver Parkway between Route 3 and Trade Street assigning traffic to the appropriate lanes for I-95 northbound and southbound and Route 3 eastbound based on the new traffic pattern resulting from the Project. The new pavement marking messages shall utilize shield symbols per figure 3B-25 of the MUTCD.

### **2.9 Transportation Management Plan**

The Design-Builder shall prepare a Transportation Management Plan (TMP) in accordance with I&IM-241/TE-351 for all proposed work associated with the Project. The TMP shall document how traffic shall be managed during the construction of the Project. The TMP for I-95 is classified as a Type C, Category V and for all other roadways a Type B, Category IV. The Design-Builder shall coordinate all work in accordance with the TMP. The phases in the Design-Builder's sequence of construction shall be followed unless the Design-Builder submits and secures VDOT's approval for a sequence which will both expedite construction while lessening the effect of such construction upon the traveling public. The TMP shall incorporate and address the elements provided in Part 2, Section 2.9.



### **2.9.1 Maintenance of Traffic**

The Design-Builder’s TMP shall include a Maintenance of Traffic (MOT) Plan detailing all phases of work, proposed lane closures, maintenance of traffic through the work area, and all construction accesses for approval by VDOT’s Project Manager. This plan shall also address safe and efficient operation of adjacent public transportation facilities and State Highways. The plan shall also include coordination with local agencies and other contractors performing work in the vicinity of I-95, Route 3, and Carl D. Silver Parkway. This plan shall reflect the noted Scope of Work and all applicable VDOT Standards and Specifications regarding time of work. All existing pedestrian access shall be maintained. The TMP shall also accommodate safe and efficient snow removal operations and ensure proper drainage during all phases of construction. Access must be maintained to all businesses, residential communities, and private entrances at all times. The phases in the Design-Builder’s suggested sequence of construction that accompany an approved work package shall be followed unless the Design-Builder submits and secures VDOT approval for a sequence which will both expedite construction while lessening the effect of such construction upon the traveling public.

If additional traffic counts are required, it will be the responsibility of the Design-Builder to collect such data. The Design-Builder shall note that any proposed detour utilizing local neighborhood streets that are maintained by developers or streets that are maintained by the City of Fredericksburg will require the coordination with the developer/applicable locality, as appropriate and are subject to the terms and conditions of VDOT’s approval.

All temporary traffic signal plans shall be submitted to VDOT for review and approval prior to construction phase, detour or traffic shift. Construction signs and temporary pavement markings shall be installed, maintained, adjusted, and removed by the Design-Builder throughout the duration of the Project.

All entrances, intersections or pedestrian access points/routes that will be affected by the work zone or by the traffic control devices will be maintained or an acceptable alternate must be provided by the Design-Builder. Bicycle and pedestrian accommodations shall be in compliance with Virginia’s Work Zone Pedestrian and Bicycle Guidance Document.

If Traffic Barrier Service Concrete (TBSC) is warranted based on the criteria for determining the application of barrier per the 2011 Work Area Protection Manual and a completed Engineering and Traffic Investigation-Work Zone Channelization/Barrier Analysis, the guidelines provided in the VDOT Roadway Design Manual and IIM-LD-93.16 shall be utilized. Barrier shall be installed a minimum of two (2) feet offset from the nearest travel lane when utilized along I-95 or interstate ramps.

### **2.9.2 Incident Management Plan**

Any field work performed which impacts travel lanes or shoulders, including but not limited to construction, geotechnical investigations, and survey, shall have an incident management plan developed and approved by VDOT prior to the start of field work.

During incidents that close one or more lanes on I-95, all lane closures shall be removed and all travel lanes fully opened to traffic along Route 3, and in the same direction as the incident on I-95, and the interchange ramps. An incident shall be defined as any condition (including Design-Builder’s work operations) that cause a traffic queue extending greater than five (5) miles on I-95 during the day, greater than six (6) miles on I-95 during the night, or one (1) mile on Route 3. The queue length shall be measured starting at the beginning of the physical work zone.

As part of the TMP, the Design-Builder shall submit an Incident Management Plan (IMP) for review and approval by VDOT. The intent of the IMP is to be prepared for incidents along the construction corridor. The Design-Builder shall coordinate with appropriate VDOT, EMS, and stakeholders during the development of the plan and hold a stakeholder meeting to brief them on the IMP. For incidents along I-95 and all other routes, the Design-Builder shall coordinate with the VDOT Northern Virginia Traffic Operations Center (“TOC”). The IMP shall address at a minimum the following with respect to incident management:

- 24/7 point of contact for emergency notification of incident by TOC;
- Emergency detour routes and sign layout plans in addition to TMP signage;
- Agency and stakeholder Responsibilities Matrix/Checklist;
- Pre-staged detour equipment and material needs (i.e.; barrels, portable changeable message boards, signage, etc.) as defined in the sign layout plans that shall be provided by the Design-Builder;
- Coordination with the TOC;
- Coordination with 1st responders and stakeholders;
- Law Enforcement, Fire, and Rescue access to the road network during incidents;
- Pre-planned Messages for various types of incidents for the PCMS; and
- Contact list for appropriate stakeholder response personnel.

The Design-Builder shall coordinate with VDOT and localities to determine allowable alternate routes and detours. The Design-Builder shall be responsible for all detour signage and traffic control measures required. As necessary, this work shall extend beyond the defined Project limits. Proposed changes to signal timing for any signals on detour routes shall be coordinated with the respective signal owner.

Upon notification from the TOC of an incident requiring a detour, the Design-Builder shall establish the detour within one (1) hour from 5:00 AM to 9:00 PM daily on I-95. The Design-Builder shall establish the detour within two (2) hours during all other times not referenced on I-95.

The Design-Builder shall coordinate with the TOC. Incident times shall be based on those recorded at the VDOT Traffic Operations Center Traffic Management System.

### **2.9.3 Lane and Road Closure Restrictions**

VDOT acknowledges that temporary lane closures may occasionally be required; however, temporary lane closures are only allowed at the sole discretion of VDOT when necessary to ensure the safety of the traveling public and no practical alternative exists. Offeror's Technical and Price Proposals shall be developed to meet the required lane, shoulder, or road closure restrictions specified in this section. Any deviations from these allowable lane closures may render an Offeror's Proposal non-responsive. Long term detours will not be permitted as a part of the Project.

Lane, shoulder, or road closures shall be detailed in the Design-Builder's Transportation Management Plan. Anticipated and proposed temporary lane and/or shoulder closures shall be reviewed and approved by VDOT. No work, including the installation or removal of channelizing devices or any other traffic control devices, may occupy a travel lane outside of the allowable lane closure times. Operations not within a travel lane (such as installing or removing signs) may be done outside of the allowable lane closure times in compliance with the 2011 Work Area Protection Manual, but all travel lanes shall remain open to traffic until the allowable lane closure time commences. The Design-Builder shall restore all lanes of traffic per the times specified in this section. Restoration of traffic shall mean the completion of all construction work, the removal of all traffic control devices, signs, workers, materials, and equipment from the closed travel lanes.

In addition to the Holidays set forth in Part 5, Section 108.02 (Limitation of Operations), the following shall also be considered Holidays, and therefore shall be subject to the same restrictions:

- Martin Luther King Jr. Day
- Lee Jackson Day
- President's Day
- September 11th
- Columbus Day
- Veteran's Day
- Thanksgiving: from noon on the Wednesday preceding Thanksgiving Day until noon on the Monday following Thanksgiving day
- Peak Shopping Season: Every day and night from Thanksgiving (as defined above) to New Year's Day (Peak Shopping Season holiday restrictions only apply to complete ramp closures)

The Design-Builder may completely close ramps A and B in order to complete work during the hours permitted in the Allowable Lane Closure Times tables below and in accordance with the Holiday restriction of operations. Only one ramp may be closed at any given time and a detour plan shall be submitted and approved by VDOT. Closure of any ramp other than A or B will not be permitted at any time.

Interstate median crossover closures will not be permitted. The Design-Builder shall maintain emergency and authorized vehicle access to the crossovers at all times.

