

VDOT

Virginia Department of Transportation

REQUEST FOR PROPOSALS

A DESIGN-BUILD PROJECT

Addendum No. 23

US Route 15/29 Improvements at Vint Hill

**From: 0.96 Miles South of Route 215
To: Intersection of US 29 and Route 215**

Fauquier County, Virginia

State Project No.: 0029-030-843, P101, R201, C501

Federal Project No.: HSIP-5B01(020)

Contract ID Number: C00114713DB105

DATE: February 4, 2019

Addendum No. 1 – February 19, 2019

Addendum No. 2 – February 28, 2019

Addendum No. 3 – March 8, 2019

TABLE OF CONTENTS

1.0 INTRODUCTION..... 1
1.1 Project Overview.....1
1.2 Base Scope and Scope Alternatives1
1.3 Procurement Overview.....2
2.0 BACKGROUND INFORMATION 3
2.1 Legislative Authority3
2.2 Maximum Contract Value3
2.3 Procurement Schedule and Project Milestones.....3
2.4 Status of NEPA.....4
2.5 VDOT’s Point of Contact4
2.6 RFP Information Package.....5
2.7 RFP Documents.....5
2.8 Deviations from the RFP Documents6
2.9 Obligation to Meet All of the Requirements of the RFP Documents6
3.0 GENERAL PROCEDURES AND REQUIREMENTS 6
3.1 Offeror’s Pre-Submittal Responsibilities and Representations.....6
3.2 Pre-Proposal Meeting7
3.3 Utility Meeting.....7
3.4 Acknowledgment of Receipt of RFP, Revisions, and/or Addenda7
4.0 CONTENTS OF PROPOSALS 8
4.1 Letter of Submittal.....8
4.2 Attachments to the Letter of Submittal10
4.3 Price Proposal.....13
4.4 Post Notice of Intent to Award Submittals14
5.0 PROPOSAL EVALUATION AND RESPONSIVENESS REVIEW 17
5.1 Price Proposal Evaluation Factors17
6.0 PROPOSAL SUBMITTAL REQUIREMENTS 18
6.1 Due Date, Time and Location18
6.2 Format.....18
7.0 QUESTIONS AND CLARIFICATIONS..... 20
8.0 AWARD OF CONTRACT, PROPOSAL VALIDITY AND CONTRACT EXECUTION .. 21
8.1 Negotiations and Award of Contract21
8.2 Proposal Validity.....22
8.3 Submittals after Notice of Intent to Award22
8.4 Contract Execution and Notice to Proceed.....22
9.0 RIGHTS AND OBLIGATIONS OF VDOT..... 22
9.1 Reservation of Rights.....22
9.2 No Assumption of Liability24
10.0 PROTESTS..... 24
11.0 MISCELLANEOUS 25
11.1 Virginia Freedom of Information Act.....25
11.2 Conflict of Interest26
11.3 Ethics in Public Contracting Act.....28

11.4	Requirement to Keep Team Intact	28
11.5	Disadvantaged Business Enterprises (DBE’s)	28
11.6	Trainee and Apprenticeship Participation	31
11.7	Escrow Proposal Documents.....	31
11.8	Administrative Requirements.....	35
11.9	Compliance with the Law in Virginia	37
11.10	Attachments.....	37

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 US Route 15/29 Improvements at Vint Hill in Fauquier County, 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:

- Scope and Cost – Obtain the most scope for the maximum contract value as identified in this RFP.

1.1 Project Overview

The Project is located along US Route 15/29 in Fauquier County, Virginia. The US-15/29 and VA-215 (Vint Hill Road) intersection consistently ranks as the #1 highest Targeted Safety Need in the Culpeper District with the highest potential for safety improvement based on statewide statistical data. High speed approaches and heavy volumes create conditions where substandard geometrics contribute to frequent crashes due to motorists overdriving conditions. The existing vertical curves approaching the US-15/29 and Vint Hill Road intersection provide sight distance for an equivalent 35 mph design speed, well below the 60 mph design speed of the corridor.

The purpose of the US Route 15/29 Improvements Project at Vint Hill is to address safety by improving the current substandard stopping sight distance in the northbound lanes of US Route 15/29 (Lee Highway) in Fauquier County, from approximately 0.96 miles south of the Route 215 to the intersection of Route 215. The proposed improvements include improving the vertical alignment of the northbound lanes of US Route 15/29 approaching the traffic signal at Vint Hill Road. Refer to Part 2 of the RFP (Technical Requirements) for the scope of work, technical information and requirements.

Offeror’s are encouraged to realize the maximum incentive for Interim Milestone Completion Date before August 2, 2019, and shall meet the Final Completion Date of the Project prior to September 30, 2019.

1.2 Base Scope and Scope Alternatives

For budgeting reasons, the Project will be procured utilizing a Base Scope and Scope Alternatives. All Offerors shall provide, at a minimum, the base scope. The Scope Alternatives

are listed in sequential order by priority and shall be provided in sequential order. For example, Scope Alternative 2 shall not be provided unless Scope Alternative 1 is also provided. The general descriptions of the Base Scope and Scope Alternatives are listed below.

1.2.1 The Base Scope of the Project includes the following:

- Improve the vertical alignment of the northbound lanes of US Route 15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 50 mph. The horizontal alignment shall be designed using a 60 mph design speed.

1.2.2 Scope Alternative 1 includes the following:

- Improve the vertical alignment of the northbound lanes of US Route 15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 55 mph. The horizontal alignment shall be designed using a 60 mph design speed.

1.2.3 Scope Alternative 2 includes the following:

- Improve the vertical alignment of the northbound lanes of US Route 15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 60 mph. The horizontal alignment shall be designed using a 60 mph design speed.

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 submits the lowest Proposal Price with the most scope alternatives, as defined in the RFP, will develop and deliver the Post Notice of Intent to Award Submittal consistent with Part 1, Section 4.4 within three (3) business days of Notice of Intent to Award.

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.

Price Proposals for the Project shall be an "all in" price; provisions for scope validation and differing site conditions shall not apply for this project. Offerors are expected to bid the risk to design and construct the project based on information provided in the RFP.

Offerors shall submit a Price Proposal for the Base Scope and Scope Alternatives within VDOT's maximum contract value in accordance with Part 1, Section 4.3. The Offeror whose Proposal is deemed responsive, who submitted the most scope alternatives for the lowest price,

and whose Price Proposal does not exceed VDOT’s maximum contract value 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 Successful Offeror will be determined in accordance with Part 1, Section 5.1. The award of the contract will be made to the Successful Offeror in accordance with Part 1, 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 February 4, 2019. The FOPI is available for inspection upon request.

2.2 Maximum Contract Value

VDOT’s current maximum contract value (MCV) for this Project is \$3,~~500~~600,000. An Offeror’s Price Proposal shall not exceed the maximum contract value. A Price Proposal that exceeds the maximum contract value will render an Offeror’s Proposal non-responsive.

2.3 Procurement Schedule and Project Milestones

2.3.1 VDOT has established incentives for early completion of the Interim Milestone. A description of the Interim Milestone and requirements to achieve the associated incentive are included in the Attachment to Part 3 Article 5 (Provision for “No Excuses” Incentives). 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	02/04/2019
.2	Pre-Proposal Meeting w/ Offerors	02/15/2019 (10:00 AM prevailing local time)
.3	Utility Meeting w/ Offerors	02/15/2019 (10:30 AM prevailing local time)
.4	RFP Questions Due to VDOT	02/20/2019 (4:00 PM prevailing local time)
.5	VDOT responses to Questions or Clarifications	02/26/2019
.6	Letter of Submittal and Price Proposal Due Date	03/ 15 <u>19</u> /2019 (4:00 PM prevailing local time)
.7	Open Price Proposals	03/ 19 <u>21</u> /2019 (9:00 AM prevailing local time)
.8	Notice of Intent to Award	03/ 22 <u>25</u> /2019
.9	CTB Approval/Notice to Award	04/10/2019
.10	Design-Build Contract Execution	04/16/2019
.11	Notice to Proceed	04/17/2019
.12	Interim Milestone	08/02/2019

.13 Final Completion

09/30/2019

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

- .1 Interim Milestone and Final Completion shall be no later than the date(s) set forth in Part 1, Section 2.3.1. For the avoidance of doubt, the date for Final Completion shall include the Work for the Base Scope and Scope Alternatives.
- .2 If an Offeror proposes Interim Milestone and/or Final Completion date(s) earlier than that shown in Part 1, Section 2.3.1 above, then such proposed date(s) will be deemed by VDOT as the contractual completion date(s) for the Design-Build Contract for all purposes, including liquidated damages.

2.4 Status of NEPA

In accordance with the requirements of the National Environmental Policy Act (“NEPA”) and in cooperation with Federal Highway Administration (FHWA), a NEPA document concurrence was approved to utilize a Categorical Exclusion on December 12, 2018. The coordination of the Categorical Exclusion is currently ongoing. The NEPA process is anticipated to be complete prior the scheduled date for project award. A working draft of the NEPA document and associated environmental documents including scoping responses are included in the RFP Information Package.

The project will not be awarded prior to completion of NEPA related work. NEPA related work is expected to be complete prior to March 2019.

2.5 VDOT’s Point of Contact

VDOT’s sole point of contact (POC) for matters related to the RFP shall be Joseph Clarke, PE. 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:	Joseph A. Clarke, PE
Address:	Virginia Department of Transportation 1401 East Broad Street Annex Building, 5 th Floor Richmond, VA 23219
Mailing Address:	1401 East Broad Street Richmond, VA 23219
Phone:	(804) 371-4316
Fax:	(804) 786-7221

E-Mail: joseph.clarke@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 "US Route 15/29 Improvements, Contract No. C00114713DB105".

2.6 RFP Information Package

An RFP Information Package is available for interested Offerors on CD. Interested Offerors should complete the RFP Information Package Order Form included as Attachment 2.6 and return the completed form to the VDOT POC identified in Section 2.5.

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

2.7 RFP Documents

2.7.1 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 THE STANDARD SPECIFICATIONS

VDOT has developed standard template Part 3, 4 and 5 (November 2016) 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 3, 4 and 5 will be incorporated into the Final Contract by reference.

2.7.2 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.

2.7.3 Addenda to the RFP Documents, if any, will be posted on the VDOT public 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.

2.8 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.

2.9 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 the general, local, and Site conditions that may affect the cost, progress, or performance of its work on the Project;
- .3 Offerors are prohibited to access VDOT right of way and private property within the Project limits to perform any activities other than to observe the conditions of the site, unless otherwise approved in writing by VDOT’s POC identified in Part 1, Section 2.4. Furthermore, the Offerors are on notice that any unauthorized access to VDOT right of way and private property within the Project may be considered sufficient for the disqualification of the Offeror or may render the Offeror’s Proposal non-responsive or both;

- .4 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;
- .5 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;
- .6 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;
- .7 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
- .8 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 Part 1, Section 2.3.1 at the VDOT Culpeper District Office, 1601 Orange Road, Culpeper, VA 22701 in the District Auditorium.

3.3 Utility Meeting

VDOT will hold a Utility Meeting of potential Offerors on the date and time set forth in Part 1, Section 2.3.1 at the VDOT Culpeper District Office, 1601 Orange Road, Culpeper, VA 22701 in the District Auditorium.

3.4 Acknowledgment of Receipt of RFP, Revisions, and/or 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 Proposal. The format of such information is described in Part 1, Section 6.

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 Price 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 Quality Assurance 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 Quality Assurance 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 ten percent (10%) DBE participation goal for the entire value of the contract.

4.1.10 Provide Interim Milestone and Final Completion Dates. The proposed dates herein shall be no later than the date(s) set forth in Part 1, Section 2.3.1. Earlier Interim Milestone and Final Completion date(s) will be deemed by VDOT as the contractual completion date(s) 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 that 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 Quality Assurance firm.

If Lead Contractor, Lead Designer and Quality Assurance 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 (per RFP Part 4). 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 Quality Assurance 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 Quality Assurance 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 Quality Assurance 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) relevant projects by the Lead Contractor for this Project as identified in Part 1, Section 4.1.7, focusing on what the Offeror considers most relevant in demonstrating the Lead Contractor’s qualifications to serve as the Lead Contractor for this Project. Relevant experience to be identified on the Lead Contractor Work History Form shall include:

- .1 Three (3) primary arterial roadway projects with a minimum construction value of \$3,000,000 that achieved on-time or early contract completion.

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) relevant projects by the Lead Designer for this Project identified in Part 1, Section 4.1.7, focusing on what the Offeror considers most relevant in demonstrating the Lead Designer’s qualifications to serve as the Lead Designer for this Project. Relevant experience to be identified on the Lead Designer Work History Form shall include:

- .1 Three (3) primary arterial roadway projects with a minimum construction value of \$3,000,000.

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 US Route 15/29. 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 Median widths
- .4 Horizontal curve data and associated design speeds
- .5 Minimum pavement sections
- .6 Cross slopes
- .7 Location of stormwater management facilities (if applicable)

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 for the Base Scope and Scope Alternatives and the Proposal Price, in both numbers and words, which is a sum for the Base Scope and any Scope Alternatives provided within (i.e. not to exceed) VDOT's Maximum Contract Value. 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, Fuel and Steel Prices for the Base Scope and Scope Alternatives Price Proposal.

4.3.3 Provide the Proposal Guaranty required by Section 102.07 of Division I Amendments to the Standard Specifications for the Base Scope and Scope Alternatives Price Proposal. 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, July 2018.

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. The Key Personnel shall be employed full time by the respective firms shown on the Organizational Chart at the time of submitting a Proposal.

- .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 ensure the overall quality of the 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 DM 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** – 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. Provide a current list of assignments and the anticipated duration of each assignment for all projects in which the Construction Manager is currently obligated.

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 (inclusive of the Base Scope and any applicable Scope Alternatives). 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 the Interim Milestone and Final Completion dates. 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, 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 Base Scope and Scope Alternatives 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 items 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.

5.1 Price Proposal Evaluation Factors

VDOT will open and read the Price Proposals publicly on the date and time set forth in Part 1, Section 2.3.1. The Successful Offeror will be determined based on the following:

.1 VDOT will only consider Price Proposals that do not exceed VDOT's maximum contract value. A Price Proposal that exceeds the maximum contract value will render an Offeror's Proposal non-responsive.

