

**CONTRACT DOCUMENTS**

**RELATING TO THE 95 EXPRESS LANES  
FREDERICKSBURG EXTENSION PROJECT**

**DATED AS OF APRIL \_\_, 2019**

**BY AND BETWEEN**

**95 EXPRESS LANES LLC,  
a Delaware Limited Liability Company**

**AND**

**BRANCH-FLATIRON, JOINT VENTURE**

---

**FRED EX CONTRACT DOCUMENTS**

**The Execution Date is April \_\_\_\_, 2019**

**The Contract Documents consist of the following, appended hereto:**

- Part 1 – Request for Proposals
- Part 2 – Fred Ex Project Technical Requirements
- Part 3 – Design-Build Contract
- Part 4 – General Conditions
- Part 5 – Division 1 Amendments to the Standard Specifications

**The Parties to the Agreement are:**

**CONCESSIONAIRE**

95 Express Lanes LLC  
6440 General Green Way  
Alexandria, VA 22312

**DESIGN-BUILDER**

Branch-Flatiron, Joint Venture  
c/o Branch Civil, Inc.  
442 Rutherford Avenue, NE  
Roanoke, Virginia 24016

**Signatures:**

***FOR THE CONCESSIONAIRE:***

***FOR THE DESIGN-BUILDER:***

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Printed Name and Title**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Printed Name and Title**

\_\_\_\_\_  
**Date**

## **CONTRACT DOCUMENTS INDEX**

### **PART 1 – REQUEST FOR PROPOSALS [ADDENDUM 11]**

### **PART 2 – FRED EX PROJECT TECHNICAL REQUIREMENTS**

- ATTACHMENT 1.0 – FRED EX PROJECT SCOPE OF WORK
- ATTACHMENT 1.3 – PROJECT DEVELOPMENT PLANS
- ATTACHMENT 1.5a – STANDARDS AND SPECIFICATIONS
- ATTACHMENT 1.5c – APPROVED DESIGN EXCEPTIONS AND DESIGN WAIVERS
- ATTACHMENT 1.13 – HEALTH, SAFETY & ENVIRONMENT REQUIREMENTS
- ATTACHMENT 3.4a – GEOTECHNICAL DATA REPORT
- ATTACHMENT 3.4b – SETTLEMENT OF STRUCTURES
- ATTACHMENT 3.9a – E-ZPASS PAVEMENT LOGOS
- ATTACHMENT 3.9b – PAVEMENT MARKINGS
- ATTACHMENT 3.16a – TTMS SPECIAL PROVISIONS
- ATTACHMENT 3.16b – NOTICE OF IMPACTS TO EXISTING TMS ASSETS

### **PART 3 – FRED EX DESIGN-BUILD CONTRACT**

- EXHIBIT 3.4.2 – APPROVED ALTERNATIVE TECHNICAL CONCEPTS
- EXHIBIT 5.1 – EARLY WORKS SCOPE OF WORK
- EXHIBIT 5.2.1 – REQUIREMENTS FOR SERVICE COMMENCEMENT
- EXHIBIT 5.2.2 – REQUIREMENTS FOR FINAL COMPLETION
- EXHIBIT 5.2.3 – REQUIREMENTS FOR ROUTE 17 GENERAL PURPOSE LANE EXIT FINAL COMPLETION
- EXHIBIT 11.3 – FEDERAL REQUIREMENTS

### **PART 4 – GENERAL CONDITIONS**

- EXHIBIT 1.2.1 – FRED EX PROJECT DEFINITIONS
- EXHIBIT 2.1.5 – KEY PERSONNEL
- EXHIBIT 3.7.1 – TTMS INTERFACE PLAN (July 18, 2018)
- EXHIBIT 5.1.1 – INSURANCE REQUIREMENTS
- EXHIBIT 6.2.5(a) – FORM OF DESIGN-BUILDER INTERIM LIEN WAIVER
- EXHIBIT 6.2.5(b) – FORM OF SUBCONTRACTOR INTERIM LIEN WAIVER
- EXHIBIT 6.2.5(c) – FORM OF SUBCONTRACTOR FINAL LIEN WAIVER
- EXHIBIT 6.6.3 – FORM OF DESIGN-BUILDER FINAL LIEN WAIVER
- EXHIBIT 10.8 – COMPREHENSIVE AGREEMENT DISPUTE RESOLUTION PROVISION
- EXHIBIT 12.1.1 – FORM OF FRED EX DIRECT AGREEMENT

**PART 5 – DIVISION 1 AMENDMENTS TO THE STANDARD SPECIFICATIONS**

EXHIBIT 107.15.1 – USE OF DISADVANTAGED BUSINESS ENTERPRISES FOR DESIGN-BUILD PROJECTS

EXHIBIT 107.15.2 – USE OF SMALL, WOMEN-OWNED, AND MINORITY-OWNED BUSINESSES FOR DESIGN-BUILD PROJECT

**PART 1**

**REQUEST FOR PROPOSALS [ADDENDUM 11]**

[ATTACHMENTS INCLUDED IN DESIGN-BUILDER'S  
TECHNICAL AND PRICE PROPOSALS]

# 95 Express Lanes Fredericksburg Extension Design-Build Project Request for Proposals

March 27, 2018

**Execution Version**

Transurban Project No.: P54400

VDOT Project No.: 0095-969-739, C501 (UPC 110527)

FHWA Project No.: 000S(345)



# **PART 1**

## **Design-Build Request for Proposals**

### **95 Express Lanes Fredericksburg Extension Project**

---

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	Fred Ex Project Overview .....	2
1.2	Fred Ex Project Scope.....	2
1.2.1	95 Express Lanes Fredericksburg Extension .....	2
1.2.2	Tolling and Traffic Management Systems (TTMS).....	3
1.3	Project-Wide Work Elements .....	4
1.3.1	Noise Impacts Analysis and Sound Barriers .....	4
1.3.2	Right of Way.....	4
1.3.3	Utilities .....	5
1.3.4	Permits .....	5
1.3.5	Coordination with Third Parties .....	5
1.3.6	Adjacent VDOT Project Coordination .....	5
1.3.7	Transportation Management Plan .....	5
1.3.8	Early Works .....	6
1.4	Environmental and FHWA Approvals.....	6
1.5	Procurement Overview .....	7
<b>2.0</b>	<b>BACKGROUND INFORMATION</b> .....	<b>7</b>
2.1	Design-Build Contract Overview .....	7
2.2	Fred Ex Project Completion.....	8
2.3	Procurement Schedule .....	8
2.4	Concessionaire’s Point of Contact .....	10
2.5	RFP Documents .....	10
2.6	Deviations from the RFP Documents .....	13
2.7	Obligation to Meet All of the Requirements of the RFP Documents.....	13
2.8	RFP Supplemental Information.....	13
<b>3.0</b>	<b>GENERAL PROCEDURES AND REQUIREMENTS</b> .....	<b>16</b>
3.1	Relationship of RFQ and RFP.....	16
3.2	Offeror’s Pre-Submittal Responsibilities and Representations .....	16
3.3	Pre-Proposal and Proprietary Meetings .....	17
3.4	Alternative Technical Concepts .....	18
3.5	Acknowledgement of Receipt of RFP, Revisions, and/or Addenda .....	21
<b>4.0</b>	<b>CONTENTS OF PROPOSALS</b> .....	<b>22</b>
4.1	General Requirements .....	22
4.2	Technical Proposal - Letter of Submittal .....	23
4.3	Technical Proposal - Offeror’s Qualifications .....	24
4.4	Technical Proposal – Fred Ex Project Approach.....	25
4.4.1	Design-Build Project Management - .....	25
4.4.2	Health and Safety Management .....	26
4.4.3	Quality Assurance/ Quality Control (QA/QC).....	26
4.4.4	Project Labor and Workforce .....	27
4.5	Technical Proposal - Design of the Fred Ex Project.....	27
4.5.1	Design Integration.....	27
4.5.2	Conceptual Roadway and Structural Plans .....	28
4.5.3	Conceptual Drainage and SWM Plans .....	28
4.5.4	Conceptual Signing and TTMS Plans .....	28



## Execution Version

4.6	Technical Proposal - Construction of the Fred Ex Project.....	29
4.6.1	Construction Approach and Sequence.....	29
4.6.2	TTMS Contractor Coordination and Interface .....	29
4.6.3	Adjacent VDOT Project Coordination and Interface .....	30
4.6.4	Transportation Management Plan .....	30
4.7	Technical Proposal - Initial Baseline Schedule .....	30
4.7.1	Initial Baseline Schedule .....	30
4.7.2	Initial Baseline Schedule Narrative.....	30
4.8	Price Proposal.....	31
5.0	EVALUATION PROCESS FOR PROPOSALS .....	32
5.1	Technical Proposal Evaluation Factors.....	33
5.2	Price Proposal Evaluation Factors.....	33
5.3	Combining Technical and Price Proposal Scores.....	34
6.0	PROPOSAL SUBMITTAL REQUIREMENTS .....	34
6.1	Due Date, Time and Location.....	34
6.2	Format.....	34
7.0	QUESTIONS AND CLARIFICATIONS.....	36
8.0	AWARD OF CONTRACT, PROPOSAL VALIDITY AND CONTRACT EXECUTION.....	37
8.1	Negotiations and Award of Contract.....	37
8.2	Proposal Validity .....	38
8.3	Contract Execution and Notice to Proceed .....	38
9.0	RIGHTS AND OBLIGATIONS OF CONCESSIONAIRE .....	39
9.1	Reservation of Rights .....	39
9.2	No Assumption of Liability.....	41
9.3	Proposal Payment.....	41
10.0	PROTESTS.....	42
11.0	MISCELLANEOUS.....	42
11.1	Confidentiality of Disclosure of Offeror Submittals .....	42
11.2	Conflict of Interest.....	43
11.3	Requirement to Keep Team Intact .....	45
11.4	DBE and SWaM Firms .....	45
11.5	Trainee and Apprenticeship Participation.....	47
11.6	Escrow Proposal Documents .....	47
11.7	Administrative Requirements .....	51
11.8	Compliance with the Law in Virginia.....	52
11.9	Attachments .....	53

## PART 1 REQUEST FOR PROPOSALS

### 1.0 INTRODUCTION

Transurban (USA) Inc., on behalf of 95 Express Lanes LLC (“**Concessionaire**”), is issuing this Request for Proposals (“**RFP**”) to solicit Design-Build proposals (“**Proposals**”) for the 95 Express Lanes Fredericksburg Extension Project (“**Fred Ex Project**” or “**Project**”) to those entities which submitted Statements of Qualifications (SOQs) pursuant to the Concessionaire’s January 17, 2018 Request for Qualifications (RFQ) and were invited to submit proposals in response to this RFP (“**Offeror**”). The purpose of this RFP is to determine which Offeror (the “**Successful Offeror**”) will be awarded the design-build contract (“**Fred Ex Design-Build Contract**”) for the Fred Ex Project.

The Fred Ex Project will be delivered in coordination with the Virginia Department of Transportation (“**VDOT**”) under an amendment to the existing Amended and Comprehensive Agreement for the I-95/395 HOV/HOT Lanes dated June 8, 2017 between the Concessionaire and VDOT (“**Comprehensive Agreement**”).

The Successful Offeror is expected to support the key objectives established for the Fred Ex Project, which include:

**Safety** – The Concessionaire has a strong corporate commitment to exemplary safety performance and expects the Design-Builder to provide best in class industry safety practices to provide a safe working environment for workers and ensure the safety of road users.

**Delivery Certainty** – The Concessionaire expects the Design-Builder to deliver the Fred Ex Project on time and within the Contract Price.

**Innovation & Sustainability** – The Concessionaire expects the Design-Builder to promote innovation and enhance sustainability in designing and constructing the Fred Ex Project.

**Coordination and Collaboration** – The Concessionaire expects the Design-Builder to share its commitment to a collaborative problem-solving approach and to proactively engage with the Concessionaire and other stakeholders to ensure successful outcomes. The Design-Builder is also expected to cooperate and coordinate with other contractors on the Fred Ex Project and adjacent VDOT Projects underway at the same time, as well as any work on adjacent roadways, including maintenance contractors and service providers.

**Maintenance of Traffic** – The Concessionaire will require that the Design-Builder plan and execute its construction staging to minimize disruptions to general purpose and Express Lanes traffic, and ensure that the staging is coordinated and fully integrated with other adjacent works.

**Execution Version**

---

**Communications and Stakeholder Management** – The Concessionaire is committed to a comprehensive and robust communications and outreach program for the Fred Ex Project and the Design-Builder will be an active partner in the development and implementation of this program.

## **1.1 Fred Ex Project Overview**

The Project is a 10-mile extension of the 95 Express Lanes in Stafford County, Virginia which will extend along Interstate 95 (I-95) from the current southern terminus of the 95 Express Lanes near Route 610 (Exit 143 - Garrisonville Road) in the north, to the vicinity of Route 17 (Exit 133 - Warrenton Road) in the south. I-95 currently operates with three general-purpose lanes in each direction along the Project corridor with a wide center median.

The primary objective of the Project is to extend the High Occupancy Toll (HOT) lanes (Express Lanes) on I-95 further south to provide additional capacity in the corridor, which will be available at no charge to HOV 3+ vehicles, and open to other permitted vehicles for a user fee (toll). The future Fredericksburg Extension Express Lanes will be subject to the same operating rules and regulations as the existing 95 Express Lanes, and when complete will operate together with the future 395 Express Lanes as a single, fully-integrated Express Lanes facility between the Potomac and Rappahannock Rivers.

The Concessionaire will be responsible for the design, construction and ongoing operations and maintenance of the Project in accordance with the terms of a pending amendment to the existing Comprehensive Agreement with VDOT.

## **1.2 Fred Ex Project Scope**

### **1.2.1 95 Express Lanes Fredericksburg Extension**

The scope of the Fred Ex Project includes the design and construction (or installation) of the following:

- Ten miles of new two-lane reversible HOT lanes (with full shoulders) from the existing southern terminus at Route 610 to Route 17 North (Exit 143 to Exit 133), and approximately 1.5 miles of an additional reversible HOT Lane within the existing 95 Express Lanes south of Garrisonville Road (Route 610).
- New HOT Lanes access points, including flyover ramps at the Route 17 terminus and Quantico area and a direct, reversible ramp connection at (Old) Courthouse Road.
- New Express Lanes bridge structure at Potomac Creek, four flyover ramps and replacement of two existing bridges over I-95 at American Legion Road and Truslow Road.

**Execution Version**

---

- Interface and direct connection with VDOT’s Southbound Rappahannock River Crossing Project (“**Southbound RRC Project**”), including a new general-purpose lane exit ramp at Route 17.
- Electronic toll collection system (three new toll locations) including: toll gantries spanning the two reversible travel lanes and two shoulders at each location, tolling equipment, supporting infrastructure (e.g., fiber optic communications network, power, controllers, cabinets, etc.) and associated computer systems and software updates.
- Comprehensive Traffic Management System (TMS), including the following Intelligent Transportation Systems (ITS) components: dynamic message signs, microwave vehicle detectors, closed circuit television cameras, automated incident detectors, and supporting infrastructure (e.g., fiber optic communications network, power, controllers, cabinets, etc.) and associated computer systems and software updates.
- Signage and ITS enhancements on local approach roadways to I-95; and
- Where required, new or expanded noise barrier walls along the Project corridor (and connecting roadways, where applicable).

A full description of the scope of work and requirements for the Fred Ex Project is provided in Part 2 (Fred Ex Project Technical Requirements). The Fred Ex Project Technical Requirements may be revised or modified during the RFP process.

### **1.2.2 Tolling and Traffic Management Systems (TTMS)**

Active and extensive coordination will be required with the Concessionaire, the Concessionaire’s affiliates and contractors, and VDOT, in order to fully integrate the Fred Ex Project’s TTMS equipment and software into the existing 95 Express Lanes systems. The Design-Builder and Transurban (USA), Inc. (as the “**TTMS Contractor**”) will operate under a TTMS Interface Plan that will govern the scope, roles and responsibilities of each party as they pertain to the Fred Ex Project.

Generally, under the TTMS Interface Plan, the Design-Builder will be responsible for the design and construction of the electronic toll collection (“**ETC**”) gantries and the procurement, installation and commissioning of all ITS roadside equipment, and necessary supporting infrastructure. The TTMS Contractor will be responsible for Systems Integration, Back Office Systems, TMS, and the procurement, installation and commissioning of the ETC equipment.

During the Fred Ex Project’s design phase, the TTMS Contractor shall supply technical information and input to the Design-Builder to progress the Fred Ex Project in accordance with the Design-Builder’s Baseline Schedule. The Design-Builder shall then progress the construction work to a point where it will turn over the initial toll point site to the TTMS Contractor no later

**Execution Version**

---

than 180 days prior to the scheduled Service Commencement Date. The Design-Builder will then turn over the remaining two toll point sites on a monthly basis, with the understanding that all of the gantries will be turned over no later than 120 days prior to the scheduled Service Commencement Date. This turnover will be in accordance with the detailed scope of the Toll Point Turnover Checklist in the TTMS Interface Plan. The TTMS Contractor will progress their work from the first toll gantry segment turnover to a point where its work will be ready for Service Commencement in conjunction with the remaining civil construction items the Design-Builder will be progressing simultaneously during this period.

Additional information on the respective roles, responsibilities, and schedule requirements for TTMS elements is provided in Section 3.7 of Part 4 (General Conditions), and Exhibit 3.7.1 (TTMS Interface Plan) of Part 4 (General Conditions) of the Fred Ex Contract Documents.

**1.3 Project-Wide Work Elements**

The following project-wide work elements are applicable to the Fred Ex Project.

**1.3.1 Noise Impacts Analysis and Sound Barriers**

The Design-Builder shall provide noise mitigation in compliance with the Virginia State Noise Abatement Policy and the Highway Traffic Noise Impact Analysis Guidance Manual. The final barrier location(s) and dimension(s) will be determined by the Design-Builder in approved locations based on the final design noise analysis. A final Noise Abatement Design Report (NADR) that covers all barrier locations shall be furnished by the Design-Builder as detailed in Part 2 (Fred Ex Project Technical Requirements).

**1.3.2 Right of Way**

The Design-Builder shall be responsible for all right-of-way acquisitions, including dedications and easements (permanent and/or temporary) necessary for the construction and operation of the Fred Ex Project. Right-of-way work includes all services necessary to acquire the right-of-way. The Offeror's right-of-way team member shall be a VDOT prequalified right-of-way contracting consultant, and must include a VDOT pre-qualified Fee Appraiser and a VDOT pre-qualified Review Appraiser. All right of way acquisitions and relocations shall be performed in accordance with VDOT Right of Way Manual and all applicable state and federal laws and regulations.

It is currently anticipated that some of work will be outside the existing VDOT rights-of-way along I-95. However, should the Fred Ex Project Technical Requirements or the Design-Builder's final design and construction approach require additional right-of-way and/or easement acquisitions (including for temporary staging and laydown areas), any such acquisitions shall be the responsibility of the Design-Builder, including any necessary public hearings. The Design-Builder shall be responsible for right-of-way acquisition costs in accordance with the terms of the Design-Build Contract.

### **1.3.3 Utilities**

The Design-Builder shall be responsible for all Utility work necessary for the construction and operation of the Fred Ex Project, including the identification and avoidance or adjustment (if necessary) of conflicting utilities. Utility work includes all items necessary to provide new services, perform relocation(s) or adjustments and associated coordination with utility owners. Utility work includes all items necessary to perform the relocations, adjustments and coordination of utilities. The Design-Builder shall be responsible for all costs associated with Utility work.

### **1.3.4 Permits**

The Design-Builder shall be responsible for acquiring and maintaining in its name all environmental, water quality, and other permits necessary for the construction of the Fred Ex Project. In instances where VDOT or Concessionaire must be the permittee, the Design-Builder shall be responsible for preparing all necessary materials to support the issuance of a permit and ensuring compliance with the permit terms during the construction period.

### **1.3.5 Coordination with Third Parties**

The Design-Builder shall be responsible for coordination with the affected public and private entities (third parties) and local jurisdictions necessary for the design and construction of the Fred Ex Project, including but not limited to: VDOT, Stafford County, Federal Highway Administration, Marine Corps Base Quantico, permitting agencies (and authorities), utility owners, and private property or business owners.

Because of the requirements of the Comprehensive Agreement between the Concessionaire and VDOT, the Concessionaire's review, concurrence, approvals, inspections, variations, and acceptance are subject to VDOT and, where applicable, third party review, concurrence, approvals, inspections, variations, and acceptance.

### **1.3.6 Adjacent VDOT Project Coordination**

The timing and scope of the Fred Ex Project will overlap with other VDOT projects, including the Courthouse Road Interchange Replacement Project and the southbound Rappahannock River Crossing (RRC) Project. The Design-Builder shall coordinate and interface with the respective project teams, including VDOT and their associated consultants and contractors throughout the duration of the Fred Ex Project to ensure that the respective projects are properly coordinated and scheduled. Cooperation between all parties is essential in the areas where the two projects will be under construction in the immediate vicinity of each other at the same time.

### **1.3.7 Transportation Management Plan**

The Design-Builder shall be responsible for the preparation of the Transportation Management Plan (TMP) in accordance with Concessionaire and VDOT guidance and standards for all proposed work associated with the Fred Ex Project. The TMP shall document how traffic shall be managed during the construction of the Fred Ex Project as detailed in Part 2 (Fred Ex Project Technical Requirements). The Design-Builder shall coordinate all work in accordance with the TMP.

**Execution Version**

---

**1.3.8 Early Works**

The Design-Builder shall develop and submit with the Technical Proposal a proposed scope of work for Early Works as a draft Exhibit 5.1.1 of Part 3 (Fred Ex Design-Build Contract) that will be discussed at the Final Proprietary Meeting noted in Section 2.3 of Part 1 (RFP) and finalized in accordance with Attachment N (Fred Ex Design-Build Contract Execution Requirements), and the work will commence upon issuance of a Limited Notice to Proceed (“LNTP”).

The purpose of the Early Works program is to complete those activities which are necessary to initiate a range of construction operations in the field and maximize the amount of construction work that may be performed immediately upon issuance of Construction Notice to Proceed (“NTP”).

The Design-Builder’s Early Works scope shall include the following: (i) preparation and approval of the Baseline Schedule, (ii) preparation and approval of various Project Development Plans and the Submittal Register needed to obtain both the Design Work and Construction NTPs, (iii) initiation of the Fred Scope Validation Work; (iv) any design work, permitting, preparation of right of way, project management activities and other work performed by the Design-Builder necessary to complete the Fred Ex Scope Validation Work; (v) the commencement and completion of the final noise studies and reports; (vi) any investigations and surveys, design work, permitting, preparation of right of way, project management activities and other work performed by the Design-Builder in the approved Early Works Scope of Work necessary to meet the conditions precedent for the Design Work and Construction NTPs as detailed in Section 5.1.2 of Part 3 (Fred Ex Design-Build Contract)

Issuance of both the Design Work NTP and Construction NTP are contingent on Financial Close under the terms of the Comprehensive Agreement Amendment with VDOT and requires a sequential financial approval process that inherently takes several months to complete following Design-Build Contract execution and issuance of the LNTP.

**1.4 Environmental and FHWA Approvals**

To comply with the requirements of the National Environmental Policy Act (NEPA), VDOT completed a Revised Environmental Assessment (EA) for the Project in August 2017. The EA was issued for public review in September 2017 and a combined Location and Design Public Hearing was held on September 25, 2017. A NEPA Finding of No Significant Impact for the Project was issued by the Federal Highway Administration (FHWA) on March 19, 2018. The EA document and associated technical reports are available for shortlisted Offerors to review at: [http://www.virginiadot.org/projects/fredericksburg/i-95\\_express\\_lanes\\_fredericksburg\\_extension.asp](http://www.virginiadot.org/projects/fredericksburg/i-95_express_lanes_fredericksburg_extension.asp). The Design-Builder will be required to meet all environmental commitments included in the NEPA documents.

An Interchange Justification Report (IJR) is currently being developed for the Project by VDOT. The February 2018 IJR was approved by FHWA on April 20, 2018. The IJR is available for review and downloading at: [http://www.virginiadot.org/projects/fredericksburg/i-95\\_express\\_lanes\\_fredericksburg\\_extension.asp](http://www.virginiadot.org/projects/fredericksburg/i-95_express_lanes_fredericksburg_extension.asp). The Design-Builder will be required to meet all

**Execution Version**

---

commitments included in the approved IJR including, but not limited to the geometric design criteria and operational improvements.

The Concessionaire is bound by the applicable provisions of the FHWA’s Design-Build Contracting regulations (23 CFR 636) with regard to the NEPA process and commencement of design-build activities.

**1.5 Procurement Overview**

The Concessionaire will use a two-phase selection process on the Fred Ex Project. The first phase of the selection process is complete with the selection of the shortlisted Offerors who responded to the RFQ and have been invited to submit Proposals pursuant to this RFP.