**Allowable Lane and Shoulder Closure Times:**

<b>Interstate 95 (Allowable Lane Closure Times – September to April)</b>			
<b>Northbound I-95 and Ramp A</b>			
<b>Day</b>	<b>Single Lane Closures, Shoulder Closures, Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to 4:30 AM 9:30 AM to 3:30 PM** 9:00 PM to 11:59 PM **Complete Ramp closures not permitted	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday <del>to</del> and Sunday	12:00 AM to 7:00 AM	Not Permitted	Not Permitted
<b>Southbound I-95 and Ramp B</b>			
<b>Day</b>	<b>Single Lane Closures, Shoulder Closures, Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to <del>7</del> 6:00 AM <del>7</del> 6:00 AM to 10:00AM** 9:00 PM to 11:59 PM **Complete Ramp closures not permitted	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 6:00 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday <del>to</del>	12:00 AM to 7:00 AM	Not Permitted	Not Permitted

<b>Interstate 95 (Allowable Lane Closure Times – September to April)</b>			
<b>Northbound I-95 and Ramp A</b>			
<b>Day</b>	<b>Single Lane Closures, Shoulder Closures, Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
<del>and</del> Sunday			

<b>Interstate 95 (Allowable Lane Closure Times – May to August)</b>			
<b>Northbound I-95 and Ramp A</b>			
<b>Day</b>	<b>Single Lane Closures, Shoulder Closures, Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to 4:30 AM 9:00 PM to 11:59 PM	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday <del>to</del> <u>and</u> Sunday	12:00 AM to 5:00 AM	Not Permitted	Not Permitted
<b>Southbound I-95 and Ramp B</b>			
<b>Day</b>	<b>Single Lane Closures, Shoulder Closures, Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to 7:00 AM <del>6:00 AM to 7:00 AM**</del> 9:00 PM to 11:59 PM <u>**Complete Ramp closures not permitted</u>	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday <del>to</del> <u>and</u> Sunday	12:00 AM to 5:00 AM	Not Permitted	Not Permitted



<b>Route 3/Carl D. Silver Parkway (Allowable Lane Closure Times)</b>			
<b>Eastbound Route 3</b>			
<b>Day</b>	<b>Single Lane Closures, <del>Shoulder Closures,</del> Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to 4:00 AM 9:00 PM to 11:59 PM	12:00 AM to 4: <del>30-00</del> AM 11:00 PM to 11:59 PM	12:00 AM to 4:00 AM
Friday	12:00 AM to 4:00 AM 10:00 PM to 11:59 PM	12:00 AM to 4:00 AM 11:00 PM to 11:59 PM	12:00 AM to 4:00 AM
Saturday <del>to</del> <u>and</u> Sunday	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	12:00 AM to 9:00 AM 11:00 PM to 11:59 PM	12:00 AM to 4:00 AM
<b>Westbound Route 3 and Carl D. Silver Parkway (Both Directions)</b>			
<b>Day</b>	<b>Single Lane Closures, <del>Shoulder Closures,</del> Complete Ramp Closures</b>	<b>Two Lane Closure</b>	<b>Complete Mainline Closure 30 Minute Duration (Maximum)</b>
Monday to Thursday	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	12:00 AM to 7:00 AM	12:00 AM to 4:30 AM
Friday	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	12:00 AM to 7:00 AM	12:00 AM to 4:30 AM
Saturday <del>to</del> <u>and</u> Sunday	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	12:00 AM to 9:00 AM 11:00 PM to 11:59 PM	12:00 AM to 4:00 AM

<b>Flagging of Route 3</b>		
<b>Flagging of All Traffic Signals (<u>Including Uniformed Flagging</u>)</b>		
<b>Day</b>	<b>Signal Flagging</b>	<b>Complete Closure 30 Minute Duration (Maximum)</b>
Monday to Friday	12:00 AM to 4:00 AM 11:00 PM to 11:59 PM	Not Permitted
Saturday <del>to</del> <u>and</u> Sunday	12:00 AM to 7:00 AM 11:00 PM to 11:59 PM	Not Permitted

All Other Roadways (Allowable Lane Closure Times)		
Day	Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday to Friday	12:00 AM to 6:00 AM 9:00 AM to 3:30 PM 7:00 PM to 11:59 PM	Not Permitted
Saturday <del>to</del> <u>and</u> Sunday	Not Permitted	Not Permitted

Note: The 15 and 30 minute blocks for complete road closures must be separated by 30 minutes to allow traffic to move through/clear the work zone.

These allowable hours shall be applicable to ~~both~~ all stationary and mobile lane closures, as well as mobile, short-duration, and short-term stationary shoulder closures along I-95 and the ramps. Intermediate-term stationary and long-term stationary shoulder closures along I-95 and the ramps may be submitted for review and approval to the VDOT Project Manager through the TMP process. VDOT will consider changes to the allowable lane closure hours only if the Design-Builder can demonstrate why the proposed work cannot be completed within the contract allowable lane closure hours. All requests shall include an assessment of the work zone traffic impacts using a sketch planning traffic analysis tool and/or an operational level traffic analysis software program as appropriate for approval by VDOT at least thirty (30) days prior to the operation impacting the lanes.

For intermediate-term stationary and long-term stationary traffic control layouts on I-95 and Route 3, lane widths shall match existing conditions. For mobile, short duration, and short-term stationary, reduced lane widths on I-95 and Route 3 shall be in accordance with section 6G.08 of the Virginia Work Protection Manual. Long term shoulder closures on I-95 northbound to construct the widened/lengthened Ramp A will be allowable in conformance with VAWAPM requirement which may include the use of positive barrier. Approval for long-term shoulder closures will depend on the closure characteristics such as location, overall size, amount of time, etc. Site specific MOT plans will need to be developed by the Design-Builder and reviewed by VDOT for approval.

Detour plans will be required for any proposed temporary total road closures exceeding twenty (20) minutes, and are subject to VDOT review and approval as part of the Design-Builder’s TMP. In addition to addressing the traffic analysis requirements in IIM-LD-241(TED-351), the Design-Builder shall demonstrate in its detour plan(s) efforts to minimize impacts to the community (including noise, access, additional travel time, etc.), and address geometry, safety (including accident analysis along the detour route), capacity, and existing roadway conditions.

Total closures of any roadway or intersection, and 2-lane closures of I-95 for such work as installation and removal of overhead sign structures, demolition of existing bridges, erection of bridge members or with substantiation of need by the Design-Builder will require:

- At minimum, four (4) weeks advance notice to VDOT (this shall include the District Construction Engineer, Regional Operations Director, and District Communications Manager). This advance notice will allow the Design-Builder and VDOT to coordinate on a public outreach campaign and/or advertising to reach affected motorists and target audiences. Alternate dates can be advertised in the event of inclement weather.
- The Design-Builder will be responsible for any costs associated with Internet, mobile, print and/or radio advertising to alert motorists and commercial traffic to the lane closures.
- The Design-Builder will be responsible for communicating with the TOC and neighboring states of Maryland and North Carolina to use variable message boards to encourage through travelers to consider taking an alternate route instead of I-95.
- If a total closure greater than thirty (30) minutes is required, it shall be approved separately with full Maintenance of Traffic and Traffic Management Plans.

The Design-Builder shall submit all lane and/or shoulder closure requests to the TOC and VDOT Project Manager for coordination purposes (for determination of conflicts with other projects, for instance) at least seven (7) days in advance of the proposed lane and/or shoulder closure and no later than close of business Wednesday the week prior to closure, stating the location, purpose, date, time, and duration of the closure. The Design-Builder shall confirm at least twenty-four (24) hours before any scheduled lane and/or shoulder closure and shall include a written reiteration of the proposed tasks and a listing of materials, labor, and equipment to be utilized, in order for TOC to post the information on the VDOT website and VA511 system.

The Design-Builder is responsible for providing advance notification via variable message and required static signing for lane and/or shoulder and complete road closures in accordance with the 2011 Virginia Work Area Protection Manual. Once a closing is in place, work shall commence immediately and shall progress on a continuous basis to completion or to a designated time.