.2 The Offeror who submits: (a) a responsive Proposal; (b) offers the most Scope Alternatives (in sequential order as specified in Section 1.3); and, in the event that another Offeror offers the same number of Scope Alternatives, (c) has the lowest Price Proposal shall be considered the Successful Offeror.

.3 In the event of tie Price Proposals with the Base Scope and an identical number of Scope Alternatives, the Successful Offeror will be decided by giving preference to Virginia persons, firms, or corporations; otherwise, the tie will be decided by lot in accordance with the VDOT Road and Bridge Specifications, Section 103.02.

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: Joseph A. Clarke, PE (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. Photos and graphics contained in the PDF copy shall be compressed to 220 pixels per inch (ppi) or less prior to conversion in order to minimize the file size to the greatest extent possible.

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

- Divided into two volumes:
 - Volume I shall:
 - Include all requirements of the Letter of Submittal, including appendices, with the exception of design concept graphics and proposal schedule.
 - Be prepared on 8.5” x 11” white paper (Charts, exhibits and other illustrative information included in the Letter of Submittal may be submitted on 11” x 17” paper, but must be folded to 8.5” x 11”.)
 - The appendices to Volume I should be organized at the end of the Volume I.
 - Volume II shall:
 - Include all design concept graphics drawn to an identifiable scale.
 - Be prepared on 11” x 17” paper unfolded
- Typed on one (1) side only
- Separated by numbered tabs with sections corresponding to the order set forth in Part 1, Section 4. 1 and Section 4.2.
- Page number references should be included in the lower right hand corner on each page of Volume I and Volume II of the Letter of Submittal.
- Animated videos/ motion pictures are prohibited.
- 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 or DVD-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 or DVD 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 price that provides the most scope alternatives. If the Proposal is responsive and the Proposal Price is within VDOT's maximum contract value, 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 for the Base Scope submitted by all Offerors is not within VDOT's maximum contract value, 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 VDOT's POC. 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 Alternative Project Delivery Division 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 The firms listed below will not be allowed to participate as a Design-Build team member due to a conflict of interest:

- Schnabel Engineering, Inc.
- Rice Associates
- Accumark
- Geomni

- Reynolds, Smith and Hills, Inc. (RS&H)

Any Proposals received in violation of this requirement will be rejected.

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, 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 (DBE's)

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 4.9. 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:

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

Metropolitan Washington Airports Authority
Department of Supplier Diversity
1 Aviation Circle
Washington, DC 20001
Phone: (703) 417-8625
<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.virginiadot.org/business/bu_bizDev.asp

www.virginiadot.org/business/bu-civil-rights-home.asp

11.5.5 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 SBSBD web site (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

VDOT will not require trainee and apprenticeship participation for this Project.

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 this section, 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 items. 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 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. The 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. EPDs that are legible and complete will be transferred to the banking institution referenced in Part 1, Section 11.7.6 after examination.
- .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 the 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 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, 7th 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 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 Part 4, Section 6.6.3. Upon receipt of this notification, APD will contact and coordinate with the Successful Offeror for the transfer of the EPD's 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 that 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.

The Offeror shall be in compliance with Commonwealth of Virginia Executive Order 61 Ensuring Equal Opportunity and Access for all Virginians in state contracting and public services. The Offeror shall maintain a non-discrimination policy, which prohibits discrimination by the Offeror on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, political affiliation, disability, or veteran status. This policy shall be followed in all employment practices, subcontracting practices, and delivery of goods or services. The Offeror shall also include this requirement in all subcontracts valued over \$10,000.

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 detail 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 is not available for the Project and is not included in the Information Package. 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. A completed CII/SSI form must be submitted to VDOT's Point of Contact provided in Part 1, 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 2.6 -- 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

END OF PART 1
INSTRUCTIONS FOR OFFERORS

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

PROJECT: US Route 15/29 Improvements at Vint Hill
RFP NO. : C00114713DB105
PROJECT NO.: 0029-030-843

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 – February 4, 2019
(Date)
2. Cover letter of RFP Addendum No.1 – February 19, 2019
(Date)
3. Cover letter of RFP Addendum No. 2 – February 28, 2019
(Date)
4. Cover letter of RFP Addendum No. 3 – March 8, 2019
(Date)

SIGNATURE

DATE

PRINTED NAME

TITLE

TABLE OF CONTENTS

1.0	DESIGN-BUILDER’S SCOPE OF WORK.....	3
1.1	Project Description.....	3
1.2	Anticipated Scope of Work.....	3
1.3	Anticipated Design Services	4
1.4	Anticipated Environmental Services.....	4
1.5	Anticipated Right of Way and Utilities	5
1.6	Anticipated Construction Services.....	6
1.7	Coordination with Active Construction Projects	7
1.8	Scope Validation.....	7
2.0	PROJECT TECHNICAL INFORMATION & REQUIREMENTS	7
2.1	References and Information.....	8
2.1.1	Standards and Reference Documents.....	8
2.1.2	RFP Information Package	12
2.1.3	Design Exceptions and Design Waivers	13
2.2	Mainline and Other Roadway Improvements	14
2.3	This section intentionally left blank.....	15
2.4	Environmental.....	15
2.4.1	Environmental Document	15
2.4.2	Cultural Resources	16
2.4.3	Section 4(f) Resources	17
2.4.4	Water Quality Permits and Compensatory Mitigation.....	17
2.4.5	Threatened and Endangered Species	17
2.4.6	Hazardous Materials	18
2.4.7	Air Quality	18
2.4.8	Noise Mitigation	19
2.4.9	Environmental Compliance	19
2.5	Survey	20
2.6	Geotechnical Work	22
2.6.1	Minimum Pavement Sections	23
2.6.2	Temporary Pavement	24
2.6.3	Geotechnical Requirements	24
2.6.4	Unsuitable Materials	25
2.6.5	Control of Rock Blasting	26
2.6.6	Pipe Installation Methods	27
2.7	Hydraulics	27
2.7.2	Drainage.....	27
2.7.3	Stormwater Pollution Prevention Plan (SWPPP)	28
2.7.4	Post-Construction Stormwater Management Facilities	31
2.7.5	Other Drainage Requirements.....	31
2.8	Landscaping	31
2.9	Traffic Control Devices	32
2.9.1	Signs.....	32
2.9.1.1	Limits of Project Signing	33
2.9.1.2	Signing Plan Requirements.....	33

2.9.1.3	Design of Sign Panels and Locations.....	33
2.9.2	Signals.....	34
2.9.3	Guardrail/Barrier.....	34
2.9.4	Pavement Markings/Markers.....	35
2.10	Transportation Management Plan.....	35
2.10.1	Maintenance of Traffic.....	36
2.10.2	Incident Management Plan.....	37
2.10.3	Lane and Road Closure Restrictions.....	39
2.10.4	Damage Recovery.....	40
2.10.5	Use of Virginia State Police.....	41
2.10.6	Portable Changeable Message Signs.....	42
2.11	Public Involvement / Public Relations.....	42
2.12	Right of Way.....	43
2.13	Utilities.....	44
2.14	Quality Assurance / Quality Control (QA/QC).....	47
2.14.1	Design Management.....	49
2.14.2	Construction Management.....	49
2.15	Project Documentation.....	52
2.16	Field Office.....	52
2.17	Plan Preparation.....	53
2.17.1	GEOPAK and MicroStation.....	53
2.17.2	Software License Requirements.....	53
2.17.3	Drafting Standards.....	53
2.17.4	Electronic Files.....	53
2.17.5	Plan Submittals.....	54
2.17.6	Right of Way Plans.....	55
2.17.7	Construction Plans.....	55
2.17.8	Released for Construction Plans.....	56
2.17.9	Record (As-Built) Plans.....	56
2.18	Virginia Occupational Safety and Health Standards.....	56
3.0	ATTACHMENTS.....	57

PART 2

TECHNICAL INFORMATION & REQUIREMENTS

1.0 DESIGN-BUILDER'S SCOPE OF WORK

1.1 Project Description

The Project is located in Fauquier County, Virginia, and involves improving the vertical alignment of the northbound lanes of US Route 15/29 approaching the existing traffic signal at Vint Hill Road (Route 215). The limits of the Project are from approximately 0.96 miles south of Vint Hill Road (Route 215) to the existing intersection of US 15/29 and Vint Hill Road (Route 215), for a total length of approximately 0.96 miles. It is noted that the description and length are approximate only and are based on the RFP Conceptual Plans shown in the RFP Information Package and the location of the short term closure of the northbound lanes of US 15/29 beginning at Riley Road in order to construct the project. 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.

A Willingness to hold a public hearing was posted for this Project on January 23, 2019. The major design features of the Project have not yet been approved by the Chief Engineer. The conceptual design contained in the RFP Information Package reflects a basic line, grade, typical sections, minimum pavement structures, major cross drainage pipes. 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.

The Design-Builder shall bring the necessary resources and expertise to efficiently and effectively execute this project with the ultimate goal to meet the interim milestone and final completion dates and realize the maximum incentive for the interim milestone date for the Project outlined in Attachment to Part 3 Article 5.

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
- 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
- Signs, sign structures, and foundations
- Overhead signs structures and other traffic control measures
- System integration, testing, maintenance until final acceptance, and documentation
- Traffic maintenance and management during all phases of construction
- Pavement markers and markings
- Storm drainage
- Quality Assurance and Quality Control for design and construction
- Stakeholder coordination and public outreach
- Overall Project management and coordination with other active construction projects in the vicinity.

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 to, 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 may include, but are not necessarily limited to: geotechnical investigation, borings and analysis, materials analysis, and/or additional environmental studies. 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 Categorical Exclusion (CE), on which coordination is currently ongoing. The NEPA process is anticipated to be complete prior the scheduled date for project award. VDOT has completed preliminary document re-evaluations for Right of Way (RW) Authorization (EQ-201) dated January 28, 2019; Plans, Specifications and Estimates (PS&E) Authorization (EQ-200) dated January 28, 2019, and a preliminary Environmental Certification/Commitments Checklist (EQ-103) dated January 28, 2019, which are included in the RFP Information Package. 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 "Permittee") 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 any subsequent coordination to obtain updated information, requirements, and clearances from environmental regulatory agencies that

provide threatened and endangered species oversight. The Northern Long-Eared bat may be affected by the Project and will require additional coordination with federal and state agencies to resolve these issues. A copy of VDOT's preliminary Fish, Plant, and Wildlife Resources Form dated January 28, 2019 is included in the RFP Information Package. Further details are provided in Part 2, Section 2.4.5.

The Design-Builder shall manage solid waste, hazardous waste, and hazardous materials in accordance with all applicable federal, state, and local environmental regulations and shall implement good housekeeping, waste minimization and pollution prevention practices. Additional information regarding hazardous materials is provided in Part 2, Section 2.4.6.

This Project is located in an area that is currently in Attainment with the National Ambient Air Quality Standards (NAAQS). The following Virginia Department of Environmental Quality (VDEQ) air pollution regulations must be adhered to during the construction of this Project: 9 VAC 5-50-60 et seq., Fugitive Dust precautions. Further details regarding air quality requirements are provided in Part 2, Section 2.4.7.

The Design-Builder is responsible for evaluating the need to conduct a Noise Study for any changes from the RFP Conceptual Plans due to their unique design, in accordance with the VDOT Highway Traffic Noise Impact Analysis Guidance manual. See Part 2, Section 2.4.8 for additional details on Noise mitigation requirements.

The Design-Builder shall be responsible for compliance with pre-construction and construction-related environmental commitments and will be responsible for compliance with pre-construction, construction-related 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. These technical studies and analyses are to be conducted in accordance with the professional standards and guidelines of each NEPA-related discipline, as well as the criteria described in Part 2, Section 2.4. VDOT shall 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 existing right of way limits as shown on the RFP Conceptual Plans, including the temporary construction easement indicated on Parcel 001. 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 are not permitted.

The Design-Builder's final design shall also be contained within the existing right of way limits as shown on the RFP Conceptual Plans, including the temporary construction easement indicated on Parcel 001. If the Design-Builder proposes any 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 to perform utility coordination, relocations, and/or adjustments as required by the Project. 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.

A revised Utility Exhibit is included in the RFP Addendum #1 Information Package. This exhibit is updated from the exhibit shown at the Pre-proposal meeting on Friday, February 15th and indicates an additional utility line crossing at approximate Sta. 121+50, which was obtained from records. Additionally, distances from existing utility poles to the proposed grading limits of the RFP Conceptual Plans are indicated on this exhibit.

VDOT will begin acquiring the right-of-way for the temporary construction easement prior to Project NTP and beyond as necessary to assist the Design-Builder. The temporary construction easement (TCE) as identified in the RFP Conceptual Plans for entrance #3 should be assumed to be acquired by VDOT and costs associated with this acquisition should not be included in the Offeror's Price Proposal. In no event shall VDOT be bound by, or liable for, any obligations or time impacts with respect to VDOT in determining and acquiring the TCE prior to Project NTP and beyond. Acquisition of any easements or right-of-way that deviate from those shown on the RFP Conceptual Plans for the Project will be at the sole risk of the Design-Builder to include all cost and time impacts associated with attaining those easements in accordance with Part 2 Section 2.12 of the RFP.

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, the demolition and removal of portions of the existing pavements, milling and overlaying or building up of existing pavement, drainage, 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. Additionally, the Design-Builder is responsible for all plant quality assurance inspection and testing, excluding items listed under Part 2, Section 2.14.2.

1.7 Coordination with Active Construction Projects

The Design-Builder shall be responsible for coordinating with contractors of other active construction projects in the vicinity of the US Route 15/29 Improvements at Vint Hill Project in accordance with Section 3.6 of Part 4. In addition, the Design-Builder shall organize and conduct joint meetings (to which VDOT shall be invited) with other Contractors on a monthly basis at a minimum, or as requested by VDOT. The ultimate purpose of these meetings is to facilitate achievement of the US Route 15/29 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.