In accordance with the terms of this RFP, Offerors will submit Proposals meeting the requirements of Section 4.0 (Contents of Proposals). Upon completion of the evaluation and scoring of the Proposals, and subject to the process set forth in Section 5.0 (Evaluation Process for Proposals), the Successful Offeror will be awarded the Fred Ex Design-Build Contract by the Concessionaire. The award of a contract will be made to the Successful Offeror in accordance with the process outlined in Section 8.0 (Award of Contract, Proposal Validity, and Contract Execution). Offerors are also on notice that the issuance of a full NTP for the Fred Ex Project is subject to the Concessionaire’s successfully reaching Financial Close.

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

The extent to which an Offeror’s Technical Proposal meets or exceeds evaluation criteria will be evaluated by the Concessionaire and reflected in the scoring of the Offeror’s Technical Proposal. An Offeror’s Technical Proposal which is deemed non-responsive to this RFP will be returned to the Offeror and the Concessionaire shall not consider their Price Proposal.

**2.0 BACKGROUND INFORMATION****2.1 Design-Build Contract Overview**

The Design-Build Contract for the Project will be a fixed price, lump sum contract between the Concessionaire and the Design-Builder. The Design-Builder is required to provide the personnel, resources and processes necessary to deliver the Project, including coordination with and integration of subcontractors.

The Fred Ex Design-Build Contract will be based on the standard VDOT Design-Build Contract, with modifications made to reflect, among other things, the fact that the Concessionaire, and not VDOT, is the counter-party to the Design-Builder and incorporate provisions required by the Concessionaire’s Comprehensive Agreement with VDOT and the project financing plan. **The**



**Contract will require a minimum of twenty-five percent (25%) of the Contract value be self-performed by the Offeror's Lead Contractor.** If an Offeror's Lead Contractor is a Joint Venture, this requirement may be met either by the Joint Venture entity or the Joint Venture Contractor member firms.

The estimated Design-Build Contract value for the Fred Ex Project is **\$365,000,000**.

## **2.2 Fred Ex Project Completion**

All works included in the Fred Ex Design-Build Contract shall be completed no later than **March 30, 2023** based on the Anticipated NTP date as stipulated in Section 2.3 of the RFP. The **Service Commencement Date** shall be no later than **October 1, 2022** based on the Anticipated NTP date as stipulated in Section 2.3 of the RFP. The Concessionaire has established several milestones for Fred Ex Design-Build Contract commencement and completion dates for the Fred Ex Project. These dates are summarized below and specified in Article 5 of Part 3 (Fred Ex Design-Build Contract), and Offerors shall base their Proposals on such milestones.

**2.2.1 The Limited Notice to Proceed (LNTP) Date** shall include the commencement of Early Works as described in RFP Section 1.3.8 and as detailed by the Offeror in the proposed draft Exhibit 5.1.1 (Early Works Scope of Work) of Part 3 (Fred Ex Design-Build Contract) submitted with the Technical Proposal per RFP Section 4.2.10. The LNTP will be issued immediately following Commercial Close for the Fred Ex Project with VDOT.

**2.2.2 The Design Work and Construction NTPs** will be issued for the Fred Ex Project as soon as Financial Close has been accomplished and shall include commencement of the Work, provided that the respective necessary pre-conditions for the Design Work NTP and Construction NTP have been met by the Design-Builder.

**2.2.3 The Service Commencement Date** shall be a function of both the actual NTP Date and the required **Service Commencement Duration** as specified in Section 5.2.1 of Part 3 (Fred Ex Design-Build Contract).

**2.2.4 The Final Completion Date** shall be no later than one-hundred eighty (180) days following the Service Commencement Date specified in the Section 5.2.2 of Part 3 (Fred Ex Design-Build Contract).

**2.2.5 The Interim Milestone** for Final Completion of the Route 17 General Purpose Lane Exit Ramp Work (which includes the Truslow Road Bridge replacement and is required for the Southbound RRC Project opening) shall be no later than July 15, 2021, as further specified in Section 5.2.3 of Part 3 (Fred Ex Design-Build Contract).

## **2.3 Procurement Schedule**

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

## Execution Version

Action	Date & Time
Issue RFP	March 27, 2018
Pre-Proposal and Utility Information Meeting with Offerors	April 3, 2018 at 9:00 am 7900 Westpark Drive, Tysons, VA
First Proprietary Meeting with Offerors	Week of April 16, 2018
First Alternative Technical Concepts (ATC) Review Meeting	Week of April 23, 2018
Second Proprietary Meeting with Offerors	Week of May 14, 2018
Second ATC Review Meeting	Week of June 18, 2018
Deadline for Submittal of Final ATCs	July 20, 2018 at 3:00 pm local time
Completion of Concessionaire Responses to Final ATCs	August 9, 2018
Deadline for Offeror Questions - Technical Proposals	August 16, 2018 at 3:00 pm local time
Completion of Concessionaire Responses to Offeror Questions on Technical Proposals	August 30, 2018
Technical Proposals Due Date	September 11, 2018 at 3:00 pm local time
Final Proprietary Meeting with Offerors (Offerors Presentation of Early Works Scope and Fred Ex Project Schedule)	Week of September 17, 2018
Deadline for Offeror Questions – Price Proposals	September 25, 2018 at 3:00pm local time
Completion of Concessionaire Responses to Offeror Questions on Price Proposals	October 5, 2018
Price Proposals Due Date	October 16, 2018 at 3:00 pm local time
Anticipated Notice of Intent to Award Fred Ex Design-Build Contract	November 6, 2018
Anticipated Commercial Close between Concessionaire and VDOT	January 15, 2019
Anticipated Fred Ex Design-Build Contract Execution	January 15, 2019
Anticipated Limited NTP	January 15, 2019
Anticipated Financial Close between Concessionaire and VDOT	April 30, 2019

**Execution Version**

---

Action	Date & Time
Anticipated Design and Construction NTPs (“Full NTP”)	April 30, 2019

**2.4 Concessionaire’s Point of Contact**

The Concessionaire’s sole Point of Contact for matters related to the RFP shall be Mr. Sean Mallipudi. Concessionaire’s Point of Contact is the only individual authorized to discuss this RFP with any interested parties, including Offerors. All written communications with the Concessionaire about the Fred Ex Project or this RFP shall be conducted via the Concessionaire’s web-based procurement tool (known as “**Ansarada**”) as required by applicable provisions of this RFP.

Name: Mr. Sean Mallipudi  
Address: 7900 Westpark Drive, Suite T500  
Tysons, Virginia 22102  
Phone: (571) 620-7945  
E-Mail: smallipudi@transurban.com

All written communications to Concessionaire from Offerors shall specifically reference the correspondence as being associated with “95 Express Lanes Fredericksburg Extension Project RFP (Project No. P54400).”

Offerors are specifically instructed not to contact VDOT personnel or consultants for information about this RFP or the Fred Ex Project. Concessionaire will coordinate with VDOT as required to provide Offerors with responses to any questions submitted in accordance with Section 7.0 (Questions and Clarifications) of this RFP.

Concessionaire disclaims the accuracy of information derived from any source other than Concessionaire’s designated Point of Contact or made available via its web-based electronic procurement tool, and the use of any such information is at the sole risk of the Offeror.

**2.5 RFP Documents**

**2.5.1** The documents included in this RFP (collectively the “RFP Documents”) will be available to Offerors in electronic format only on the Concessionaire’s web-based procurement tool (Ansarada). No hard copies will be provided. 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 [Revision 11]**

ATTACHMENT A.1 – ACKNOWLEDGEMENT OF RECEIPT OF RFP, REVISIONS AND/OR ADDENDA - TECHNICAL PROPOSAL [Revision 1]

ATTACHMENT A.2 – ACKNOWLEDGEMENT OF RECEIPT OF RFP, REVISIONS AND/OR ADDENDA - PRICE PROPOSAL

**Execution Version**

---

ATTACHMENT B.1 – TECHNICAL PROPOSAL CHECKLIST [Revision 1]  
ATTACHMENT B.2 – PRICE PROPOSAL CHECKLIST  
ATTACHMENT C – PRICE PROPOSAL INSTRUCTIONS  
ATTACHMENT D.1 – PRICE PROPOSAL FORM  
ATTACHMENT D.2 – FRED EX PROJECT PRICE PROPOSAL  
ATTACHMENT D.3 – SCHEDULE OF PAY ITEMS  
ATTACHMENT E – OFFEROR’S STATEMENT  
ATTACHMENT F – OFFEROR’S CERTIFICATION  
ATTACHMENT G – PROPOSAL PAYMENT AGREEMENT  
ATTACHMENT H – WAIVER OF PROPOSAL PAYMENT  
ATTACHMENT I – ESCROW PROPOSAL DOCUMENTS CHECKLIST  
ATTACHMENT J – ESCROW AGREEMENT [Revision 1]  
ATTACHMENT K – CERTIFICATION REGARDING DEBARMENT; PRIMARY COVERED  
TRANSACTIONS  
ATTACHMENT L – CERTIFICATION REGARDING DEBARMENT; LOWER TIER COVERED  
TRANSACTIONS  
ATTACHMENT M – PROPOSAL GUARANTY FORM  
ATTACHMENT N – FRED EX DESIGN-BUILD CONTRACT EXECUTION REQUIREMENTS [Revision 2]  
    > EXHIBIT N.1 – FORM OF PERFORMANCE BOND  
    > EXHIBIT N.2 – FORM OF PAYMENT BOND  
  
ATTACHMENT ATC.1 – PRELIMINARY ATC SUBMISSION FORM [Revision 1]  
ATTACHMENT ATC.2 – FINAL ATC SUBMISSION FORM [Revision 1]  
ATTACHMENT ATC.3 – ATC RESPONSE FORM  
ATTACHMENT ATC.4 – LIST OF APPROVED ATCs FORM

**PART 2 – FRED EX PROJECT TECHNICAL REQUIREMENTS [Revision 7]**

ATTACHMENT 1.0 – FRED EX PROJECT SCOPE OF WORK [Revision 5]  
    Appendix A – RFP Conceptual Plans *dated March 15, 2018*:  
        • RFP Conceptual Plan Sheets (11”x17”)  
            ○ Plan Revision Set 1 *dated April 27, 2018*  
            ○ Plan Revision Set 2 *dated August 3, 2018*  
            ○ Plan Revision Set 3 *dated August 30, 2018*  
            ○ Plan Revision Set 4 *dated October 1, 2018*  
        • Roadway and Drainage Roll Plots *dated August 30, 2018 [Revision 3]*  
        • Signing, Pavement Marking and Lighting Roll Plots *dated August 3, 2018 [Revision 2]*  
ATTACHMENT 1.3 – PROJECT DEVELOPMENT PLANS [Revision 2]  
ATTACHMENT 1.5a – STANDARDS AND SPECIFICATIONS [Revision 2]  
ATTACHMENT 1.5c – APPROVED DESIGN EXCEPTIONS AND DESIGN WAIVERS [Revision 1]  
ATTACHMENT 1.13 – HEALTH, SAFETY & ENVIRONMENT REQUIREMENTS [Revision 1]  
ATTACHMENT 3.4a – GEOTECHNICAL DATA REPORT  
ATTACHMENT 3.4b – SETTLEMENT OF STRUCTURES  
ATTACHMENT 3.9a – E-ZPASS PAVEMENT LOGOS  
ATTACHMENT 3.9b – PAVEMENT MARKINGS  
ATTACHMENT 3.16a – TTMS SPECIAL PROVISIONS [Revision 2]  
ATTACHMENT 3.16b – NOTICE OF IMPACTS TO EXISTING TMS ASSETS

**Execution Version**

---

**PART 3 – FRED EX DESIGN-BUILD CONTRACT [Revision 5]**

EXHIBIT 3.4.2 – APPROVED ALTERNATIVE TECHNICAL CONCEPTS

EXHIBIT 5.1.1 – EARLY WORKS SCOPE OF WORK

EXHIBIT 5.2.1 – REQUIREMENTS FOR SERVICE COMMENCEMENT

EXHIBIT 5.2.2 – REQUIREMENTS FOR FINAL COMPLETION

EXHIBIT 5.2.3 – REQUIREMENTS FOR ROUTE 17 GENERAL PURPOSE LANE EXIT FINAL COMPLETION

EXHIBIT 11.3 – FEDERAL REQUIREMENTS [Revision 2]

**PART 4 – GENERAL CONDITIONS [Revision 5]**

EXHIBIT 1.2.1 – FRED EX PROJECT DEFINITIONS [Revision 4]

EXHIBIT 2.1.5 – KEY PERSONNEL

EXHIBIT 3.7.1 – TTMS INTERFACE PLAN [July 18, 2018]

EXHIBIT 5.1.1 – INSURANCE REQUIREMENTS [Revision 2]

EXHIBIT 6.2.5(a) – FORM OF DESIGN-BUILDER INTERIM LIEN WAIVER [Revision 1]

EXHIBIT 6.2.5(b) – FORM OF SUBCONTRACTOR INTERIM LIEN WAIVER [Revision 1]

EXHIBIT 6.2.5(c) – FORM OF SUBCONTRACTOR FINAL LIEN WAIVER [Revision 1]

EXHIBIT 6.6.3 – FORM OF DESIGN-BUILDER FINAL LIEN WAIVER [Revision 1]

EXHIBIT 10.8 – COMPREHENSIVE AGREEMENT DISPUTE RESOLUTION PROVISION

EXHIBIT 12.1.1 – FORM OF FRED EX DIRECT AGREEMENT

**PART 5 – DIVISION 1 AMENDMENTS TO THE STANDARD SPECIFICATIONS [Revision 2]**

EXHIBIT 107.15.1 – USE OF DISADVANTAGED BUSINESS ENTERPRISES FOR DESIGN-BUILD PROJECTS

EXHIBIT 107.15.2 – USE OF SMALL, WOMEN-OWNED, AND MINORITY-OWNED BUSINESSES FOR DESIGN-BUILD PROJECTS

**2.5.2** 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 clarifications will be submitted to Concessionaire in accordance with the procedures and timeframes specified in Section 7.0 (Questions and Clarifications) and Section 2.3 of this RFP. Concessionaire will review all questions and/or requests for clarifications 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.

**2.5.3** Offeror's designated representative shall be notified via the Concessionaire's web-based procurement tool (Ansarada) when any addenda to the RFP Documents are issued. Electronic copies of any updated or additional RFP Documents will be provided to Offerors via the Ansarada project web site. No hard copies will be provided.

## 2.6 Deviations from the RFP Documents

If an Offeror would like to deviate from any requirement of an RFP Document, it shall notify Concessionaire in writing of such proposed deviations prior to the Second Proprietary Meeting described in Section 3.4 of this RFP. Concessionaire has the sole discretion as to the acceptability of any such proposed deviations. If Concessionaire's review of the proposed deviation leads it to believe that the proposed deviation will meet the intent of the Fred Ex Project scope, it may issue an Addendum as appropriate, subject to the provisions of Section 2.7 of this RFP. Proposed deviations from the requirements of the RFP Documents will not be valid unless they are submitted by the Offeror in writing.

## 2.7 Obligation to Meet All of the Requirements of the RFP Documents

If awarded the Fred Ex Design-Build Contract, the Design-Builder will be obligated to meet the requirements of the RFP Documents for the Fred Ex Contract Price and within the Fred Ex Contract Time. Offerors are on notice that Concessionaire's review of Technical Proposals with respect to the RFP, as well as its issuance of any Addendum relative to a proposed deviation under Section 2.6 of this RFP, shall not be construed as relieving the Design-Builder of this obligation. Offerors are on further notice that Concessionaire will review, comment and/or approve the Design-Builder's final design after the award of the Fred Ex Design-Build Contract, in accordance with Part 2 (Fred Ex Project Technical Requirements).

## 2.8 RFP Supplemental Information

A RFP Supplemental Information Package will be provided in electronic format only to each Offeror. The RFP Supplemental Information is provided for information only. The Design-Builder shall verify information as needed. The RFP Supplemental Information includes the following:

### A. Fred Ex Project Information:

- Fred Ex Project TTMS Roll Plots, Revision 3 *dated August 30, 2018*
- Fred Ex Project Utility Coordination Plan Set *dated March 15, 2018*
- Fred Ex Project Preliminary Drainage and Stormwater Management Report *dated March 15, 2018*
- Fred Ex Project Drainage Existing Conditions Assessment Report – Volume I *dated March 15, 2018*
- Fred Ex Project Drainage Existing Conditions Assessment Report – Volume II (Video Pipe Inspection) *dated March 15, 2018*
- Fred Ex Project Right of Way Acquisition Report, Revision 1 *dated April 11, 2018*
- Fred Ex Project Preliminary Design Utility Tracking Matrix *dated March 15, 2018*
- Fred Ex Project Service Panel Report *dated March 15, 2018*
- Truslow Road and American Legion Road Bridge Replacement Detour Reports *dated August 29, 2017*

**Execution Version**

---

- RFP Conceptual Plans - CADD Plan Sets in VDOT CADD Manual Format (.dgn)
- RFP Conceptual Plans - 3D Model in VDOT CADD Manual Format (.dgn)
- Approved Design Waivers for the Fred Ex Project (*Various Dates*)
- VDOT Request for Preliminary Jurisdictional Determination – Inventory of Wetlands Along the I-95 Corridor, US 17 N (Exit 133) to US 1 (Exit 161) *dated October 2017*.
- U.S. Army Corps of Engineers - Preliminary Jurisdictional Determination Letter *dated November 13, 2017*
  
- Additional Reference or Supporting Information:
  - Price Proposal Forms – Excel File
  - Executive Order 13502 - Use of Project Labor Agreements for Federal Construction Projects (dated February 6, 2009)
  - FHWA’s Interim Guidance on the Use of Project Labor Agreements (dated May 7, 2010)
  - VDOT Right-of-Way Monument Obelisk Locations at MM 141.8/9
  - Fred Ex Project Drainage Inspection Video Files
  - VDOT As-Built Plans for Truslow Road, American Legion Road and Potomac Creek Bridges
  - Fred Ex Project gINT file
  - SHPO coordination correspondence letters
  - FEMA Library Data
  - Available Uniform Stream Methodology (USM) forms prepared for Fred Ex project
  - CADD (.dgn) files associated with revised plans and roll plots issued in Addendum 2
  - Additional Fred Ex Project Drainage Inspection Video Files
  - Fred Ex Interchange Justification Report VISSIM and Synchro Data Files
  - CADD (.dgn) file associated with VDOT Right-of-Way Monument Obelisk Locations at MM 141.8/9
  - VDOT As-Built Plans for Enon Road, Centreport Parkway, and Telegraph Road Bridges
  - VDOT Proposal and Plans for Slope Stabilization Work on I-95 SB at MM 146.9
  - Indicative Detail for Embankment Over Existing Soil Nail Wall on I-95 SB at MM 146.9
  - VDOT Plans for Existing VDOT Stormwater Facility at 95 Express Lanes Sta. 248+00 RT
  - Location Information for Private Cemetery on East Side of I-95 North of Truslow Road

**Execution Version**

---

- Traffic Noise Model (TNM) files associated with Fred Ex Project
- CADD (.dgn) files associated with Retaining Wall RW1 through RW12 Plan and Profile drawings in Sheets 59(1) through 70 in RFP Conceptual Plan Set
- Additional VDOT Plans for Centreport Parkway Bridge
- Figure depicting Route 17 General Purpose Lane Exit Ramp Work Scope Elements *dated August 30, 2018*
- CADD (.dgn) files associated with revised plans and roll plots issued in Addendum 5
- 95 Express Lanes – Segment 1 Geotechnical Engineering - Soil Survey and Minor Structures Report *dated October 16, 2012*
- 95 Express Lanes Fredericksburg Extension – Section 7 (Threatened & Endangered Species) Consultation Package *dated August 20, 2018*
- Stafford County Falls Run Interceptor Sewer - Interstate 95 Crossing Plans *dated March 18, 2016*
- Stafford County Falls Run Interceptor Sewer - Interstate 95 Crossing Plans Construction Progress Update *as of August 31, 2018*
- CADD (.dgn) files associated with revised plans and roll plots issued in Addendum 6
- CADD (.dgn) file associated with revised plan issued in Addendum 7

**B. Adjacent Project Information:**

- **Southbound Rappahannock River Crossing Project**
  - RRC Project Conceptual Design Plans *dated November 14, 2017*
  - RRC Project Geotechnical Data Report *dated September 25, 2017*
- **Route 630 (Courthouse Road) Interchange Improvements**
  - Route 630 Interchange Improvements Released for Construction Plans *dated December 5, 2017*
  - Route 630 Interchange Improvements Geotechnical Data Report *dated August 31, 2017*
- **95 Express Lanes Southern Terminus Extension**
  - 95 Express Lanes Southern Terminus Extension Approved for Construction Plans *(Various Dates)*
  - 95 Express Lanes Southern Terminus Extension Geotechnical Data Report *dated December 2016*
  - 95 Express Lanes Southern Terminus Extension Drainage Reports *(Various Dates)*
- Additional Reference or Supporting Information:
  - VDOT-Provided RRC Project Drainage Inspection Video Files



**Execution Version**

---

- VDOT-Provided 95 Express Lanes Southern Terminus Extension Drainage Inspection Video Files
- Route 630 Interchange Utility Relocation Plans for Dominion Power, Verizon, and Summit IG
- 95 Express Lanes Southern Terminus Extension Stormwater Management Report, Drainage Design CADD (dgn) files, and Geotechnical Engineering Roadway Report
- Design-Builder Schedule for RRC Project *dated May 21, 2018*
- Design-Builder Schedule for Route 630 Project *dated May 30, 2018*
- VDOT RRC Project RFP Signing/ITS Roll Plots *dated July/August 2017*

The Concessionaire does not represent or warrant that the information contained in the documents provided in the RFP Supplemental Information Package is suitable for designing the Fred Ex Project. The requirements described in Part 2 (Fred Ex Project Technical Requirements) shall supersede the information contained in the RFP Supplemental Information Package. Any supplemental information which may be provided by the Concessionaire is not deemed a component of the RFP and such documents are solely for the information of the Offeror, which each Offeror may use at their own risk and as they deem appropriate.

### **3.0 GENERAL PROCEDURES AND REQUIREMENTS**

This section of the RFP provides general information, procedures and requirements related to the pre-submittal period to be followed by all Offerors.

#### **3.1 Relationship of RFQ and RFP**

Offerors are advised that the content of the RFP Documents may differ from the content of the RFQ Documents. In the event of any conflict between the RFQ Documents and the RFP Documents, the RFP Documents shall govern.

#### **3.2 Offeror's Pre-Submittal Responsibilities and Representations**

**3.2.1** 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 Fred Ex Project, including but not limited to:

.1 Visiting the Fred Ex Project Site and becoming familiar with and satisfying itself as to the general, local, and Site conditions that may affect the cost, progress, or performance of its work on the Fred Ex Project;

.2 Addressing all potential impacts with affected utility owners and third parties and ensuring all such impacts have been included in the Offeror's Technical and Price Proposals;

**Execution Version**

---

.3 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 Fred Ex Project;

.4 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 Fred Ex Project; and

.5 Notifying Concessionaire in writing, in accordance with the processes set forth in Section 7.0 (Questions and Clarifications) of this RFP, 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 Concessionaire.

### **3.3 Pre-Proposal and Proprietary Meetings**

**3.3.1** Concessionaire will hold a mandatory Pre-Proposal and Utility Information Meeting for all Offerors on the date and time set forth in RFP Section 2.3. At least one representative from each Offeror is required to attend this meeting in order for the Offeror's Proposal to be considered. No more than ten (10) representatives from each Offeror (inclusive of any member of Offeror's team) will be allowed to participate in the Pre-Proposal meeting. The Concessionaire will use this meeting to review the results of the design process to date and give the Offerors a chance to ask questions early in the RFP process in an open forum.

**3.3.2** Concessionaire will invite each Offeror to participate in interactive proprietary meetings with Concessionaire. Three rounds of these meetings are anticipated as set forth in RFP Section 2.3. Each meeting will be private, in that only one Offeror will meet with Concessionaire at a time. Each meeting will last no longer than two (2) hours. Offeror participation in the First and Second Proprietary Meetings is optional; participation in the Final Proprietary Meeting is mandatory. The Final Proprietary Meeting will include a presentation led by the Offeror's proposed Project Manager and other appropriate Key Personnel that covers, at a minimum, the proposed Early Works Scope of Work, the Fred Ex Project Schedule, and approved ATCs included in the Offeror's Technical Proposal. Additional rounds of meetings may be held at the Concessionaire's discretion up until the due date for the Price Proposals. VDOT representatives may also participate in these proprietary meetings.

**3.3.3** The purpose of the proprietary meetings is to give each Offeror, in a confidential setting, an opportunity to ask questions and discuss concerns related to the Fred Ex Project, details of the Fred Ex Project scope, and administrative procedures, and for the Offeror to discuss any proposed deviations to the RFP. The meetings are also intended to enable Concessionaire to interact with Key Personnel and express, among other things, whether the Offeror is pursuing an approach that will not meet the RFP Documents or that is otherwise unacceptable to Concessionaire. At least five (5) business days before each meeting the Offeror shall submit to Concessionaire in writing the names and functions of each of its attendees and the issues and questions to be discussed.