If the Design-Builder is unable to remove the lane and/or shoulder closure by the stipulated time the Design-Builder will not be allowed further lane closures until the reasons for the failure are evaluated and the Design-Builder can provide assurance that the causes have been corrected. A formal submission as to the reasons for the failure to restore traffic lanes within the contract lane closure restrictions and the proposed corrective measures is to be provided to the VDOT Construction Manager within two (2) days of the occurrence. VDOT will respond to the adequacy of the submission within two (2) working days of receipt. No consideration for extension of time and no additional compensation will be granted for these days.

VDOT reserves the right to monitor traffic conditions impacted by the work and to make additional restrictions as may be necessary or as emergency situations dictate. Additional restrictions for other holidays or special local events may be necessary, however, in these

situations VDOT will endeavor to inform the Design-Builder at the earliest and in no case less than forty-eight (48) hours prior to the event.

During the Construction Phase, the Design-Builder shall provide an emergency contact list of project personnel for internal use and have sufficient manpower and resources available to respond to any onsite emergency, including any work zone incidents.

#### 2.9.4 Lane Rental Charges

Lane Rental charges for failure to remove active work zone elements from traffic lanes and shoulder areas and place end of day signage, if required, shall be assessed at the following monetary rates.

Active work zone elements shall be defined as equipment, personnel, channelizing devices, signage for lane closures and traffic shifts, and other items required for active work on the roadway.

LANE RENTAL TABLE		
Ramp A Closure (Route 3 Westbound to I-95 Northbound)		
Failure To Restore All Lane Traffic By:	Amount	Cumulative Amount
4:30 AM	\$1,000	\$1,000
4:45 AM	\$1,500	\$2,500
5:00 AM	\$2,000	\$4,500
5:15 AM	\$2,500	\$7,000
5:30 AM	\$3,000	\$10,000

After 5:30 AM, if the Design-Builder has failed to remove the active work zone elements the \$10,000 cumulative lane rental amount indicated above shall apply, plus \$400 for each minute thereafter, as determined by VDOT, until such time as traffic has been restored, all active work zone elements have been removed from the roadway, and end of day signage, if required, is placed in accordance with the 2011 Virginia Work Area Protection manual.

LANE RENTAL TABLE		
Ramp B Closure (I-95 Southbound to Route 3 Westbound)		
Failure To Restore All Lane Traffic By:	Amount	Cumulative Amount
<del>4:30</del> 6:00 AM	\$500	\$500
<del>4:45</del> 6:15 AM	\$750	\$1,250
<del>5:00</del> 6:30 AM	\$1,000	\$2,250
<del>5:15</del> 6:45 AM	\$2,000	\$4,250
<del>5:30</del> 7:00 AM	\$3,000	\$7,250

After ~~5:30~~7:00 AM, if the Design-Builder has failed to remove the active work zone elements the \$7,250 cumulative lane rental amount indicated above shall apply, plus \$525 for

each minute thereafter, as determined by VDOT, until such time as traffic has been restored, all active work zone elements have been removed from the roadway, and end of day signage, if required, is placed in accordance with the 2011 Virginia Work Area Protection manual. The lane rental times are absolute and supersede the allowable lane closure tables in Part 2, Section 2.9.3. The lane rental times will not vary throughout the year.

If the Design-Builder is assessed these lane rental charges for failure to restore traffic lanes, the Design-Builder will not be allowed further lane closures until the reason for the failure are evaluated and the Design-Builder can provide assurance that the causes have been corrected. A formal submission as to the reasons for the failure to restore traffic lanes within the contract lane closure restrictions and the proposed corrective measures is to be provided to the VDOT Project Manager within two (2) days of the occurrence. No modification of the Contract Price or Contract time(s) will be granted or considered for these days.

VDOT may, at its sole discretion, waive lane rental charges for failure to open traffic if such cause is not related to or caused by the Design-Builder's operations. The Design-Builder shall record lane rental charges on a daily basis and submit tabulation along with certification from the Quality Assurance Manager that such tabulation is correct to the VDOT Project Manager for concurrence within two (2) days of the occurrence. At the Completion of the Project and prior to the final payment voucher, the VDOT Project Manager will initiate an adjustment to the Contract Price through a Work Order in accordance with Article 9 of Part 4 to consider all lane rental charge assessments.

### **2.9.5 Use of Virginia State Police**

The Design-Builder shall be responsible for coordinating through VDOT for Virginia State Police (VSP) service during Temporary Traffic Control operations involving lane closures and/or rolling lane closures, and any other operation as covered in Appendix C of the 2011 Virginia Work Area Protection Manual. VDOT shall be responsible for all costs incurred by VSP specific to the Project. The request for VSP must be made at least five (5) business days prior to the scheduled roadwork.

All lane and rolling lane closures shall be identified in the TMP and in accordance with Traffic Engineering Memorandum TE-352 and WAPM TTC-66.0.

### **2.9.6 Portable Changeable Message Signs**

Portable Changeable Message Signs (PCMSs) shall be used in advance of the work zone when closing or shifting lanes for all lane closures and traffic shifts on I-95 and during all other operations on all other roadways as where required by the 2011 Work Area Protection Manual. The Design-Builder shall provide at least two (2) PCMSs along each direction of I-95, which are to be placed in advance of the Project when lane shifts or closures are in place. The PCMS shall be removed from the roadway when not in use. The Design-Builder shall coordinate the implementation of PCMSs with VDOT. The use of PCMSs shall not replace any traffic control device otherwise required per the MUTCD or the Virginia Work Area Protection Manual. PCMS messages shall be in accordance with Appendix D of the 2011 Virginia Work Area Protection

Manual. PCMSs will also be required in accordance with the Signal Turn On Procedure outlined in Part 2, Section 2.8.2.1.

## **2.10 Public Involvement / Public Relations**

The Design-Builder shall be responsible for providing a point of contact for the internal use of the VDOT Fredericksburg District Communications Office to obtain project information or for reporting to the Design-Builder customer concerns throughout the duration of the Project.

The Design-Builder shall be responsible for coordinating preparation and release of information to the public with VDOT's Communications Office. The Design-Builder shall obtain VDOT's prior approval on all information to be released to the public.

During the Design and Construction phases, the Design-Builder shall:

- At the onset of the design phase, provide VDOT's Fredericksburg District Communications Office with a plan of work and overall project design/construction schedule to assist VDOT in the creation of a project page on VDOT's website.
- As soon as practically possible in the design phase, and prior to any Pardon Our Dust pre-construction meetings or stakeholder meetings, provide a rendering or renderings of the Project. The Rendering(s) should show detail views of changes at the I-95 southbound off-ramp at Route 3 westbound and the Central Park entrance, changes at Route 3 westbound at the I-95 northbound on-ramp, and changes at the I-95 northbound off-ramp to Route 3 eastbound (if changes are made at this location).
- Provide two (2) sets of printed display-size copies of rendering/renderings, mounted on display boards, which can be brought to public meetings as visual aids.
- Provide a weekly update on specific Project activities to VDOT's Fredericksburg District Communications Office. This list may be bulleted. The update should include any shoulder or lane closures for the upcoming week, and any potential impacts to I-95, Route 3, and commercial entrances or roads intersecting with Route 3. This weekly update will be provided to VDOT's Fredericksburg District Communications Office no later than 5:00 PM on Thursdays. This information may be posted to VDOT's website and shared with local media outlets to brief motorists and stakeholders on project impacts.
- Significant traffic impacts (complete I-95 or Route 3 stoppages, or closing two (2) or more lanes on I-95 or Route 3, or impacts to entrances to Central Park or Spotsylvania Towne Centre), should be communicated at least two (2) weeks in advance.