Warrenton Park And Ride Lot Expansion At 29/605

Location: Approximately 5.0 miles south of the Project

Project No.: P029-030-813, P101, R201, C501 (UPC # 109549)

Status: Design-Bid-Build anticipated advertisement date of March 12, 2019

VDOT Contact: David Cabbage (540) 727-7129

david.cabbage@vdot.virginia.gov

Warrenton Southern Interchange

Location: Approximately 8.9 miles south of the Project

Project No.: 0029-030-121, P101, R201, C501, B616 (UPC # 77384)

Status: Design- Build; under construction, anticipated completion November 2020

VDOT Contact: Greg Cooley (434) 906-7979

gregory.cooley@vdot.virginia.gov

1.8 Scope Validation

The scope validation process as described in Part 4, Section 2 will not apply for this Project.

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 shall bring the necessary resources and expertise to efficiently and effectively execute this project with the ultimate goal to meet the interim milestone and final completion dates and realize the maximum incentive for the interim milestone date for the Project outlined in Attachment to Part 3 Article 5.

The Design-Builder's final design shall meet or exceed all requirements included in the Contract Documents. 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. The Design-Builder must meet or exceed the minimum roadway design standards and criteria as noted in Attachment 2.2 of the RFP for the Base Scope of Work.

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 2016 VDOT 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

- VDOT Instructional and Informational Memoranda (I&IM), All Divisions, (Latest Revision)
- VDOT 2005 Road Design Manual, Vol I, (Revised July 2018)
- VDOT 2012 CADD Manual (latest revisions)
- VDOT 2016 Road and Bridge Standards, Volume I and Volume II (Latest Revision)
- VDOT 2009 Survey Manual, Revised July 2016

- VDOT 1999 Project Participation Manual (Revised July 2014)
- VDOT 2016 Road and Bridge Specifications (including the latest Supplement)
- VDOT 2002 Drainage Manual (Revised July 2017)
- VDOT 2014 Traffic Engineering Design Manual
- VDOT Traffic Operations Analysis Guidebook Version 1.1, dated November 2015
- VDOT Asbestos Inspection Procedures, May 14, 2004
- VDOT Asbestos Project Monitoring and Clearance Air Monitoring Procedures, May 14, 2004
- VDOT State Noise Abatement Policy, July 13, 2011
- VDOT Noise Report Development and Guidance Document Version 5
- VDOT Construction Manual (2005, Revised 2008)
- VDOT Post Construction Manual (December 2016)
- 2011 Virginia Work Area Protection Manual, revised April 1, 2015 and October 2015 (Revision 1a)
- AASHTO 2011 Roadside Design Guide, 4th Edition, (Latest Revision)
- AASHTO 2011 A Policy on Geometric Design of Highways and Streets, 6th Edition (Latest Revision)
- VDOT *Highway Traffic Noise Impact Analysis Guidance Manual*, updated July 14, 2014
- AASHTO Manual for Assessing Safety Hardware, current edition
- National Cooperative Highway Research Project Report 350, 1993
- DEQ Stream Channel Erosion Control - Technical Bulletin No. 1

(b) Reference Manuals

- VDOT *State Noise Abatement Policy*, July 13, 2011
- VDOT Highway Traffic Noise Impact Analysis Guidance Manual, Version 7, July 14, 2015
- gINT Manual
- 2009 Manual on Uniform Traffic Control Devices and all subsequent revisions
- 2011 Virginia Supplement to the 2009 Manual on Uniform Traffic Control Devices and all subsequent revisions
- VDOT Traffic Engineering Design Manual, current edition
- VDOT Road Design Manual, current edition
- All VDOT Traffic Engineering Division Memoranda
- All VDOT Instruction and Informational Memoranda
- 2011 Virginia Standard Highway Signs, Revision March 2015
- FHWA Standard Highways Signs and Markings, current edition
- FHWA's Highway Traffic Noise Analysis and Abatement Guidance, December 2011
- VDOT Guardrail Installation Training Manual, Published August 2017, (Revised Aug. 2018)
- VDOT Manual of Instructions for the Materials Division
- VDOT Utility Manual of Instructions (October 2016, including August 2017 revisions)
- VDOT Right of Way Manual of Instructions (FHWA Update 2016, Revised October 2017)
- VDOT Noise Report Development Guidance Document, Version 4, August 27, 2014
- Procedures For Inventory and Inspection of Traffic Control Device Structures, current edition

- National Electric Code
- Statewide Lane Closure Coordination Process
- DCR/DEQ Virginia Erosion and Sediment Control Handbook, Third Edition, 1992
- The Virginia Stormwater Management Handbook, Second Edition, draft (DEQ 2013)
- DEQ Virginia Runoff Reduction Spreadsheet – Version 3.0
- DEQ Virginia Stormwater BMP Clearinghouse (<http://vwrrc.vt.edu/swc/>) (including 2011 Design Specifications for Practices (note exclusions in Part 2, Section 2.7.4))
- VDOT BMP Design Manual of Practice, April 2013
- VDOT Drainage Manual, Revised May 2017 (including current errata sheet)
- VDOT Instructional & Information Memorandums (“I&IM”), All Divisions
- FHWA publications HDS-6, HEC-14, HEC-15, HEC-18, HEC-20, HEC-22, and HEC-23
- NFPA 70 National Electrical Code, 2014 Edition

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

Federal

- cn102-050100-00 Compliance with the Cargo Preference Act, November 19, 2018
- SP102-DB0510-02 Use of Domestic Material, December 19, 2018

General

- SP105-DB0110-00 Design-Build Project Partnering, December 19, 2018
- SP105-DB0610-00 Design-Build Tracking Numbers, December 19, 2018
- ~~Special Provision for Controlled Blasting, May 2014~~
- SP105-DB0600-00 Document Control System, November 19, 2018
- SP102-DB0120-00 Non-Discrimination in Employment and Contracting Practices, November 14, 2018
- SQ105-DB0611-01 Division I Amendments (Part 5), Section 105.6-Subcontracting (Federal Funded Projects), November 19, 2018

Roadway Construction

- SP302-000100-00 Restoring Existing Pavement, July 12, 2016
- SP302-000140-01 Pipe Rehabilitation, November 7, 2016
- cn315-DB0100-00 Placing and Finishing, January 18, 2017
- cq317-DB0100-00 Stone Matrix Asphalt Concrete Placement, January 10, 2019
- SP105-DB1000-01 Construction Record Documentation of Permanent Stormwater Management Facilities, November 14, 2018
- SP107-DB0110-00 Form C-45a, November 14, 2018
- SP208-DB0100-00 Subbase and Aggregate Base Material, January 10, 2019
- SP302-DB0120-00 Jack and Bore, December 12, 2018
- SP302-DB0130-00 Microtunneling, November 19, 2018
- SP303-DB0210-00 Use of Number 10 Screenings, November 14, 2018

- SP307-DB0100-00 Cement Treated Aggregate (CTA) Base, December 19, 2018
- SP315-DB0710-01 Rideability for Design-Build Projects, November 19, 2018
- SQ302-DB0100-00 Pipe Replacement, December 19, 2018

Incidental Construction

- cn512-DB120-00 Maintaining Traffic, July 13, 2016
- cn518-DB0210-00 Number of Trainees, July 12, 2016
- cq512-DB0120-00 Uniformed Flaggers, November 14, 2018
- cq512-DB03100-00 Maintaining Traffic, November 18, 2018

Environmental

- SP522-DB0130-00 Tree Removal Time of Year Restriction, December 7, 2018

Traffic Engineering

- SP700-DB0180-02 Modifications to AASHTO's Sign Structure Specification, November 14, 2018
- SP703-DB0100-00 Mast Arm Hanger Assembly Std SM-3 and SMD-2, December 19, 2018
- SP801-DB0100-01 Lane Closure Coordination (LCC)/Lane Closure Implementation (LCI), November 14, 2018
- SS700-002016-03 Section 700 General, June 29, 2018

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-Builders 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:

General:

- Special Provisions and Special Provision Copied Notes, listed in Part 2, Section 2.1.1(c) above
- Culpeper District Allowable Work Hours - July 2015 Final
- RFP Conceptual Roadway Plans (PDF), dated February 28, 2019
- Guidance for Context Sensitive Solutions/Design, dated February 25, 2004

Environmental:

- FHWA Concurrence with NEPA (CE), dated December 7, 2018
- DEQ scoping response letter to VDOT, dated June 27, 2018
- Fauquier County Parks & Recreation Dept. scoping response letter to VDOT, dated December 19, 2018
- Fauquier County scoping response letter to VDOT, no date
- John Marshall Soil and Water Conservation District scoping response letter to VDOT, dated January 2, 2019
- Virginia Department of Health scoping response letter to VDOT, dated December 27, 2019
- Virginia Outdoors Foundation scoping response letter to VDOT, dated December 19, 2019
- VDOT Scoping Letter
- Preliminary PS&E Re-Evaluation (EQ200) & (EQ201) dated January 28, 2019
- Preliminary Environmental Certification/Commitments Checklist (EQ103) dated January 28, 2019
- VDOT letter to Consulting Parties, dated January 11, 2019
- Preliminary Permit Determination dated January 22, 2019
- Agency Coordination-IPAC, dated January 24, 2019
- Preliminary Air Quality Report January 25, 2019
- Cultural Resources Summary Report, dated January 25, 2019
- Noise Form dated January 9, 2019
- No Adverse Effect Concurrence letter from VDHR, dated February 1, 2019
- Hazardous Materials Summary Report, January 31, 2019
- Cultural Resources Map

Geotechnical:

- Geotechnical Engineering Report, dated February 6, 2019
- gINT© Project Databases (subsurface data for proposed pavement installations, and subsurface data associated with proposed structures)

Hydraulics:

- Water Quantity Compliance Waiver

Roadway:

- RFP Conceptual Roadway Plans (electronic files), updated February 28, 2019

Survey:

- Survey & Mapping Data, updated February 28, 2019

Utilities:

- Test Hole Reports, dated Feb. 7, 2019
- Test Hole CADD Files
- Revised Utility Exhibit, dated Feb. 19, 2019

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.

Roadway cross sections and record roadway plans for this Project, which are not deemed a component of the RFP, are being provided to Offerors as supplemental information only. 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.

2.1.3 Design Exceptions and Design Waivers

Substandard features reflected in the preliminary design include stopping sight distance (as indicated in the Base Scope of work with the RFP Conceptual Plans which provide a minimum stopping sight distance for a vertical curve design speed of 50mph), vertical grade (which adheres to a design speed of 50mph for rural arterials with rolling terrain), shoulder width, and existing and proposed embankment slopes which have a slope stability factor of safety that is less than 1.3. If during further development of the design the Design-Builder identifies additional substandard features, the Design-Builder is required to either eliminate them through design improvements or apply for the appropriate design exceptions and/or waivers. The costs for preparation of design waivers or exceptions and any information needed to support these documents is the responsibility of the Design-Builder. Any schedule delays as a result of the approval process are the responsibility of the Design-Builder.

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 roadway. 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 US 15/29 improvements depicted on the RFP Conceptual Plans (contained in the RFP Information Package), the Design-Builder is also responsible for making necessary improvements to existing median crossovers, existing turn-lanes, and existing driveway connections. Crossover grades shall not exceed 4% and sight distances shall not be reduced below currently available values. Positive drainage shall be maintained at crossovers and medians. Crossovers are not required to accommodate u-turn movements for WB-67 vehicles, however, appropriate signage restricting u-turn movements must be provided.

All roadway typical sections shall be designed to incorporate any necessary widening required for the installation of the MGS Standard guardrail as discussed in Part 2, Section 2.9.3. MGS Standard guardrail is depicted in the RFP Conceptual Plans and utilized 9' posts when required widths for 6' posts are not met.

Functional Classification

US Route 15/29 is a corridor of statewide significance and part of the National Highway System and is functionally classified as an Other Principal Arterial. The VDOT geometric design standard that will be utilized for US Route 15/29 will be GS-1 in rolling terrain with a minimum design speed of 60 mph for the design of horizontal curves and a minimum design speed of 50 mph for the design of vertical curves.

The Base scope of work will include improving the vertical alignment of the northbound lanes of US Route 15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 50 mph. The sag curve at the north end of the project limits adjacent to the intersection of Vint Hill Road and US 15/29 is not required to be improved to provide sight distance for a 50 mph design speed, as this is the tie-in location.

Two scope alternatives are included in the Project. Scope Alternative 1 will include improving the vertical alignment of the northbound lanes of US Route 15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 55 mph and Scope Alternative 2 will include improving the vertical alignment of the northbound lanes of US Route

15/29 within the project limits to provide stopping sight distance for a minimum Design Speed of 60 mph.

A shift in the horizontal alignment of the northbound lanes of US Route 15/29 within the project limits towards the existing median is allowed, provided the minimum width of the median as measured between the edges of the northbound and southbound through travel lanes is 32 feet. However, a shift of the northbound lanes of US Route 15/29 within the project limits to the outside will not be allowed.

All existing turn lanes, median crossovers and entrances on US 15/29 within the project limits shall remain in the Design-Builder's final design. The existing rock outcrop in the median of US 15/29 between Entrance #1 and approximate Station 120+00 shall be removed to improve intersection sight distance at the crossover.

2.3 This section intentionally left blank

2.4 Environmental

2.4.1 Environmental Document

In accordance with the requirements of the National Environmental Policy Act ("NEPA") and in cooperation with Federal Highway Administration (FHWA), a NEPA document concurrence was approved to utilize a Categorical Exclusion on December 12, 2018. The coordination of the Categorical Exclusion is currently ongoing. The NEPA process is anticipated to be complete prior the scheduled date for project award. A working draft of the NEPA document and associated environmental documents including scoping responses are included in the RFP Information Package. VDOT has also completed preliminary document re-evaluations for Right of Way (RW) Authorization (EQ-201) dated January 28, 2019; Plans, Specifications and Estimates (PS&E) Authorization (EQ-200) dated January 28, 2019, and a preliminary Environmental Certification/Commitments Checklist (EQ-103) dated January 28, 2019, 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. 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 CE, the final document re-evaluations for RW and the PS&E Re-evaluation, and the final Environmental Certification forms. All commitment compliance shall be supported by appropriate documentation, to be provided by the Design-Builder to the VDOT Project Manager.

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 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 no additional cost and/or time delays to the Project.

VDOT expects that the results from any additional work needed to support the Design-Builder's final design will be conveyed to the Department as quality deliverables in accordance with professional standards and guidelines for each NEPA-related discipline, as well as the criteria described in Part 2, Section 2.2. Moreover, VDOT reserves the right to return any inadequate or substandard deliverables to the Design-Builder for revision prior to coordination.