**Execution Version**

---

Sufficient detail on the topics for discussion shall be provided to give Concessionaire opportunity to have appropriate personnel in attendance (i.e. a bulleted list of topics is not considered sufficient detail). No more than ten (10) team members from each Offeror may attend such meetings (twelve (12) for the Final Proprietary Meeting). Separate meetings will be held to review and discuss ATCs as further described in RFP Section 3.4.

**3.3.4** The Offeror shall prepare minutes of its proprietary meetings with Concessionaire and furnish the minutes within three (3) business days of the meeting. Concessionaire reserves the right to comment on and return such meeting minutes to the Offeror to reflect its understanding of these meetings. Statements made by the Concessionaire at these meetings are for the Offerors' information only and any recording of such in the meeting minutes shall not replace or supersede the written requirements of the RFP Documents, unless such documents are changed by a formal Addendum issued by the Concessionaire. Because of the proprietary nature of these meetings, neither the agenda nor the minutes will be subject to disclosure until after the award of the Fred Ex Design-Build Contract.

**3.3.5** While the discussions in these proprietary meetings are intended to be confidential, nothing shall preclude Concessionaire from exercising any rights that it may have under this RFP, including the right to issue a clarification or revision of the RFP, or an Addendum, as a result of what is discussed in such meetings.

**3.3.6** Nothing herein shall be construed to preclude Concessionaire from speaking with any Offeror at any time prior to the opening of the Price Proposals, and Concessionaire expressly reserves all such rights to do so.

### **3.4 Alternative Technical Concepts**

**3.4.1** Alternative Technical Concepts (ATC) will be permitted and considered during the RFP phase of the Project using a process that is generally consistent with VDOT's ATC process. Some adjustments may be made to account for the Concessionaire's long-term operations and maintenance obligations and/or comply with provisions of the Comprehensive Agreement with VDOT.

**3.4.2** An ATC is a pre-proposal submission by an Offeror to modify a requirement contained in an RFP Document that is related to an Offeror's unique design concept (e.g. significant changes to the alignment, profile, and interchange configuration). The purpose of the ATC process is to allow for technical innovation, creativity, and flexibility to achieve the project's goals and objectives which are equal to or better than the RFP requirements. A proposed alternative concept does not meet the definition of an ATC if the concept is already contemplated by the requirements of the RFP. The Concessionaire shall not consider proposed ATCs that: (a) reduce scope, long term performance, quality or reliability; (b) modify the Design-Build Contract risk allocation (such as responsibility for utility relocation, responsibility for ROW acquisition, QA/QC program requirements and minimum pavement section requirements); and/or (c) impose an additional burden on the Concessionaire or VDOT for maintenance (i.e. purchase of specialized equipment). Additionally, proposed changes to VDOT's design standards and practices (such as those solely

**Execution Version**

---

proposed for the purpose of relaxing a more stringent standard) will not be considered unless the Concessionaire and VDOT determine that such proposed changes are directly associated with, and required to implement, an ATC for a unique design concept. The Concessionaire reserves the right to reject or approve a proposed ATC prior to submittal of Proposals.

**3.4.3 Limitations to the ATC process are as follows:**

**.1** The Concessionaire, in consultation with VDOT, will determine whether to make modifications to the RFP Documents as a result of any approved ATC. In most cases, the RFP Documents will not be modified when approved ATC(s) include acceptable location-specific design exceptions, acceptable design waivers, and acceptable deviations from VDOT Standards. However, where an ATC approval contemplates a significant scope change or widespread inclusions of design exception(s) and/or waiver(s), the Concessionaire may amend the RFP. Offerors shall base their Proposals on the terms and conditions of the RFP Documents included in the latest issued Addendum. Prior to approving any ATCs which would result in the issuance of an Addendum, the Offeror submitting the ATC will be given the option to withdraw the proposed ATC.

**.2** Offerors are required to submit each alternative concept as a separate ATC. A concept may include multiple interrelated parts, but an ATC with multiple unrelated parts shall be rejected.

**.3** No more than 10 separate ATCs may be submitted for formal approval in accordance with RFP Section 3.4.5 from each Offeror.

**.4** In accordance with Part 4 (General Conditions), Section 2.1.10, if the Contract Documents incorporate any ATCs and Design-Builder, for whatever reason: (a) does not comply with one or more Concessionaire conditions of pre-approval for the ATC; (b) does not obtain required third-party approval for the ATC; or (c) fails to implement the ATC, then Design-Builder shall: (1) provide written notice thereof to the Concessionaire; and (2) comply with the requirements in the Contract Documents that would have applied in the absence of such ATC. Such compliance shall be without any increase in the Contract Price or extension to the Contract Time(s). For the avoidance of doubt, Design-Builder shall not be entitled to any increase in the Contract Price or extension of the Contract Time(s) as a result of any delay, inability or cost associated with the acquisition of any property that may be required to implement any ATC.

**3.4.4 ATC Meetings**

**.1** In addition to the Proprietary Meetings described in RFP Section 3.3, each Offeror may elect to participate in separate proprietary meetings which shall focus solely on the review and discussion of ATCs. The purpose of the ATC-specific meetings is to give each Offeror, in a confidential setting, an opportunity to present and discuss conceptual ATCs. The meetings are also intended to enable the Concessionaire and VDOT (where applicable) to express, among other things, whether the Offeror is pursuing an approach that is unacceptable to the Concessionaire and, when possible, to establish whether a proposed concept meets the definition of an ATC thereby requiring a formal ATC submittal. Each ATC meeting is expected to last no longer than three (3)

**Execution Version**

---

hours per Offeror. No more than ten (10) team members from each Offeror may attend such meetings. VDOT representatives will also participate in these ATC meetings.

.2 ATC Meeting #1 is for the initial presentation and review of ATCs an Offeror is considering. A complete and comprehensive list of potential ATCs is to be provided at this meeting and any preliminary design concepts or alternative approaches under development shall be reviewed and discussed. At least seven (7) days prior to the scheduled date for each ATC Meeting #1, Offerors shall submit to the Concessionaire a list and summary description for each proposed ATC the Offerors will present and discuss during the meeting.

.3 At ATC Meeting #2, the Offeror will present and discuss the proposed ATCs the Offeror plans to submit as formal ATCs. At least seven (7) days prior to the scheduled date for each ATC Meeting #2, Offerors shall submit to the Concessionaire a Preliminary ATC Submission Form (Attachment ATC.1) for each proposed ATC the Offerors will present and discuss during the meeting.

.4 The Offeror shall prepare minutes of its proprietary meetings with Concessionaire and furnish the minutes within three (3) business days of the meeting. Concessionaire reserves the right to comment on and return such meeting minutes to the Offeror to reflect its understanding of these meetings. Statements made by the Concessionaire at these meetings are for the Offerors information only and any recording of such in the meeting minutes shall not replace or supersede the written requirements of the RFP Documents, unless such documents are changed by a formal Addendum issued by the Concessionaire. Because of the proprietary nature of these meetings, neither the agenda nor the minutes will be subject to disclosure until after the award of the Fred Ex Design-Build Contract.

.5 While the discussions in these ATC meetings are intended to be confidential, nothing shall preclude the Concessionaire from exercising any rights that it may have under this RFP, including the right to issue a clarification or revision of the RFP, or an Addendum, as a result of what is discussed in such meetings.

### **3.4.5 ATC Submittal and Approval Process**

The following process shall be used for the formal submission of ATCs for approval.

.1 If an Offeror desires to submit a formal ATC proposal, it shall do so by completing and submitting the Final ATC Submission Form (Attachment ATC.2) for each proposed ATC. **Offerors will only be permitted to submit ATC proposals for those ATCs presented at ATC Meeting #2.** Any ATCs submitted as formal ATC proposals that were not presented at ATC Meeting #2 will be rejected without consideration.

.2 The formal ATC submittal, including all submittal requirements listed on the Final ATC Submission Form, must be received by the due date and time set forth in RFP Section 2.3. Each formal ATC submission (including all required supporting documentation) must be made electronically via the Concessionaire's web-based procurement portal (Ansarada). Offerors shall

**Execution Version**

---

also deliver five (5) additional hard copies of each formal ATC submittal (including all required supporting documentation).

All hard copy 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:

Transurban  
Attention: Mr. Sean Mallipudi  
6440 General Green Way  
Alexandria, Virginia 22312

Neither fax nor email submissions will be accepted. Offerors are responsible for achieving delivery by the stated deadline, and late submissions will be rejected without opening, consideration, or evaluation, and will be returned unopened to the sender.

**.3** If at any time after formal ATC submission it is determined that clarifications or additional information is needed, the Concessionaire will request the information from the Offeror prior to completing the ATC review. During the ATC review period, the Concessionaire, in consultation with VDOT, may make a determination and notify the Offeror if an RFP Addendum will be required related to an Offeror's proposed ATC. If so, the Offeror may choose to withdraw the ATC from further consideration. In that case, the Offeror shall notify the Concessionaire in writing within three (3) days. No additional ATCs may be submitted in place of a withdrawn formal ATC submission.

**.4** At the conclusion of the ATC review process, the Concessionaire will issue an ATC Response Form (Attachment ATC.3) to the Offeror for each formal ATC submitted by the due date set forth in RFP Section 2.3. All approved ATCs, whether fully or conditionally, will be indicated as such by the Concessionaire on the ATC Response Form.

**.5** The Offeror shall identify in the Technical Proposal any approved ATC(s) incorporated in its Proposal and confirm that it is agreeing to all conditions that may have accompanied the ATC approval(s). The Offeror shall include the completed List of Approved ATCs Form (Attachment ATC.4) with their Technical Proposal identifying each approved ATC incorporated into its Proposal.

### **3.5 Acknowledgement of Receipt of RFP, Revisions, and/or Addenda**

Offeror shall provide to Concessionaire the Acknowledgement of Receipt of RFP (Revisions and/or Addenda - Technical Proposal), set forth as Attachment A.1, signed by the Offeror's designated representative or Principal Officer, with submission of the Technical Proposal, which will serve as acknowledgement that the Offeror has received this RFP and any Addenda issued by the Concessionaire. If additional Revisions and/or Addenda are issued past the date of the submission of the Technical Proposal, Offerors shall also submit a completed Attachment A.2 (Acknowledgement of Receipt of RFP Revisions or Addenda - Price Proposal) to acknowledge receipt of this additional information.

## 4.0 CONTENTS OF PROPOSALS

This section of the RFP describes specific information that must be included in the Offeror's Proposal. The Concessionaire will use the information provided in each Proposal to determine which Offeror provides the best value for the Fred Ex Project and the Concessionaire based upon the evaluation criteria established in this RFP.

### 4.1 General Requirements

Offerors will submit a two-part Proposal as follows. The specific format and submittal requirements for the Proposals are described in Section 6.0 (Proposal Submittal Requirements) of the RFP.

**4.1.1** The Technical Proposal will consist of all information required under Sections 4.2 – 4.8 of this RFP and is to be submitted separately from the Price Proposal by the date and time set forth in Section 2.3. Offerors shall include an original signed copy of Attachment A.1 and a completed Attachment B.1 (Technical Proposal Checklist) with their Technical Proposal. The purpose of the Technical Proposal Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the Offeror's Technical Proposal and to provide a page reference indicating the location in the Technical Proposal of each submittal requirement.

**4.1.2** The Price Proposal will consist of the information required by Section 4.8 of the RFP and is to be submitted separately from the Technical Proposal by the date and time set forth in RFP Section 2.3. The Price Proposal will not be opened until the Technical Proposal has been evaluated and scored pursuant to Section 5.0 (Evaluation Process for Proposals) of the RFP. Offerors shall complete the Attachment B.2 (Price Proposal Checklist), 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. By submitting its Price Proposal, the Offeror certifies that the Fred Ex Project presented in its Technical Proposal is in conformance with Part 2 (Fred Ex Project Technical Requirements) as indicated in the RFP and/or Addenda.

**4.1.3** Each Offeror shall meet all requirements established by this RFP. The Concessionaire will evaluate and score Offerors' Technical Proposals based upon the evaluation criteria found in this RFP. Failure to meet an RFP requirement will render an Offeror's Proposal non-responsive, while the extent to which an Offeror meets or exceeds the RFP requirements will be determined by the Evaluation Team and reflected in the proposal scoring.

**4.1.4** Offerors shall be aware that Concessionaire 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. Concessionaire also reserves the right to request additional information from an Offeror during the evaluation of that Offeror's Proposal.

**4.1.5** 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 in RFP Section 11.1.

## 4.2 Technical Proposal - Letter of Submittal

**4.2.1** 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 Fred Ex Design-Build Contract with Concessionaire. The Letter of Submittal shall be signed by an authorized representative of the Offeror. All signatures shall be original and signed in ink.

**4.2.2** The Letter of Submittal shall declare Offeror's intent, if selected, to enter into the Fred Ex Design-Build Contract with Concessionaire in accordance with the terms of this RFP.

**4.2.3** The Letter of Submittal shall, pursuant to Section 8.2 of the RFP, declare that the offer represented by the Technical and Price Proposals will remain in full force and effect for one hundred twenty (120) Days after the date the Price Proposal is actually submitted to Concessionaire ("**Price Proposal Submission Date**").

**4.2.4** The Letter of Submittal shall identify the name, title, address, telephone and fax numbers, and email address of an individual who will serve as the designated representative and single Point of Contact for the Offeror.

**4.2.5** The Letter of Submittal shall 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.).

**4.2.6** The Letter of Submittal shall include either an executed Attachment G (Proposal Payment Agreement), or an executed Attachment H (Waiver of Proposal Payment).

**4.2.7** The Letter of Submittal shall provide the Certification Regarding Debarment Forms as set forth in Section 11.7.6 of this RFP.

**4.2.8** The Letter of Submittal shall include a written statement that Offeror is committed to achieving the following goals with respect to small and minority business participation, on-the-job training, and workforce development:

- Disadvantaged Business Enterprise (DBE) participation equal to ten percent (10%) of the Fred Ex Design-Build Contract value, **plus** Small, Women-owned, and Minority-owned (SWaM) firm participation equal to nineteen percent (19%) of the Fred Ex Design-Build Contract value. For clarity, the total DBE/SWaM percentage is twenty-nine (29%) and no funds paid to qualified firms shall be double counted toward this goal; and
- Providing at least four (4) on-the-job trainee positions in accordance with VDOT's trainee and apprenticeship program.
-



**Execution Version**

---

**4.2.9** The Letter of Submittal shall reaffirm the Offeror’s commitment to sustainability and intent to achieve during the design and construction of the Project at least a “Silver” rating using the Envision infrastructure sustainability rating system. Additional information on the Envision rating system can be found at: <http://sustainableinfrastructure.org/envision/>. In addition, Offeror shall identify any on-going corporate commitments or established programs used by the Offeror to promote sustainability including examples of current initiatives on other interstate roadway, toll road or managed lanes projects.

**4.2.10** The Letter of Submittal shall include a draft version of Part 3 (Fred Ex Design-Build Contract) Exhibit 5.1.1 (Early Works Scope of Work) that meets the requirements of RFP Sections 1.3.8 and 2.2.1. The Offeror’s Initial Baseline Schedule submitted with their Proposal shall outline their planned activities and costs for this Early Works period with a total value not to exceed Ten Million Dollars (\$10 million). This draft Exhibit 5.1.1 will be finalized before the Fred Ex Design-Build Contract execution in accordance with the requirements of Attachment N (Fred Ex Design-Build Contract Execution Requirements). To expedite the processing of permits necessary to complete any such work within the existing VDOT or Concessionaire rights-of-way, the Letter of Submittal shall also include a detailed listing of specific Early Works activities to be conducted within the median or adjacent to I-95 and the existing 95 Express Lanes.

**4.2.11** The Letter of Submittal shall include a current letter from the Offeror’s surety or insurance company confirming the Offeror’s original surety letter (submitted per RFQ Section 3.2.10) is still valid for the entire Proposal Validity Period detailed in RFP Section 8.2.

**4.2.12** The Letter of Submittal shall include seven (7) years of currently valued General Liability insurance loss runs.

**Evaluation Criteria for 4.2:** Pass/Fail – Offeror’s Letter of Submittal includes the necessary written statements, commitments, and/or documentation to verify that the mandatory requirements of the RFP have been met.

### **4.3 Technical Proposal - Offeror’s Qualifications**

Offeror shall provide sufficient information to enable Concessionaire to verify that the previously-provided qualifications remain current and valid.

**4.3.1** Offeror shall confirm in its Proposal that the information contained in its SOQ remains true and accurate in accordance with the requirements of Section 11.3 of the RFP. To the extent that named team members or Key Personnel are proposed to change, such change requires Concessionaire approval. If such a change is proposed, the Offeror shall submit information at least (30) thirty days prior to submission of the Technical Proposal describing the reasons for the change and provide all pertinent information (in accordance with Section 3.0 of the RFQ) to the Concessionaire for review and written approval. The Offeror may not make any changes in its named team members or Key Personnel after receipt of Concessionaire approval above until Design-Build Contract execution and thereafter in accordance with the Fred Ex Design-Build Contract. The Technical Proposal shall include a copy of the letter(s) issued by the Concessionaire approving team member changes from the SOQ.

**Execution Version**

---

**Evaluation Criteria for 4.3.1:** Offeror provides statement that either confirms the information in SOQ remains true and accurate or indicates that any requested changes were previously approved by Concessionaire in accordance with the RFP requirements.

**4.3.2** Furnish an organizational chart, showing the “chain of command” identifying Key Personnel and their “second in command” or supporting managers where applicable. This chart shall identify major functions to be performed, and their reporting relationships in managing, designing and constructing the Fred Ex Project, including safety and quality control/quality assurance. Additionally, furnish a narrative describing the functional relationships among contracting participants for the organizational chart. The organizational chart and narrative shall be updated and expanded from the SOQ submittal as necessary and shall clearly indicate any changes that have been made and were previously approved by Concessionaire in accordance with RFP Sections 4.3.1 and 11.3. The narrative shall also clearly identify which positions are full-time and the projected availability of any part-time positions to support the Fred Ex Project.

**Evaluation Criteria for 4.3.2:** Extent to which the Key Personnel and their supporting team members, organizational chart and narrative includes pertinent disciplines and availability required for the Fred Ex Project and demonstrates a well-integrated organization throughout the design and construction of the Fred Ex Project. Furthermore, the reporting relationships are presented clearly with logical and appropriate reporting lines incorporating all aspects of management, design and construction for the Fred Ex Project, including Concessionaire and third parties, supporting effective communication and providing confidence to Concessionaire that the Fred Ex Project will be delivered in accordance with the contract requirements. Extent to which organizational chart and narrative demonstrates cohesive approach to TTMS design and TTMS Contractor coordination and integration.

#### **4.4 Technical Proposal – Fred Ex Project Approach**

Offeror should provide sufficient information to enable Concessionaire to understand and evaluate the Offeror’s overall approach to managing design and construction of the Fred Ex Project.

**4.4.1 Design-Build Project Management** - Provide sufficient information to enable Concessionaire to understand and evaluate the Offeror’s capability and capacity to effectively manage a complex design-build project and demonstrate Offeror’s prior experience in these areas. Offeror shall submit a narrative description of its design-build project management approach, including examples of how this approach has been successfully used on interstate roadway or managed lane projects of a similar scope, scale and complexity. In particular, the Concessionaire is interested in how the Offeror has created and successfully managed a fully-integrated design-build team and what systems, tools, processes, and/or procedures the Offeror will use to actively manage the contract and ensure timely compliance with all contract obligations and reporting requirements. Offerors shall specifically address how it has addressed the following project management functions on previous projects and how these techniques will be applied to the Project:

**Execution Version**

---

- Establishing clear lines of responsibility and accountability necessary to manage the Project and interact with the Concessionaire and key stakeholders as a single, integrated team, including the processes for resolving internal conflicts without engaging or involving the Concessionaire;
- Providing sufficient management and administrative personnel to actively administer the design-build contract and fulfil the full range of contract obligations;
- Ensuring continuous and seamless coordination between design and construction activities, including any necessary interfaces with the TTMS Contractor;
- Developing the necessary business processes and procedures necessary to execute the work and meet the Project’s documentation and reporting requirements; and
- Developing and providing regular reporting on key metrics and performance indicators related to quality, safety, design performance, construction performance, and management effectiveness.

**Evaluation Criteria for 4.4.1:** Extent to which the Offeror has demonstrated the capability and capacity to effectively manage a design-build project of similar scope, scale and complexity during both the design and construction phases, including the identification of specific tools, techniques or methods that will be used to ensure that all aspects of the Project are effectively managed and administered in accordance with the Design-Build Contract requirements and best industry practices.

**4.4.2 Health and Safety Management** - Describe the Offeror's approach to health and safety management for the Fred Ex Project, including but not limited to planned efforts during design and construction to avoid/minimize Fred Ex Project potential safety impacts to the construction workers and the traveling public. Demonstrate that all aspects of safety management are well integrated into the Fred Ex Project plans and schedules. Describe specific safety programs, practices that will be adopted by the Offeror and its subcontractors to foster a proactive safety culture that engages the entire Offeror’s team. Identify how safety performance will be measured and specific methods that will be used for continuous improvement throughout the project.

**Evaluation Criteria for 4.4.2:** Extent to which the Offeror’s demonstrates a thorough and well integrated approach to safety management during design and construction considering both the Design-Builder’s work and the on-going 95 Express Lanes, and VDOT’s General Purpose Lanes operations.

**4.4.3 Quality Assurance/ Quality Control (QA/QC)** - Describe the Offeror’s approach to QA/QC during design and construction including an appropriate staffing plan to meet the QA/QC requirements for the Fred Ex Project. Specifically address the QA/QC procedures for those unique Fred Ex Project elements that the Offeror deems most critical from the design perspective and the construction perspective. Provide information on how a quality culture will be promoted on the Fred Ex Project starting with the Design-Builder’s senior staff down the line to all the technicians, construction workers and subcontractors.

**Execution Version**

---

**Evaluation Criteria for 4.4.3:** Extent to which the Offeror's approach and staffing plan would maximize the quality for the unique Fred Ex Project elements that the Offeror deems most critical from a design perspective or a construction perspective. Effectiveness of the Offeror's approach to Design Quality Management to ensure well structured, easily audited documents that give the Concessionaire's confidence that it is receiving a quality product. Extent to which the Offeror's approach to Construction Quality Management and culture and provides confidence to Concessionaire that the construction will be carried out in accordance with the RFP requirements.

**4.4.4 Project Labor and Workforce Strategy** - To address potential challenges in attracting skilled construction labor in the metropolitan Washington D.C. market during the construction period for the Fred Ex Project, Offerors may propose the use of voluntary Project Labor Agreement(s) (PLAs) as part of their overall labor and workforce strategy, provided that any such PLAs are consistent with Virginia law and meet the requirements of Executive Order 13502 (dated February 6, 2009) and FHWA's Interim Guidance on the Use of Project Labor Agreements (dated May 7, 2010).

For the purposes of any proposed PLA and this RFP, the term "**Labor Organization**" means any organization of any kind, or any agency or employee representation committee or plan, in which employees participate and which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours of employment, or conditions of work, and the term "**Project Labor Agreement**" or "**PLA**" means a pre-hire collective bargaining agreement with all appropriate Labor Organizations that establishes the terms and conditions of employment for the Fred Ex Project.

**Evaluation Criteria for 4.4.4:** Extent to which the Offeror commits to the use of voluntary PLAs on the Fred Ex Project that meet or exceed the requirements stated in Executive Order 13502 (dated February 6, 2009) and FHWA's Interim Guidance on the Use of Project Labor Agreements (dated May 7, 2010). Partial points will be awarded for an executed PLA (or PLAs) that covers only certain trades, is missing key elements, or excludes subcontractors. No points will be awarded if no PLA is proposed or evidence of an executed PLA is not provided.

#### **4.5 Technical Proposal - Design of the Fred Ex Project**

Offeror shall provide sufficient information to enable Concessionaire to understand and evaluate the Offeror's concept designs for the Fred Ex Project. In evaluating the Offeror's design concepts, the Evaluation Team will score (in their sole discretion) the Offeror's Technical Proposals based upon the evaluation criteria found in this RFP. The extent to which an Offeror meets or exceeds evaluation criteria will be rated by the Evaluation Team and will be reflected in the scoring of the Technical Proposals submitted by Offerors.

**4.5.1 Design Integration** - Offeror shall provide sufficient information to enable Concessionaire to understand and evaluate the Offeror's approach to producing an integrated design for the entire Fred Ex Project. This information should outline the design deliverables and processes noting key Concessionaire, governmental agency, third party, and TTMS Contractor inputs. Offeror shall address the interdisciplinary coordination at the design stage essential to avoid construction clashes

**Execution Version**

---

and produce a quality product that takes into account long term maintenance and safety considerations.