- By the last day of each calendar month, send up-to-date project photos for display on VDOT’s website or for use in communications materials. Send additional Project photos as requested.
- Send up-to-date Project plan sheets for display on VDOT’s website or for use in communications materials, as requested.
- Create thirty (30) project display boards (similar to size of a public meeting display board) that can be distributed to Route 3 area businesses with pre-printed tear off fact sheets (approximately two hundred (200) sheets each) containing project information on new lane configurations. Provide easels as necessary to support display boards. Provide additional sheets to re-attach to display boards as requested by VDOT.
- Create a one-page sheet, approximately 8.5 x 11 inches in size with project information on new lane configurations, as well as details on traffic impacts during construction and where to find information. Sheet can be used on project display boards, and can be posted online at project website.
- Be responsible for all costs associated with holding public meetings, including required advertising for public meetings, mailed notices of upcoming meetings to residents or businesses as requested, printing of meeting materials and brochures/displays, and facility rental fees and audiovisual equipment and/or audiovisual equipment rental fees.
- Hold a “Pardon Our Dust” meeting for the general public a minimum of two (2) weeks prior to the start of construction (all aspects of the meeting will be coordinated and approved by VDOT). This meeting will be held in accordance with the VDOT Policy Manual for Public Participation in Transportation Projects. A Project presentation may be requested to be delivered at least once during this meeting, followed by time for audience questions. The Design-Builder’s Project staff will attend the meeting to assist with answering public questions. Provide two (2) sets of Project plan sheets for this meeting, mounted on display boards. Provide a PowerPoint presentation, if a presentation is requested by VDOT, and a meeting brochure.
- Hold a “Pardon Our Dust” meeting for public safety officials and other stakeholders a minimum of two (2) weeks prior to the start of construction (all aspects of the meeting will be coordinated and approved by VDOT). Invited attendees will include area law enforcement, fire/rescue, school officials, school transportation staff, public transit providers, etc. The Design-Builder’s Project staff will attend the meeting to brief audience on Project, potential impacts, and to assist with answering questions. Provide two (2) sets of project plan sheets for this meeting, mounted on display boards. Provide a PowerPoint presentation if requested, meeting brochure, and project contact list with phone numbers of key personnel that may be needed by stakeholders.

- Accompany VDOT’s Fredericksburg District Communications staff to attend periodic stakeholder/homeowner’s associations meetings as requested to perform project outreach throughout the Project.
- As requested by VDOT, be available to assist VDOT’s Fredericksburg District Communications Office with arranging media and/or stakeholder tours of the Project, and carry out tours with VDOT and Design-Builder personnel. Provide necessary personal protective equipment (PPE) for media/guests during tours.
- As requested by VDOT, be available to assist VDOT’s Fredericksburg District Communications Office with arranging project groundbreaking and/or ribbon-cutting project completion event for media and guests. Provide necessary PPE equipment for media and guests, and tent and/or chairs as needed.
- As requested by VDOT, provide information to VDOT’s Fredericksburg District Communications Office to answer customer and media inquiries.
- Provide to VDOT’s Project Manager an emergency contact list of Project personnel and response plan to respond to any onsite emergency, including any work zone incidents in accordance with IIM-LD-241.
- The VDOT Fredericksburg District Communications Office contact information is:

Kelly Hannon  
Communications Manager  
VDOT Fredericksburg District  
87 Deacon Road  
Fredericksburg, VA 22405  
540-374-3344 office  
540-656-0321 cell

Tina Bundy  
Communications Specialist  
VDOT Fredericksburg District  
87 Deacon Road  
Fredericksburg, VA 22405  
540-899-4560 office  
540-907-8325 cell

During the Construction Phase, the Design-Builder shall:

- Coordinate with the City of Fredericksburg, provide regular updates and appropriate notifications to City of Fredericksburg and other stakeholders and ensure compliance with all applicable City of Fredericksburg ordinances.

A public hearing was held for the Project on July 19, 2016. Applicable Public Hearing comments have been compiled and have been incorporated into the plans as deemed necessary by VDOT. Any public meetings held shall be conducted in accordance with the current VDOT Policy Manual for Public Participation in Transportation Projects.

## 2.11 Right-of-way

The Design-Builder shall adhere to the requirements set forth in the Right of Way Manual of Instructions, 3<sup>rd</sup> Edition, FHWA Update January 1, 2016, Chapter 10, and Attachment 2 for the Technical Requirements, Part 2, Right of Way.

## 2.12 Utilities

All efforts and costs necessary for all utility designations, utility locates (test holes), conflict evaluations, cost responsibility determination, utility relocation designs, utility relocations and adjustments, utility reimbursements, replacement land rights acquisition and utility coordination shall be included in the Offeror's Price Proposal; provided, however, that the compensation paid to landowners for replacement land rights will be paid by VDOT as a part of the right-of-way acquisition costs and shall **NOT** be included in the Offeror's Price Proposal. Costs for any utility betterment(s) shall not be included in the Offeror's Price Proposal but shall be reimbursed to the Design-Builder through agreement with the requesting utility owner.

Utility information provided on the RFP Conceptual Plans identifies all known utilities, at the time of plan development, that are located within the Project limits. Aerial utilities are identified on the RFP Conceptual Plans and/or in the Survey files by the structure to which they are attached. However, it is the Offeror's responsibility to verify, to their satisfaction, the owner, type, size, height and number of cables attached to the structure when preparing their Price Proposal. All underground utility data was obtained and is depicted in accordance with CI/ASCE 38-02 SUE Quality Level B designation on the RFP Conceptual Plans and/or Survey files. However, it is the Offeror's responsibility to verify, to their satisfaction, the owner, type, size, number of cable/conduits, pipes, services, and horizontal and vertical (depth) location of underground utilities to include service connections and laterals with the utility owners when preparing their Price Proposal.

The Design-Builder shall be responsible for all utility designations, utility locates (test holes), conflict evaluations, cost responsibility determinations, utility relocation designs, utility relocations and adjustments, utility reimbursement, replacement land rights acquisition, utility coordination, and coordination of utility betterments required for the Project. The Design-Builder shall be responsible for all necessary utility relocations, adjustments, and betterments to occur in accordance with the accepted Baseline Schedule.

The Design-Builder shall be responsible for coordination of the Project construction with all utility owners that may be affected. The Design-Builder shall be responsible for coordinating the work of the Design-Builder, its subcontractors, and the various utilities. The Design-Builder shall initiate early coordination with all utility owners with facilities located within the Project limits. The resolution of any conflicts between utilities and the construction of the Project shall

be the responsibility of the Design-Builder. No additional compensation or time will be granted for any delays, inconveniences, or damage sustained by the Design-Builder or its subcontractors due to interference from utility owners or the operation of relocating utilities or betterments.

The Design-Builder shall make all reasonable efforts to design the Project to avoid conflicts with utilities, and minimize impacts where conflicts cannot be avoided.

The Design-Builder shall identify and acquire any replacement utility easements or required right-of-way needs of all utilities necessary for relocation due to conflicts with the Project.

Utility owners and their respective contact information that are known to VDOT are provided below for reference only. It is the Design-Builder's responsibility to verify whether other utility owners exist within the Project limits and coordinate with them.

Dominion Power  
7500 West Broad Street  
Richmond, Virginia 23294  
Mr. Greg Sye  
Phone: (703) 201-5626  
Email: Greg.Sye@Dom.com

City of Fredericksburg  
715 Princess Anne Street  
Post Office Box 7447  
Fredericksburg, Virginia 22404  
Mr. Dave King  
Phone: (540) 372-1023  
Email: dking@fredericksburgva.gov

Comcast  
11101 University Boulevard  
Manassas, Virginia 20110  
Mr. John Filmeck  
Phone: (540) 553-1415  
Email: John\_Filmeck@comcast.com

Columbia Gas  
60 Commerce Parkway  
Fredericksburg, Virginia 22406  
Mr. David Godoy  
Phone: (540) 368-3218  
Email: godoy@nisource.com

Verizon South  
9401 Peabody Street  
Manassas, Virginia 20110  
Mr. William (Bill) Lacey  
Phone: (703) 369-9571  
Email: William.Lacey@verizon.com

Summit IG  
22375 Broderick Drive, Suite 165  
Dulles, Virginia 20166  
Mr. Steve Ragland  
Phone: (804) 317-4483  
Email: sragland@summitig.com

PEG Bandwith  
8532 Skip Jack Place  
Pasadena, Maryland 21122  
Mr. Michael Llamas  
Phone: (443) 827-1786  
Email: mllamas@pegbandwidth.com

Cox Communications  
1310 Belman Road  
Fredericksburg, Virginia 22401  
Mr. James Cummings  
Phone: (571) 237-8596  
Email: james.commings@cox.com

The Design-Builder shall provide all utility owners with roadway design plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the

Project impacts. The utility owners will use the Design-Builder's design plan for preparing relocation plans and estimates. If a party other than the utility owner prepares relocation plans, there shall be a concurrence box on the plans where the utility owner signs and accepts the relocation plans as shown.