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, as well as the submission of inadequate or substandard deliverables. 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

On January 15, 2019, The VDOT submitted an effect letter to VDHR and Consulting Parties. In this letter the VDOT recommended that the project will have no adverse effect on historic resources. The architecture APE is the vicinity where alterations to feeling and setting may occur. The archaeology APE is the construction footprint and any associated easements. For the purpose of this project, the APE is limited to existing VDOT ROW. The VDOT received concurrence of its no adverse effect determination from VDHR on February 1, 2019. Copies of relevant VDOT/VA SHPO correspondence and mapping showing the location of the historic property are included in the RFP Information Package.

There is one historic property in the Project's APE:

VDHR No. 030-5152 Resource Description – Buckland Mills Battlefield

The following commitments must be carried out by Design-Builder:

The Design-Builder should consider historic properties to be design constraints and avoid impacting them beyond what is shown on the RFP Conceptual Plans. In addition, the Design-Builder shall notify the VDOT Project Manager in advance of any other project-related activities, including but not limited to staging, borrow/disposal, and any temporary or permanent easements, proposed to be located on or within the view-shed of historic properties. These activities, any changes to the design, alignment, right of way limits, or easements shown on the

RFP Conceptual Plans, or any additions to the Project such as stormwater management facilities, wetland mitigation sites, or noise barriers, 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, in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*, and the Virginia Department of Historic Resources' most current *Guidelines for Conducting Survey in Virginia*, while 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 VDOT.

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

VDOT's preliminary Permit Determination January 22, 2019 is included in the RFP Information Package. No permits are required for the Project, with the stipulation that fill is placed only within the existing roadway fill prism, which is defined as the section of roadway between the existing cut and fill slope tie-in points on the left and right sides of the roadway. Grading activities shall not extend beyond the existing toe of slope of fill slopes along the outside shoulder for the entire project, except for constructing entrance improvements. Any changes to the current concept which require fill, permanent or temporary, to be placed beyond the existing toe-of-slope at any of the existing culvert crossings, will require a permit and will render this permit determination invalid. The Offeror should note that VDOT's preliminary Permit Determination and wetland delineations (if applicable) 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 which state/federal water quality permits will be required during coordination with the Design-Builder.

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 Project may affect T&E species. The following state/federally listed T&E species were identified in the vicinity of the Project: Northern Long-Eared bat. This species may be affected by the Project and will require additional coordination with federal and state agencies to resolve these issues. A copy of VDOT's preliminary Fish, Plant, and Wildlife Resources Form dated January 28, 2019 is included in the RFP Information Package. The project is clear for advertisement of the RFP, although additional agency coordination may be required according to the RFP (Part 2 Technical Requirements).

The Offeror shall be advised that new and updated T&E information is continually added to agency databases. The Design-Builder shall be responsible for any subsequent coordination to

obtain updated information, requirements, and clearances from environmental regulatory agencies that provide threatened and endangered species oversight. The Design-Builder shall copy the VDOT District Environmental Manager on any submittals requesting concurrence from USFWS on effect determinations of federally-listed species. 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 shall 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 performed studies to determine the potential for hazardous materials and/or contamination within the Project area. Information pertaining to these studies is included in the RFP Information Package and constitutes Known Pre-existing Hazardous Materials as defined in Part 4, Article 4.

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

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 its 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 Report, dated January 25, 2019, is provided in the RFP Information Package. The Report identifies federal and state regulatory requirements that must be adhered to during construction of the Project.

This Project is located in an area that is currently in Attainment with the National Ambient Air Quality Standards (NAAQS). The following Virginia Department of Environmental Quality (VDEQ) air pollution regulations must be adhered to during the construction of this Project: 9 VAC 5-50-60 et seq., Fugitive Dust precautions.

Construction activities related to Air Quality shall be performed in accordance with Part 5, Section 107.16(b) 2 requiring compliance with all applicable local, state, and federal air quality regulations.

2.4.8 Noise Mitigation

The Noise Scoping Decision for this Project was that this is a Type III project and that a Noise study is not required. A copy of the Noise Form dated January 9, 2019, is included in the RFP Information Package. However, Offerors are responsible for evaluating the need to conduct a Noise Study for any changes from the RFP Conceptual Plans due to their unique design, in accordance with the VDOT Highway Traffic Noise Impact Analysis Guidance manual. If a Noise Study is required, Offerors shall account for the Noise Study and any resulting Noise Walls in their ~~Technical and~~ Price Proposals.

The Project is exempt from local (County) noise restrictions. The DB team shall make all reasonable efforts to plan and execute operations to minimize noise between 10:00 p.m. and 6:00 a.m.

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 to resolve 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 CE, the final Document Re-evaluations for RW Authorization (EQ-201) and PS&E Authorization (EQ-200), and the final 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

NOTE: The RFP Concept Plans were prepared with an older survey, which may not reflect current conditions. However, VDOT recently completed a new survey and utility designation for the design and construction of the Project in accordance with VDOT's Survey Manual. This new survey is included in the RFP Information Package.

The description of the survey limits is as follows: starting at the intersection of US 15/29 and Route 215 Vint Hill Road, running approximately 3000' South along US 15/29 and variable width coverage, then starting at the intersection of US 15/29 and Route 215 Vint Hill Road and running approximately 2500' North along US 15/29 with variable width coverage, then starting at the intersection of US 15/29 and Route 215 Vint Hill Road, running approximately 5000' East on Route 215 to the intersection of Route 600 Broad Run Church Road. The field survey was conducted using aerial LiDAR and photogrammetry, conventional and mobile LiDAR methods and data was collected within the tolerances defined in the VDOT Virginia Map Accuracy Standards. Field survey and utility data have been obtained, including, but not limited to the following:

- Notification of property owners*
- Vertical control (Based on NAVD88 Geoid 2012A)**
- Horizontal control (Based on NAD83-2011)**
- Mobile LiDAR Control Points set @ approx. 800' intervals
- Mobile LiDar**
- Field data verified and updated
- Planimetrics
- Property data and R/W
- Utilities (Level B sub-surface utility investigation in the median from inside edge of pavement to inside edge of pavement and areas designated as potential BMP's.)
- 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.

**Approach: VDOT conducted a static GNSS network survey related to local National Geodetic Survey (NGS) First Order control monuments to update the horizontal and vertical values on existing VDOT Project Monuments. Differential leveling was conducted between the VDOT Project Monuments through the traversed ground control points. Mobile LiDAR was employed to acquire the pavement surface elevations. Mobile LiDAR ground control points (MCP) were set at approximately 800’ intervals along the project corridor. The MCP’s were observed utilizing a localized RTK solution with 4 observations on each point. The mobile LiDAR data was adjusted to these points and mapping was produced. Blind check shots were surveyed on well-defined paved surfaces throughout the project and tested against the final mapping. The RMSE of the blind check points was 0.05’ and falls within the map class and accuracy listed below. The maximum variance of the blind check shots was ±0.17 foot.

The field survey and utility data provided in the RFP Information Package contains the general depiction of existing conditions and may be used for purposes of completing final design of the Project. The horizontal accuracy of the survey is at the Class 1 Level at 1:300 scale. The vertical accuracy is Class 3 with 1-foot contours. Accuracy standards apply to well-defined stable locations. The accuracies are from the VDOT Survey manual. The Design-Builder shall be responsible for obtaining any additional 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 registered, licensed in the Commonwealth of Virginia with LD-200 information and supporting computations submitted to the VDOT Project Manager.

Prior to Project completion, if any existing RW monuments are disturbed or destroyed, the Design-Builder shall provide (if necessary) and reset VDOT 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

Schnabel Engineering has completed a design-level geotechnical subsurface investigation for the RFP Conceptual Plans for this Project. The results of the investigation are presented in the Geotechnical Engineering Report (GER) dated February 6, 2019, which is included in the RFP Information Package for Addendum #1.

The GER included in this RFP is being provided for Offeror's information in accordance with Section 102.04 of Division I Amendments (Part 5). The Design-Builder is not required to complete further geotechnical investigation if its design concept is not significantly different from the RFP Conceptual Plans. However, the Design-Builder is required to confirm that its design will not decrease the slope stability factors provided in the GER for the existing embankment slopes. Any additional geotechnical engineering investigation performed shall be in accordance with Chapter 3 of the VDOT Materials Division's Manual of Instructions (MOI). The current AASHTO LRFD Bridge Design Specifications, 6th Edition 2012 and Section 700.05© of the 2016 VDOT Road and Bridge Specifications shall be met where applicable.

The Design-Builder may collect additional data for geotechnical evaluation of pavements, embankments, soil cuts, soil and rock cuts, culverts, minor structures including drainage pipes, and any other earth-supported or earth-retaining structures or elements of highway design and construction required for this 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 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, licensed professional engineer in the Commonwealth of Virginia, in gINT© software. The gINT© file for the borings contained in Geotechnical Engineering Report, dated February 6, 2019, are provided in the RFP Information Package.

The Design-Builder shall submit to the VDOT for its review any 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 ten (10) 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.

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 2016 VDOT Road and Bridge Specifications and applicable Special Provisions.

2.6.1 Minimum Pavement Sections

Minimum pavement sections shall be utilized for construction of the Project. The anticipated locations for new pavement, mill and overlay, demolish and replace are provided on the RFP Conceptual Plans included in the RFP Information Package. The Design-Builder shall be responsible for the construction of the pavements for this Project in accordance with the Contract Documents.

The Design-Builder shall prepare and incorporate into the plans, typical sections, profiles and cross-sections the 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. Underdrains are identified in the Geotechnical Engineering Report, but are not shown in the RFP Conceptual Plans. The minimum pavement sections are as follows:

New Pavement and Pavement Widening (Mainline and Shoulder)

Surface – 2.0 inches Asphalt Concrete, Type SM-12.5E

Intermediate – 2.0 inches Asphalt Concrete, Type IM-19.0D

Base – 8.0 inches Asphalt Concrete, Type BM-25.0D

Subbase – minimum of 8.0 inches Aggregate Base Material, Type I, Size No. 21B. The aggregate subbase should be connected to UD-4 or day-light to the face of slope.

Mill and Overlay (Mainline)

For existing mainline pavement structure that is to remain in-place and be subjected to mainline traffic, the asphalt concrete depth shall not be reduced.

For salvage/mill and replace areas, the existing pavement shall be milled two (2) inches and replaced with the following:

Surface – 2.0 inches Asphalt Concrete, Type SM-12.5E

NOTE: For any areas where the existing pavement will include new AC build-up greater than a 2-inch thickness, use IM or BM mix designations as noted above in layer thicknesses in accordance with Chapter 6 of the MOI. Where AC overlay/build-up with new asphalt concrete will be 4.0 inches or greater, milling of the existing AC is not required.

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. Work may involve differential depth milling, differential leveling, or both. The Design-Builder shall propose an appropriate leveling course mix for each situation.

2.6.2 Temporary Pavement

The Design-Builder shall be responsible for any temporary pavement design including shoulder strengthening to accommodate MOT. 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 Manual of Instructions. 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 for the Project shall have a minimum six (6) inches of asphalt concrete and shall meet the following minimum design criteria:

- Design Life – 2 months minimum or for the proposed length of MOT phase (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

Temporary 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.

2.6.3 Geotechnical Requirements

Unless otherwise indicated in the Geotechnical Engineering Report or noted herein, 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 slopes shall not be

steeper than 1H:1V and the maximum slope ratio to be used for roadway embankment fill slopes shall not be steeper than 1.5H: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 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 – 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.

The Design-Builder's design shall not result in slope stability safety factors less than those stated in the Geotechnical Engineering Report, using the material parameters and groundwater table location specified in the GER. Construction shall not impact the existing embankment fill slopes in any manner. Vibratory compaction equipment shall not be used within 10 feet laterally of the top of the existing embankment fill slopes.

2.6.4 Unsuitable Materials

Unsuitable material as defined in the Geotechnical Engineering Report. The recommendations for unsuitable materials apply to any material considered for use in the following locations:

- Within three (3) feet below the embankment foundation or pavement subgrade level
- Within two (2) feet below the bedding material of minor structures
- Laterally within two (2) feet of the outside edge of the pavement shoulders
- Laterally within two (2) feet of the limits of bedding material of minor structures

The following materials should be considered unsuitable:

- Rock or IGM present within one (1) foot of pavement section subgrades

- Organic materials classifying as OH or OL in accordance with the Unified Soil Classification System (USCS)
- High plasticity materials classifying as CH or MH in accordance with the Unified Soil Classification System (USCS)
- Contain more than 5 percent by weight organic matter
- Exhibit a swell value greater than 5 percent as determined from the California Bearing Ratio (CBR) test using VTM-8
- Exhibit strength, consolidation, durability of rock or any other characteristics that are deemed unsuitable by VDOT
- Are denoted in the Contract Documents as unsuitable
- All materials within the uppermost three (3) feet of a pavement subgrade shall have a minimum resilient modulus value of 12,280 psi. Saturated, very dry and/or loose or very soft soils that exhibit excessive pumping or rutting under the weight of construction equipment. If these near-surface materials can be moisture conditioned (mechanically or chemically) to an acceptable moisture content that allows adequate compaction to meet project specifications, and classification testing indicates they are not otherwise unsuitable, they may be compacted in-place to the specified compaction

The anticipated locations and methods of treatment for unsuitable materials identified in the Geotechnical Engineering Report 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 2016 VDOT 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.

All materials within the uppermost three (3) feet of a pavement subgrade shall have a minimum resilient modulus value of 12,280 psi. The Design-Builder's quality control and quality assurance plan shall include performance testing to verify this minimum value during construction.

2.6.5 Control of Rock Blasting

Blasting will be permitted for construction of the US 15/29 Improvements at Vint Hill project. All controlled blasting shall be performed in accordance with ~~the Special Provision for~~

~~Controlled Blasting provided in the RFP Information Package Attachment 2.6.5 – Controlled Blasting.~~

Blasting operations shall only be conducted between 6:30 am and 11:00 am Monday through Friday. Blasting operations will not be allowed at nights or on weekends. Temporary traffic stoppages on Route 29 SB shall be limited to 15 minutes for blasting. A minimum 48 hour notification to the public via PCMS will be required prior to all scheduled blasting operations.