**Evaluation Criteria for 4.5.1:** Extent to which the Offeror’s Design Integration Approach meets or exceeds the Concessionaire’s expectations for an integrated Design-Build program and provides confidence that the design approach for the Fred Ex Project will be fully integrated among all disciplines to ensure that long-term asset performance, safety, and durability objectives will be achieved. Extent to which the Offeror demonstrates the capability to meet or exceed the design-related Technical Requirements and fully integrate TTMS-related requirements into the overall design process

**4.5.2 Conceptual Roadway and Structural Plans** - Furnish descriptions and conceptual roadway plans for the Fred Ex Project indicating: (a) general geometry including horizontal curve data and associated design speeds, the number and widths of lanes and shoulders; (b) horizontal alignments; (c) limits of reconstruction and any other work on the I-95 general purpose lanes; (d) proposed utility impacts; (e) typical sections showing pavement sections and cross slopes; and (F) detailed layouts of at least one Toll Point site location. Include 11” x 17” graphics illustrating the Conceptual Fred Ex Project Plans. Provide a description and structural concept for the proposed bridge structures, retaining walls and major drainage structures. Include 11”x 17” graphics depicting elevations, transverse section and abutment configurations for each proposed structure type. Conceptual roadway and structural plans shall not be in conflict with the proposed design of the Southbound RRC Project. Any approved ATCs that will be included in the Offeror’s Price Proposal shall be shown in the Conceptual Roadway Plans.

**4.5.3 Conceptual Drainage and SWM Plans** - Furnish descriptions and conceptual plans for the Fred Ex Project drainage and stormwater management (SWM) design that are compliant with Part 2 (Fred Ex Project Technical Requirements). Provide 11”x 17” drainage concept plans showing proposed design, including new drainage structures and the use of existing structures. Identify existing drainage structures that will require rehabilitation or replacement and techniques proposed to complete this work. Identify locations and maintenance access for new SWM facilities. Any approved ATCs that will be included in the Offeror’s Price Proposal shall be shown in the Conceptual Drainage Plans.

**4.5.4 Conceptual Signing and TTMS Plans** – Furnish descriptions and provide plans showing the proposed locations and configurations for the Fred Ex Project roadway signage and TTMS roadside equipment. Any proposed deviations from the RFP Conceptual Plans for these elements must be identified, and the rationale and justification for such changes provided. Any approved ATCs that will be included in the Offeror’s Price Proposal shall be shown in the Conceptual Signing and TTMS Plans. Hard and electronic (.pdf) copies of the Conceptual Signing and TTMS Plans shall be submitted with the Offeror’s Technical Proposal in roll plot format (at a scale of 1 in. = 100 ft.), and shall include appropriate titles, legends, and labeling.

**Evaluation Criteria for 4.5.2 – 4.5.4:** Extent to which the Offeror’s Design Concept meets or exceeds the Fred Ex Project’s scope and the Technical Requirements and provides the Concessionaire full confidence that the Fred Ex Project’s long-term asset performance and

**Execution Version**

---

durability requirements will be achieved. Extent to which the Offeror demonstrates an understanding of the challenges associated with the corridor constraints and the associated challenges for roadway and structural design. Extent to which the Offeror provides innovative concepts for drainage design and SWM facilities that minimize environmental impacts and right-of-way acquisitions. Extent to which the Offeror demonstrates full understanding of the requirements and associated challenges for the signing and TTMS design and confirms the layout of all signage and TTMS roadside equipment elements shown on the RFP Conceptual Plans.

**4.6 Technical Proposal - Construction of the Fred Ex Project**

Offeror shall provide sufficient information to enable Concessionaire to understand and evaluate the Offeror's anticipated means and methods for the construction of the Fred Ex Project and the impacts those means and methods will have on the traveling public.

**4.6.1 Construction Approach and Sequence** - Describe the Offeror's approach for completing the construction of the Fred Ex Project, including 1) the general phasing and sequence of activities required to complete construction in the most efficient manner possible; 2) the proposed approach for utility coordination, adjustments, and relocations, including conflict resolution; 3) the proposed approach to identifying and mitigating geotechnical risks; and 4) approach to environmental management for the Project. Describe how the Offeror's construction approach has considered public safety (including measures to limit disruptions to traffic) and stakeholder engagement and awareness. Accommodation of the existing 95 Express Lanes operations and daily traffic reversals must be addressed.

**Evaluation Criteria for 4.6.1:** Completeness and effectiveness of Offeror's approach to sequencing construction activities to adequately address safety and operations, as well manage environmental risks, coordinate with adjacent projects, and address site constraints. Extent to which the Offer identifies specific steps that will be taken to: engage stakeholders, achieve timely receipt of required permits and government approvals, expedite utility coordination, address geotechnical conditions and mitigate potential delays to construction or on-time Service Commencement for the Fred Ex Project.

**4.6.2 TTMS Contractor Coordination and Interface** - Explain how the Offeror will implement Exhibit 3.7.1 (TTMS Interface Plan) of Part 4 (General Conditions) on the Fred Ex Project. Offerors shall focus on how specific coordination elements and interfaces will be addressed during the construction, installation, and the TTMS testing and commissioning phases of the Fred Ex Project. Offerors should describe successful approaches and methods it has used in the past to manage specialty technology contractors within the context of a large civil construction project.

**Evaluation Criteria for 4.6.2:** Extent to which the Offeror is able to demonstrate understanding of the goals of the TTMS Interface Plan and provides a detailed understanding of how the TTMS and civil works will be coordinated to achieve Service Commencement. Extent to which Offeror identifies opportunities, challenges, and risks associated construction of technology in a heavy civil project environment.

**Execution Version**

---

**4.6.3 Adjacent VDOT Project Coordination and Interface** – The timing and scope of the Fred Ex Project will overlap with other VDOT projects, including the Courthouse Road Interchange Replacement Project and the RRC Project. Explain how the Offeror will coordinate and interface with the respective project teams, including VDOT and their associated consultants and contractors throughout the duration of the project to ensure that the respective projects are properly coordinated and scheduled.

**Evaluation Criteria for 4.6.3:** Extent to which the Offeror is able to demonstrate understanding of the requirements for coordination and integration with adjacent VDOT projects, and presents a management approach that will allow simultaneous advancement of the Fred Ex Project and ensure the successful completion of all projects within the established schedules. The Offeror shall address both design and construction aspects of their approach to coordination and integration with adjacent projects.

**4.6.4 Transportation Management Plan** - Explain how the Offeror will maintain traffic through all phases of construction. Describe in detail any proposed lane or ramp closures, temporary detours, time of day restrictions, flagging operations, minimum lane widths and work zone speed reductions required to construct the Fred Ex Project using the Offeror’s means and methods. Identify major Fred Ex Project stakeholders located near the Fred Ex Project and discuss how they will be impacted during construction. Furnish conceptual MOT details and critical cross sections showing proposed phasing and methodology for construction.

**Evaluation Criteria 4.6.4:** Extent to which the Offeror is able to mitigate impacts to the traveling public and major project stakeholders during construction of the Fred Ex Project.

#### **4.7 Technical Proposal - Initial Baseline Schedule**

Provide an Initial Baseline Schedule for the entire Fred Ex Project outlining the Offeror’s proposed plan to accomplish the Work for the Fred Ex Project. This schedule submission shall include:

**4.7.1 Initial Baseline Schedule** - The Initial Baseline Schedule shall depict the Offeror’s proposed overall sequence of work, and durations for each work task and the deliverables required to complete the Fred Ex Project. The Initial Baseline Schedule should be organized using a hierarchical Work Breakdown Structure (WBS), broken down into Level 3 elements, at a minimum, showing major phases of the Fred Ex Project (i.e. project milestones, project management, TTMS Contractor integration, Early Works, Scope Validation Period, design, public involvement, environmental, right-of-way, utility, construction, sound barriers, etc.) The Initial Baseline Schedule should depict the anticipated Fred Ex Project critical path (based on the longest path), reviews by Concessionaire, VDOT, FHWA, other regulatory agencies; and work by suppliers, subcontractors, and other involved parties, as applicable.

**4.7.2 Initial Baseline Schedule Narrative** - An Initial Baseline Schedule Narrative describing the Offeror’s proposed overall plan to accomplish the Fred Ex Work 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 Initial Baseline Schedule is based.

**Execution Version**

---

Offerors are to note that in addition to the Initial Baseline Schedule, the Design-Builder will be required to develop and submit a Baseline Schedule in accordance with Section 11.1 of Part 3 (Fred Ex Design-Build Contract) and Section 1.4 of Part 2 (Fred Ex Project Technical Requirements) upon award of Fred Ex Design-Build Contract.

**Evaluation Criteria 4.7.1 and 4.7.2:** Extent to which the Offeror provides an Initial Baseline Schedule and Initial Baseline Schedule Narrative that demonstrates an understanding of the complexities and interrelationships of the technical elements of the Fred Ex Project. Additionally, the extent to which the Offeror's Initial Baseline Schedule takes into account: internal plan reviews, Concessionaire plan reviews and approvals, Maintenance of Traffic sequencing, TTMS Contractor integration, permitting constraints, right of way acquisition, utility relocation, construction activities and QA/QC inspection and testing.

#### **4.8 Price Proposal**

The information and attachments required by this Section 4.8 shall be submitted on the due date and time set forth in RFP Section 2.3. If the 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 further consideration under this procurement for this Fred Ex Project. Offerors shall complete the Attachment B.2 (Price Proposal Checklist), and include it with their Price Proposal submittal. The purpose of the Price Proposal Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the submittal.

**4.8.1** Offeror shall specify, on the form provided as Attachment D.1, its Proposal Price (in numbers and words) for the Fred Ex Project. The Proposal Price shall be based upon the Initial Baseline Schedule submitted in accordance with RFP Section 4.7. Additional pricing detail shall be provided on Attachment D.2 in accordance with the requirements of Attachment C (Price Proposal Instructions).

Payments for Mobilization (as detailed in Attachment C) shall not exceed two percent (2%) of the total of the Fred Ex Proposal Price and will be made in two separate installments. The first installment of fifty percent (50%) of the Design-Builder's total mobilization cost will be made following issuance of the Design Work NTP. The second installment will be made following issuance of the Construction NTP.

The values associated with each price item shall be as described in the Attachment D.1 and D.2 and shall be inclusive of all direct and indirect costs, overhead, profit and any other expenses of any kind.

Offerors are advised that the prices set forth above shall be considered full compensation to Offeror for all design and construction of the Fred Ex 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. These values shall be clearly supported by the escrowed pricing documents.



**Execution Version**

---

**4.8.2** In addition to Attachments D.1 and D.2, Offerors shall also complete Attachment D.3 (Schedule of Pay Items) listing the total material quantities and costs of each proposed pay item, using item codes and units of measure that are consistent with VDOT’s list of standard and non-standard item codes. The values and quantities shall be clearly supported by the escrowed pricing documents.

**4.8.3** Submit a proposed payment schedule and cash curve showing funds that will be required for each month for the duration of the Fred Ex Project.

**4.8.4** Provide a Proposal Guaranty for five percent (5%) of the Proposal Price for the Fred Ex Project. A Proposal Bond will be accepted only if executed in a form that contains the exact wording as detailed in Attachment M (Proposal Guaranty Form). Any Proposal accompanied by a bond having wording that differs in any respect from that furnished by the Concessionaire will be rejected. When the principal is a Joint Venture, each party thereof shall be named and shall execute the Proposal Guaranty. Each surety to the Proposal Bond shall be named and shall execute the Proposal Bond. The Proposal Bond shall be accompanied by a certified copy of the power of attorney for the surety’s attorney-in-fact. **If the 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 the Fred Ex Project.**

**4.8.5** Provide the Sworn Statement Forms, as set forth in Attachment E (Offeror’s Statement) and Attachment F (Offeror’s Certification) respectively.

**4.8.6** Provide full-year annual audited financial statements for the prior three (3) years and the latest available financial statements for the current year that have been prepared in accordance with Generally Accepted Accounting Principles (“GAAP”). If an Offeror does not maintain audited financial statements, it shall submit a notarized letter attesting to the completeness and accuracy of the unaudited financial statements signed by the chief financial officer of its parent company. If any of this information is not in the English language, a certified English translation shall be provided, including numeric conversion of amounts into U.S. dollars. If a party obligated to furnish such financial statements is not a public company, it may request that the statements be treated confidentially by the Concessionaire. In providing such financial statement with the Price Proposal, Offerors grant the Concessionaire permission to confidentially provide copies of the financial statements to rating agencies for the purposes of obtaining ratings for any debt financing required for the Project.

## **5.0 EVALUATION PROCESS FOR PROPOSALS**

**5.0.1** Concessionaire will evaluate each Proposal from each Offeror, with such evaluation being based upon the numerical weighting set forth in RFP Sections 5.1 and 5.2. The Technical Proposal will have a weighting of thirty percent (30%) and the Price Proposal will have a weighting of seventy percent (70%).

**5.0.2** In its sole discretion, Concessionaire may hold interviews, ask written questions of the

**Execution Version**

---

Offerors, seek written clarifications, conduct discussions on the Proposals, and solicit updated proposals during the evaluation and selection process.

**5.1 Technical Proposal Evaluation Factors**

**5.1.1** The Technical Proposal will be evaluated based upon the following factors including the Pass/Fail factors of RFP Section 4.2. All information required under the identified sections will be evaluated.

<b>Section</b>	<b>Rating Weight</b>
4.3 Offeror's Qualifications	5%
4.4 Fred Ex Project Approach	35%
4.5 Design of the Fred Ex Project	25%
4.6 Construction of the Fred Ex Project	25%
4.7 Initial Baseline Schedule	10%
<b>TOTAL</b>	<b>100%</b>

**5.1.2** If Concessionaire determines that a Technical Proposal does not comply with or satisfy requirements of the RFP Documents Concessionaire may find such Proposal to be non-responsive. In such event, the Price Proposal corresponding to the non-responsive Technical Proposal will not be opened, but will be returned unopened, along with the non-responsive Technical Proposal, to the Offeror. An Offeror that submits such a non-responsive Technical Proposal will not be eligible to receive any Proposal Payment.

**5.1.3** Each evaluation criterion has an assigned maximum number of points that demonstrates its relative importance. The total Technical Proposal score will be determined in accordance with VDOT's *Design-Build Evaluation Guidelines* (May 2014).

**5.2 Price Proposal Evaluation Factors**

Price Proposals will be scored in accordance with VDOT's *Design-Build Procurement Manual*, (April 2017) as follows:

**.1** The Offeror submitting the lowest Price Proposal will be awarded the maximum number of points, seventy (70).

**.2** The next-lowest Price Proposal will be awarded points based on the product of: (a) the ratio of the lowest Price Proposal divided by the next-lowest Price Proposal; and (b) seventy (70) points (i.e., the points awarded for the lowest Price Proposal), with such product rounded to the nearest one hundredth of a point.

**.3** The process will continue for each of the remaining Price Proposals, with points being awarded based on the product of: (a) the ratio of the lowest Price Proposal divided by the

**Execution Version**

---

respective Offeror's Price Proposal; and (b) seventy (70) points (i.e., the points awarded for the lowest Price Proposal), with such product rounded to the nearest one hundredth of a point.

**5.3 Combining Technical and Price Proposal Scores**

**5.3.1** The Technical Proposal Score derived from RFP Section 5.1 will be added to the Price Proposal Score derived from RFP Section 5.2 in accordance with the VDOT's *Design-Build Procurement Manual* (April 2017)

**5.3.2** Award of the Fred Ex Design-Build Contract shall be made in accordance with RFP Section 8.0 (Award of Contract, Proposal Validity, and Contract Execution).

**6.0 PROPOSAL SUBMITTAL REQUIREMENTS**

This section 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** Technical and Price Proposals are to be submitted electronically via Ansarada, and additional hard copies delivered to the address below by the date and time set forth in RFP Section 2.3.

**6.1.2** Electronic submittals are required to be posted to Fred Ex Project site on Ansarada in the designated folder for each Offeror. All hard copy 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:

Transurban  
Attention: Mr. Sean Mallipudi  
6440 General Green Way  
Alexandria, Virginia 22312

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

**6.2 Format**

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

**Execution Version**

---

**6.2.1** Separate sealed parcels containing the Technical Proposal and Price Proposal shall be submitted by the due dates and times set forth in RFP Section 2.3. Parcels shall be clearly marked to identify the Fred Ex Project and the Offeror, and to identify the contents as Technical Proposal and Price Proposal, as applicable.

**6.2.2** Each Offeror shall deliver fifteen (15) identical paper copies of the Technical Proposal, one (1) of which must bear original signatures on the Letter of Submittal, and one (1) electronic copy of the Technical Proposal containing the entire proposal in a single, consolidated and bookmarked Adobe Acrobat (.pdf) file, submitted electronically via Ansarada posted to the designated folder for each Offeror. An electronic copy of the Initial Baseline Schedule in Primavera format (.xer) shall also be submitted via Ansarada. If a discrepancy exists between the paper copy and the electronic version, the information on the paper copy will supersede the information provided on the electronic version.

Each printed copy of the Technical Proposal shall be securely bound, with an identity on its front cover, in the upper right-hand corner, as “Copy \_\_\_ of 15 Copies.” **Three ring binders are not permissible.**

The Technical Proposal shall be divided into two separate volumes:

**Volume I** shall be prepared on 8.5” x 11” paper (charts, tables, exhibits and other illustrative information included in the Technical Proposal may be submitted on 11” x 17” paper, but must be folded to 8.5” x 11”) and shall include:

- The Letter of Submittal and all requirements of the Technical Proposal, including appendices, with the exception of the Offeror’s conceptual plans.
- Initial Baseline Schedule Narrative
- Technical Proposal Attachments, as listed in RFP Section 11.9, shall be included, as appendices at the end of Volume I.

Volume I of the Technical Proposal shall not exceed seventy-five (75) pages. The Technical Proposal appendices (Attachments) shall not be counted against this page limit.

**Volume II** shall be prepared on 11” x 17” paper (unfolded) and shall include:

- Conceptual Design Plans and supporting graphics drawn to an identifiable scale
- Index and Key Map for the Conceptual Signing and TTMS Plans
- Initial Baseline Schedule

In addition to the Volume I and II hard copies, five (5) sets of the Conceptual Signing and TTMS Plans shall be provided; each set is to be provided in a labeled tube container.

Other general submittal requirements include:

- Printing on one (1) side of pages only;

**Execution Version**

---

- Page number references in the lower right hand corner on each page;
- Numbered tabs for each sections corresponding to the order set forth in RFP Section 4.0 (Contents of Proposals), (except for that required by RFP Section 4.8). The numbered tabs shall not count against the above referenced page limit, provided that no project specific information is included on them.
- All printing, except for the front cover of the Technical Proposal, should be in 12-point font. (10 point font may be used for filling out information on charts, tables and/ or exhibits).

**6.2.3** Each Offeror shall deliver two (2) paper copies of the Price Proposal and supporting Documents detailed in Attachment B.2 (Price Proposal Checklist), which must bear original signatures. The Price Proposal shall be securely bound and contained in a single volume. **Three ring binders are not to be used.** Additionally, the Price Proposal shall be printed or typed on one (1) side only and separated by tabs with sections corresponding to the order set forth in RFP Section 4.8.

Each Offeror shall also submit one (1) electronic copy of the Price Proposal containing the entire proposal in a single, consolidated and bookmarked Adobe Acrobat (.pdf) file electronically via Ansarada posted to the designated folder on Ansarada for each Offeror. If a discrepancy exists between the paper copy and the electronic version, the information on the paper copy will supersede the information provided on the electronic version.

## **7.0 QUESTIONS AND CLARIFICATIONS**

**7.1** All questions and requests for clarification regarding this RFP shall be submitted to Concessionaire’s Point of Contact in electronic form via Ansarada. No requests for additional information, clarification or any other communication should be directed to any other individual. Offerors shall not contact VDOT personnel or consultants with questions regarding this RFP or the Fred Ex Project. **No oral requests for information will be accepted.**

**7.2** For instructions on use of Ansarada or technical support, Offerors may contact the Ansarada support team at (312) 638-2200.

**7.3** With the exception of proprietary questions, all questions and Concessionaire’s answers will be sent to all Offerors. If an Offeror is of the view that a clarification question or issue relates to Proprietary aspects of their Proposal, the Offeror must designate that question as “Proprietary” when submitting the question in the subject line.

If Concessionaire agrees that a question or issue relates to Proprietary aspects of their Proposal, the response will not be made available to other Offerors. However, if Concessionaire is of the view that the question or issue is not Proprietary, Concessionaire will advise the relevant Offeror, who will then have the option to:

- Withdraw the question (if applicable);

**Execution Version**

---

- Modify the question and re-submit as either a non-proprietary or Proprietary question (subject to Concessionaire’s re-assessment); or
- Continue to request a response to the question, noting that the question and the response will be made available to all Offerors.

Concessionaire reserves the right to determine in all cases whether a question is Proprietary.

**7.4** If there is any conflict between versions for any RFP Documents or Addendum, the latest revision issued on Ansarada shall control.

**7.5** All questions or requests for clarification must be submitted by the due dates and times set forth in RFP Section 2.3. Questions or clarifications requested after such time will not be answered, unless Concessionaire elects, in its sole discretion, to do so.

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

**7.7** Concessionaire, in its sole discretion, shall have the right to seek clarifications from any Offeror to fully understand information contained in the Proposal and to help evaluate and rank the Offerors.

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

Concessionaire has determined that the negotiation and award of the Fred Ex Design-Build Contract will be made in the following manner:

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

**8.1.1** Concessionaire will review the Proposal submitted by the highest-scored Offeror. If the Proposal is responsive and the Price Proposal is within the Concessionaire’s budget for design and construction services, then the Concessionaire will issue a Notice of Intent to Award to the highest-scored Offeror. The Successful Offeror shall then complete the Contract Documents execution processes described in Attachment N (Fred Ex Design-Build Contract Execution Requirements).

**8.1.2** The Concessionaire 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** Alternatively, if the Price Proposal submitted by the highest-scored Offeror is not within the Concessionaire’s budget for design and construction services, the Concessionaire may elect to establish a competitive range among those Offerors who have submitted responsive Proposals. In this case, all Offerors deemed to be within the competitive range will be invited to participate in a

**Execution Version**

---

best and final offer process (BAFO) which complies with VDOT’s Design-Build Manual and the FHWA’s Design-Build Contracting regulations (23 CFR 636).

This BAFO process will include additional proprietary discussions with each bidder to better understand initial pricing and identify potential areas where modifications to the current requirements may result in better value for the Concessionaire. Following these discussions, a final RFP Addendum will be issued identifying any changes in the Project requirements and requesting submission of a Revised Price Proposal.

The Revised Price Proposal will then be used as the basis for final scoring of each Offeror’s Proposal. A new Price Proposal score will be determined in accordance with Section 5.2 of the RFP. No further review of the Technical Proposals will be conducted prior to final scoring; the previously-determined Technical Score based on the Offeror’s compliant Technical Proposals will be used in calculating the final score in accordance with Section 5.3 of the RFP.

**8.1.4** If, following either limited negotiations or completion of a BAFO process, the Price Proposal submitted by the highest-scored Offeror still exceeds the Concessionaire’s budget for design and construction, the Concessionaire may cancel the RFP and consider other procurement alternatives. The Concessionaire shall notify all Offerors of the results of their decision.

**8.2 Proposal Validity**

The offer represented by each the Technical Proposal and Price Proposal will remain in full force and effect for one hundred twenty (120) days after the latest Price Proposal Submission Date. If the Fred Ex Design–Build Contract has not been executed within one hundred twenty (120) days after the Price Proposal Submission Date, each Offeror that has not previously agreed to an extension of such deadline shall have the right to withdraw its Proposal.

**8.3 Contract Execution and Notice to Proceed**

**8.3.1** The execution of the Fred Ex Design-Build Contract is dependent on achievement of Commercial Close between the Concessionaire and VDOT for the Fred Ex Project, and issuance of the Design Work NTP and Construction NTP to the Design-Builder is dependent on achievement of Financial Close between the Concessionaire and VDOT. Within thirty (30) days of the Notice of Intent to Award, Successful Offeror shall deliver to Concessionaire all pertinent documents in accordance with Attachment N (Fred Ex Design-Build Contract Execution Requirements). Within thirty (30) days of receipt of the Attachment N documents, the Concessionaire will return the Proposal Guarantees and a final, signature-ready version of the Fred Ex Design-Build Contract to the Successful Offeror. The Successful Offeror shall execute the Fred Ex Design-Build Contract and return to the Concessionaire with seven (7) days thereof. The Concessionaire will counter-sign and fully execute the Design-Build Contract upon successfully achieving Commercial Close.

**8.3.2** Concessionaire reserves the right to issue a Limited Notice to Proceed any time after execution of the Fred Ex Design-Build Contract.

**Execution Version**

---

**8.3.3** Upon execution of the Fred Ex Design-Build Contract, the Successful Offeror may submit an invoice for an advanced payment of two hundred fifty thousand dollars (\$250,000) of the Contract Price. This amount, which should be included in the Offeror's Price Proposal, represents payment toward design and preconstruction services performed prior to execution of the Fred Ex Design-Build Contract and is intended to defray some of those expenses incurred by the Successful Offeror. Concessionaire will not make any other payment toward design and preconstruction services performed prior to execution of the Fred Ex Design-Build Contract to the Successful Offeror. Such invoice shall be processed and paid in accordance with the payment provisions of the Fred Ex Design-Build Contract.