The Design-Builder shall coordinate and conduct a preliminary utility review meeting with all affected utility owner to assess and explain the impact of the Project. VDOT's Project Manager and VDOT's Regional Utilities Manager/Design Build Projects Utility Coordinator (or designee) shall be included in this meeting.

The Design-Builder shall verify the prior rights of each utility owner's facilities if claimed by a utility owner. If there is a dispute over prior rights with a utility, the Design-Builder shall be responsible for resolving the dispute. The Design-Builder shall prepare and submit to VDOT a Preliminary Utility Status Report within one hundred and twenty (120) days from the Date of Notice to Proceed that includes a listing of all utilities located within the Project limits and a conflict evaluation and cost responsibility determination for each utility. This report shall include copies of existing easements, As-Built plans or other supporting documentation that substantiates any compensable rights of the utility owner.

The Design-Builder shall obtain the following from each utility owner that has a utility located within the Project limits: relocation plans including letter of "no cost" where the utility owner does not have a compensable right; utility agreements including cost estimate and relocation plans where the utility owner has a compensable right; or letters of "no conflict" where the utility owner's facilities will not be impacted by the Project.

The Design-Builder shall review all relocation plans to ensure that relocations comply with the current editions of the VDOT Utilities Manual of Instruction, the Utility Relocation Policies and Procedures and the VDOT Land Use Permit Manual. The Design-Builder shall also ensure that there are no conflicts with the proposed roadway improvements and ensure that there are no conflicts between each of the utility owner's relocation plans. The Design-Builder shall prepare and submit to VDOT all relocation plans. The Design-Builder is expected to assemble the information included in the relocation plans in a final and complete form and in such a manner that VDOT may approve the submittals with minimal review. The Design-Builder shall meet with VDOT's Regional Utilities Manager/Design Build Projects Utility Coordinator (or designee) within forty-five (45) days from the date of Notice to Proceed to gain a full understanding of what is required with each submittal. The Design-Builder shall receive written approvals from VDOT prior to authorizing utilities to commence relocation construction. The utility owners shall not begin their relocation work until authorized by the Design-Builder. Each relocation plan submitted must be accompanied by a certification from the Design-Builder stating that the proposed relocation will not conflict with the proposed roadway improvement and will not conflict with another utility owner's relocation plan.

At the time the Design-Builder notifies VDOT that the Design-Builder deems the Project to have reached Final Completion, the Design-Builder shall certify to VDOT that all utilities have been identified and conflicts have been resolved and that those utility owners with compensable rights or other claims related to relocation or coordination with the Project have

had their facilities relocated and their claims and compensable rights satisfied or will be satisfied by the Design-Builder.

The Design-Builder shall ensure the utility owners submit As-Built drawings upon completion of their relocation and/or adjustments. VDOT will issue an as-built permit to the utility owners after receipt of the permit application and the As-Built drawings. The Design-Builder shall accurately show the final location of all utilities on the As-Built drawings for the Project in accordance with Part 2, Section 2.15.9 of the RFP.

### **2.13 Quality Assurance / Quality Control (QA/QC)**

The Design-Builder shall submit its Quality Assurance/Quality Control (QA/QC) for both design and construction to VDOT at the meeting held after the Date of Commencement as set forth in Part 4 General Conditions under Section 2.1.2. Along with the QA/QC Plan submittal, the Design Manager and Quality Assurance Manager (QAM) shall provide a presentation of the QA/QC Plan for both design and construction utilizing Project related scenarios. Project scenarios shall include, but not be limited to:

- Preparatory Inspection Meeting requirements, including incorporation of at least one each, Witness and Hold Point, as set forth in Sections 5.3 and 5.14 of the Department’s guidance document for Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012 (January 2012 QA/QC Guide);
- At least one (1) material which VDOT retains responsibility for testing as identified in Table 5-2, January 2012 QA/QC Guide;
- Situation arising requiring the issuance of a Non-Conformance Report and subsequent review of the report, including completion of corrective measures and the issuance of a Notice of Correction of non-conformance work with proper log entries and proper interface with auditing and recovery requirements as set forth in Sections 5.10 and 5.11 of the January 2012 QA/QC Guide for non-conforming work resulting from:
  - defective equipment
  - construction activities/materials which fail to conform as specified;
- Inspection documentation capturing requirements as set forth in Section 5.20 and 5.21 of the January 2012 QA/QC Guide; as well as inspection of foundation and pavement subgrades that are to be performed and certified by the Design-Builder’s licensed geotechnical engineer in accordance with the Contract requirements;
- Application for payment for Work Package which includes work element, including review and approval by Quality Assurance Manager; and
- Measures that will be implemented to ensure compliance with Buy America requirements on the Project.



- Detail two (2) sample entries in Materials Notebook showing completion of Form C-25, including subsequent submission and review by Department Project Manager as set forth in Section 5.21. Refer to Section 803.73 of VDOT’s Manual of Instruction for Materials Division, Form TL-142S, for an example of a completed Materials Notebook and VDOT Materials Division Memorandum Number MD299-07 for Materials Acceptance – October 4, 2007.

### **2.13.1 Design Management**

The Design-Builder is responsible for design quality in accordance with VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012 (January 2012 QA/QC Guide). The Design-Builder’s Design Manager shall be responsible for establishing and overseeing a QA/QC program for all pertinent disciplines involved in the design of the Project, including review of design, working plans, shop drawings, specifications, and constructability of the Project. This individual shall report directly to the Design-Builder’s Project Manager, and is responsible for all of the design, inclusive of QA and QC activities. Members of the Design QA and QC team are responsible for review of all design elements to ensure the development of the plans and specifications are in accordance with the requirements of the Contract Documents. Design QA should be performed by one or more member(s) of the lead design team that are independent of the Design QC. The Project design control plan will provide VDOT assurance that the design plans and submittals will meet all contract requirements. The QAM shall verify that all design related Work Packages submitted for payment have been certified by the Design Manager as being in conformance with the Contract Documents and the Design QA/QC Plan.

Appendix 2 of the January 2012 QA/QC Guide provides minimum requirements that shall be met for development of the Design QA/QC Plan.

### **2.13.2 Construction Management**

The Design-Builder shall develop, execute, and maintain a Construction QA/QC Plan for the full duration of the Contract in accordance with VDOT’s January 2012 QA/QC Guide. The Design-Builder shall have the overall responsibility for both the QA and QC activities and shall be responsible for all QA activities and QA sampling and testing for all materials used and work performed on the Project. These QA functions shall be performed by an independent firm that has no involvement in the construction and QC program/activities. There shall be a clear separation between QA and construction, including separation between QA inspection and testing operations and construction QC inspection and testing operations, including testing laboratories. Two (2) independent, AMRL certified testing laboratories will be required, one for QA testing and one for QC testing.

The Quality Assurance Manager (QAM) shall have the authority to enforce the Contract requirements when deficient materials or unsatisfactory finished products fail to conform to Contract requirements. The QAM, in accordance with his/her assignment, shall be responsible to observe the construction in progress and to ensure the QA and QC testing and inspection is being

performed in accordance with the Contract requirements. The Design-Builder shall establish and maintain a Quality Assurance Auditing and Nonconformance Recovery Plan (AR Plan) for uniform reporting, controlling, correction and disposition and resolution of nonconformance (including disputed nonconforming items) issues that may arise on the Project. The Design-Builder's AR Plan shall establish a process for review and disposition of nonconforming workmanship, material, equipment or other construction and design elements of the Work including the submittal of the design review process for field changes. All deficiencies (hereinafter referred to as a Non-Conformance), including those pertaining to rules, regulations, and permit requirements, shall be documented by the QAM. A Non-Conformance Report (NCR) referenced by a unique number, shall be forwarded to the Contractor and VDOT within twenty-four (24) hours of discovery of the Non-Conformance. Non-conformance procedures are provided in Section 5.10.5 of the January 2012 QA/QC Guide.