2.6.6 Pipe Installation Methods

Culverts or utility pipes shall be installed by conventional methods in accordance with recommendations provided in the Geotechnical Engineering Report and Section 302.03 of the 2016 VDOT Road and Bridge Specifications.

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.

2.7.2 Drainage

The drainage work shall include the design and construction of culverts, open channels, storm sewer systems, underdrains, 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 VDOT's Drainage Manual and the 2016 VDOT Road and Bridge Standards and all joints shall be determined in accordance with IIM-LD-254. The Design-Builder shall provide VDOT two (2) electronic copies on compact disc (CD) 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 VDOT's Drainage Manual.

Replacement of the three (3) existing culverts underneath US 15/29 at approximate Sta. 112+60, approximate Sta. 125+30, and approximate Sta. 136+90 is not part of this project. For the purposes of developing its Price Proposal, the Offeror shall assume that all other existing roadway culverts 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 are to be plugged and abandoned in accordance with VDOT Standard PP-1, removed, or replaced with adequate structures designed and constructed in support of the Design-Builder's final drainage design. Offerors should note that VDOT has not assessed the structural condition of the existing

culverts within the Project limits. If after award the Design-Builder investigates the structural condition of the affected existing culverts, and as a result proposes use (or repair) of some or all, then it shall be done only with VDOT's approval. The Design-Builder shall credit VDOT, the differential in cost for utilizing the existing or rehabilitated culverts in lieu of removing and replacing the culverts.

The Design-Builder shall assess the structural condition and serviceability of the structure by performing a visual/video inspection of the existing culverts utilizing the assessment criteria for Post Installation Inspections presented in VDOT Road and Bridge Specification 302.03(d). The Design-Builder shall provide VDOT with an inspection report documenting the assessment following the methodology as prescribed in the Road and Bridge Specification 302.03(d). The Design-Builder shall provide VDOT with an inspection report documenting their 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, pipe culverts 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 VDOT's Drainage Manual and Special Provisions SQ302-000140-01 Pipe Rehabilitation and SQ302-000100-00 Pipe Replacement.

Pipes to be rehabilitated using methods that reduce the pipe cross sectional flow area by 10% or more will not be allowed without the written approval of the VDOT District Hydraulic Engineer. Circular pipes 24-inches or less in diameter, and elliptical pipes 30-inches by 19-inches or smaller, are not eligible for a rehabilitation method that reduces the cross sectional flow area unless approved in writing by the VDOT District Hydraulic Engineer.

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 VDOT Standard EW-12's in order to outfall an underdrain according to the guidelines set forth in the 2016 VDOT Road and Bridge Standards and VDOT's Drainage Manual while maintaining the ability for the underdrain to be accessed in the future for maintenance purposes.

2.7.3 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 Act (VSMA) and the Virginia Stormwater Management Program (VSMP) Regulation.

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 VDOT District Hydraulic Engineer in accordance with VDOT's 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) electronic copies each on 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 utilizing the Part IIB technical requirements in the ESC Law and Regulations, and the VSMA and VSMP Regulation, as appropriate, for each location where stormwater is discharged from the Project site.

The Project requires coverage under the General Virginia Pollutant Discharge Elimination System (VPDES) Permit for discharge of stormwater from Construction Activities (VPDES Construction Permit). The Design-Builder is responsible for providing to VDOT the necessary information for VDOT 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 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.

For a project that is to be constructed in its entirety (not in phases), the application for permit coverage shall include the total proposed Land Disturbance Area and the total Land Development Area, including any off-site facilities in the VDOT right of way, for the overall project. The Design-Builder shall submit a SWPPP (including a complete ESC Plan, SWM Plan, and P2 Plan) for the entire project, for review and approval with the initial application for permit coverage.

Where a project will be constructed in phases, the application for permit coverage shall include the total proposed Land Disturbance Area and the total Land Development Area, including any off-site facilities in the VDOT right of way, for the entire project. The Design-Builder shall submit a SWPPP (including a ESC Plan, a SWM Plan, and P2 Plan) subsequently for each phase that includes the scope and extent of land disturbing proposed for that phase. The

SWPPP for the initial phase shall be submitted with the application for permit coverage. It is expected that the individual phase submittals will be self-sustaining and not incur a deficit in post construction SWM design requirements requiring mitigation on successive phases. Subsequent work phase submittals shall include the required modifications to the Land Disturbance Area based upon the proposed scope and extent of land disturbing activities for that phase. However, these modifications, in total, shall not exceed the submitted total Land Development Area for the entire project.

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. Any request for an exception from the technical criteria of the VSMP regulation shall be coordinated and approved prior to receiving permit coverage. 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. However, the Department is working on an expedited process to reduce the time to obtain the permit. For the purposes of preparing Technical proposals and schedules, Offerors may assume a 30 day period from the submitted request date to obtain the VPDES permit coverage for this Project. This represents a hold point in the Design-Builder's CPM Schedule. The 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 in accordance with VDOT's 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. It shall be the responsibility of the Design-Builder's certified ESCCC representative and the Design-Builder's VDEQ certified ESC Inspector to monitor Project compliance with the approved SWPPP and the construction general permit. The Design-Builder's VDEQ certified ESC Inspector must represent the Quality Assurance firm for the Project. The inspections carried out by the Design-Builder's certified ESCCC representative and the Design-Builder's VDEQ certified ESC Inspector shall be in accordance with the *Minimum Requirements for Quality Assurance and Quality Control on Design-Build Projects and Public-Private Transportation Act Projects* manual and Part 5 Section 107.16(e) as amended in Exhibit 1 to Part 3. The inspections shall be documented and certified by both the Design-Builder's

ESCCC representative and the Design-Builder's VDEQ certified ESC Inspector on the Construction Runoff Control Inspection Form (C-107 Part I).

2.7.4 Post-Construction Stormwater Management Facilities

The Department has submitted a Water Quantity Compliance Waiver (9VAC25-870-66) to the Virginia Department of Environmental Quality for this project and VDOT anticipates receiving approval of the waiver prior to the Technical Proposal submission date.

In preparation of the Water Quantity Compliance Waiver, VDOT completed a preliminary stormwater management analysis for the Project, concluding that the post construction phosphorus reduction requirement for the Project is 1.31 lbs/year. VDOT will purchase nutrient credits to meet 100% of the Project phosphorus removal requirements as described in IIM-LD-251. The Water Quantity Compliance Waiver documenting the preliminary stormwater management analysis is included in the RFP Information Package. The Design-Builder, as part of their final design, shall validate the preliminary stormwater management analysis and confirm that their final design will not result in an increase in post construction runoff, which may nullify the SWM waiver and require post construction SWM facilities as part of its SWM Plan for the Project. Any changes in the scope or footprint of the established basic project concept, proposed by the Offeror and acceptable to VDOT may require additional analysis to be performed by the Design-Builder at their cost.

If the Design-Builder determines that additional phosphorus reduction is required relative to their unique design, the Design-Builder will provide for and include the required compensatory mitigation in the post construction SWM Plan. The Offeror shall account for all costs associated with the post construction Stormwater Management Plan, as well as compensatory mitigation, in its Price Proposal.

2.7.5 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 Landscaping

The roadside development sheet may include tall fescue for erosion and sediment control and for permanent seeding.

2.9 Traffic Control Devices

All existing traffic control devices within the project limits (including flashers, poles, arms, controllers and related equipment) that are no longer relevant and/ or are not required with the Design-Builder's proposed design shall be removed unless otherwise approved to remain by the Department. Foundations for structures that are to be removed shall be removed unless otherwise approved by the Department.

The existing CCTV camera, the existing traffic signal and all related equipment located at the intersection of US 15/29 and Vint Hill Road shall be maintained. Signal detection cameras and timings for the traffic signal at the intersection of Vint Hill Road may require adjustment during the construction period and after construction. The existing signal at US 15/29 and Vint Hill Road will require phasing and/or timing modifications to remove detection from the northbound leg during the road closure period. The Design-Builder shall notify the Culpeper District Traffic Engineer and Northwest Regional Operations at least four (4) weeks prior to the closure for coordination and planning of these adjustments, which will be made by the Department.

The Project shall include all Traffic Control Devices (TCD), including temporary and permanent installation of the following: signage, 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 unless otherwise approved by the Department.

2.9.1 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.

All signs and sign structures to be removed during the construction of the Project shall be disposed of by the Design-Builder unless otherwise approved by the Department.

2.9.1.1 Limits of Project Signing

All signs and sign structures that are not required within the project limits (including signs that are no longer relevant and/ or are not required due to the proposed design) shall be removed unless otherwise approved to remain by the Department.

Existing signs that are not impacted by construction and are still applicable with the Design-Builder's final design may remain in place. Existing signs in good condition and meeting current standards may be relocated. The Design-Builder shall replace all existing signage that is damaged or that does not meet current standards and is applicable with its design and shall install new signing within the Project limits as required. Any signing on adjacent roadways beyond the Project limits that require relocation, replacement, or modification due to the proposed design shall be the responsibility of the Design-Builder.

Temporary detour signing will be required outside the project limits for the planned detour during the closure of the US 15/29 northbound lanes. A detour route exhibit is included in the RFP Information Package for information only as a conceptual exhibit to clearly indicate the intended detour route for the closure period. This exhibit is not indicative of a complete signing plan that may be required for the detour. Additional information on the detour is included in Part 2, Section 2.10.1.

2.9.1.2 Signing Plan Requirements

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 type 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 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).

2.9.1.3 Design of Sign Panels and Locations

Proposed and replaced sign panels shall be in accordance with the 2016 VDOT Road and Bridge Specifications and other references in Part 2, Section 2.1. 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 and Supplemental Guide Signs shall be ground mounted. No guide signs shall be mounted on bridges.

The Design-Builder shall use Standard VDOT sign structures for new and relocated VDOT owned signs. Ground-mounted VDOT sign structures 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 Design-Builder shall utilize the current 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 used.

The Design-Builder shall coordinate the permanent location of sign structures and all proposed, relocated, or modified with Integrated Directional Signing Program (IDSP) signs such as Supplemental Guide Signs (SGS), Specific Travel Services (Logo) Signs, General Motorist Services Signs (GMSS), Tourist Oriented Directional Signs (TODS), and all other signs approved and maintained as part of the IDSP. 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 on 2 ½" square tube posts and concrete foundations 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. Any signs that would require more than two (2) square tube posts would need prior approval by VDOT. The Design-Builder is responsible for costs associated with removal and replacement of IDSP signs.

2.9.2 Signals

The existing signal at US 15/29 and Vint Hill Road will require phasing and/or timing modifications to remove detection from the northbound leg during the road closure period. The Design-Builder shall notify the Culpeper District Traffic Engineer and Northwest Regional Operations at least four (4) weeks prior to the closure for coordination and planning of these adjustments, which will be made by the Department.

2.9.3 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 the AASHTO Manual for Assessing Safety Hardware (MASH), 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 Appendix I of the VDOT Road Design Manual. This may require the upgrade of guardrail to the nearest logical termination point beyond the current Project limits.

All guardrail on this project shall be MASH compliant, Midwest Guardrail Systems (MGS) standard, guardrail as noted in the February 2017 revision to the 2016 VDOT Road and Bridge Standards, Section 500, Pages 506.01 through 506.11 and 507.01 through 507.04 and the March revision to the 2017 VDOT Road Design Manual Appendix J.

The Design-Builder shall request VDOT field verification of the proposed layout of any guardrail at least twenty-four (24) hours prior to the installation of guardrail, except that if the request is made on a Friday, Saturday or Sunday, then a minimum of forty-eight hours (48) notice is required. Accompanied by the Design-Builder, VDOT representative will inspect the locations and advise on any necessary adjustments. 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.

2.9.4 Pavement Markings/Markers

The Design-Builder shall include all required pavement markings, markers, and delineators. Type B, Class 1 thermoplastic material will be required for all pavement markings, except for removable pavement marking tape, which shall be Type D- Class III. 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. All removable pavement marking tape shall be Type D – Class III wet-reflective temporary tape.

All new lane markings, edge lines, and center lines 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 within the Project limits shall be replaced in accordance with VDOT Standard PM-8 and/or PM-9.

2.10 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. This Project is classified as a Type C, Category V in terms of the TMP. The TMP shall include a list of possible alternative routes and detours, formalized chosen alternate routes for each audience (school buses, trucks, Emergency Medical Services (EMS), etc), identified infrastructure resources available to assist with Project information (i.e. Portable Changeable Message Signs (PCMSs), Portable Close Circuit Television (PCCTV) Cameras, VDOT 511, etc), and potential Project traffic impacts during construction with methods to mitigate those impacts.

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 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 2.10. The TMP will set forth the program for traffic management and related activities to ensure safety and mobility for the travelling public throughout the US 15/29 Corridor for the duration of the construction Period. The Maintenance of Traffic Plan will be consistent with, and included as part of, the TMP for the construction Period. In connection with the TMP, the Design-Builder will develop and implement the Maintenance of Traffic Plan, be responsible for the public outreach for the TMP and be responsible for traffic and operational analysis for lane closures, roadway reconfigurations and detours. Lane and road closure restriction information can be found in Part 2, Section 2.10.3 Lane and Road Closure Restrictions. Any additional lane closures and detour routes shall comply with the Work Area Protection Manual with any deviations requiring the approval of the Department.

2.10.1 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, hauling routes, 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 US 15/29. This plan shall reflect the noted Scope of Work and all applicable VDOT Standards and Specifications regarding time of work. All users must be addressed and accommodated in the TMP, including pedestrians, bicyclists, transit vehicles, and other motorists. Access must be maintained to all businesses, residential communities, and private entrances at all times. Access to Entrance #1 shall be maintained from northbound and southbound directions. Access to Entrances #2 and #3 shall be maintained from the southbound direction, utilizing the crossover at Entrance #2.

The Design-Builder shall be responsible for maintaining positive drainage during all MOT phases to prevent ponding on the roadway in conflict with the traveling public. 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.

The Design-Builder will be responsible for making the following temporary improvements for the closure period: 1) signing the westbound Rte. 215 to northbound US 15/29 movement to a yield condition, 2) signing truck restrictions to prevent trucks from using the local detours, and 3) covering all existing overhead and ground mounted signs that are not applicable for the detour period.