## **9.0 RIGHTS AND OBLIGATIONS OF CONCESSIONAIRE**

### **9.1 Reservation of Rights**

**9.1.1** In connection with this procurement, Concessionaire reserves to itself all rights (which rights shall be exercisable by Concessionaire 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 Concessionaire of the Fred Ex 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 terminate evaluations of responses received at any time.
- .6** The right to suspend and terminate the procurement process for the Fred Ex Project, at any time.
- .7** The right to revise and modify, at any time prior to the Proposal Submittal Date, factors it will consider in evaluating responses to this RFP and to otherwise revise its evaluation methodology.
- .8** The right to waive or permit corrections to data submitted with any response to this RFP until such time as Concessionaire declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.



**Execution Version**

---

**.9** The right to issue Addenda, supplements, and modifications to this RFP, including but not limited to modifications of evaluation criteria or methodology and weighting of evaluation criteria.

**.10** The right to permit submittal of Addenda and supplements to data previously provided with any response to this RFP until such time as Concessionaire declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.

**.11** 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 and evaluation of the responses to this RFP.

**.12** 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.

**.13** The right to permit Offerors to add or delete named firms and/or Key Personnel until such time as Concessionaire declares in writing that a particular stage or phase of its review has been completed and closed.

**.14** The right to add or delete Offeror responsibilities from the information contained in this RFP.

**.15** The right to appoint and change appointees of the Evaluation Team.

**.16** The right to use assistance of outside technical and legal experts and consultants in the evaluation process.

**.17** 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.

**.18** The right to disqualify any Offeror that changes its submittal without Concessionaire approval.

**.19** The right to change the method of award or the evaluation criteria and scoring at any time prior to submission of the Proposals.

**.20** The right to respond to all, some, or none of the inquiries, questions and/or request for clarifications received relative to the RFP.

**.21** The right to use all or part of an unsuccessful Offeror's Proposal that accepts a Proposal Payment.

**.22** The right to negotiate the allocation of prices identified for specific portions of the work depicted within a Price Proposal.

**Execution Version**

---

**.23** The right to disqualify and/or cease negotiations with an Offeror if Concessionaire, in its sole discretion, determines that the Offeror's Price Proposal contains unbalanced pricing among the specific portions of work identified therein.

**.24** The right to modify the ATC process described in RFP Section 3.4.

**.25** The right to introduce additional confidentiality requirements at any time to protect the Concessionaire's proprietary information and systems.

## **9.2 No Assumption of Liability**

**9.2.1** Except for such amounts as may be paid through the Proposal Payment set forth in RFP Section 9.3.1, for those Offerors who submit a responsive Proposal, but are not awarded the Fred Ex Design-Build Contract, and for such amounts set forth in RFP Section 8.3.3 for the Successful Offeror who may submit an invoice for an advanced payment of two hundred fifty thousand dollars (\$250,000) of the Contract Price, Concessionaire 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 such costs shall be borne solely by each Offeror and its team members.

**9.2.2** Except as stated in RFP Section 9.3.1, in no event shall Concessionaire be bound by, or liable for, any obligations with respect to the Fred Ex Project until such time (if at all) a contract, in form and substance satisfactory to Concessionaire, has been executed and authorized by Concessionaire and, then, only to the extent set forth therein.

## **9.3 Proposal Payment**

**9.3.1** Notwithstanding the terms of RFP Section 9.2, Concessionaire is willing to pay those Offerors who submit a responsive Proposal, but are not awarded the Fred Ex Design-Build Contract, a Proposal Payment in the amount of two hundred fifty thousand dollars (\$250,000).

**9.3.2** Prior to the proposal submission date, if the Design-Build procurement process is terminated for any reason, Concessionaire shall not be responsible for any Proposal Payments, partial or in full, for any costs incurred by the Offerors in developing proposals.

**9.3.3** After proposals have been received by Concessionaire and determined to be responsive, and Concessionaire makes the decision to cancel the procurement or not to award the Fred Ex Design-Build Contract all responsive Offerors will receive a Proposal Payment. The Proposal Payment will be made within forty-five (45) days after execution of the Fred Ex Design-Build Contract or, if applicable, the decision by Concessionaire to cancel the procurement or to not award the Fred Ex Design-Build Contract.

**9.3.4** Payment to an Offeror of the Proposal Payment is expressly conditioned upon such Offeror providing, pursuant to RFP Section 4.2.7, an executed Attachment G (Proposal Payment

**Execution Version**

---

Agreement) and being fully compliant with the conditions established in such agreement for payment of the Proposal Payment.

**9.3.5** Under no circumstances will the Concessionaire be liable for or reimburse any costs incurred by Offeror, whether or not selected for negotiations, in developing proposals unless otherwise noted in the RFP.

**9.3.6** If an unsuccessful Offeror elects to waive the Proposal Payment, it will expressly do so by executing the Waiver of Proposal Payment in the form set forth in Attachment H (Waiver of Proposal Agreement) and submitting such Waiver of Proposal Payment as part of its Proposal, pursuant to RFP Section 4.2.7.

## **10.0 PROTESTS**

The following represents an Offeror's sole recourse against the Concessionaire for any protests or challenges with respect to this RFP.

**10.1** Protests regarding the requirements or form of this RFP must be received by the Concessionaire's point of contact not later than thirty (30) calendar days after this initial issuance of the RFP, except that an initial protest that arises under any addenda to this RFP may be filed up to five (5) calendar days after the date the addendum was issued, but in no case later than fifteen (15) calendar days before the Technical Proposal due date specified in Section 2.3 of the RFP. Protests regarding the Concessionaire's Notice of Intent to Award must be received by the Concessionaire's Point of Contact no later than five (5) calendar days after the Concessionaire has notified the Offerors of its Notice of Intent to Award. All protests shall be in writing, and submitted to the Concessionaire's Point of Contact by hand-delivery or registered mail. The written protest shall be concise and logically presented to facilitate review, and include the basis for the protest and the relief sought. No protest shall be allowed for a claim that the Successful Offeror is not a responsible bidder. Failure to substantially comply with any of the requirements in this RFP, including requirements related to protests, may be grounds for dismissal of the protest.

**10.2** The Concessionaire will acknowledge receipt of a protest and may take whatever actions it deems useful or necessary in making a decision, including having a meeting and requesting additional submissions. The Concessionaire shall issue a decision in writing, which decision shall be final and dispositive, and not subject to any legal review or challenge. By submitting a Proposal, each Offeror is deemed to have agreed that this protest process is its sole remedy, and that it has waived its rights, if any, to judicially challenge any decision by the Concessionaire.

## **11.0 MISCELLANEOUS**

### **11.1 Confidentiality of Disclosure of Offeror Submittals**

All Proposals submitted in response to this RFP shall become the property of the Concessionaire upon their receipt. Offerors are advised that the Concessionaire is not subject to the disclosure

**Execution Version**

---

requirements of the Virginia Public Procurement Act or the Virginia Freedom of Information Act and will treat the contents of all Offer or submittals as confidential throughout the entire solicitation process. Following award of the Fred Ex Design-Build Contract, records associated with the procurement will be provided to VDOT upon its request, and at that time will become public records that are subject to disclosure requirements under current Virginia law.

However, certain categories of records are exempt from the disclosure requirements of the Virginia Freedom of Information Act (Va. Code Sec. 2.2-3700, et seq.) even after the award of the Fred Ex Design-Build Contract, when VDOT has all of the procurement records. To be excluded from the disclosure requirements of the Virginia Freedom of Information Act, an Offeror must submit a written request accompanying such records:

1. Invoking the relevant Virginia Freedom of Information Act exclusion upon submission of the records (to the Concessionaire) for which protection from disclosure is sought;
2. Identifying with specificity the records for which protection is sought; and
3. Stating the reasons why protection is necessary.

**11.2 Conflict of Interest**

**11.2.1** Each Offeror shall require its proposed team members to identify potential conflicts of interest or 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 Fred Ex Project or the Concessionaire'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 Concessionaire's Point of Contract.

The Concessionaire, in consultation with VDOT, 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 Fred Ex Project. Failure to abide by Concessionaire'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 Concessionaire or VDOT to provide assistance in development of request for proposals or evaluation criteria for the Fred Ex Project.
- .2** An organization or individual hired by Concessionaire or VDOT to provide assistance in development of request for proposals or evaluation criteria as part of the programmatic guidance or procurement documents for Concessionaire's Design-Build program, and as a result has a unique competitive advantage relative to the Fred Ex Project.

**Execution Version**

---

**.3** An organization or individual with a present or former contract with Concessionaire or VDOT to prepare planning, environmental, engineering, or technical work product for the Fred Ex 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 Concessionaire or VDOT to provide assistance in Fred Ex Design-Build contract administration for the Fred Ex Project.

**11.2.3** Concessionaire reserves the right, in consultation with VDOT, to make determinations relative to potential conflicts of interest on a project specific basis. Any questions related to potential conflicts of interest shall be submitted to the Concessionaire in accordance with the requirements of RFP Section 7.0 (Questions and Clarifications).

**11.2.4** Concessionaire may, in consultation with VDOT, 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 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:

- Transurban (USA) Inc.
- Transurban (USA) Operations Inc.
- Alpha Corporation
- Capital Projects Strategies, LLC
- FreeAhead, Inc.
- GET Solutions
- HDR Engineering Inc.
- Hirschmugl, Heine & Associates, Inc.
- Mattern & Craig
- Rice Associates
- SaLUT (Soil and Land Use Technology)
- S&ME
- Consultants and contractors providing services to VDOT related to the Project:
  - Ames & Gough
  - Ballard Spahr
  - CDM Smith

**Execution Version**

---

- Ernst and Young (EY)
- HMMH (Harris Miller Miller & Hanson Inc.)
- KPMG
- Peggy Malone & Associates
- Pillar Operations and Maintenance Advisors
- PRR Public Affairs
- Reynolds Smith and Hill (RS&H)
- B. Reese Advisory
- RK&K, LLP
- Stantec
- T3 Design Corporation
- Whitman Requardt & Associates, Inc.

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

**11.3 Requirement to Keep Team Intact**

The team proposed by Offeror, including but not limited to the Offeror's organizational structure, Lead Contractor, the Lead Designer, Key Personnel, and other individuals identified in the SOQ and pursuant to RFP Section 4.3.1, shall remain on Offeror's team for the duration of the procurement process and, if the Offeror is awarded the Fred Ex Design-Build Contract, the duration of the Fred Ex Design-Build Contract. If circumstances require a proposed change, it must be submitted in writing to Concessionaire's Point of Contact 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.

**11.4 DBE and SWaM Firms**

**11.4.1** 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 49 CFR Part 26 of the Code of Federal Regulations, as amended, the USDOT DBE Program regulations, VDOT's DBE Program rules and regulations, and Part 3, Exhibit 11.3 (Federal Requirements).

**11.4.2** Concessionaire also encourages the utilization of Small, Women-owned and Minority-owned (SWaM) firms to participate in the performance of its projects. A list of Virginia Department of Small Business and Supplier Diversity (SBSD) certified SWaM firms is maintained on the SBSBD web site ([www.sbsd.virginia.gov](http://www.sbsd.virginia.gov)) under the SWaM Vendor Directory link. Offerors are encouraged to take all necessary and reasonable steps to ensure that SWaM firms have the maximum opportunity to compete for and perform services in the Fred Ex Design-Build Contract.

**Execution Version**

---

If the Offeror intends to subcontract a portion of the services on the Fred Ex Project, the Offeror is encouraged to seek out and consider SWaM firms as potential sub-consultants. 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.

**11.4.3** It is the policy of Concessionaire 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 RFP Section 4.2.8. 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 Fred Ex 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.

**11.4.4** After Award of the Contract the Design-Builder shall submit documentation related to the use of DBEs and SWaMs for the Fred Ex Project in accordance with the procedures set forth in Part 3 (Fred Ex Design-Build Contract), Exhibit 11.3 (Federal Requirements) and Part 5 (Division 1 Amendments to the Standard Specifications) Section 107.15. 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 Fred Ex Project. In the case where the DBE is to be utilized to achieve the DBE participation goal, the DBE must be certified by VDOT prior to the submission and provide VDOT 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 and SWaM 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.

**11.4.5** DBE and SWaM certification entitles a firm to participate on the Fred Ex Project. However, it does not guarantee that the firm will obtain Concessionaire work nor does it attest to the firm's abilities to perform any particular type of work.

**11.4.6** When preparing bids for projects with DBE and SWaM goals, Concessionaire encourages prospective Offerors 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

[www.sbsd.virginia.gov](http://www.sbsd.virginia.gov)

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

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

Central Office 1221 East Broad Street Richmond, VA 23219 (804) 786-2085	Fredericksburg District 87 Deacon Road Fredericksburg, VA 22405 (540) 899-4562	BOWD 1602 Rolling Hills Drive Suite 110 Richmond, VA 23229 (804) 662-9555
--	---	---

The following informational websites may also be of assistance:

[www.virginiadot.org/business/bu\\_bizDev.asp](http://www.virginiadot.org/business/bu_bizDev.asp)

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

**11.4.7** This Project requires utilization of SWaM firms to participate in the performance of its projects. A list of SBSB-certified SWaM firms is maintained on the SBSB website ([www.sbsd.virginia.gov](http://www.sbsd.virginia.gov)) under the SWaM Vendor Directory link. Offerors are encouraged to take all necessary and reasonable steps to ensure that SWaM firms have the maximum opportunity to compete for and perform services in the design-build contract. If the Offeror intends to subcontract a portion of the services on the Project, the Offeror is encouraged to seek out and consider SWaM firms as potential sub-consultants. 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.

## **11.5 Trainee and Apprenticeship Participation**

Concessionaire will require participation in VDOT’s trainee and apprenticeship program for the Fred Ex Project and has established a goal of four (4) trainees identified in RFP Section 4.2.8.

## **11.6 Escrow Proposal Documents**

**11.6.1 Scope.** Pursuant to RFP Section 11.6.5.1 below, the Successful Offeror shall submit to the individual set forth in RFP Section 2.4 above, within thirty (30) days of the Notice of Intent to Award date, one copy of all documentary information generated in preparation of its Proposal. This material is hereinafter referred to as Escrow Proposal Documents (EPDs). The EPDs will be held in a secure location at the Concessionaire’s office until immediately prior to award of the Fred



**Execution Version**

---

Ex Project. The EPDs of the Successful Offeror will be transferred to and then held in escrow at the institution specified in RFP Section 11.6.6. Attachment I (Escrow Proposal Documents Checklist) has been provided for reference.

**11.6.2 Ownership**

.1 The EPDs are, and shall always remain, the property of the Successful Offeror, subject to joint review by Concessionaire, the Successful Offeror, and VDOT, as provided herein.

.2 Concessionaire stipulates and expressly acknowledges that the EPDs constitute trade secrets. This acknowledgement is based on Concessionaire'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. Concessionaire 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. Concessionaire further acknowledges that the EPDs and the information contained therein are made available to Concessionaire only because such action is an express prerequisite to award of the Fred Ex Design-Build Contract. Concessionaire 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.

**11.6.3 Purpose**

EPDs will be used to assist in the negotiation of change orders and in the settlement of disputes and claims for the life of the Fred Ex Project. Specifically, the Concessionaire intends for the values set forth by the Offeror in the Pay Item Categories and Unit Prices of Section 4.8 of the RFP to be complete prices that represent the extent of the described work. A high level of detail and due-diligence by the Offeror is expected when preparing these price breakdowns that are critical for the Concessionaire and VDOT to make transparent and sound commercial decisions. The information in the EPDs and the Attachments described in Section 4.8 of the RFP may be used as components of change orders or to adjust the Fred Ex Project Scope to make the project commercially viable.

**11.6.4 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, 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 English.

**Execution Version**

---

.2 It is required that the EPDs clearly itemize the estimated costs of performing the work of each item contained in the Successful Offeror's Attachment D.2 (Fred Ex Project Scope Price Proposal), and Attachment D.3 (Schedule of Pay Items) required by RFP Section 4.8. Cost items shall be separated into sub-items as required to present a detailed cost estimate and allow a detailed cost review. 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 Concessionaire should not be included in the EPDs unless needed to comply with these requirements.

**11.6.5 Submittal**

.1 The EPDs shall be submitted in a sealed container to the individual set forth in RFP Section 2.4 above, which container shall be clearly marked on the outside with the Successful Offeror's name, date of submittal, Fred Ex Project name, and the words "Escrow Proposal Documents."

.2 Prior to award of the Fred Ex Design-Build Contract, EPDs of the Successful Offeror will be transferred to the institution referenced in RFP Section 11.6.6 and will be examined, organized, and inventoried by representatives of Concessionaire, together with members of the Successful Offeror's staff who are knowledgeable in how the Proposal was prepared. This examination is to ensure that the EPDs are legible and complete. It will not include review of, and will not constitute approval of proposed construction methods, estimating assumptions, or interpretations of any RFP Documents or the Fred Ex Design-Build Contract. Examination will not alter any condition or term of the Fred Ex Design-Build Contract.

.3 If all the documents required by RFP Section 11.6 have not been included in the original submittal, additional documentation may be submitted, at Concessionaire's sole discretion, prior to award of the Fred Ex Design-Build Contract.

**Execution Version**

---

.4 If the Fred Ex 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 the complete EPDs is the Successful Offeror's responsibility and a prerequisite to award of the Fred Ex Design-Build 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 Total Proposal Price proposed by the Successful Offeror, shall provide separate Escrow Documents to be included with those of the Successful Offeror. Such documents shall be opened and examined in the same manner and at the same time as the examination described above for the Successful Offeror.

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

**11.6.6 Storage**

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

SunTrust Bank  
919 East Main Street, Floor 7  
Richmond, Virginia 23219  
Attention: Corporate Agency Services  
Telephone: (804) 782-5400

The cost of storing the EPDs will be paid by the Concessionaire.

**11.6.7 Examination**

.1 The EPDs shall be examined by Concessionaire and the Design-Builder, at any time deemed necessary by Concessionaire, or by VDOT in accordance with the amended I-95/395 HOV/HOT Lanes Comprehensive Agreement for the Fred Ex Project.

.2 Concessionaire may delegate review of EPDs to members of Concessionaire'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 Concessionaire 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, Concessionaire may upon notice to the Design-Builder, review such documents without the Design-Builder being present.

**11.6.8 Final Disposition and Return of EPDs**

**Execution Version**

---

The EPDs of the Successful Offeror will be returned to the Design-Builder at such time as the Fred Ex Design-Build Contract has been completed, final payment has been made, and all claims or disputes arising under or related to the Fred Ex Design-Build Contract have been fully and finally resolved and/or adjudicated.

**11.6.9 Execution of Escrow Agreement**

The Successful Offeror, as a condition of award of the Fred Ex Design-Build Contract, agrees to execute Attachment J (Escrow Agreement).

**11.7 Administrative Requirements**

In addition to the specific submittal requirements set forth in RFP Sections 3.0 (General Procedures and Requirements) and 4.0 (Contents of Proposals), all Offerors shall comply with the following:

**11.7.1** All business entities, except for sole proprietorships, are required to be registered with the Virginia State Corporation Commission (a Business Registration Guide is available on the Internet at <http://www.state.va.us/scc/division/clk/brg.htm>). 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 ([http://www.dpor.virginia.gov/dporweb/ape\\_reg.pdf](http://www.dpor.virginia.gov/dporweb/ape_reg.pdf)). Board regulations require that all professional corporations and business entities that have branch offices located in Virginia which offer or render any professional services relating to the professions regulated by the Board be registered with the Board. Registration involves completing the required application and submitting the required registration fee for each and every branch office location in the Commonwealth. All branch offices that offer or render any professional service must have at least one full-time resident professional in responsible charge that is licensed in the profession offered or rendered at each branch. All firms involved that are to provide professional services must meet this criteria prior to a contract being executed by Concessionaire.

**11.7.2** Concessionaire will not consider for award any Proposals submitted by any Offerors and will not consent to subcontracting any portions of the proposed Fred Ex 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.

**11.7.3** 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.”

**11.7.4** Concessionaire assures compliance with Title VI of the Civil Rights Act of 1964, as amended. The consultant and all subconsultants selected for this Fred Ex Project will be required

**Execution Version**

---

to submit a Title VI Evaluation Report (EEO-D2) when requested by the Concessionaire to respond to the RFP. This requirement applies to all consulting firms with fifteen (15) or more employees.

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

**11.7.6** Execute and return the attached Attachment K (Certification Regarding Debarment Form(s) Primary Covered Transactions) and Attachment L (Certification Regarding Debarment Form(s) Lower Tier Covered Transactions) for the Offeror and any subconsultant, subcontractor, or any other person or entity on the Offeror's organizational chart included in the Technical Proposal.

If the Offeror and any subconsultant, subcontractor, or any other person or entity 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.

**11.7.7** The required services may involve the handling of VDOT 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 Fred Ex 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's 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.

**11.8 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 Fred Ex Project may render your RFP submittal, in the sole and reasonable discretion of Concessionaire, non-responsive and/or non-responsible, and in that event your RFP submittal may be returned without any consideration or evaluation for selection of contract award.