The Design-Builder also shall be responsible for providing QA and QC testing for all materials manufactured off-site, excluding the items listed below:

- Prestressed Concrete Structural Elements (beams, girders (VDOT adopted Bulb-T sections), and piles)
- Structural Steel Elements (beams, girders, and sign structures)
- Pipe (concrete, steel, aluminum, and high density polyethylene) for culverts, storm drains, and underdrains
- Precast Concrete Structures
- Asphalt Concrete Mixtures
- Aggregate (dense and open graded mixes)
- Metal Traffic Signal and Light Poles and Arms

VDOT will provide plant QA and plant QC inspection and/or testing of these items. In the event that VDOT determines that materials fail to meet the tolerances in the VDOT 2007 Road and Bridge specifications, a NCR will be issued by the VDOT Project Manager and addressed to the Design-Builder's QAM for resolution. The Design-Builder is required to submit documentation of the source of materials, including the source of each material to be incorporated into the Project and the acceptance method that will be used for the material. A VDOT Form C-25 may be used to meet this requirement; however, the Design-Builder is required to submit a VDOT Form C-25, for all materials that VDOT retains responsibility for testing. The source of materials, C-25 is for informational purposes only and will not be approved or rejected by VDOT since it is the Design-Builder's responsibility to obtain materials that meet the contractual requirements. The Design-Builder will be responsible for providing QA and QC testing of all off-site materials that are not identified above, including materials obtained from off-site soil borrow pits.

The Design-Builder's QAM shall report directly to the Design-Builder's Project Manager and be independent of the Design-Builder's physical construction operations. The QAM shall establish quantities prior to commencing construction, and provide VDOT a total number of QC, QA (Independent Assurance (IA) and Independent Verification Sampling and Testing (IVST)), Owner's (the Department) Independent Assurance (OIA), and Owner's Independent Verification Sampling and Testing (OVST) required as a result of the quantities and the sampling and testing

requirements as set forth in Table A-3 and A-4 of the January 2012 QA/QC Guide. VDOT will provide all OIA and OVST tests and, therefore, final determination of the actual number of OIA and OVST tests to be performed will be made by VDOT based on these quantities.

The QAM shall be responsible for the QA inspection and testing of all materials used and work performed on the Project to include observing the Contractor's QC activities, maintaining the Materials Notebook (including adherence to the Special Provision for Design-Build Tracking (DBT) numbers included in the RFP Information Package), documentation of all materials, sources of materials and method of verification used to demonstrate compliance with the Contract requirements. This includes all materials where QA testing is to be performed by VDOT. The QAM shall be vested with the authority and responsibility to stop any work not being performed according to the Contract requirements. The construction QA and QC inspection personnel shall perform all of the construction inspection and sampling and testing work in accordance with the Contract requirements. This includes the documentation of construction activities and acceptance of manufactured materials. The Design-Builder's Quality Assurance firm shall have a presence on-site during any and all construction operations to ensure all construction work and QC activities are being performed in accordance with the Contract requirements. The QAM shall assign a Lead QA Inspector to the Project prior to the start of construction. This individual, who must be on the site full-time for the duration of all construction of the Project, shall be responsible to observe construction as it is being performed, to include all QC activities to ensure inspection and testing, and correction of any non-conformities of the Work are being performed in accordance with the Contract requirements. The Lead QA Inspector shall be supported by other QA inspectors under his/her direction to ensure at any time all construction operations and QC activities are being observed. The Lead QA Inspector shall report directly to the QAM.

All sampling and testing shall be performed by a laboratory that is accredited in the applicable AASHTO procedures by the AASHTO Accreditation Program (AAP). For test methods not accredited by AAP, the laboratory must comply with AASHTO R18 (most current Edition) and must be approved by the Department at its sole discretion. Two independent testing laboratories will be required, one for QA testing and one for QC testing. The entity(ies) performing QA operations, inspections, sampling, and laboratory testing and the entity(ies) performing QC operations, inspections, sampling, and laboratory testing shall be unique and independent from one another.

All construction QA and QC personnel shall hold current VDOT materials certifications for the types of materials testing that they are assigned to perform in accordance with Section 3.6 of the January 2012 QA/QC Guide, and for the safety and use of nuclear testing equipment as required by the Road and Bridge Specifications. The QA programs shall be performed under the direction of the QAM. The QC programs shall be performed under the direction of the Construction Manager. Substitution of Construction Manager and/or the QAM shall require VDOT approval. In addition, VDOT shall have the right to order the removal of any construction QA and QC personnel, including the QAM and the Construction Manager for poor performance at the sole discretion of the VDOT Project Manager. The QA/QC plan shall include rapid reporting of non-compliance to the VDOT Project Manager, and shall include the remedial actions to be taken as discussed in Sections 5.10 and 5.11 of the January 2012 QA/QC Guide.

The Design-Builder shall provide, prior to Final Application for Payment, a complete set of Project records that include, but are not limited to the following:

- Project correspondence
- Project diaries
- Test reports
- Invoices
- Materials books
- Certified survey records
- DBE/EEO records
- Warranties
- As-Built drawings
- Special tools

### **2.14.3 Project Documentation**

The Design-Builder shall maintain all project documentation electronically in an online location that is accessible to all personnel associated with the Project (to include contractor personnel, QC personnel, QA personnel, design personnel, right-of-way personnel, and VDOT personnel) at all times for the entire duration of the Project. Project personnel may have different read and write privileges as deemed appropriate by the VDOT Project Manager. The online document management filing structure for the project will follow the File Index identified in Attachment 2.14.3. For this Project, the online location shall be the project's Outside VDOT SharePoint website. The purpose of the online document management system is for maintaining project documents; it does not replace any submission requirements, including but not limited to providing hard copies of plans, calculations, and reports, and uploading applicable documentation into VDOT's FALCON system.

Prior to submitting each monthly Application for Payment, the Design-Builder is responsible for uploading all pertinent project documentation associated with the work performed that month onto the online document management system. This includes all applicable QC and QA daily work reports, QC and QA test reports, and DBE/ EEO Documentation. Work packages will not be considered complete until all required QC and QA reports and materials documentation has been provided.

Prior to submitting the Semi-Final Application for Payment, the Design-Builder is responsible for uploading all project documentation identified in Attachment 2.14.3 onto the online document management system. Final Payment will not be processed until all applicable documentation has been provided.

### **2.14 Field Office**

The Design-Builder shall provide office space, equipment, and services consistent with requirements for a Type I Field Office with the following modifications:

- In lieu of “a facsimile machine with optional memory and service contract for preventative maintenance, including replacement printer cartridges”, the Design-Builder shall provide a “multi-function printer, scanner, facsimile machine with the ability to print, copy, and scan documents up to 11” x 17” in size with a service contract for preventative maintenance, including replacement printer cartridges.
- In addition to the utility services listed in VDOT 2007 Road and Bridge Specification Section 514.02, the Design-Builder shall make suitable internet access available to VDOT personnel for their use in the performance of project management activities.

This field office should be configured and equipped for joint operations by Design-Builder and Department staff. The configuration and equipping of the field office shall be coordinated between the Design-Builder and the VDOT Project Manager prior to on-site placement of the field office. The field office will be operational throughout the duration of the Project construction and shall be removed upon final Project acceptance.

## 2.15 Plan Preparation

### 2.15.1 GEOPAK and MicroStation

When the Design-Builder is given the Date of Commencement, they will be furnished with the following software and files which run in WindowsXP or Windows7 only: GEOPAK (current version used by VDOT), MicroStation (current version used by VDOT) and VDOT Standard Resources Files, and all the design files used to develop the RFP Conceptual Roadway and Bridge Plans including aerial images, if available, and survey files.