If additional traffic counts are required, it will be the responsibility of the Design-Builder to collect such data. Additional traffic counts are not required unless the Design-Builder

proposes an alternate detour route. The Design-Builder shall note that any proposed detour utilizing local neighborhood streets that are maintained by either Fauquier County or Prince William County will require the coordination with the 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 pavement markings (temporary) shall be installed, maintained, adjusted, and removed by the Design-Builder throughout the duration of the Project. A detailed signing and pavement marking plan for the regional detour shall be submitted to VDOT for review and approval. Existing signs that conflict with the intended detour route will need to be removed or temporarily covered during the closure period. Existing pavement marking may need to be eradicated and temporary pavement marking may need to be placed for the detour.

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.

The Design-Builder shall be responsible for all typical repairs and maintenance such as guardrails, grass cutting, and pothole repair in accordance with Part 5, Section 105.14 beginning 3 months after NTP or when construction activities begin, whichever is soonest, and ending on final completion of the Project.

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 Roadway Design Manual and IIM-LD-93 shall be utilized.

Reductions in the posted speed limit within the work zones will be allowed by the Design-Builder in accordance with the procedures called for in TE-350.1 using the Work Zone Speed Analysis form. A Work Zone Speed Analysis prepared by a Professional Engineer licensed and registered in the Commonwealth of Virginia shall be completed and provided to the VDOT Project Manager for forwarding and final approval

2.10.2 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.

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. 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 message boards, signage, etc.) as defined in the sign layout plans that shall be provided by the Design-Builder;
- Coordination with VDOT Staunton TOC;
- Signage of emergency detour routes;
- 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 portable DMS; and
- Contact list for appropriate stakeholder response personnel.

~~As part of the IMP, the Design-Builder shall furnish all labor, equipment, supervision and qualified personnel to perform wrecker service to remove disabled vehicles within the Project limits and along the entire regional detour route during the closure period. The wrecker shall be on site 24 hours a day, or provided through an "on call" service which must provide a response time of less than 15 minutes whenever a long term stationary work zone is in place, and shall drop the disabled vehicles at the Design-Builder's designated storage location within the Project limits. A medium duty wrecker shall be equipped with overhead emergency lights, rear floodlights, wheel lift and all other standard safety items required for wreckers. Under no circumstances shall a vehicle involved in a crash be removed or disturbed by the wrecker until the Virginia State Police or other law enforcement agency gives approval.~~

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 AM-9 PM daily. The Design-Builder shall establish the detour within two (2) hours during all other times not referenced.

The Design-Builder shall coordinate with the NWRO TOC. The NWRO TOC will coordinate with the appropriate State and Local authorities. The TOC email address is: Stauntrafficmanagementcenter@vdot.virginia.gov and the Shift Supervisor phone number 540-332-7789.

2.10.3 Lane and Road Closure Restrictions

For this Project, a 26 day closure period shall be allowed for the northbound lanes of US 15/29 from noon on July 8th, 2019 through 12:00AM on August 3rd, 2019. During this closure period, the Design-Builder is permitted to close all northbound movements of US 15/29 from Riley Road to Vint Hill Road in order to conduct 24 hour construction operations. However, access to and egress from all properties on the east side of US 15/29 between Riley Road and the intersection of Vint Hill Road shall be continuously provided and maintained through the closure period.

The detour shall direct northbound traffic around the project area by diverting NB US 15/29 traffic near Warrenton onto the US 17 Bypass, north for approximately 14.4 miles to Interstate 66, then east for approximately 11.5 miles to US 15 and for approximately 14.1 miles to US 29.

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 Culpeper District Traffic Engineer and the Northwest Regional Operations (NWRO).

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.

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. The Design-Builder shall restore all lanes of traffic per the times specified in the Culpeper District Allowable Work Hours. 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 roadway.

The Culpeper District Allowable Work Hours shall be applicable to both stationary and mobile lane closures, as well as shoulder closures. 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.

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, 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 US 15/29 for such work as installation and removal of overhead sign structures, rock blasting operations or with substantiation of need by the contractor will require coordination with appropriate stakeholders and public notice.

The Design-Builder shall submit all lane and/or shoulder closure requests to the VDOT TOC, into the Lane Closure Advisory Management System (LCAMS), and to the 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 Project 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.

2.10.4 Damage Recovery

Damage recovery/user costs will be assessed against the Design-Builder if all lanes are not open to traffic by the time required in the approved request for temporary lane closure. Costs will be assessed as follows and continue until all lanes are opened as determined by the VDOT Project Manager. This assessment will be in the following amounts (Note the assessment for subsequent hours are added to the previous hours):

Hours	Monday - Sunday Fee for Failure to Remove Lane Closure
4:00 AM – 4:59AM	\$284
5:00 AM – 5:59AM	\$76,265
6:00 AM – 6:59AM	\$47,946
7:00 AM – 7:59AM	\$20,034
8:00 AM – 8:59AM	\$8,278
9:00 AM – 9:59AM	\$1,099
10:00 AM – 10:59AM	\$629
11:00 AM – 11:59AM	\$347
12:00 PM – 12:59PM	\$215
1:00 PM – 1:59PM	\$403
2:00 PM – 2:59PM	\$143
3:00 PM – 3:59PM	\$97
4:00 PM – 4:59PM	\$79
Note: The assessment is cumulative; Subsequent hours are added to the previous hours.	

If the Design-Builder is assessed these damage recovery/user fees 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 damage recovery/user fees for failure to open traffic if such cause is not related to or caused by the Design-Builder’s operations. The Design-Builder shall catalog user cost assessments on a daily basis and submit a tabulation along with certification from the QAM that such tabulation is correct to the VDOT Project Manager for concurrence. VDOT will make a deduction in the assessed amount from Progress Payment funds otherwise due to the Design-Builder. After Final Completion, the VDOT Project Manager will initiate an adjustment to the Contract Price in accordance with Article 9 of Part 4 to consider all damage recovery/user cost assessments.

2.10.5 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 Virginia Work Area Protection Manual. VDOT shall be responsible for all costs incurred by VSP specific to the Project.

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

2.10.6 Portable Changeable Message Signs

Portable Changeable Message Signs (PCMS's) shall be used in advance of the work zone when closing or shifting lanes within the Project limits and shall be used to provide guidance to the travelling public at least six (6) weeks in advance of and during the planned road closure. The Design-Builder shall provide at least three (3) PCMS's along US 15/29 northbound and two (2) PCMS's along US 15/29 southbound, which are to be placed in advance of the Project. Additional PCMS's will be required for the detour and the Design-Builder shall coordinate with VDOT for the provision of those PCMS signs. For purposes of preparing Price Proposals, Offerors shall anticipate the need for 10 PCMS's for the detour. PCMS's shall have the capability to be remotely controlled from the NWRO Transportation Operations Center (TOC) to facilitate emergency access during an incident only. PCMS's shall also be used to provide en-route travel information about planned construction, delays or other sudden changes in travel conditions throughout the Project's duration. The PCMS shall be placed in a semi-permanent location, protected from traffic but highly visible to the public. The Design-Builder shall coordinate the implementation of PCMS's with VDOT. The use of PCMS's shall not replace any traffic control device otherwise required per the MUTCD or the Virginia Work Area Protection Manual.

2.11 Public Involvement / Public Relations

The Design-Builder shall be responsible for providing a point of contact and a local or toll free phone number for VDOT to use when gathering information to respond to a citizen or media inquiry regarding this Project during the Project development and through Project delivery to Project completion. The Design-Builder shall also be responsible for coordinating the preparation and release of any public information with VDOT's Culpeper District Office of Communications.- All information to be released to the public shall be approved by VDOT prior to release.

During the design and construction phases, the Design-Builder shall:

- Hold informal meetings (such as "pardon our dust" meetings) with affected stakeholders as necessary and as directed by VDOT. A list of affected stakeholders (including, but not limited to, community associations, churches, business owners, police, fire & rescue, school bus transportation, transit operators) shall be developed by the Design-Builder and submitted to VDOT for acceptance prior to holding any meetings. All stakeholders shall be informed of meetings.

Concurrent with the first plan submittal and at intervals deemed necessary by the VDOT, provide to VDOT's Project Manager written information about the Project suitable for posting by VDOT on its Website, including any significant changes that affect the public. Such information will include a Project overview, plan of work, overall Project schedule and progress, potential impacts to traffic on all roadways within the project limits (i.e., temporary lane

closures, shoulder closures, ramp reconstruction, milling operations, etc.), up-to-date Project photos, and contact information.

During the Construction Phase, the Design-Builder shall:

- Coordinate with Fauquier County, Prince William County and the VDOT NOVA District, provide regular updates and appropriate notifications to Fauquier County and other stakeholders and ensure compliance with all applicable County ordinances.
- Provide to the VDOT Project Manager information for Traffic Alerts whenever there are new impacts to motorists. All information for Traffic Alerts must be submitted at least one (1) week in advance of the traffic impact. If the impact is major (changes or additional lane closures that are anticipated to cause traffic delays that exceed existing conditions), VDOT must be notified one month in advance.
- 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.
- Maintain a log or database of questions, complaints, and/or comments received from stakeholders and the public either via public outreach efforts or direct contact, along with dates received, responses generated, and how the issues or concerns are addressed. If appropriate, this list of questions and responses will be posted on VDOT's website.

A Willingness to hold a public hearing was posted for this Project on January 23, 2019. Any public meetings held shall be conducted in accordance with the VDOT Public Involvement Manual, revised November 2016.

2.12 Right of Way

The procedures and requirements related to Right of Way for this Project shall be in accordance with the Right of Way Manual of Instructions, 3rd Edition, FHWA Update January 1, 2016, Chapter 10 (Special Projects Section), including Attachment 2 to Chapter 10 (Right of Way Contract Provisions for Design Build Contracts).

VDOT will begin acquiring the right-of-way for the temporary construction easement prior to Project NTP and beyond as necessary to assist the Design-Builder. The temporary construction easement (TCE) as identified in the RFP Conceptual Plans for entrance #3 should be assumed to be acquired by VDOT and costs associated with this acquisition should not be included in the Offeror's Price Proposal. In no event shall VDOT be bound by, or liable for, any obligations or time impacts with respect to VDOT in determining and acquiring the TCE prior to Project NTP and beyond. Acquisition of any easements or right-of-way that deviate from those shown on the RFP Conceptual Plans for the Project will be at the sole risk of the Design-Builder

to include all cost and time impacts associated with attaining those easements in accordance with Part 2 Section 2.12 of the RFP.

2.13 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.

Prior to the receipt of the new survey, VDOT became aware of 2 potential utility conflicts located between approximate Sta. 120+00 and Sta. 120+50. A revised Utility Exhibit is included in the RFP Addendum #1 Information Package. This exhibit is updated from the exhibit shown at the Pre-proposal meeting on Friday, February 15th and indicates an additional utility line crossing at approximate Sta. 121+50, which was obtained from records. Additionally, distances from existing utility poles to the proposed grading limits of the RFP Conceptual Plans are indicated on this exhibit.

Utility information provided on the survey identifies all known utilities, at the time of plan development, that are located within the Project limits. Aerial utilities are identified on 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 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 the Department 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 Energy ~ Distribution

1719 Hydraulic Road
Charlottesville, Virginia 22906
Mr. Nathaniel Horstick ~ Electric T&D Projects Manager
Mobile: (571) 992-5339
Email: nathaniel.d.horstick@dominionenergy.com

Northern Virginia Electric Cooperative (NOVEC)

5399 Wellington Branch Drive
Gainesville, Virginia 20155
Mr. Kevin Whyte ~ Manager, Distribution Engineering
Office: (703) 754-6773
Email: kwhyte@novec.com

Verizon Virginia, LLC

901 Prince Edward Street
Fredericksburg, Virginia 22401
Mr. Dave Russell ~ Supervisor, Network Engineering & Operations
Office: (540) 368-8176
Email: david.a.russell@verizon.com

Verizon Business (MCI)

12379 Sunrise Valley Drive, Suite A
Reston, Virginia 20191
Adam Rice ~ Lead Specialist Engineer
Mobile: (571) 220-8978
Email: adam.rice@verizon.com

Comcast Cable

5304 Kings Court
Frederick, Maryland 21703

Amy Goad ~ Construction Supervisor
Office: (301) 625-3407
Mobile: (202) 815-9919
Email: amy_goad@comcast.com

Qwest Government Services, Inc. (QGS)
Dba CenturyLink Government Programs
2950 Towerview Road, Ste. 150
Herndon, VA
Noah Dobbins, P.E.
(703)464-7529

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 forty-five (45) 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 thirty (30) 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.

The Design-Builder shall be responsible for ensuring that each utility owner that is subject to the requirements of Section 313 of Title 23 United States Code, MAP-21 S.1518 Buy America as described in Part 5, Exhibit 102.05(g.1) provides written certification to the Design-Builder that they are in compliance with this requirement. If the Design-Builder or its subcontractors are installing the utility relocations then the Design-Builder shall provide the certification pre-installation, along with any other Contractor installed items for the Project; if the utility owner/company is installing the utility relocation then the certification shall be provided post-installation. Compliance documentation must be furnished for the Design-Builder to be reimbursed for the Work. For any utility betterments where Project funds are being applied, the Work must meet the Buy America requirements.

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 2.17.9 of the RFP.