## 11.9 Attachments

The following attachments are specifically made a part of, and incorporated by reference into, this Request for Proposals:

ATTACHMENT A.1 – ACKNOWLEDGEMENT OF RECEIPT OF RFP REVISIONS AND/OR  
ADDENDA (TECHNICAL PROPOSAL) [Revision 1]

ATTACHMENT A.2 – ACKNOWLEDGEMENT OF RECEIPT OF RFP REVISIONS AND/OR  
ADDENDA (PRICE PROPOSAL)

ATTACHMENT B.1 – TECHNICAL PROPOSAL CHECKLIST [Revision 1]

ATTACHMENT B.2 – PRICE PROPOSAL CHECKLIST

ATTACHMENT C – PRICE PROPOSAL INSTRUCTIONS

ATTACHMENT D.1 – PRICE PROPOSAL FORM

ATTACHMENT D.2 – FRED EX PROJECT PRICE PROPOSAL

ATTACHMENT D.3 – SCHEDULE OF PAY ITEMS

ATTACHMENT E – OFFEROR’S STATEMENT

ATTACHMENT F – OFFEROR’S CERTIFICATION

ATTACHMENT G – PROPOSAL PAYMENT AGREEMENT

ATTACHMENT H – WAIVER OF PROPOSAL PAYMENT

ATTACHMENT I – ESCROW PROPOSAL DOCUMENTS CHECKLIST

ATTACHMENT J – ESCROW AGREEMENT [Revision 1]

ATTACHMENT K – CERTIFICATION REGARDING DEBARMENT; PRIMARY COVERED  
TRANSACTIONS

ATTACHMENT L – CERTIFICATION REGARDING DEBARMENT; LOWER TIER COVERED  
TRANSACTIONS

ATTACHMENT M – PROPOSAL GUARANTY FORM

ATTACHMENT N – FRED EX DESIGN-BUILD CONTRACT EXECUTION REQUIREMENTS  
[Revision 2]

ATTACHMENT ATC.1 – PRELIMINARY ATC SUBMISSION FORM [Revision 1]

ATTACHMENT ATC.2 – FINAL ATC SUBMISSION FORM [Revision 1]

ATTACHMENT ATC.3 – ATC RESPONSE FORM

ATTACHMENT ATC.4 – LIST OF APPROVED ATCs FORM

\* \* \* \* \*

**END OF PART 1**

**PART 2**  
**FRED EX PROJECT TECHNICAL REQUIREMENTS**

[ATTACHMENTS PROVIDED ON ENCLOSED DVD]

## **PART 2**

# **Fred Ex Project Technical Requirements**

---



This page intentionally left blank

## TABLE OF CONTENTS

<b>PURPOSE .....</b>	<b>ix</b>
<b>DEFINITIONS.....</b>	<b>ix</b>
<b>1            Project Management .....</b>	<b>1</b>
<b>1.1        Overview.....</b>	<b>1</b>
<b>1.2        Project Administration .....</b>	<b>1</b>
1.2.1    General Requirements .....	1
1.2.2    Not Applicable .....	2
1.2.3    Workers .....	2
1.2.4    Quality Management System Plan (QMSP).....	2
1.2.5    Submittals.....	5
1.2.6    Plans and Working Drawings .....	11
1.2.7    Location of Offices and Accommodations for Concessionaire’s Staff During the Project .....	12
1.2.8    Document Management System.....	14
1.2.9    Project Meetings.....	15
1.2.10    Source of Supply and Quality Requirements .....	16
1.2.11    Invoicing.....	17
<b>1.3        Project Development Plans .....</b>	<b>17</b>
1.3.1    General .....	17
1.3.2    Project Development Plans.....	17
1.3.3    Project Development Plan Updates .....	18
1.3.4    Submission Timetable .....	18
<b>1.4        Schedules .....</b>	<b>18</b>
1.4.1    Fred Ex Project Schedules .....	18
1.4.2    Initial Fred Ex Baseline Schedule .....	23
1.4.3    Baseline Schedule.....	24
1.4.4    Monthly Progress Reports and Project Schedule Updates.....	27
1.4.5    Weekly Reporting.....	30
1.4.6    Revisions To Baseline Schedule .....	30
1.4.7    Project Recovery Schedule.....	31
1.4.8    Time Impact Analysis (TIA) .....	31
1.4.9    Delay Claim Analysis (Non-Prospective) .....	33
1.4.10    Design-Builder Schedule Manager.....	33
<b>1.5        Standards and Specifications .....</b>	<b>34</b>
1.5.1    General Requirements .....	34
1.5.2    Interpretation of Standards and Specifications .....	34
<b>1.6        Right of Way .....</b>	<b>35</b>
<b>1.7        Utilities.....</b>	<b>39</b>
1.7.1    General Requirements .....	39
1.7.2    Design-Builder’s Responsibility for Utility Property and Services.....	44
1.7.3    Restoration of Work Performed by Others .....	45
<b>1.8        Work Restrictions .....</b>	<b>45</b>
1.8.1    General Requirements .....	45
1.8.2    Work Hours .....	46
1.8.3    Temporary Roadway Closures .....	46

**Execution Version**

1.8.4	Reversible Facilities .....	52
1.8.5	Lane Closure Types .....	53
1.8.6	Allowance for Additional Lane Closure Restriction by the Concessionaire and/or Design-Builder Request for Additional Lane Closures .....	53
1.8.7	Night Work.....	55
1.8.8	Law Enforcement Utilization .....	56
1.8.9	Size and Weight Limitations .....	56
1.8.10	Use of Explosives .....	57
1.8.11	95 Express Lanes.....	57
1.8.12	Holidays .....	58
1.8.13	Damage Recovery for Lane Closures .....	59
1.8.14	Marines Corps Base Quantico Work .....	60
1.8.15	Bridge and Road Closures .....	60
<b>1.9</b>	<b><i>Maintenance of Traffic</i></b> .....	<b>61</b>
1.9.1	General Requirements .....	61
1.9.2	Maintenance of Traffic during Construction .....	62
1.9.3	MOT During Operation for Routine Maintenance and Major Rehabilitation Maintenance Work.....	66
1.9.4	Transportation Management Plan.....	66
<b>1.10</b>	<b><i>Not Used</i></b> .....	<b>67</b>
<b>1.11</b>	<b><i>Third Parties and Permitting</i></b> .....	<b>67</b>
1.11.1	Permitting .....	67
1.11.2	Third Parties .....	68
1.11.3	Fire Hydrants.....	69
1.11.4	Construction Over or Adjacent to Navigable Waters .....	69
1.11.5	Other Permitting for Construction In, Over and/or Adjacent to Navigable Waters.....	70
1.11.6	Marines Corps Base Quantico .....	71
<b>1.12</b>	<b><i>Emergency Services</i></b> .....	<b>71</b>
1.12.1	Liaison.....	71
1.12.2	Emergencies and Extraordinary Circumstances .....	71
<b>1.13</b>	<b><i>Safety</i></b> .....	<b>72</b>
1.13.1	General Requirements .....	72
1.13.2	Construction Safety and Health Standards .....	73
<b>1.14</b>	<b><i>Adjacent VDOT Project Coordination</i></b> .....	<b>76</b>
1.14.1	General .....	76
1.14.2	Southbound Rappahannock River Crossing Project.....	78
1.14.3	Courthouse Road Interchange Project .....	79
<b>1.15</b>	<b><i>Sustainability</i></b> .....	<b>80</b>
1.15.1	General .....	80
1.15.2	Energy Use .....	80
1.15.3	Land and Water Use .....	80
1.15.4	Materials Use.....	81
1.15.5	Environmental Quality .....	82
1.15.6	Sustainable Procurement .....	82
1.15.7	Sustainability Plan .....	82
<b>2</b>	<b>Public Information and Communications</b> .....	<b>84</b>
<b>2.1</b>	<b><i>Public Information</i></b> .....	<b>84</b>
2.1.1	General Requirements .....	84
2.1.2	Interface and Liaison with the Concessionaire and VDOT .....	84
2.1.3	Project Communications Team .....	85

**Execution Version**

---

2.1.4	Integrated Design-Builder’s Communications, Consultation, Public Outreach, and Community Engagement Plan.....	86
2.1.5	Public Engagement and Awarenesss .....	87
2.1.6	Stakeholder Outreach and Information.....	87
<b>2.2</b>	<b><i>Media Relations</i></b> .....	<b>89</b>
2.2.1	Media Outreach .....	89
<b>2.3</b>	<b><i>Project Marketing</i></b> .....	<b>90</b>
2.3.1	Project Branding.....	90
2.3.2	Market Research and Analysis .....	90
<b>2.4</b>	<b><i>Elected Official and Agency Outreach</i></b> .....	<b>90</b>
<b>3</b>	<b>Design and Construction Requirements</b> .....	<b>91</b>
<b>3.1</b>	<b><i>General</i></b> .....	<b>91</b>
<b>3.2</b>	<b><i>Inspection of Work</i></b> .....	<b>93</b>
3.2.1	Inspection of Work.....	93
3.2.2	Removal of Unacceptable or Unauthorized Work.....	94
<b>3.3</b>	<b><i>Environmental</i></b> .....	<b>94</b>
3.3.1	Environmental Documentation.....	94
3.3.2	Water Quality Permits .....	96
3.3.3	Water Pollution .....	98
3.3.4	Hazardous Materials.....	99
3.3.5	Environmental Monitoring .....	101
3.3.6	Environmental Stipulations .....	102
3.3.7	Not Used.....	102
3.3.8	Air Quality.....	102
3.3.9	Noise Mitigation.....	103
3.3.10	Forests .....	106
3.3.11	Cultural Resources .....	107
3.3.12	Not Used.....	108
3.3.13	Section 4(f) Resources.....	108
3.3.14	Threatened and Endangered Species .....	109
<b>3.4</b>	<b><i>Geotechnical</i></b> .....	<b>110</b>
3.4.1	Geotechnical Design.....	110
3.4.2	Slope Design .....	113
3.4.3	Pipe Installation Methods .....	115
3.4.4	Geotechnical Exploration Plan Submission and Approval .....	115
3.4.5	Unsuitable Materials.....	117
3.4.6	Chemically Aggressive Soil Conditions .....	118
3.4.7	Vibration Control .....	119
3.4.8	Coordination and Review by Geotechnical Engineer.....	120
<b>3.5</b>	<b><i>Materials</i></b> .....	<b>120</b>
3.5.1	Rights for and Use of Materials Found on the Fred Ex Project.....	120
3.5.2	Not Applicable .....	120
3.5.3	Not Applicable .....	120
3.5.4	Not Applicable .....	120
3.5.5	Samples, Tests, and Cited Specifications .....	120
3.5.6	Material Delivery .....	120
3.5.7	Plant Inspections .....	121
3.5.8	Storing Materials .....	121
3.5.9	Handling Materials .....	122
3.5.10	Unacceptable Materials .....	122

**Execution Version**

3.5.11	Materials Furnished by the Concessionaire .....	122
3.5.12	Local Material Sources (Pits and Quarries) .....	122
3.5.13	Disposal Areas .....	124
<b>3.6</b>	<b><i>Drainage, Erosion and Siltation and Stormwater Management</i></b> .....	<b>125</b>
3.6.1	Drainage .....	125
3.6.2	Erosion and Siltation .....	128
3.6.3	Storm Water Pollution Prevention Plan and Virginia Stormwater Management Program General Permit for the Discharge of Stormwater from Construction Activities .....	130
<b>3.7</b>	<b><i>Roadway Design</i></b> .....	<b>135</b>
3.7.1	General Requirements .....	135
3.7.2	Requirements for Operational Analysis .....	136
<b>3.8</b>	<b><i>Pavement</i></b> .....	<b>137</b>
3.8.1	Minimum Pavement Sections .....	137
3.8.2	Temporary Pavement .....	142
<b>3.9</b>	<b><i>Traffic Engineering</i></b> .....	<b>143</b>
3.9.1	General .....	143
3.9.2	Pavement Markings .....	143
3.9.3	Static Signs .....	144
3.9.4	Traffic Signals .....	148
3.9.5	Roadway Lighting .....	150
3.9.6	Power.....	151
<b>3.10</b>	<b><i>Fences and Barriers</i></b> .....	<b>153</b>
<b>3.11</b>	<b><i>Aesthetics</i></b> .....	<b>153</b>
<b>3.12</b>	<b><i>Landscaping</i></b> .....	<b>155</b>
<b>3.13</b>	<b><i>Not Used</i></b> .....	<b>155</b>
<b>3.14</b>	<b><i>Bicycle and Pedestrian Facilities</i></b> .....	<b>155</b>
<b>3.15</b>	<b><i>Structures and Bridges</i></b> .....	<b>156</b>
3.15.1	General .....	156
3.15.2	Definitions .....	157
3.15.3	Design .....	157
3.15.4	Bridges & Structures .....	161
3.15.5	Retaining Walls .....	165
3.15.6	Modifications to Existing Culverts.....	167
3.15.7	Traffic Structures.....	168
3.15.8	Noise Barrier Walls .....	171
3.15.9	Not Used.....	172
3.15.10	Miscellaneous Requirements.....	172
<b>3.16</b>	<b><i>Tolling and Traffic Management System</i></b> .....	<b>172</b>
3.16.1	General .....	172
3.16.2	Existing ITS Infrastructure .....	173
3.16.3	Not Used.....	174
3.16.4	Not Used.....	174
3.16.5	Not Used.....	174
3.16.6	Not Used.....	174
3.16.7	Not Used.....	174
3.16.8	Not Used.....	174
3.16.9	Not Used.....	174
3.16.10	Traffic Management System (TMS).....	174
3.16.11	CCTV Video Coverage .....	176

**Execution Version**

3.16.12	Video-based AID.....	177
3.16.13	CCTV Video Recording.....	178
3.16.14	CCTV Communications Standards.....	178
3.16.15	Traffic Monitoring Sensors (Microwave Vehicle Detectors).....	178
3.16.16	DMS.....	179
3.16.17	Not Used.....	180
3.16.18	Communications Infrastructure.....	180
3.16.19	Existing VDOT TMS Roadside Equipment.....	182
3.16.20	Not Used.....	183
3.16.21	Not Used.....	183
3.16.22	Not Used.....	183
3.16.23	Not Used.....	183
3.16.24	Not Used.....	183
3.16.25	Not Used.....	183
3.16.26	Testing.....	183
3.16.27	Not Used.....	185
3.16.28	Not Used.....	185
3.16.29	Concessionaire Testing and Integration Obligations.....	185
3.16.30	Roadway Gates.....	185
3.16.31	Maintenance Access.....	186
3.16.32	Specified New ITS Roadside Equipment.....	187
3.16.33	Maintenance of 95 Express Lanes Operating Systems.....	188
3.16.34	Impacts to 95 Express Lanes Facilities and Operations.....	188
3.16.35	Notification of Impact (NOI) to Concessionaire and VDOT Equipment.....	188
3.16.36	Enforcement Areas.....	191
3.16.37	Electronic Tolling.....	191
3.16.38	Vehicle Occupancy Detection System.....	192
3.16.39	Integrated Roadside Units.....	193
<b>3.17</b>	<b><i>Maintenance During Construction</i></b> .....	<b>193</b>
<b>3.18</b>	<b><i>As-Built Documents</i></b> .....	<b>195</b>
<b>3.19</b>	<b><i>Surveys</i></b> .....	<b>199</b>
<b>3.20</b>	<b><i>Security</i></b> .....	<b>201</b>
3.20.1	General Requirements.....	201
3.20.2	Design-Builder’s Responsibility During Suspension of Construction.....	202
<b>3.21</b>	<b><i>Not Used</i></b> .....	<b>202</b>

## ATTACHMENTS

- 1.0 Fred Ex Project Scope of Work
- 1.3 Project Development Plans
- 1.5a Standards and Specifications
- 1.5c Approved Design Exceptions and Design Waivers
- 1.13 Health, Safety and Environment Requirements
- 3.4a Fred Ex Project Geotechnical Data Report
- 3.4b Settlement of Structures
- 3.9a E-ZPass Pavement Logo
- 3.9b Pavement Markings
- 3.16a TTMS Special Provisions
- 3.16b Notice of Impacts to Existing TMS Assets

This page intentionally left blank



## TECHNICAL REQUIREMENTS

### PURPOSE

The purpose of these Technical Requirements is to identify the minimum scope and technical requirements to develop the I-95 Express Lanes Extension to Fredericksburg Project (“Fred Ex Project” or “Fred Ex”). The Work required by the Technical Requirements will be undertaken by or on behalf of the Design-Builder.

Refer to Attachment 1.0 for a general summary of the scope of the Fred Ex Project and the Work.

### ACRONYMS

<b>Acronym</b>	<b>Definition</b>
AACE	American Association of Cost Engineers
AFC	Approved for Construction
AMRL	AASHTO Material Reference Laboratory
BCWP	Budgeted Cost of Work Performed
BCWS	Budgeted Cost of Work Scheduled
BMS	Building Management System
BPPS	Bridge Pier Protection System
CADD	Computer Aided Drafting and Design
CCI	Critical Condition Index
CRM	Customer Relations Management
CTA	Cement Treated Aggregate
DBE	Disadvantaged Business Enterprise
DE	Design Exception
DMS	Dynamic Message Sign
DW	Design Waiver
EDMS	Electronic Document Management System
EPA	Environmental Protection Agency
ETTM	Electronic Tolling and Traffic Management
FDC	Field Design Change
FHWA	Federal Highway Administration
F.O.B.	Free on Board
GCS	Gate Control System
GP	General Purpose
HOT-OC	HOT (Express Lanes) Operations Center
HPC	High Performance Concrete
HPS	High Performance Steel
HSE	Health, Safety and Environment
ICD	Interface Control Document
ID	Asset Identification
IIM	Instructional and Informational Memorandum

## Execution Version

<b>Acronym</b>	<b>Definition</b>
IDMS	Incident Detection and Monitoring System
IPPM	Internal Policy/Procedure Memorandum
IRI	International Roughness Index
JOMP	Joint Operating and Maintenance Protocols
KPI	Key Performance Indicators
LCAMS	Lane Closure Advisory Management System
LDR	Load-related Distress Rating
LL	Live Load
LPN	License Plate Number
LRFD	Load and Resistance Factor Design
MATOC	Metropolitan Area Transportation Operations Coordination
MLHCC	Modified Latex Hydraulic Cement Concrete
MOMS	Maintenance Online Management System
MPSTOC	McConnell Public Safety and Transportation Operations Center
MCBQ	Marines Corps Base Quantico
MRP	Maintenance Rating Program
MSE	Mechanically Stabilized Earth
MUA	Master Utility Agreement
NADR	Noise Abatement Design Report
NATR	Noise Analysis Technical Report
NBIS	National Bridge Inspection Standards
NCR	Non-Conformance Report
NDC	Notice of Design Change
NDR	Non Load-related Distress Rating
NRO	Northern Regional Operations
NTCIP	National Transportation Communications for ITS Protocol
O&M	Operations and Maintenance
OCR	Optical Character Recognition
ORT	Open Road Tolling
OSPS	Operating Speed Performance Standard
PDM	Precedence Diagram Method
PE	Professional Engineer
PIP	Public Information Plan
PS&E	Plans, Specifications, and Estimate
PVC	Polyvinyl Chloride
RWIS	Road Weather Information System
SPI	Schedule Performance Index
SWaM	Small, Women- and Minority-owned Business Enterprise
T&DI	Toll and Driver Information
TAMS	Turnkey Asset Maintenance Services
TCP	Traffic Control Plan
TCRO	Traffic Control Room Officers
TOC	Traffic Operations Center

**Execution Version**

---

<b>Acronym</b>	<b>Definition</b>
TS&L	Type, Size, and Location
UIT	Ultrasonic Impact Testing
VDEM	Virginia Department of Emergency Management
VDOT	Virginia Department of Transportation
VECTOR	Virginia Evacuation Coordination Team for Operational Response
VES	Vehicle Enforcement System
VOD	Vehicle Occupancy Detection
VOS	Volume, Occupancy & Speed
VSLs	Variable Speed Limit Signs
WBS	Work Breakdown Structure

## DEFINITIONS

**Capitalized terms used but not otherwise defined have the respective meanings set forth in Exhibit 1.2.1 to Part 4 (General Conditions) of the Fred Ex Design-Build Contract. In addition, the following terms have the meanings specified below:**

**Best Efforts** means exerting every available resource and allowing sufficient time (a minimum of 30 days) to settle claims with landowners amicably.

**Bridge Class Culvert** is as defined in Section 3.15 of the Technical Requirements.

**Consolidation Settlement** is as defined in AASHTO LRFD Bridge Design Specifications Section 10.6.2.4.

**Design-Builder** means BRANCH-FLATIRON, JOINT VENTURE.

**Design Exception** is defined as a document required where it is either impractical or not economical to obtain the AASHTO minimum design criteria as shown in the Geometric Design Tables. In such a case, an exception shall be secured from the State Location and Design Engineer and FHWA (if applicable).

**Design Waiver** is defined as a document required when deviations from VDOT's design criteria occur. When design criteria meet or exceed AASHTO minimal design but fall short of VDOT's minimal design, a Design Waiver shall be required. Design Waivers will be applicable to all projects regardless of functional classification and funding and shall be documented and approved in accordance with the Design Waiver Request form LD-448.

**Disaster Recovery Plan** is as defined in Section 3.16.24 of the Technical Requirements.

**Elastic Settlement** is as defined in AASHTO LRFD Bridge Design Specifications Section 10.6.2.4.

**Federal Degradation Standard** is as defined in Section 4.4.5 of the Technical Requirements.

**Fred Ex Design-Build Contract** means the contract between the Concessionaire and Design-Builder for design and construction of the the Project.

**Fred Ex TTMS Contract** means the contract between the Concessionaire and TTMS Contractor for the design and construction of the tolling and traffic management systems for the Project.

**Free Flow** means conditions where vehicular traffic can maintain generally consistent speeds without experiencing undue delay or breakdown in flow.

**International Roughness Index (IRI)** is the standard measure of ride quality used by VDOT.

**Load-related Distress Rating (LDR)** is a deduct-based index having a value of 100 when the pavement being evaluated has no discernible load-related distress.

**Major Rehabilitation** is as defined in Section 3.15.5.3 of the Technical Requirements.

**Mainline** is the primary roadway in which the traffic sensors for speed and other traffic data operate excluding auxiliary lanes, collector-distributor roads or ramps.

**Monthly Progress Earning Schedule** is as defined in Section 1.4.1.C of the Technical Requirements.

**Execution Version**

---

**Noon** is 12:00 p.m. Eastern.

**Non Load-related Distress Rating (NDR)** is a deduct-based index similar to the Load Rated Distress Rating (LDR) except that the distresses assigned to the index are non-load rated.

**Notification Center** is as defined in Section §56-265.15. of the Code of Virginia.

**Peak Period** is the period from 5:30 a.m. – 9:00 a.m. and/or 4:00 p.m. – 7:00 p.m., Monday through Friday, excluding holidays.

**Percent Degradation** is defined in Section 4.4.4.C of the Technical Requirements.

**Permit to Work** – means authorization or approval from the Concessionaire and/or its operating entities to perform specific activities within the limits of the 95 Express Lanes.

**Potomac Formation (silts/clays)** are silts/clays defined as such in the Geologic Map of Virginia published by the Virginia Division of Mineral Resources.

**Project (or Fred Ex Project)** is the extension of the 95 Express Lanes in Stafford County, Virginia, from the current southern terminus of the 95 Express Lanes near Route 610 (Garrisonville Road) to Route 17 (Warrenton Road) as more fully described in Attachment 1.0.

**Project Recovery Schedule** is the schedule submitted by the Design-Builder to the Concessionaire whenever the Monthly Progress Report shows the Fred Ex Final Completion Date has 30 days of negative float; Project Recovery Schedule submittals shall include a list of all activities changed, added or deleted along with all logic changes, and an accompanying narrative explaining the nature of the changes.

**Project Roll Plan** is a scaled signage plan or plans showing proposed, existing, or relocated DMS and static signs required along I-95 and connecting roadways for the Fred Ex Project.

**Quality Assurance Manager** means the person reporting to the Design-Builder’s Project Manager responsible for the independent process of determining conformance of work by examining the quality control data.

**RFP Conceptual Plans** means the schematic drawings used as the basis for the Request for Proposals and its supporting technical documents.

**Secondary Settlement** is as defined in AASHTO LRFD Bridge Design Specifications Section 10.6.2.4.

**Security Plan** is as defined in Section 3.16.23 of the Technical Requirements.

**Standard Documents** means the standards, specifications, standard drawings, and special provisions listed in Attachment 1.5a to the Fred Ex Technical Requirements – Standards and Specifications.

**Standard of Care** means using logical, rational, and common sensible calculation and precaution in determining whether there is reason to believe that property to be acquired for rights of way may contain concealed or hidden wastes or other materials or hazards requiring remedial action or treatment.

**Station** is one or more traffic monitoring sensors at a single location used to collect traffic volume, lane occupancy, and speed data on the HOT Lanes.

**Execution Version**

---

**Substandard Station** is a Station whose weighted average speed over the a.m. or p.m. Peak Period falls below the minimum average operating speed defined for each degradation standard.

**Substructure** means the part of a structure that is below the bearings of simple and continuous spans, skewbacks of arches, and tops of footings of rigid frames, together with the back walls, wingwalls, and wing protection railings.

**Superstructure** means the portion of a structure that is not defined as substructure.

**Trail Blazer Roll Plan** is a scaled signage plan or plans showing proposed, existing, or relocated static signs on highways, feeder roads, and other roadways notifying motorists of the access to I-95 Express Lanes.

**TTMS Contractor** is Transurban (USA) Inc., a Delaware corporation.

# 1 Project Management

## 1.1 Overview

- A. The Design-Builder acknowledges that Concessionaire review, concurrence, approvals, inspections, variations, and acceptance shall be subject to VDOT review, concurrence, approvals, inspections, variations, and acceptance. The Design-Builder also acknowledges that Concessionaire review, concurrence, approvals, inspections, variations, and acceptance may be subject to third-party review, concurrence, approvals, inspections, variations, and acceptance. Third-parties may include, but not be limited to FHWA and other appropriate governmental agencies.
- B. The Design-Builder shall establish and maintain an organization that effectively manages all elements of the Fred Ex Project. The Fred Ex Project management effort will be defined and guided by the Fred Ex Project Development Plans (PDPs), as described in Attachment 1.3.
- C. Fred Ex Project management activities shall include, but not be limited to, scope, schedule, cost, safety and document management, and will be consistent with the Work Breakdown Structure (WBS) developed by the Design-Builder.

## 1.2 Project Administration

### 1.2.1 General Requirements

- A. The Design-Builder's management approach shall provide all components of an effective and efficient management system, including communication and reporting; documentation of Work; supervision of Work personnel and activities; all tools, facilities, and materials; environmental protection and mitigation; safety of Work personnel; and any other management elements needed to produce and document a quality, safe, efficient, and operable Fred Ex Project.
- B. All prospective Contractors, subcontractors, lower tiers subcontractors, and prime contractors of joint ventures shall prequalify with VDOT and shall have received a certification of qualification. All prospective Contractors and subcontractors reporting directly to the Design-Builder shall also be prequalified with VDOT and shall have received a certification of qualification.
- C. The Design-Builder shall not subcontract any part of the Work to a Contractor who is not prequalified with VDOT. This restriction does not apply to consultants, manufacturers, suppliers, or haulers. Consent to subcontract or otherwise delegate any portion of the Work shall not relieve the Design-Builder of any responsibility for the fulfilment of the Fred Ex Design-Build Contract. Further, delegation or subcontracting of the Design-Builder's responsibilities shall not diminish the Design-

**Execution Version**

---

Builder's obligation to report directly to the Concessionaire, unless the Concessionaire expressly agrees to accept reports or communications from third parties.

**1.2.2 Not Applicable****1.2.3 Workers**

- A. Each party shall notify the other party, in writing, if they believe any person employed by VDOT, the Concessionaire, the Design-Builder, TTMS Contractor, or any subcontractor:
1. Is not performing his or her work in a proper or skillful manner;
  2. Is intemperate or disorderly; or
  3. Is acting in an unsafe manner.
- B. The party receiving the notice will immediately investigate the specifics of the notification and provide a response to the party initiating the notification, within 5 days, detailing a plan of action to resolve the written concerns. If the employees' actions create an unsafe environment for the Design-Builder's workers, Concessionaire personnel, VDOT personnel or travelling public, the notified party will immediately stop the operations to resolve safety issues in accordance with the Fred Ex Design-Build Contract.