### 2.15.2 Software License Requirements

VDOT shall furnish a License Access Key for all the software products VDOT makes available to the Design-Builder. The License Access Key will be supplied upon request by the Design-Builder, based on the data provided on a completed Software License Form, LD-893, and subsequently reviewed and approved by the VDOT Project Manager.

The License Access Key is provided for use on the Project detailed on the request only for the duration specified for that Project. Any adjustment made to the Project schedule will be taken into consideration in adjusting the time the License Access Key is available. Justification for the number of license(s) requested **MUST** include the estimated number of total computer hours for the task of design, detailing, relating Project management and other computer based engineering functions requiring the software requested.

The appropriate use of the License Access Key provided to the Design-Builder will become the responsibility of the Design-Builder regardless of who on the team uses the License Access Key. The Design-Builder will be responsible for keeping track of the License Access Key provided to them or a team member and, upon completion of the Project, the prompt



notification to the VDOT CADD Support Section of Project Completion and removal of the software from any system used solely for the Project for which it was obtained.

### **2.15.3 Drafting Standards**

All plans shall be prepared in U.S. customary units and in accordance with the most recent version of the VDOT Road Design Manual, Vol. I, VDOT CADD Manual and VDOT I&IMs and VDOT's Manual of Structure and Bridge Division, Vol. V, Part 2, Design Aids and Typical Details.

### **2.15.4 Electronic Files**

The Design-Builder shall submit all plans in accordance with the Department's policies and procedures (Right-of-way and/or Construction submittals, Released for Construction, and As-Builts) in electronic format using the provided CADD software. Files shall be submitted in both Microstation DGN and Adobe PDF formats, by way of VDOT's Falcon Consultant environment or FTP Server. The Design-Builder will complete form LD-443, the Falcon System Access and Security Agreement and form LD-894, the Falcon Access Request Form, for access to the Falcon Consultant environment. VDOT will furnish electronic files of all applicable standard detail sheets upon request by Design-Builder. The files will use standard VDOT cell libraries, level structures, line types, text fonts, and naming conventions as described in the most recent version of the VDOT CADD Manual and VDOT's Manual of the Structure and Bridge Division, Vol. V - Part 2, Design Aids and Typical Details. Files furnished to Design-Builder in electronic format shall be returned to VDOT and removed from Design-Builder and its designer's computer equipment upon completion of the Project.

### **2.15.5 Plan Submittals**

In addition to electronic files as described in Part 2, Section 2.15.4 above, the Design-Builder shall prepare and distribute hard copy paper plans in the quantities as specified below, for each of the following deliverables (at a minimum, as other submittals and/or work packages may be necessary or desired):

- Right-of-way Plans
- Released for Construction Plans
- Right-of-way and/or Construction Revisions
- Record Plans (As-Built)
- Approved Shop Drawings
- Design Calculations

The Right-of-way and/or Construction plans may be submitted for approval in logical subsections (such as from station to station) or consisting of work packages such as: 1) clearing and grubbing along with erosion and siltation control, 2) grading and drainage, 3) final roadway, and 4) traffic control. A submittal schedule and planned breakdown of work packages shall be submitted to VDOT for review and approval as part of the planned Project Baseline schedule.



Right-of-way and/or Construction Plans shall be accompanied by 1) a VDOT LD-436 checklist filled out as appropriate for the specific submittal, and 2) a written notice signed by the Design-Build Design Manager that includes the following:

- The logical subsections or work packages for which review and approval is being requested
- Confirmation that the submittal has been checked and reviewed in accordance with the Design-Builder’s approved QA/QC plan.
- Confirmation that the submittal either meets all requirements of the Contract Documents and Reference Documents or that any deviations from the Contract Documents and Reference Documents have been identified and previously approved by VDOT.

The Design-Builder shall submit all Right-of-way and/or Construction plans to VDOT and FHWA simultaneously, for review and approval. VDOT shall receive two (2) full-size sets and ten (10) half-size sets of each submission, with the exception of the Released for Construction Plans (see Part 2, Section 2.15.8 below). FHWA shall receive two (2) half-size sets of each submission. The plan submissions shall be delivered to the following addresses:

Virginia Department of Transportation  
Attention – Gale M. Dickerson, P.E.  
87 Deacon Road  
Fredericksburg, VA 22405

Federal Highway Administration  
Attention – S. Elliot Moore, P.E.  
400 N. 8<sup>th</sup> Street, Suite 750  
Richmond, VA 23219-4825

VDOT and FHWA shall have the right to review all Right-of-way and Construction Plans and provide comments regarding compliance with the requirements of the Contract Documents and Reference Documents. The Design-Builder shall be responsible for satisfying all such comments. Formal responses to VDOT and FHWA comments shall be provided in subsequent submittals.

VDOT and FHWA have the right to disapprove any design approach that is not in compliance with the requirements of the Contract Documents and Referenced Documents.

VDOT’s written approval of any deviations from requirements of the Contract Documents and Reference Documents shall be attached to the plans submitted for review.

### **2.15.6 Right-of-way Plans**

Right-of-way Plans and any associated Design Calculations shall be submitted to VDOT and FHWA simultaneously for review. The time frame for plan review and approval shall be in accordance with the requirements of the Contract Documents. All VDOT and FHWA comments must be adequately addressed before the Right-of-way Plans will be approved. Notice to Commence Right-of-way Acquisition will be granted in accordance with Part 2, Section 2.11 above. The Design-Builder shall be responsible for the design details and ensuring that the design and right-of-way acquisition work are properly coordinated.

### **2.15.7 Construction Plans**

Construction Plans, and any associated Design Calculations, shall be submitted to VDOT and FHWA simultaneously for review. The time frame for plan review and approval shall be in accordance the requirements of the Contract Documents. All VDOT and FHWA comments must be addressed to the satisfaction of the commentator before Construction Plans are recommended for approval to the Chief Engineer. This plan milestone includes plans that may be submitted as soon as sufficient information is available to develop Construction Plans for certain portions or elements of the Project (or work packages). The Design-Builder shall meet commitments for review and approval by other entities/agencies as specified in other portions of the RFP and its attachments. The Design-Builder shall be responsible for the design details and ensuring that the design and construction work are properly coordinated.

### **2.15.8 Released for Construction Plans**

Released for Construction Plans are those that are issued for construction after approval by VDOT's Chief Engineer. Notice to Commence Construction will only be issued by the VDOT Project Manager upon approval of the Construction Plans (or Work Packages) by the Chief Engineer.

The Released for Construction Plans shall be distributed simultaneously to VDOT and FHWA. VDOT shall receive one (1) full-size set and five (5) half-size sets of Released for Construction Plans, along with all electronic files. FHWA shall receive two (2) half-size hard copy sets, along with all electronic files, of the Released for Construction Plans. The plans shall be delivered to the following addresses:

Virginia Department of Transportation  
Attention - Gale M. Dickerson, P.E.  
87 Deacon Road  
Fredericksburg, VA 22405

Federal Highway Administration  
Attention – S. Elliot Moore, P.E.  
400 N. 8<sup>th</sup> Street, Suite 750  
Richmond, VA 23219-4825

### **2.15.9 Record (As-Built) Plans**

The final plan milestone is Record (As-Built) Plans. As-Built Plans shall be prepared, signed and sealed by a Professional Engineer licensed in Virginia, and submitted to VDOT with the final application for payment. These plans will show all adjustments and revisions to the Construction Plans made during construction and serve as a permanent record of the actual location of all constructed elements. Adjustments and revisions shall include but not limited to the following major items:

- Horizontal Alignment – All changes in horizontal alignment and curve data;
- Vertical Alignment – All changes in vertical alignment, benchmarks, grades and ditch flows;
- Drainage Structures and Stormwater Management – All changes in location, elevation, length and size of culverts, storm sewer pipes, drop inlets, manholes, and stormwater management facilities/BMPs;
- Earthwork and Pavement – Earthwork, sub-base, aggregate base, pavement quantity and/or material changes.