2.14 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 kick-off meeting held after the Date of Commencement as set forth in RFP Part 4, 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:

- A walkthrough of the QC and QA process for one design phase submittal, including the names of the individuals that will be performing the design and those providing the reviews. Discuss how the QC and QA process will be documented to confirm that

it was completed per the QA/QC Plan and steps that will be taken to ensure that the QC and QA reviews are independent;

- Preparatory Inspection Meeting requirements, including incorporation of at least one each, Witness and Hold Point, as set forth in Sections 5.7 and 5.16 through 5.19 of the Department's guidance document for Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, July 2018 (July 2018 QA/QC Guide). Clearly identify coordination efforts with VDOT that are necessary to receive timely approvals associated with the Witness Point and Hold Point;
- At least one (1) material which VDOT retains responsibility for testing as identified in Table 5-21 of the July 2018 QA/QC Guide;
- Situation requiring the issuance of a Nonconformance Report and subsequent review of the report, including completion of corrective measures and the issuance of a Notice of Correction of nonconforming Work with proper log entries and proper interface with auditing and recovery requirements as set forth in Sections 5.13 through 5.15 of the July 2018 QA/QC Guide for nonconforming Work resulting from:
 - defective equipment
 - construction activities/materials which fail to conform as specified;
- Inspection documentation capturing requirements as set forth in Section 5.22 and 5.23 of the July 2018 QA/QC Guide; as well as inspection of geotechnical elements that are to be performed and certified by the Design-Builder's licensed geotechnical engineer as set forth in Section 5.20 of the July 2018 QA/QC Guide;
- Preparation of an application for payment. Discuss the process for identifying an initiated Work Package and a completed Work Package on the application for payment, including the work element and associated documentation that is required and verified by the Quality Assurance Manager. Discuss DBE and EEO documentation that may be required prior to submitting payment applications for approval;
- 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 the VDOT Project Manager as set forth in Section 5.23 of the July 2018 QA/QC Guide and Chapter VII of VDOT's Manual of Instruction for the Materials Division. Refer to Section 803.73, Form TL-142S, of the Manual of Instructions for the Materials Division for an example of a completed Materials Notebook.

- Review the Document Management System that will be utilized to track and organize project documentation. Discuss the access that various project team members will have to the system. List the documentation that will be available prior to the submission of each application of payment.

2.14.1 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, July 2018 (July 2018 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 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.

Chapter 4 of the July 2018 QA/QC Guide provides minimum requirements that shall be met for development of the Design QA/QC Plan.

2.14.2 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 July 2018 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) as part of the Construction QA/QC Plan for uniform reporting, controlling, correction and disposition and resolution of nonconforming Work (including disputed nonconforming items) issues that

may arise on the Project. Nonconforming Work is any Work performed by the Design-Builder that is not in compliance with contract requirements and may include, but is not limited to, design, R/W, utility relocation, equipment, materials, construction means and methods, quality control, quality assurance, and project management. The Design-Builder's AR Plan shall establish a process for review and disposition of nonconforming Work in accordance with Section 5.13 of the 2018 QA/QC Guide.

Nonconforming Work that is correctable by established means and methods and complies with the contract requirements upon correction shall be considered a Deficiency and documented in a Deficiency Log. Nonconforming Work that is not correctable, such as safety or environmental permit violations, shall be considered a Nonconformance, issued a Nonconformance Report and documented in a Nonconformance Log. Deficiencies that do not have a corrective action plan agreed upon by the Department at the time of the subsequent application for payment shall be considered a Nonconformance, issued a Nonconformance Report, and documented in the Nonconformance Log. Procedures for reporting, documenting and correcting nonconforming Work are outlined in Sections 5.14 and 5.15 of the July 2018 QA/QC Guide.

VDOT will provide QA inspection and/or testing of the items listed below:

- Prestressed Concrete Structural Elements (beams, girders (AASHTO and Bulb-T sections), and piles)
- Metal Traffic Signal and Light Poles and Arms
- Structural Steel Elements (beams and girders)
- Laminated Bridge Bearing Pads
- Precast Concrete Structures
- Pipe (concrete, steel, aluminum, and high density polyethylene) for culverts, storm drains, and underdrains
- Asphalt Concrete QA Program
- Hydraulic Cement Concrete Plant and Truck Inspections
- Hydraulic Cement Concrete Mix Designs
- Aggregate CMA QA Program
- CCPRM, CIR and FDR Mix Designs

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 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's QAM shall report directly to the Design-Builder's Project Manager and be independent of the Design-Builder's physical construction operations. Prior to the start of each work activity, the QAM (in conjunction with the CM) shall identify the QA and QC Inspector(s) and Testing Technician(s) by name and provide a detailed matrix for each type of inspection and testing required illustrating each technician's qualifications/certifications and respective inspections and tests that are to be performed. The QAM shall also identify the Department's testing and inspection requirements that are to be performed for each work activity.

In accordance with Chapter VII of VDOT's Manual of Instruction for Materials Division, the Materials Notebook (Form TL-142DB/LAP) shall be populated during the course of the project based on the actual quantities used during construction. 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 approved Construction QA/QC Plan and 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 minimum of one (1) Lead QA Inspector to the Project prior to the start of construction. The lead QA Inspector, who must be on the site full-time for the duration of all construction of the Project, shall be responsible for verifying that all construction activities performed by the Design-Builder were done so in accordance with the Contract requirements and were observed by the quality assurance firm. This includes observation of all QC activities to ensure inspection and testing, and the observation of any approved corrective action for any non-conformities of the Work. 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. The Lead QA Inspector shall be certified as a VDEQ ESC Inspector and shall be responsible for certifying the Project's compliance with the SWPPP and the VPDES Construction Permit on the Construction Runoff Control Inspection Form (C-107 Part 1) as prescribed in Part 2, Section 2.7.3.

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) or ASTM C1077 (for concrete test methods) 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 July 2018 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 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.

2.15 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. The Document Control System for this Project shall be CADAC. Refer to the Special Provision for Document Control System. 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 shall follow the structure identified in the Design-Build Project-File Index (Attachment 2.15). 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 ProjectWise 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 for this Project. 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 Final Application for Payment, the Design-Builder is responsible for uploading all project documentation identified in Attachment 2.15 onto the online document management system. Final Payment will not be processed until all applicable documentation has been provided.

2.16 Field Office

No field office will be required for VDOT personnel on this project. VDOT personnel will be located in the Warrenton Residency, located at 457 East Shirley Avenue, Warrenton, Virginia 20186.

2.17 Plan Preparation

2.17.1 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 Windows7P or Windows10 only: GEOPAK/OpenRoads (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.

2.17.2 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.

2.17.3 Drafting Standards

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

2.17.4 Electronic Files

The Design-Builder shall submit all plans in accordance with VDOT'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 ProjectWise System and in coordination with VDOT's CADD Support group. The Design-Builder will complete form LD-899, the ProjectWise System Access Request form, form IT-36E, the VDOT Information Security Agreement form and form LD-900, the ProjectWise Access to Project Request Form.

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 the VDOT Manual of the Structure and Bridge Division - Part 2. 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 this Project.

2.17.5 Plan Submittals

In addition to electronic files as described in Part 2, Section 2.17.4 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 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 2.17.8 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 - Harold L. Jones, Jr., P.E.
VDOT Charlottesville Residency
701 VDOT Way
Charlottesville, VA 22911

Federal Highway Administration
Attention – Vanna Patterson Lewis, P.E.
Virginia Division, FHWA, US DOT
400 N. 8th 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.

2.17.6 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 2.12 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.

2.17.7 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 VDOT's 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.

2.17.8 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 - Harold L. Jones, Jr., P.E.
VDOT Charlottesville Residency
701 VDOT Way
Charlottesville, VA 22911

Federal Highway Administration
Attention – Vanna Patterson Lewis, P.E.
Virginia Division, FHWA, US DOT
400 N. 8th Street, Suite 750
Richmond, VA 23219-4825

2.17.9 Record (As-Built) Plans

The final plan milestone is Record (As-Built) Plans. As-Built Plans shall be prepared, signed and sealed by a registered, licensed Professional Engineer in the Commonwealth of 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.

2.18 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 2.3A -- GEOTEXTILE ROADBED PROTECTION

ATTACHMENT 2.6.5 -- CONTROLLED BLASTING

ATTACHMENT 2.7.4 -- 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 2.5 of this RFP.

END OF PART 2 - TECHNICAL INFORMATION & REQUIREMENTS

ATTACHMENT 2.6.5 - CONTROLLED BLASTING

March 8, 2019

I. DESCRIPTION

The Design-Builder is hereby advised of the proximity of this project to private property, dwellings, water wells, springs, utilities, railroads and/or other structures (including storm drainage and culverts). The Design-Builder shall design production blasts to minimize backbreak. Therefore, controlled blasting techniques shall be employed during construction. Prior to prosecuting the work, the Design-Builder shall conduct an on-site review of the work involved and develop a plan of operations for performing the excavation work. Blasting plan shall be submitted to the Engineer at least two weeks prior to construction.

II. PRE-BLASTING PROCEDURES

To the extent required by the contract, the Design-Builder shall complete pre-blast inspections of neighboring properties and the test blast program in advance of production blasting. Prior to beginning any construction activities, the Design-Builder shall notify the Engineer and arrange for a pre-construction meeting to discuss monitoring/surveying of structures likely to be affected by the construction activities. Monitoring/surveying (i.e., Pre-Blast Inspections) shall be performed by an independent, appropriately experienced engineering consultant/testing agency approved to provide services in the Commonwealth of Virginia, and as approved by the Department. The consulting/testing agency personnel shall have at least 5 years of experience with at least 5 projects similar in nature and scope to this project.

Pre-Blast Inspection

The Design-Builder shall cooperate and coordinate blasting activities with the owners of private property, dwellings, water wells, springs, utilities, structures, and resources.

A licensed professional structural engineer, approved to provide services in the Commonwealth of Virginia shall perform a visual inspection of all buildings and structures that may be affected by the construction activity. Visual surveys of the exterior of the structures and buildings shall be conducted. Findings shall be documented via video recording or photographic records accompanied by verbal or written narrative. Recordings and photographs shall be dated and signed by the Design-Builder or others conducting the survey.

A certified land surveyor shall establish a system of vertical and horizontal control points on or about such buildings and structures. Such control points shall be tied to benchmarks and indices sufficiently remote to not be disturbed by the Design-Builder's operations. A plan of this system shall be submitted to the Engineer for review and comments. Survey readings of all control points shall be taken and permanently recorded prior to the start of construction activity.

Cracks and other preexisting conditions revealed during the preconstruction review shall be marked or recorded in such a way to allow future reference but shall not harm the historic or

aesthetic integrity of the structure. The marked/recorded cracks and preexisting conditions shall be measured and records of the measurements shall be submitted to the Engineer for review.

Both the survey points and cracks/preexisting conditions shall be checked daily, or more often if necessary, whenever construction activities are ongoing within the limits defined in the plans. Three copies of readings shall be submitted to the Engineer without delay after being obtained. Any settlement, horizontal movement, or change in preexisting conditions detected shall be reported immediately to the Engineer. Any observations not noted in the original pre-blast inspections, such as changes in cracks, sags or other damage, shall also be immediately reported to the Engineer. In the event of such movement or observed changes in the pre-blast inspections, the Design-Builder shall propose immediate remedial action to the Engineer.

Test Blast Program

Prior to any production blasting, the Design-Builder shall perform a test blast program. The design of a blasting plan requires some level of assumption on the rock formation and the nature of energy dissipation with distance. The purpose of the test blast program is to evaluate and confirm or revise the assumptions of the preliminary blast design. The preliminary blast design shall include the expected blasting area as well as the estimated operation timeframes for scheduling purposes.

Using the weight per delay of the blast design, install a test blast to include same powder, caps, delays, loading, stemming and anticipated burden of the production blast. The test blast shall be in the same rock formation anticipated for the production blast. Coordinate with the Engineer for appropriate location for the test blast. Submit the test blast design one week prior to execution. The test blast shall include at least five detonations.

From the center of the test blast location, provide three arrays of vibration monitors. Each array of monitors shall include three monitoring locations at distances of 25 feet, 75 feet and 200 feet. The angle between the three arrays shall be 120 degrees, in plan dimension. The array locations may be adjusted to fit site constraints with the approval of the Engineer.

All vibration monitors shall record ground movements in three directions and include signal processing to report accelerations, peak particle velocity and displacement. Monitors shall be fixed to the ground in accordance with the manufacturer's instructions.

Following the completion of the test blast, the Design-Builder shall submit a test blast report including all data and details of the test blast and subsequent monitoring. The Design-Builder shall interpret the vibration results to develop a scaled distance chart. Develop a scaled distance chart for each array and report to what extent the formation shows anisotropy (i.e., the scaled distance chart for each array may be different or may be similar).

Submit the conclusions of the test blast to the Engineer at least three days prior to production blasting. Adjust the production blast design, as needed to control vibrations, based on the test blast results.

III. BLASTING PROCEDURES

No blasting shall be performed within fifty feet of existing or new bridge foundations, railroad right-of-way, residential or commercial buildings, wells or other structures (including storm drainage and culverts) without the written approval of the Engineer. In the vicinity of proposed concrete construction, blasting shall be scheduled so that blasting operations are fully complete prior to the placement of concrete.

All blasting shall be performed in accordance with the current edition of the Virginia Statewide Fire Prevention Code. The drill-hole diameter, hole spacing, timing pattern and size of charge per hole shall be such as to afford satisfactory breakage with a minimum of vibration and backbreak. At no time shall the total size of any charge cause the particle velocity of the ground motion to exceed 0.50 inches per second when measured at the nearest structure to a blast.

Seismic monitoring shall be performed by a qualified firm before performing blasting operations near private property, dwellings, water wells, springs, utilities, railroads and/or other structures (including storm drainage and culverts). Some of the initial blasts shall be monitored close to the blasting while others shall be monitored at property and structures; and the blasting plan shall be revised if the anticipated maximum particle velocity at those locations will exceed 0.50 inches per second.

The seismograph used shall have the ability to store digital data for documentation and inspection by, or submittal to, the Department. Further, the seismograph used shall be capable of accurately measuring frequency and amplitude in three planes: vertically, longitudinally, and transversely. These instruments must be dynamically calibrated and of such sensitivity that displacements as little as 0.0005 inches and frequencies of from 1 to 100 cycles per second may be read. The instruments must also be capable of adjustment so that the peak of maximum amplitude of vibration can be recorded on the tape or disk.

The Design-Builder shall provide the Engineer a blasting plan and blasthole drilling log for each blast event. The blasting plan shall show the type, grade and quantity of explosives, type of detonating cap and primer, hole locations, depths, amount of subdrilling, burden, stemming and minimum distances from the blasts to private property, dwellings, water wells, springs, utilities, and other structures. The blasting plan shall also indicate the forecasted seismic vibration, based on the scaled distance to the nearest monitoring point. (Forecasted seismic vibrations shall be based on site-specific regression for those cases where the contract includes a tests blast program.) A copy of the blasting plan and blasthole drilling log shall be submitted to the Engineer at the end of each workday on which blasting activity has occurred. Sample forms for completing the blasting plan and blasthole drilling log are appended to this Attachment 2.6.5.