**1.2.4 Quality Management System Plan (QMSP)**

- A. The Design-Builder shall establish and maintain a documented QMS in accordance with Attachment 1.3 to ensure Project quality objectives are satisfied. The QMS requirements shall extend to Design-Builder's entire organization.
- B. The Design-Builder shall submit its quality assurance and quality control (QA/QC) plans for both design and construction to the Concessionaire prior to any design submittals or construction as set forth in these Technical Requirements. Along with the QA/QC plan submittal, the Design-Builder shall provide a presentation of the QA/QC plan for both design and construction utilizing Fred Ex Project related scenarios. Fred Ex Project scenarios shall include, but not be limited to:
1. Preparatory Inspection Meeting requirements, including incorporation of at least one each, Witness and Hold Point, as set forth in Sections 5.3 and 5.14 of the VDOT'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);
  2. At least one (1) material which VDOT retains responsibility for testing as identified in Table 5-2, July 2018 QA/QC Guide;
  3. Situation arising requiring the issuance of a Non-Conformance Report and subsequent review of the report, including completion of corrective



**Execution Version**

---

measures and the issuance of a Notice of Correction of non-conformance work with proper log entries and proper interface with auditing and recovery requirements as set forth in Sections 5.10 and 5.11 of the July 2018 QA/QC Guide for non-conforming work resulting from:

- (i) defective equipment
  - (ii) construction activities/materials which fail to conform as specified in the Technical Requirements;
4. Inspection documentation capturing requirements as set forth in Section 5.20 and 5.21 of the July 2018 QA/QC Guide; as well as inspection of foundation and pavement subgrades that are to be performed and certified by the Design-Builder's licensed geotechnical engineer in accordance with the Fred Ex Design-Build Contract;
  5. Application for payment for Work Package which includes work element, including review and approval by Quality Assurance Manager;
  6. Measures that will be implemented to ensure compliance with Buy America requirements on the Fred Ex Project; and
  7. Detail two (2) sample entries in Materials Notebook showing completion of Form C-25, including subsequent submission and review by the VDOT as set forth in Section 5.21 of the July 2018 QA/QC Guide. Refer to Section 803.73 of VDOT's Manual of Instruction for Materials Division, Form TL-142S, for an example of a completed Materials Acceptance and Materials Notebook, refer to Chapter VII of VDOT Materials Division Manual of Instructions.
- C. 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 Quality Assurance Manager (QAM) shall be responsible for establishing and overseeing a QA/QC program for all pertinent disciplines involved in the design of the Fred Ex Project, including review of design, working plans, shop drawings, specifications, and constructability of the Fred Ex Project. The QAM shall be responsible for ensuring that the inspection, integration, and testing plan established by the Design-Builder and approved by the Concessionaire is properly executed, variances are reported and corrective actions are made. 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 Fred Ex Project 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 Fred Ex Project design control plan will provide Concessionaire assurance that the design plans and submittals will meet all requirements of the Fred Ex Project Contract Documents. The QAM shall verify that all design related Work Packages submitted

**Execution Version**

---

for payment have been certified by the Design Manager as being in conformance with the Fred Ex Project Contract Documents and the Design Quality Management Plan. The Design-Builder or its designees shall be responsible for all quality assurance and quality control activities required to manage its own processes as well as those of its contractors, subcontractors, and suppliers of any tier.

- D. Appendix 2 of the July 2018 QA/QC Guide provides minimum requirements that shall be met for development of the Design Quality Management Plan.
- E. The Design-Builder shall develop, execute, and maintain a Construction Quality Management Plan for the full duration of the Contract in accordance with the July 2018 QA/QC Guide. The Design-Builder's QAM 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 Fred Ex 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.
- F. The QAM shall have the authority and responsibility to enforce the Fred Ex Design-Build Contract and the Agreement requirements when deficient materials or unsatisfactory finished products fail to conform to the requirements of the Fred Ex Design-Build Contract and the Agreement. 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 requirements of the Fred Ex Design-Build Contract. The Design-Builder shall establish and maintain a Quality Assurance Auditing and Nonconformance Recovery Plan (AR Plan) for uniform reporting, controlling, correction and disposition and resolution of nonconformance (including disputed nonconforming items) issues that may arise on the Fred Ex Project. The Design-Builder's AR Plan shall establish a process for review and disposition of nonconforming workmanship, material, equipment or other construction and design elements of the Work including the submittal of the design review process for field changes. All deficiencies (hereinafter referred to as a Non-Conformance), including those pertaining to rules, regulations, and permit requirements, shall be documented by the QAM. A Non-Conformance Report (NCR) referenced by a unique number, shall be forwarded to the Concessionaire and the Design-Builder within 24 hours of discovery of the Non-Conformance. Non-conformance procedures are provided in Section 5.10.5 of the July 2018 QA/QC Guide.
- G. The Design-Builder also shall be responsible for providing QA and QC testing for all materials manufactured off-site. The Design-Builder may use the VDOT's resources for the following construction quality control activities where VDOT routinely provides these services:

**Execution Version**

---

1. offsite programmatic inspection, including supplier plant acceptance inspections;
2. offsite programmatic testing, including supplier plant acceptance testing; and
3. Items on the VDOT's pre-approved list.

Inspection by the VDOT Representative shall not relieve the Design-Builder of any obligation to furnish acceptable materials and to provide acceptable engineered designs and completed construction that is in accordance with Fred Ex Design-Build Contract.

**1.2.5 Submittals**

- A. The Design-Builder shall or shall cause to be coordinated, delivered, and processed, all submittals to the Concessionaire as required by the Fred Ex Design-Build Contract.
- B. The Design-Builder shall cause all draft, revised, and final submittals to be accurate, complete, and in a form and at a level of detail to enable the Concessionaire to satisfactorily discharge its review and approval obligations. All plans shall be prepared in US Customary Units in accordance with the most recent version of the VDOT Road Design Manual, VDOT CADD Manual, VDOT IIM's, and VDOT's Manual of Structures and Bridge Division Volume V, Part 2, Design Aids and Typical Details. The Design-Builder shall prepare plans for each of the following deliverables (at a minimum, as other submittals and/or work packages may be necessary or desired):
  1. Right of Way Plans
  2. Construction Plans
  3. Right of Way and/or Construction Revisions
  4. Record Plans (As-Built)
  5. Approved Shop Drawings
  6. Design Calculations
- C. The bridge plans must use the standard sheets in the VDOT Manual of Structure and Bridge Division (all parts). Structural elements that have a corresponding standard sheet in the VDOT Manual of Structure and Bridge Division must be detailed using the appropriate standard sheet. The sequence of concrete deck placement operations for beams or girder construction shall be given for continuous structures, and all erection stresses shall be computed where necessary for design. A summary table of moments, shears, reactions and stresses for primary load carrying members shall be included in the plans.
- D. The Right of Way and/or Construction plans may be submitted for approval in logical subsections (such as from bridge to bridge) or consisting of work packages such as: 1) clearing and grubbing along with erosion and siltation control, 2) grading and

**Execution Version**

---

drainage, 3) final roadway, (including signing and pavement marking, utilities and lighting plans), Tolling and Traffic Management Plans, and 4) traffic control. Individual bridge plans may be submitted in logical components such as: 1) foundation, 2) remaining substructure, and 3) superstructure. A submittal schedule and planned breakdown of work packages shall be submitted to Concessionaire for review and approval as part of the planned Project Baseline schedule. The submittal schedule shall be updated monthly and all past due submittals and required resubmittals shall be forecasted.

- E. Right of Way and/or Construction Plan submittals 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:
1. The logical subsections or work packages for which review and approval is being requested
  2. Confirmation that the submittal has been checked and reviewed in accordance with the Design-Builder's approved QA/QC plan.
  3. 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 Concessionaire.
- F. Subject to applicable confidentiality requirements as required by Law, the Design-Builder shall issue to the Concessionaire or make available through an Electronic Document Management System (EDMS) or other type of approved electronic storage and retrieval system, hard copies and electronic copies of all correspondence, meeting minutes, and other external documents (including emails) constituting any and all material Fred Ex Project communications with:
1. Governmental Authorities;
  2. Business and Fred Ex Project stakeholders;
  3. Landowners;
  4. News media;
  5. Utilities;
  6. Railroads; and
  7. Community stakeholders.
- G. The Design-Builder shall provide all Design Documentation and Construction Documentation as both hard-copy and electronic files as per VDOT CADD Manual. These documents will be deemed "received" by the Concessionaire (thereby triggering the applicable timeframe for review) on submission of both the electronic and hard copy files, inclusive of all required information necessary to perform a complete review. Packages received after 3:00pm will be deemed received the

**Execution Version**

---

following business day. The Concessionaire will notify the Design-Builder within seven days if the package is incomplete. These documents will include (but are not limited to) the following items:

1. Design calculations and analysis;
  2. Mix designs;
  3. Reports, studies, and investigations;
  4. Fred Ex Project Schedule;
  5. Design Public Hearing and Public Meeting Documentation;
  6. Design Documentation for field inspection and right-of-way;
  7. Detailed design submittal and Approved for Construction (AFC) documents, construction sketches, shop drawings, and diagrams;
  8. Soil boring logs, laboratory test results, quality control records and audit and all other testing and inspection documentation, etc.;
  9. Material communications relating to Design Documentation and Construction Documentation;
  10. Responses to reviewed comments from the Concessionaire;
  11. Change Orders (including all related communications and disputes resolution proceedings);
  12. Governmental Approvals; and
  13. Third party approvals.
- H. Design submittals will be submitted in \*.pdf format and hard copy. Final for Approval and AFC Documents will include the CADD files in \*.dgn format, \*.pdf format, and hard copy.
- I. The Concessionaire may request the Design-Builder provide CADD \*.dgn files at interim design submittals to facilitate review.
- J. The Design-Builder will be required to provide three hard copies of all submittal documents for the Concessionaire's and VDOT's records within 1 business day of submittal via the Fred Ex Project EDMS. Five hard copies of all Approved for Construction documents shall be provided within 2 business days of the electronic submittal via the Fred Ex Project EDMS. Hard copies of plan sheets shall be 11" x 17".
- K. The Concessionaire will be required to provide two hard copies of all submittal documents for VDOT's records and two hard copies of all Approved for Construction documents for FHWA's records.

**Execution Version**

---

- L. The Design-Builder shall transfer all electronic document submittals into the Fred Ex Project EDMS as defined in Section 1.2.8 or through a secure website maintained by the Concessionaire. All files shall be well organized and easy to locate in accordance with the Fred Ex Design-Build Contract. The file transfer shall be conducted as follows:
1. E-mail may be used to notify the Concessionaire of the availability of the document files, and if a file transfer protocol or SharePoint website or other type of approved electronic data storage and retrieval system is used, the e-mail must include a link to the document file to facilitate access and download.
- M. Whenever the Design-Builder is obligated to make a submittal pursuant to the Fred Ex Design-Build Contract, the Design-Builder shall include with such submittal the signed cover sheets described below.
1. A cover sheet, signed by the Design-Builder's Representative, that includes the following certification:
    - (i) The Design-Builder certifies or has caused to be certified that [description of submittal] was prepared by professionals having the requisite qualifications, certifications, credentials, skills, and experiences needed to prepare the submittal in accordance with the requirements of the Fred Ex Design-Build Contract (including good industry practice).
    - (ii) The Design-Builder certifies or has caused to be certified that it has reviewed the submittal for completeness; the submittal accurately depicts the Work to be undertaken or performed; and the submittal was prepared in accordance to, and otherwise complies with:
      - a. the Fred Ex Design-Build Contract (including good industry practice);
      - b. the Technical Requirements;
      - c. the approved QMSP;
      - d. applicable Law; and
      - e. Governmental Approvals.
  2. A cover sheet, signed by the Contractor (or Designer) who prepared or is otherwise in responsible charge of the submittal, that includes the following certification:
    - (i) [The name of Contractor (or Designer)], which is under contract with the Design-Builder to perform services related to the Fred Ex Design-Build Contract, certifies that it prepared or is otherwise in responsible charge of the [description of submittal].

Execution Version

---

- (ii) The [description of submittal] was prepared by professionals having the requisite qualifications, certifications, credentials, skills, and experiences needed to prepare the submittal in accordance with good industry practice and the requirements of the Fred Ex Design-Build Contract.
  - (iii) The [description of submittal] is complete and accurately depicts the Work to be undertaken or performed; and the submittal was prepared in accordance with, and otherwise complies with:
    - a. the Fred Ex Design-Build Contract (including good industry practice);
    - b. the Technical Requirements;
    - c. the approved QMSP;
    - d. applicable Law; and
    - e. Governmental Approvals.
- N. The Design-Builder shall include in the Initial Fred Ex Baseline Schedule and in all other Fred Ex Project Schedules all proposed major design and construction submittals that will require the Concessionaire’s review and approval.
- O. The Design-Builder shall submit to the Concessionaire for its review and approval, a Submittal Register, including the schedule for the submission of Design Documentation and Construction Documentation by the Design-Builder to the Concessionaire. The purpose of this Submittal Register is to allow for proper allocation of resources to review the submissions. The Submittal Register shall be approved by the Concessionaire prior to the submission of any Design Documentation and/or Construction Documentation to the Concessionaire by the Design-Builder. The Submittal Register shall identify all submittal packages that the Design-Builder intends to submit for review. Submittal packages not included in the approved Submittal Register will not be reviewed without prior approval by the Concessionaire.
- P. Following the commencement of Design Work, the Design-Builder shall provide monthly updates to the Submittal Register referenced above in its Monthly Progress Report. More frequent updates may be requested by the Concessionaire and the Design-Builder shall reasonably comply with such update requests.
- Q. The Design-Builder shall develop and maintain a submittal tracking log for the submission of all Design Documentation and Construction Documentation. The submittal tracking log shall be accessible by the Concessionaire, Design-Builder, and VDOT. The purpose of this submittal log is to allow for accurate and transparent tracking of all submissions.

**Execution Version**

---

- R. Unless otherwise mutually agreed by all parties, weekly submittal status meetings will be held to review all anticipated submittals, current submittals and pending re-submittals.
- S. If at any given time the Design-Builder makes multiple submittals, the Design-Builder shall indicate to the Concessionaire the priority assigned to each submittal to foster a timely and coordinated review by the Concessionaire.
- T. Documents that will be reviewed and approved by the Concessionaire include the AFC Construction Documentation covering individual work packages, including interface points used by the Design-Builder during its design review process, the Design Public Hearing Documentation, Design Documentation for field inspection and right-of-way, and all changes to the AFC Plans including Notice of Design Changes (NDCs), Field Design Changes (FDCs), and Non-Conformance Reports (NCRs).
1. The Design-Builder shall submit all major design submittals to the Concessionaire at each of the following Design Submittal stages. The Design-Builder may elect to omit those stages noted below as optional, however, all cost and schedule risk associated with such omission shall be the Design-Builder's:
    - (i) (Optional) Interim: less than 100% complete – submission shall include an indication of the submittal's percentage of completeness to ensure the Concessionaire's review comments are appropriate for the submission.
    - (ii) (Optional) Final for Review: 100% complete – submission will be reviewed with expectation of being 100% complete and review comments will be provided to the Design-Builder.
    - (iii) Final for Approval: 100% complete – submission will be reviewed with expectation of being 100% complete and ready for construction.
    - (iv) Approved for Construction Documents (AFC Documents)– Immediately following approval of the Final for Approval submittal, distribution of approved documents to be used for construction.
- U. AFC Documents shall include all drawings, specifications, revisions thereto, and any other items necessary to construct the Work, which shall be sealed by a Professional Engineer licensed in the Commonwealth of Virginia. Prior to submission of AFC Documents to the Concessionaire for review and approval, the Design-Builder shall complete or shall cause to be completed a review of the AFC Documents.
- V. The Concessionaire may request interim submittals at any time for any of the above noted items for complex or unusual elements of the Work, or for elements where no applicable standards exist, if the Concessionaire can reasonably demonstrate that



**Execution Version**

---

additional information is necessary to complete review of any such Work. Such interim submittals shall be developed to address the Concessionaire specific requests for information and shall be submitted within ten (10) days from the request by the Concessionaire, or other such timeframe as may be mutually agreed.

- W. Required submittals, excluding the interim submittals outlined in the Fred Ex Design-Build Contract, to be signed and sealed by professional licensure licensed in the Commonwealth of Virginia.
- X. The Concessionaire’s review of the Design-Builder’s submittals will relate only to conformance to and compliance with the requirements of the Fred Ex Design-Build Contract. Any deviation from the requirements of the Fred Ex Design-Build Contract must be specifically described and accompanied by explicit supporting justification. The Concessionaire’s review shall not relieve the Design-Builder of responsibility for errors and/or omissions in the submittals.

**1.2.6 Plans and Working Drawings**

- A. The Design-Builder shall furnish all plans and drawings showing such details as are necessary to give a comprehensive understanding of the Fred Ex Work specified. Except as otherwise shown on the plans, dimensions shown on the plans are measured in the respective horizontal or vertical planes. Dimensions that are affected by gradients or vertical curvatures shall be adjusted as necessary to accommodate actual field conditions and shall be specifically denoted on the working drawings.
- B. The Design-Builder shall furnish working drawings to the Concessionaire.
- C. Working drawings shall not incorporate any deviations from the Technical Requirements unless the changes are specifically denoted, together with justification, and are approved in writing by the Concessionaire in accordance with the Fred Ex Design-Build Contract. The Design-Builder shall identify working drawings and submittals by the complete State project and job designation numbers. Items or component materials shall be identified by the specific item number and specification reference in the Fred Ex Design-Build Contract.
- D. A Professional Engineer licensed in the Commonwealth of Virginia shall certify working drawings for, but not limited to, falsework supporting a bridge superstructure; concrete structures and pre-stressed concrete members; lighting, signal, and pedestrian poles; electrical and communication systems infrastructure; sign structures; breakaway support systems; anchor bolts; toll gantries; retaining walls and foundations.
- E. The Design-Builder shall provide one electronic version in a format acceptable to the Concessionaire of working drawings for which the Concessionaire’s review is required in accordance with the Fred Ex Design-Build Contract. The Concessionaire will return reviewed working drawings to the Design-Builder within 28 days. If a railroad, municipality, or other entity as specified in the Fred Ex Design-Build

**Execution Version**

---

Contract or on the plans is required to review the working drawings, the Design-Builder shall submit to the Concessionaire a plan of operations showing the design and method of proposed operations and shall provide the Concessionaire evidence of approval by railroad, municipality, or other entity providing approval before performing any work. The plans shall be clear and legible, and details shall be drawn to scale.

- F. Prior to manufacture of non-standard items, the Design-Builder shall furnish to the Concessionaire a certification of the acceptability of the design of such non-standard item, as determined from a review which shall be made on behalf of the Design-Builder by a Professional Engineer licensed in the Commonwealth of Virginia. Such certification shall cover all design data, supporting calculations and materials. Non-standard designs previously certified or approved by the Concessionaire will not require recertification.
- G. The Concessionaire's review of the Design-Builder's working drawings will relate only to conformance to and compliance with the requirements of the Fred Ex Design-Build Contract. Any deviation from the requirements of the Fred Ex Design-Build Contract must be specifically described and accompanied by explicit supporting justification. The Concessionaire's review shall not relieve the Design-Builder of responsibility for errors and/or omissions in the working drawings.
- H. If the Contract Documents need to be revised after AFC issuance, then the Design-Builder shall use a FDC or NDC to document the change and receive concurrence from the Concessionaire. Notice of Design Changes (NDC) and Field Design Changes (FDC) that are required after issuance of the Concessionaire's approval of the Approved for Construction (AFC) drawings must be resubmitted to the Concessionaire for review prior to implementation of construction associated with the NDC or FDC. All reviews require an accelerated review and approval process. NDC and FDC review/approval shall be given by the Concessionaire within fourteen (14) days of submittal to the Concessionaire. Any basis for disapproval must be submitted to the Design-Builder in writing by the Concessionaire.
- I. The plans and working drawings shall be appropriately signed and sealed by professional licensure licensed in the Commonwealth of Virginia, as applicable.

**1.2.7 Location of Offices and Accommodations for Concessionaire's Staff During the Project**

- A. The Concessionaire encourages co-location of its key staff with the Design-Builder during the design and construction period. The Concessionaire desires to cooperate with the Design-Builder during the design development and review period in order to create efficiencies for the benefit of the Project.
- B. The Design-Builder shall establish one primary field office or dedicated Class C or better office space, the location of which is to be determined and mutually agreed to by the Design-Builder and the Concessionaire, but which is expected to be within the

Execution Version

Project corridor. This work shall consist of locating, procuring, furnishing, erecting, equipping, maintaining, cleaning (weekdays), and removing and restoring property upon completion of use of the field office. The Design-Builder has the option to provide either modular trailers or to rent office accommodations to satisfy the Project office requirements. The Fred Ex Project field office shall be located within the VDOT Fredericksburg District.

- C. Design-Builder shall provide, maintain and manage fully outfitted, furnished and networked office space for Design-Builder, Concessionaire and VDOT use including at a minimum insurance, lease agreements, Utility connections, Utility service, internet service, maintenance, janitorial, security and other services necessary to provide the required office facilities.
- D. Design-Builder shall provide parking facilities sufficient for the number of Design-Builder and Concessionaire personnel assigned to the location plus visitor parking.
- E. Design-Builder shall be responsible for loss to Concessionaire and visitor property as a result of fire, theft, malicious acts, and other human activity or related causes
- F. The field office shall include the following:

Space	Quantity	Minimum Size (SF)
Office (Concessionaire)	2	100
Office (VDOT)	2	100
Workstation Cubicle (VDOT & Concessionaire)	12	64
Conference Room (Shared)	2	250
File Room (Shared)	1	240
Storage Room (Shared)	1	100
Kitchen (Shared)	1	---
Washroom (Shared)	1	---

Work spaces provided for Concessionaire and VDOT personnel shall be available for their exclusive use at any time during the design and construction of the Fred Ex Project.

- G. Design-Builder shall provide Concessionaire continuous access and maintain, at a minimum, the following systems and equipment at the field office location:
  - 1. High-speed internet connection with minimum 45 Mbps download/10Mbps upload with static IP address;
  - 2. Network connected color printer/scanner/copier/fax, minimum 600 dpi and 60 pages per minute, staple, duplex and paper handling up to 11"x17";

**Execution Version**

---

3. computer network wiring for each office, desk and conference room to support VDOT-provided file server (for VDOT's dedicated use) and all other networked devices.
- H. Design-Builder shall provide field office site and floor plans for review and comment no less than 30 calendar days prior to occupancy.
  - I. The field office shall be available and operational from 30 days after the latter of Financial Close or Design Work Notice to Proceed to 30 days after Final Completion. Furnishings and equipment specified shall be in sound and functional condition throughout the duration of the project.
  - J. The field office and equipment as required herein shall remain the property of the Design-Builder
  - K. The Design-Builder shall provide and maintain in a neat, sanitary condition such accommodations for the use of its employees, as well as the employees or agents of the Concessionaire and VDOT, as may be needed to comply with the requirements of applicable Law.
  - L. The field office shall be weatherproof, tightly floored and roofed, constructed with an air space above the ceiling for ventilation, supported above the ground and anchored against movement. The floor-to-floor ceiling height shall be at least 7 feet 6 inches. The inside walls and ceilings shall be constructed of, Masonite, gypsum board, or other similarly suitable materials as permitted by fire and building codes. The exterior walls, ceiling and floor shall be insulated.
  - M. Lighting, Heating, and Air Conditioning: The field office shall have satisfactory functional lighting, electrical outlets, heating equipment, an exhaust fan, and air conditioner connected to an operational power source. At least one of the light fixtures shall be a fluorescent light situated over the plan and drafting table. There shall also be at least one 100 watt exterior light fixture at each exterior doorway. Electrical power and fuel for heating equipment shall be furnished by the Design-Builder.

**1.2.8 Document Management System**

- A. The Concessionaire shall establish and maintain an Electronic Document Management System (EDMS) to store and record all material documents generated on the Fred Ex Project, including those records required under Law.
- B. In the provision of an EDMS, the Concessionaire will:
  1. use data systems, standards, and procedures with consistent naming and searching protocols;
  2. ensure document retention for any minimum statutory period(s);

**Execution Version**

---

3. provide a secure EDMS, such that only authorized users have access and that it is protected from theft, damage, unauthorized or malicious use;
  4. provide a mechanism for the electronic transfer of metadata along with the associated document in standard business file format; and
  5. provide the Design-Builder with written procedures and training of staff who will be required to access all relevant documents generated under the Fred Ex Design-Build Contract. All electronic information submitted to the Concessionaire shall be searchable and legible, to the extent practical.
- C. In the relevant PDP, the Design-Builder shall:
1. reference the specific EDMS tool to be used by the Concessionaire and the access methods available to the Design-Builder and others that may need access to the system;
  2. describe methods by which all documents issued and received by the Design-Builder shall be uniquely coded and retrievable in a user-friendly format;
  3. describe upon completion of the Fred Ex Project, the transfer of EDMS data and files, such that the Concessionaire has a complete set of material project documentation in electronic format and written documentation on the contents of the data.