### **2.16 Virginia Occupational Safety and Health Standards**

The Project shall comply with Virginia Occupational Safety and Health Standards in accordance with Section 107.17 of the Division I Amendments to the Standard Specifications.

- At a minimum, all Design-Builder personnel shall comply with the following, unless otherwise determined unsafe or inappropriate in accordance with OSHA regulations:
- Hard hats shall be worn while participating in or observing all types of field work when outside of a building or outside of the cab of a vehicle, and exposed to, participating in or supervising construction.
- Respiratory protective equipment shall be worn whenever an individual is exposed to any item listed in the OSHA Standards as needing such protection unless it is shown the employee is protected by engineering controls.
- Adequate eye protection shall be worn in the proximity of grinding, breaking of rock and/or concrete, while using brush chippers, striking metal against metal or when working in situations where the eyesight may be in jeopardy.
- Approved high visibility Safety apparel shall be worn by all exposed to vehicular traffic and construction equipment.
- Standards and guidelines of the current Virginia Work Area Protection Manual shall be used when setting, reviewing, maintaining, and removing traffic controls.

- Flaggers shall be certified in accordance with the Virginia Flagger Certification Program.
- No person shall be permitted to position themselves under any raised load or between hinge points of equipment without first taking steps to support the load by the placing of a safety bar or blocking.
- Explosives shall be purchased, transported, stored, used and disposed of by a Virginia State Certified Blaster in possession of a current criminal history record check and a commercial driver's license with hazardous materials endorsement and a valid medical examiner's certificate. All Federal, State and local regulations pertaining to explosives shall be strictly followed.
- All electrical tools shall be adequately grounded or double insulated. Ground Fault Circuit Interrupter (GFCI) protection must be installed in accordance with the National Electrical Code (NEC) and current Virginia Occupational Safety and Health agency (VOSH). If extension cords are used, they shall be free of defects and designed for their environment and intended use.
- No person shall enter a confined space without training, permits and authorization.
- Fall protection is required whenever an employee is exposed to a fall six (6) feet or greater.

### 3.0 ATTACHMENTS

The following attachments are specifically made a part of, and incorporated by reference into, these Technical Information & Requirements:

- ATTACHMENT 2.2 -- ROADWAY INVENTORY AND MAJOR DESIGN CRITERIA
- ATTACHMENT 2.3 -- ADDITIONAL FOUNDATION CRITERIA
- ATTACHMENT 2.4 -- NUTRIENT CREDIT ASSIGNMENT AGREEMENT
- ATTACHMENT 2.14.3 -- DESIGN-BUILD PROJECT FILE INDEX

All additional information is included in the RFP Information Package – referred to in Part 1, Section 2.8.4 of this RFP.

### END OF PART 2 - TECHNICAL INFORMATION & REQUIREMENTS

**SAFETY IMPROVEMENTS  
INTERSTATE 95 and ROUTE 3  
UPC 107715**

**Attachment 2.2**

**Design Criteria Table  
November 2016**

	<b>Interstate 95</b>	<b>Route 3</b>	<b>NB I-95 ON RAMP FROM EB RTE. 3 (Ramp A, Loop D)</b>	<b>SB I-95 ON LOOP FROM WB RTE. 3 (Loop B)</b>	<b>SB I-95 OFF RAMP TO WB RTE. 3 (Ramp B)</b>	<b>NB CD Roadway Design to determine soundwall location</b>
<b>Functional Classification</b>	Urban Interstate GS-5	Urban Principal Arterial (Other) GS-5	Interchange Ramp GS-R	Interchange Ramp GS-R	Interchange Ramp GS-R	Urban Interstate GS-5
<b>ADT (Design Year 2038)</b>	205,000 vpd for I-95 North of Route 3	107,000 vpd from I-95 Bridge to Carl D. Silver Parkway	40,100 vpd	5,800 vpd	30,100 vpd	40,100 vpd
	165,900 vpd for I-95 South of Route 3	75,800 vpd from I-95 Bridge to Gateway Blvd				
<b>Truck Percentage (Design Hour)</b>	15%	4% from I-95 Bridge to Carl D. Silver Parkway 5% from I-95 Bridge to Gateway Blvd	5%	5%	5%	5%
<b>Design Speed (mph)</b>	70 MPH	45 MPH	50 MPH <sup>1</sup>	25 MPH	50 MPH <sup>2</sup>	60 MPH
<b>Number of Lanes</b>	See RFP Conceptual Plans	See Conceptual RFP Plans	See RFP Conceptual Plans	1	See RFP Conceptual Plans	2
<b>Minimum Lane Widths</b>	12 ft	11 ft min. and 12 ft within interchange areas. <sup>6</sup>	12 ft <sup>3</sup>	18 ft	12 ft <sup>3</sup>	12 ft
<b>Superelevation Standard</b>	TC-5.11R e <sub>max</sub> 8.0%	TC 5.11ULS e <sub>max</sub> 2.0%	TC-5.11R e <sub>max</sub> 8.0%	TC-5.11R e <sub>max</sub> 8.0%	TC-5.11R e <sub>max</sub> 8.0%	TC-5.11R e <sub>max</sub> 8.0%
<b>Paved Shoulder Widths</b>	12 ft	4 ft Left / 8 ft Right	4 ft Left / 8 ft Right	4 ft Left / 8 ft Right	4 ft Left / 8 ft Right	4 ft Left / 10 ft Right
<b>Graded Shoulder Width</b>	14 ft cut and 14 ft in fill. If using guardrail the graded shoulder shall be 17 ft.	10 ft cut/fill 13 ft when used with guardrail.	6 ft Left / 10 ft Right. If using guardrail add 3 ft to graded shoulder.	6 ft Left / 10 ft Right. If using guardrail add 3 ft to graded shoulder.	6 ft Left / 10 ft Right. If using guardrail add 3 ft to graded shoulder.	14 ft cut and 17 ft in fill
<b>Curb and Gutter</b>	N/A	CG-7	N/A	N/A	N/A	N/A
<b>Terrain</b>	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling
<b>Minimum Radius</b>	1,821 ft	795 ft	50 MPH: 760 ft 30 MPH: 215 ft	25 MPH: 135 ft	50 MPH: 760 ft 25 MPH: 135 ft	1,204 ft
<b>Minimum Stopping Sight Distance</b>	730 ft	360 ft	50 MPH: 425 ft 30 MPH: 200 ft	25 MPH: 155 ft	50 MPH: 425 ft 25 MPH: 155 ft	570 ft
<b>Clear Zone<sup>4</sup></b>	30 ft with foreslope of 6:1 or flatter	20 ft with foreslope of 6:1 or flatter	foreslopes 6:1 or flatter 50 MPH: 20-22 ft 30 MPH: 14-16 ft	foreslopes 6:1 or flatter 25 MPH: 14-16 ft	foreslopes 6:1 or flatter 50 MPH: 20-22 ft 25 MPH: 14-16 ft	30 ft with foreslope of 6:1 or flatter
<b>Slope Standard</b>	CS-4	CS-4	CS-4	CS-4	CS-4	CS-4
<b>Minimum Vertical Clearance</b>	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"	16'-6"

- Design speed shall be minimum of 50 MPH at on ramp to I-95 functional area and transition to 30 MPH.
- Design speed shall be 50 MPH at I-95 off ramp exit from I-95. Off ramp to provide for a dual lane off ramp, with the outside design as a choice lane for SB I-95 traffic. 25 MPH minimum design speed applies to tie to Route 3.
- 12 ft will be used per lane on multi-lane ramps. Single lane ramps will be 16 ft wide, except 18 ft will apply to Loop B.
- Clearzone requirements depend on foreslope and backslope conditions, utilize Roadway Design Manual page A-21.
- The intent of this table is to describe absolute design minimums and not enumerate every required design feature. Design features shown in the Request for Proposal plans exceeding these minimums shall be adhered to and shall supersede minimums shown within this table.
- The westbound Route 3 mainline lane widths of 11 feet apply to the west of the I-95 Bridge. The eastbound Route 3 mainline lane widths of 12 feet apply to the east of the I-95 Bridge.