In order to help control the effects of vibration, fly-rock, and air blast, maintain a burden distance that is not more than one half the bench height and between 25 to 35 times the diameter of the explosive charge in the blasthole, unless otherwise approved by the Engineer.

Production blastholes that are designed for lifts or hole depths of 10 feet or less shall be loaded with explosive cartridges no larger than 1.25-inches in diameter. On cut slopes of ¼:1 (H:V) or steeper there may be some short blastholes. The Design-Builder will be required to follow this specification as to explosive diameter as it relates to bench height. This may require the use of mixed drilling for maximum production efficiency.

Production blastholes that are designed for lifts of 10 to 15 feet deep shall be loaded with explosive cartridges no larger than 1.5-inches in diameter.

Production blastholes that are designed for lifts of 15 to 20 feet deep shall be loaded with explosive cartridges no larger than 2.5-inches in diameter. If blasthole alignment restrictions can be met and geological conditions permit, the lift depth may be increased to a maximum of 35 feet at the option of the Engineer.

The Design-Builder shall cooperate and coordinate blasting activities with the owners of private property, dwellings, water wells, springs, utilities, and structures. The cost for explosives and blasting operations, alternative methods, monitoring, and the recording and submittal of requisite data shall be considered incidental to the cost of excavation, and will not be measured for separate payment. Design-Builder's failure to maintain and submit blasting plans and blasthole drilling logs as stipulated herein will result in withholding payment for excavation until such time that plans and logs are provided.

IV. ROCK SLOPES

Slopes shall be considered rock slopes when the following criteria are met:

1. Height of final slope is fifteen (15) feet or greater.
2. Fifty (50) percent of the face of the final slope is rock, based on visual inspection.

All rock slopes with a slope of 1H:1V or steeper shall be pre-split by blasting, controlled blasting or non-explosive techniques, in accordance with Section 303.04a of the Road & Bridge Specifications and this Attachment 2.6.5.

V. EXPLOSIVES

The Design-Builder shall provide explosive products that conform to the following:

1. ANFO shall have no more than 5 percent fines as defined as no more than 5 percent of less than 35 mesh (0.02 inch) particle size.
2. The mixed ANFO shall contain 6 percent diesel oil plus or minus 0.5 percent.
3. The Design-Builder's supplier shall test all ammonium nitrate lots delivered to the site and send a letter that the particle size and oil content met the above specification.
4. Cartridged explosives shall all be from the same lot number. The date codes shall be visible.
5. The cartridged explosive shall be less than 6 months old.

6. If any emulsion or water gel product show signs of premature crystallization, that product and lot number shall be immediately removed from the site and undamaged product shall be immediately brought to the site by the Design-Builder's supplier.
7. Bulk explosive products shall have an ammonium nitrate content of a fixed percentage and that percentage shall be supplied to the Engineer.
8. If bulk trucks are weighed to determine the amount of explosive used, then the remainder of the water after holes are loaded (i.e., as used for the water ring on the bulk emulsion or water gel trucks) shall not be discharged until after the trucks are weighed for billing.
9. The date of calibration of any bulk trucks used on the site shall be shown on the blast report or invoice.
10. All bulk trucks shall come equipped with gauges or meters to accurately record the amount of explosive delivered to each blast hole. The amount of explosive delivered to each hole shall be recorded by the driver and given to the Engineer's representative before the truck leaves the job site. If the meters or gauges are inoperable, the Design-Builder's supplier will not send these vehicles to the site and will send only functional vehicles.
11. All bulk trucks brought to the site shall be in good repair and not leaking any fluids.
12. If chemical gassing of emulsion or blasting agents are used, then the results of the site gassing test (i.e., total volume increase before the blast is fired) shall be recorded on the blast report.
13. If any product deviates more than 10 percent from the properties shown on the manufacture's data sheet, that lot will not be used on the project and the manufacturer shall remove those products from the job site and immediately replace with products that meet specification.
14. 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.

VI. INITIATORS

1. All initiators of one delay period will be from the same lot number.
2. The age of all the initiators used on one blast will be about the same age (i.e., within a period of one month).
3. All initiators shall be less than six months old.
4. If any product deviates more than 10 percent from the properties shown on the manufacture's data sheet, that lot shall not be used on the project and the manufacturer will remove those products from the job site and immediately replace with products that meet specification.

VII. PERSONNEL

1. The blaster dispatched for shot service will have at least 5 years experience as a licensed blaster.
2. The same blaster shall always be sent to the site, unless otherwise approved by the Engineer.
3. The blaster shall lay out and mark the holes for the subsequent blast before leaving the site.
4. The blaster shall take a video of each blast and supply a copy of those videos to the Engineer at the end of each month.

5. The blaster shall accurately tape the measurements for locating the blastholes for the driller.
6. The blaster will take care to never load holes in or within 3 feet of a mud seam or open joint, fault, etc.
7. The blaster will design the blast to keep control of flyrock. Flyrock is defined as any rock moving more than half the distance from the blast to the property lines or any protected structure on the job site.
8. If flyrock or excessively high vibrations occur, the Design-Builder shall be required to bring in an independent blast design consultant, at the Design-Builder's own expense to determine the reason and methods of solution to the problem. A written report of the consultant's findings shall be given to the Engineer.
9. The blast report shall be completed and given to the Engineer before the blaster leaves the job site.
10. The blaster shall examine the rock conditions around any blasthole before the hole is loaded. After examination, the blaster shall report any concerns or problems to the Design-Builder before loading any problematic blasthole.

VIII. DRILLING

1. The location of all blastholes shall be measured with a tape and marked by the blaster for the driller.
2. The driller shall drill the hole within two hole diameters of the intended center.
3. The driller shall measure the cleaned blasthole before the drilling rig is moved from the blasthole.
4. The driller shall record the depth and thickness of any voids, soft zones or seams and give this information to the blaster or their supervisor at the end of each shift.
5. If a contract driller is used, it will be the responsibility of the driller to meet the tolerances defined above. If more than 5 percent of the holes are drilled outside the specified tolerance, for other than geologic reasons, the driller shall be required to refill the out-of-tolerance drill holes and re-drill them at the proper locations. The extra cost of filling and re-drilling will be at the expense of the Design-Builder.

IX. LIABILITY

The supplier of blasting services and the Design-Builder are responsible for liability. The Department will not sign a hold harmless agreement.

X. GEOLOGY

The common excuse for all blasting problems is, "Geology." Changes in geology are common on VDOT projects and are to be expected. It is the blaster's responsibility to modify procedure to overcome changes in geology.

There are some true geologic problems that cannot be easily overcome with reasonable changes in the blasting methods or that will substantially increase cost. These true geologic problems are not the normal cause of claims of geologic problems. Normally, poor blasting procedures, wrong or defective explosives or initiators are the cause of poor performance.

If blasting yields are below 80 percent or excessive backbreak, seismic vibrations or flyrock occurs and the excuse is geology, then the supplier shall call an independent blasting consultant, well versed in blasting for transportation projects. The blasting consultant shall review the geology and blasting methods to determine appropriate changes for the blasting design.

BLASTING PLAN

Location: _____	Job: _____	Date: _____
Type of Shot: _____	Station: _____	
Type of Material: _____		
Distance to Nearest Structure: _____		feet

Production Blast:

Number of Holes: _____	Hole Diameter: _____	Drill Angle: _____
Burden: _____ feet	Spacing: _____ feet	Depth _____ feet
Stemming: _____ Feet	Stemming Material: _____	
Subdrilling: _____	Lift Height: _____	

Method of Firing: (check one)	Electric: _____	Non-Electric: _____
Sequential Timer: (check one)	Yes: _____	No: _____
	Timer Setting(s): _____	
Surface Delay Periods: _____		
Downhole Delay Periods: _____		

Types of Explosives: _____	_____	_____
Size of Primers: _____	_____	
Primer Locations: _____	_____	

Trade Names of Explosives:	Amount: _____
_____	Amount: _____
_____	Amount: _____
_____	Amount: _____
Trade Names of Primers:	Amount: _____
_____	Amount: _____
_____	Amount: _____
Trade Names of Initiators:	Amount: _____
_____	Amount: _____
_____	Amount: _____

Maximum Lbs/Delay: _____	_____
Anticipated Vibration Level: _____	_____
Scaled Distance: _____	_____

NOTE:

1. Provide drawing of pattern, initiator hookup, hole firing times and cross section of blasthole showing explosive loads and primer locations, depth, subdrill, stemming, etc.
2. Include manufacturer's data sheets for all products.

BLASTING PLAN (continued)

Controlled Blast:

Check One:	Presplit: _____	Cushion Blast: _____	Line Drill: _____
Diameter of Drillhole:	_____		Hole Depth: _____
Drillhole Angle:	_____		

Method of Initiation:	_____		
Delays Used:	_____	Holes/Delay:	_____

Describe Methods Used To Maintain Hole Alignment:

Buffer Row:	Hole Diameter: _____	Charge Diameter: _____
	Total Charge: _____	Burden: _____
	Spacing: _____	Depth: _____

Trade Names of Explosives:	_____	Amount: _____
	_____	Amount: _____
	_____	Amount: _____
	_____	Amount: _____
Trade Names of Primers:	_____	Amount: _____
	_____	Amount: _____
	_____	Amount: _____
Trade Names of Initiators:	_____	Amount: _____
	_____	Amount: _____
	_____	Amount: _____
	_____	Amount: _____

NOTE:

1. Provide drawing of pattern, initiator hookup, hole firing times and cross section of blasthole showing explosive loads and primer locations, depth, subdrill, stemming, etc.
2. Include manufacturer's data sheets for all products.

BLASTHOLE LOADING INFORMATION

EXPLOSIVE					EXPLOSIVE				
LOADING DENSITY					LOADING DENSITY				
HOLE / CHARGE NUMBER	TO:	TO:	TO:	TO:	HOLE / CHARGE NUMBER	TO:	TO:	TO:	TO:
1					31				
2					32				
3					33				
4					34				
5					35				
6					36				
7					37				
8					38				
9					39				
10					40				
11					41				
12					42				
13					43				
14					44				
15					45				
16					46				
17					47				
18					48				
19					49				
20					50				
21					51				
22					52				
23					53				
24					54				
25					55				
26					56				
27					57				
28					58				
29					59				
30					60				

PREBLAST SURVEY

EXTERIOR REPORT

Property Owner: _____ Page ____ of ____ Pages

Outside Photos Taken: Yes ____ No ____ B&W ____ Color ____

Description of Lot: Level ____ Sloping to front ____ Sloping to rear ____ Or to Side ____

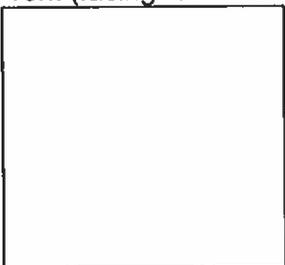
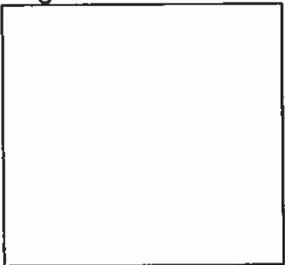
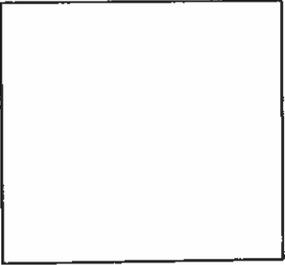
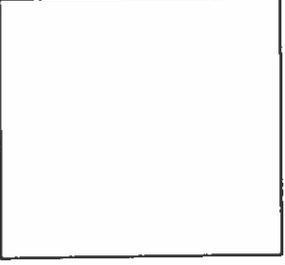
Standing Water or Pooling Area: Front ____ Back ____ Left ____ Back ____

Condition Codes: (E) - Excellent (G) - Good, not New (F) - Fair

Remarks

	Type of Material		
Roofs	_____	_____	_____
Siding	_____	_____	_____
Gutters/Spouts	_____	_____	_____
Driveway	_____	_____	_____
Foundation	_____	_____	_____
Walkway(s)	_____	_____	_____
Porch(es)	_____	Patio(s) _____	Windows _____

Chimney(s): Brick ____ Stone ____ C-Block ____ Metal ____

Front (facing foundations)	Right	Left	Rear
			

Detached Buildings: Number: Condition:

Garage(s) _____

Barn(s) _____

Shed(s) _____

Utility Building(s) _____

Other(s) _____

PREBLAST SURVEY

INTERIOR REPORT

Property Owner: _____

Page ____ of ____ Pages

Room: _____ Entered From: _____

Walls:	Plaster	_____	Dry Wall	_____	Panel	_____	Paper	_____	C. Block	_____	Other	_____
Ceiling	Plaster	_____	Dry Wall	_____	Ac. Tile/Panel	_____	Paper	_____	Open C.	_____	Other	_____
Floor	Carpet	_____	Linoleum	_____	Square Tile	_____	Wood	_____	Concrete	_____	Other	_____

Wall

Ceiling/Floor

Remarks: _____

Room: _____ Entered From: _____

Walls:	Plaster	_____	Dry Wall	_____	Panel	_____	Paper	_____	C. Block	_____	Other	_____
Ceiling	Plaster	_____	Dry Wall	_____	Ac. Tile/Panel	_____	Paper	_____	Open C.	_____	Other	_____
Floor	Carpet	_____	Linoleum	_____	Square Tile	_____	Wood	_____	Concrete	_____	Other	_____

Wall

Ceiling/Floor

Remarks: _____

VIBRATION REPORT

EVENT: _____ SHOT: _____ SEISMOGRAPH UNIT: _____
 LOCATION: _____ DATE: _____ TIME: _____

STATION: _____
 SHOT POSITION: COORDINATES: EAST: _____ FT NORTH: _____ FT

STATION: _____
 MONITOR POSITION: COORDINATES: EAST: _____ FT NORTH: _____ FT

DISTANCE FROM SHOT: _____ FT
 MAXIMUM CHARGE WEIGHT PER DELAY: _____ LBS
 AIR OVERPRESSURE: _____ Db

	RADIAL	TRANSVERSE	VERTICAL	VECTOR SUM	MAXIMUM
PPV					
FREQUENCY					

JOB _____ INSPECTOR/BLASTER _____