**1.2.9 Project Meetings**

- A. Authorized Representatives and other pertinent representatives of the parties shall meet within 10 days after any Notice to Proceed issued in accordance with the Fred Ex Design-Build Contract to discuss issues affecting the administration of the Work and to implement the necessary procedures, including those relating to submittals and approvals, to facilitate the ability of the parties to perform their obligations under the Fred Ex Design-Build Contract.
- B. Within 14 days (or other period of time as mutually agreed by the parties) after the satisfaction of the conditions precedent to begin construction as set forth in the Fred Ex Design-Build Contract and prior to the start of construction, the parties and their respective representatives shall conduct a pre-construction meeting to discuss the Design-Builder's planned construction operations. At the pre-construction meeting, the parties shall discuss, among other things, safety, the sequence of the Work, scheduling, constructability issues, coordination with Separate Contractors, Governmental Authorities and Utilities, and maintenance of traffic.
- C. The Design-Builder shall hold monthly joint progress meetings with the Concessionaire. During such meetings, progress during the prior month, Work to be undertaken during the next month, and encountered or anticipated issues shall be reviewed, and the Design-Builder shall collect information from any Contractors responsible for Work completed during the specified duration and Work scheduled during the upcoming reporting duration. These meetings shall be attended by the

**Execution Version**

---

Design-Builder Representative and other personnel as requested by the Concessionaire, including relevant Contractors. Meetings will occur monthly beginning the month after the initial Notice to Proceed is issued. The Design-Builder shall be responsible for preparing, maintaining and distributing minutes of the meetings to all attendees for review. The meeting minutes shall be provided to the Concessionaire within three days after the monthly progress meeting or such other timeframe as mutually agreed. The parties may cancel a monthly progress meeting from time to time if they mutually agree that such meeting is not necessary.

- D. As part of, and in conjunction with, the monthly progress meetings required by the Fred Ex Design-Build Contract, the Design-Builder shall provide the Concessionaire with an update of the Baseline Schedule for the Concessionaire's review, and, if required by the Technical Requirements, approval, and a progress narrative that describes, at a minimum, the overall progress for the preceding month, a critical path analysis, a discussion of problems encountered and proposed solutions thereof, work calendars, constraints, delays experienced and any pending Time Impact Analysis ("TIA"), float consumption if any, and the reasons for such consumption, documentation of any logic changes, duration changes or other relevant changes. The monthly progress narrative shall also include the following:
1. comparisons of actual and planned progress, including (1) illustrating schedule variance graphically by plotting the budgeted cost of work performed (BCWP) and the budgeted cost of work scheduled (BCWS); and (2) reporting the schedule performance index (SPI), defined as the ratio of BCWP divided by BCWS;
  2. a statement by the Design-Builder that the Baseline Schedule is the schedule being executed to perform the Work;
  3. details of any aspects of the Work which may jeopardize the completion in accordance with the Fred Ex Design-Build Contract; and
  4. measures being (or to be) adopted to overcome such aspects and a list of approvals needed to adopt such measures.
- E. The Design-Builder and the Concessionaire shall agree to other meetings as appropriate and mutually agreed.

**1.2.10 Source of Supply and Quality Requirements**

- A. The QMSP shall describe procedures for ensuring that materials used throughout the Work conform to the requirements of the Fred Ex Design-Build Contract. Unless otherwise specified in the Technical Requirements or subject to mutual agreement, materials, equipment, and components that are to be incorporated into the finished Work shall be new. The Design-Builder shall file a statement of the known origin, composition, and manufacture of all materials to be used in the Work, including optional or alternate items as part of AFC Documents. The Design-Builder's statement shall be electronically submitted to the Concessionaire by use of VDOT's Form C-25 after satisfying Design-Builder's Quality Management System Plan.

**Execution Version**

---

- B. All materials or equipment (excluding the equipment maintained and operated by the Design-Builder) physically installed, which will become part of the completed Fred Ex Project, whether it is permanent or temporary, must conform to the requirements of the Fred Ex Design-Build Contract, and shall be furnished with valid test data required to document the quality of the material or equipment at least two weeks prior to delivery. The Design-Builder shall change the source of supply and furnish material or equipment from other approved sources if the requirements are not met and shall notify the Concessionaire of this change, and provide the same identifying information noted in this section, at least two weeks prior to delivery. Materials shall not contain Hazardous Waste or be furnished from a source containing toxic, hazardous or regulated solid wastes.

**1.2.11 Invoicing**

- A. The invoices will be in a mutually agreed upon format, and include a reasonable level of back up documentation. Such invoices shall include the following:
1. the Fred Ex Project number;
  2. a letter from the Authorized Representative verifying the total amount of costs set forth in the invoice, the timeframe such costs were incurred;
  3. back-up documentation for vouchers for more than \$500.00 (the voucher back-up documentation will include the paperwork retained by the Concessionaire for audit purposes);
  4. any documentation needed to comply with Federal Requirements, including FASTLANE expenditure requirements.

**1.3 Project Development Plans****1.3.1 General**

- A. The Design-Builder shall provide Project Development Plans (“PDPs”) as defined in this section and detailed in Attachment 1.3 to these Technical Requirements. Such PDPs shall address the activities of the Design-Builder and shall not obligate the Concessionaire to perform any activity unless agreed to in writing by the Concessionaire.
- B. The PDPs shall meet the requirements of the Fred Ex Design-Build Contract. Further information regarding the development of the PDPs is noted in Attachment 1.3 of these Technical Requirements.

**1.3.2 Project Development Plans**

- A. The Design-Builder shall produce and maintain up-to-date documentation showing its internal quality reviews and results of compliances, non-compliances, and corrective actions taken.

**Execution Version**

---

- B. The Concessionaire may audit and monitor the activities described in the PDPs to assess the Design-Builder’s compliance. Any audit findings shall be adequately addressed within 30 days of the Concessionaire’s audit report.
- C. All statements and procedures contained in the PDPs shall be of an auditable nature.
- D. The PDPs and updates shall be made available to the Concessionaire in electronic format and hard copies, as requested.

**1.3.3 Project Development Plan Updates**

- A. The Design-Builder shall update and improve the effectiveness of its PDPs and have mechanisms in place to monitor progress and identify opportunities for improvement.
- B. A PDP or procedure shall be updated pursuant to Attachment 1.3, if such PDP or procedure:
  - 1. does not adequately address the matters it is intended to address;
  - 2. does not conform or is otherwise necessary to comply with the Fred Ex Design-Build Contract;
  - 3. has to be changed because of an audit;
  - 4. no longer represents current or appropriate practice; or
  - 5. is required by the Fred Ex Design-Build Contract to be updated.

**1.3.4 Submission Timetable**

- A. The PDPs will be developed in accordance with Attachment 1.3 of these Technical Requirements.
- B. The Concessionaire’s rights of rejection of a PDP are limited to material issues that would provide a lower standard than the requirements presented in Attachment 1.3 of these Technical Requirements.

**1.4 Schedules**

Any Notices to Proceed shall be in accordance with the Fred Ex Design-Build Contract.

**1.4.1 Fred Ex Project Schedules**

- A. Purpose, Format, and Content of the Fred Ex Project Schedule:
  - 1. Terms not defined herein or in the Fred Ex Design-Build Contract shall have the same meanings ascribed to them in the AACE International Recommended Practice No. 10S-90 (“Cost Engineering Terminology”).
  - 2. The purpose of the Fred Ex Project Schedule is to ensure that adequate planning, scheduling, and resource allocations occur to provide a reasonable



**Execution Version**

---

and executable work plan, cash flow projections, and continuous monitoring and reporting for the Fred Ex Work performed or remaining. The Baseline Schedule and the monthly updates to the Project Schedule shall be used for coordinating the Work, monitoring the progress of Work performed, identifying Work to be performed, evaluating changes, and a tool for measuring progress.

3. The Fred Ex Project Schedule shall consist of the Initial Fred Ex Baseline Schedule, the Baseline Schedule, updates to the Fred Ex Project Schedule, and the As-Built Schedule.
4. Fred Ex Project Schedules will be reviewed in accordance with VDOT Post-Award Scheduling Guide and the AACE Recommended Practice No. 53-06 as appropriate. Acceptance by the Concessionaire of the Fred Ex Project Schedule will not relieve the Design-Builder from its responsibility to complete all Work within the Fred Ex Project Schedule. In addition, the Concessionaire's acceptance of any Fred Ex Project Schedule creates neither a warranty, expressed or implied, nor an acknowledgment of the reasonableness of the activities, logic, durations, or cost loading of the Design-Builder's Fred Ex Project Schedule. Furthermore, acceptance of the Fred Ex Project Schedule will not relieve the Design-Builder from complying with all the requirements of the Fred Ex Design-Build Contract, including, without limitation, requirements, sequences, constraints, and/or obligations.

**B. General Requirements:**

In the Fred Ex Project Schedule, the Design-Builder shall:

1. ensure that the actual number of activities in the schedule is sufficient to assure adequate planning of the Work and to permit monitoring and evaluation of progress and perform the analysis of alleged time impacts;
2. ensure that design activities identify Final for Approval and AFC Documents;
3. apply the Critical Path Method (CPM) of network calculation to generate the Fred Ex Project Schedule (the critical path shall be based on the longest network path through the Fred Ex Project) and prepare the Fred Ex Project Schedule using the Precedence Diagram Method (PDM) to establish relationships and interdependencies between the individual activities required to complete the Fred Ex Project;
4. ensure that activity identification numbers, textual descriptions, and codes are consistently applied in the Fred Ex Project Schedule and are unique for each specific activity;
5. divide all Work prior to Fred Ex Final Completion Date into activities with appropriate logic ties to show the Design-Builder's overall approach to sequencing, include logical relationships between activities reflecting the Design-Builder's actual intended sequence of Work; and logically tie all activities to avoid open ends;

**Execution Version**

---

6. show the Fred Ex Project milestones including commencement of Design Work, the anticipated issuance of any Notices to Proceed, completion dates for the Route 17 General Purpose Lane Exit Ramp improvements, American Legion Road Bridge replacement, and Truslow Road Bridge replacement, demolition dates for the existing American Legion Road and Truslow Road Bridge piers and abutments, the Fred Ex Service Commencement Date and the Fred Ex Final Completion Date;
7. show phasing of the Work as detailed in the plans, subcontractor work, procurement, fabrication, delivery, installation, testing of materials and equipment, commissioning of systems, and any long-lead time orders for major or significant materials and equipment;
8. allocate an estimated cost to the appropriate lowest level elements (activities) of the Work Breakdown Structure (WBS) by use of material resources;
9. reflect the required coordination with other contractors, utility owners, Governmental Agencies, transit entities and railroads, engineers, architects, contractors, and suppliers;
10. identify regulatory approvals required and the dates by which such approvals are necessary;
11. be fully compliant with the Fred Ex Design-Build Contract;
12. conform to the Work Restrictions (Section 1.8) and Maintenance of Traffic (Section 1.9) requirements;
13. reflect the ROW Acquisition and Relocation Plan;
14. reflect the Utilities Plan; and
15. allow for completing all work necessary to commence systems (TMS and Tolling) operations prior to set testing periods (stand alone, central, and in-service burn) in accordance with the TTMS Interface Plan.

**C. Schedule of Values****1. General**

- (i) The Monthly Progress Earning Schedule will be based on cost data generated from the Fred Ex Project Schedule. The progress earnings schedule shall depict planned progress based on anticipated earnings and shall depict monthly comparisons of actual versus planned progress, including: (1) illustrating the schedule variance graphically by plotting the budgeted cost of work performed (BCWP) and the budgeted cost of work scheduled (BCWS); and (2) reporting the schedule performance index (SPI), defined as the ratio of BCWP divided by BCWS for the Fred Ex Project to date and the monthly projections through Final Completion.

**Execution Version**

---

- (ii) The Schedule of Values (SOV) is a detailed, itemized list of payment Activities for which the Design-Builder desires to be paid and establishes the value or cost of each detailed part of the Work. An initial SOV shall be derived from the cost-loaded, Approved Initial Baseline Schedule, and a complete SOV shall be derived from the cost-loaded, Approved Baseline Schedule. The Design-Builder shall allocate the Contract Amount in the SOV consistent with the Price Proposal.
- (iii) The Design-Builder shall submit an initial SOV for Approval with the Initial Baseline Schedule and a Baseline SOV for Approval with the Baseline Schedule. Each SOV shall be generated by the corresponding schedule file through the use of assigned material resources.
- (iv) The purpose of cost-loading the Project Schedule is to tie Activities with payment Activities in order to monitor progress for making payment.

**2. Payment Activities**

- (i) The Design-Builder shall attach costs to those Activities in the Baseline Schedule for which the Design-Builder desires to be paid. The Design-Builder shall not assign costs to activities for which it is not ultimately responsible, i.e. the Concessionaire, VDOT, or Third-Party Activities.
- (ii) The SOV shall include payment Activities for the items identified on the Price Proposal. The SOV shall show the purchase and delivery costs for Materials and Permanent Equipment that the Design-Builder anticipates it shall request payment prior to installation.
- (iii) The Design-Builder shall meet with the Concessionaire to demonstrate its conversion of the Price Proposal to the SOV structure.
- (iv) Except for mobilization and the continuing Activities, the SOV shall be prepared to a level of detail so that the average value of the payment Activities is greater than \$50,000, and no payment Activity value shall be less than \$10,000 or greater than \$1,000,000 without prior Approval.
- (v) Each payment Activity shall include a directly proportional amount of Design-Builder overhead and profit. The Contract Amount shall be allocated to accurately reflect the Design-Builder's cost for such Activity and shall not artificially inflate, imbalance, or front-load payment Activities.
- (vi) When requested by the Concessionaire, the Design-Builder shall substantiate payment Activity values with data that will validate their accuracy. The sum of the individual values shown on the SOV shall equal the total Contract Amount.

**Execution Version**

---

## 3. Continuing Activities

- (i) The SOV shall include payment Activities sufficient to cover all efforts necessary to fulfill all Contract requirements and successfully complete the Work for the following continuing Activities utilizing Level of Effort Activities:
  - a. Project Management and staffing;
  - b. Production of As-Built Documents;
  - c. Scheduling;
  - d. Environmental Compliance;
  - e. Quality Control;
  - f. Quality Assurance;
  - g. Project office and associated Equipment;
  - h. Public Information;
  - i. Design Management;
  - j. Maintenance during construction;
  - k. Design support during construction.

## 4. Measurement of Progress

- (i) For any Activity where partial payment for partial completion may be requested by the Design-Builder, sufficient detail shall be provided to clearly define the work elements included and demonstrate the level of completion. Any such partial payments shall be made in accordance with Section 6.2 of Part 4 (General Conditions).
  - (ii) For continuing Activities, payment shall be made for the amount apportioned for the month payment is being requested.
- D. The scheduling software employed by the Design-Builder shall be compatible with the Concessionaire's scheduling software. The Design-Builder's scheduling software must have the capability to import and export data in the Primavera proprietary exchange format (\*.xer). The Concessionaire's scheduling software is the latest version of Primavera's Project Management software (P6).
- E. Float available in the Fred Ex Project Schedule, at any time, shall not be considered for the exclusive use of either the Concessionaire or the Design-Builder. During the course of the Work, any Float generated is not for the sole use of the party generating the Float; rather it is a shared commodity to be reasonably used by either party. A schedule showing work completing in advance of the Fred Ex Final Completion Date,

**Execution Version**

---

and accepted by the Concessionaire, will be considered to have Fred Ex Project Float. Fred Ex Project Float will be a resource available to both the Concessionaire and Design-Builder. No time extensions will be granted unless a delay occurs which impacts the Fred Ex Project's critical path, consumes all available float or contingency time, and extends the work beyond the Fred Ex Final Completion Date as defined by the Fred Ex Design-Build Contract.

- F. If the parties cannot agree to a Fred Ex Project Schedule, either party may refer the disagreement to the dispute resolution procedures set forth in the Fred Ex Design-Build Contract.
- G. The Design-Builder shall maintain at all times, at its office, a minimum of one complete set of all schedule reports shown above. All schedule reports shall be available to the Concessionaire for inspection and audit. Additional reports may be required as future needs dictate, and the reports listed above may be deleted (by mutual consent of the parties).
- H. The Design-Builder shall exercise resequencing logic to minimize any delays before requesting any extension of time.

**1.4.2 Initial Fred Ex Baseline Schedule**

- A. The Initial Fred Ex Baseline Schedule is the Design-Builder's conceptual plan for the design and construction of the Fred Ex Project. This schedule shall be used to monitor performance of the Work until the Baseline Schedule is approved by the Concessionaire.
- B. The schedule submitted with the Design-Builder's Proposal shall be the Initial Fred Ex Baseline Schedule
- C. The Initial Fred Ex Baseline Schedule, which shall outline the Design-Builder's proposed plan to accomplish the Work, shall be in the same general format as the Baseline Schedule, as described in the Technical Requirements. The Initial Fred Ex Baseline Schedule shall include at least the following:
  - 1. Schedule activities representing all Work to the WBS Level 3 or greater as set forth in AACE International Recommended Practice No. 37R-06 "Schedule Levels of Detail – As Applied in Engineering, Procurement and Construction" (AACE-37R-06);
  - 2. Individual cost loaded (using material resources) Schedule activities, designated as payment activity at WBS Level 2 or greater as set forth in AACE-37R-06; and
  - 3. The Initial Fred Ex Baseline Schedule does not need to be resource loaded for labor or equipment.

### 1.4.3 Baseline Schedule

- A. Within the time set forth in Part 3, Section 11.1.2, the Design-Builder shall submit to the Concessionaire for its review and approval a proposed Baseline Schedule, which shall include the Design-Builder's detailed plan for design and construction of the Fred Ex Project. The Design-Builder shall develop its proposed Baseline Schedule from the Initial Fred Ex Baseline Schedule. The Design-Builder shall submit to the Concessionaire two hard copies (printed on 11" by 17" paper) of its proposed Baseline Schedule, along with an electronic version of the proposed Baseline Schedule created in the Primavera proprietary exchange format (\*.xer).
- B. Within 28 days of the Concessionaire's receipt of the proposed Baseline Schedule, the Concessionaire shall notify the Design-Builder in writing of its approval or disapproval of the proposed Baseline Schedule, and of any comments it has or amendments it wishes the Design-Builder to make. The Design-Builder shall give due consideration to the Concessionaire's suggested amendments or comments and, to the extent it deems appropriate, revise the proposed Baseline Schedule and re-submit the same within 14 days to the Concessionaire for its review in accordance with this Clause B for the Concessionaire's approval. Within 28 days of the Concessionaire's receipt of the re-submitted proposed Baseline Schedule, the Concessionaire shall notify the Design-Builder in writing of its approval or disapproval. Upon approval by the Concessionaire, the proposed Baseline Schedule will become the Baseline Schedule. If the parties cannot agree to a mutually acceptable Baseline Schedule, either party may refer the disagreement to the dispute resolution procedures set forth in the Fred Ex Design-Build Contract. Until such time as the dispute is resolved, the Initial Fred Ex Baseline Schedule will be used for the design and construction of the Fred Ex Project. The Baseline Schedule shall include a well-organized WBS, the development of which is based on a deliverable-oriented methodology that captures all the Fred Ex Project activities. The WBS shall allow schedule summarization at a minimum of four hierarchical WBS Levels, such as: Fred Ex Project areas (Level 1), WBS elements (Level 2), work packages and deliverables (Level 3) and the detail control level (Level 4) to which the individual schedule activities are assigned their WBS code.
- C. Activities in the Baseline Schedule shall be assigned Fred Ex Project-specific activity codes.
- D. The Baseline Schedule shall include all major activities of the Work in sufficient detail to enable the Concessionaire to monitor and evaluate design and construction progress from the Limited Notice to Proceed Date until Final Completion.
- E. The Baseline Schedule shall include separate activities for major submittals proposed by the Design-Builder, together with appropriate activities for the Concessionaire's review or approval, provided that such review and/or approval times by the Concessionaire shall be no less than the time provided for such reviews in the Fred Ex Design-Build Contract.

**Execution Version**

---

- F. The Baseline Schedule shall be broken down into work packages and deliverables generally completed in not less than one but no more than 30 calendar days, or as mutually agreed (unless such deliverable is a procurement or other non-construction activity), and with dollar value (price) of each appropriate lowest level element of the WBS identified. The total cost loaded into the Baseline Schedule shall be equal to the total cost of the Fred Ex Design-Build Contract.
- G. The Work shall be broken down in sufficient details to identify the phase, stage, feature, type of Work, deliverable, and specific location in which the Work occurs, including as applicable:
1. Fred Ex Project milestones, including completion dates for the Route 17 General Purpose Lane Exit Ramp improvements, American Legion Road Bridge demolition, American Legion Road Bridge replacement, Truslow Road Bridge demolition and Truslow Road Bridge replacement;
  2. Administrative activities such as key submittals, notifications, and review by the Concessionaire;
  3. Design activities showing all Work required to complete each stage of design and deliverable;
  4. Public involvement activities;
  5. Environmental and permitting activities;
  6. ROW acquisition activities showing all parcels;
  7. Utility relocations and adjustments, including all specific types and locations;
  8. Procurement, fabrication, and delivery activities of materials;
  9. Construction start-up activities such as mobilization, staging areas, surveying, clearing and grubbing, and construction access;
  10. Maintenance of Traffic (MOT) activities;
  11. Construction activities broken down by phase stage, feature, type of work, and specific location, as applicable;
  12. Tolling System and Traffic Management System (TMS) infrastructure construction, procurement of equipment, device installation, systems commissioning, integrations, testing and in-service equipment burn period prior to Final Completion;
  13. Other necessary miscellaneous activities that consume time, for example, installation and removal of temporary systems or structures such as shoring, load tests, curing, demolition, testing and acceptance periods including all activities necessary for the complete testing and inspection of all Work as necessary to achieve proper activation and use of the Work, punch list, clean-up, and demobilization.

**Execution Version**

---

- H. Activity calendars shall be assigned using project-level calendars. Use of global calendars is not allowed and shall be cause for rejecting the Fred Ex Project Schedule. Activity codes shall be defined and assigned to the individual activities to allow for filtering, grouping, and sorting of activities by project phase, responsibility, area, phase, stage, feature, work type, Change Orders, Disadvantage Business Enterprise, and other major work category, as applicable. Activity codes shall be assigned using project-level activity codes. Use of global activity codes is not allowed and shall be cause for rejecting the Fred Ex Project Schedule.
- I. Constraints shall be used sparingly and on a case-by-case basis, as necessary. Constraints such as “Mandatory Start” or “Mandatory Finish” that violate network logic are not allowed and shall be cause for rejecting the Fred Ex Project Schedule. If the Fred Ex Design-Build Contract includes a specified “start-no-earlier than” milestone, then the Fred Ex Design-Build Contract milestone activity shall be constrained with a “Start On or After” constraint, with a date equal to the date specified in the Fred Ex Design-Build Contract. If the Fred Ex Design-Build Contract includes a specified Intermediate Milestone or Final Completion milestone, then the Fred Ex Design-Build Contract intermediate completion milestone activity or Final Completion milestone activity shall be constrained with a “Finish On or Before” constraint, with a date equal to the date specified in the Fred Ex Design-Build Contract.
- J. The Fred Ex Project Schedule software settings shall be defined according to the following Primavera (P6) settings:
1. Duration type for all activities shall be specified as “Fixed Duration & Units.”
  2. Percent Complete type for all activities shall be specified as “Physical % Complete”.
  3. The “Drive activity dates by default” checkbox in the Fred Ex Project Details Resources tab shall be marked.
  4. The “Link Budget and At Completion Cost for not started activities” checkbox in the Project Details Calculation tab shall be marked.
  5. The “Reset Remaining Cost and Units to Original” in the Project Details Calculation tab shall be specified.
  6. The “Subtract Actual from At Completion” under “When updating actual units or costs” in the Project Details Calculation tab shall be specified.
  7. The “Update units when costs changes on resource assignments” checkbox in the Project Details Calculation tab shall be marked.
  8. The “Link Actual and Actual This Period Units and Cost” checkbox in the Project Details Calculation tab shall be marked.
  9. Specify “Retained Logic” in the Scheduling Options dialog box for scheduling progressed activities.



**Execution Version**

---

10. Specify “Longest Path” in the Scheduling Options dialog box for defining critical activities.
  11. Specify “Finish Float = Late Finish – Early Finish” in the Scheduling Options dialog box as the schedule calculation option to compute total float.
- K. The Fred Ex Project Schedule shall use “Stored Period Performance” with Financial Periods to commence on the first day of a month and end on the last day of a month.
- L. The Fred Ex Project Schedule shall be calculated using the precedence diagram network logic method and the CPM. The use of Primavera P6 resource-leveling to determine sequence, order, or timing of the activities is not allowed and shall be cause for rejecting the Fred Ex Project Schedule.

**1.4.4 Monthly Progress Reports and Project Schedule Updates**

- A. The Fred Ex Project Schedule will be current, reflecting actual progress at the time of submittal to the Concessionaire and will be kept current and submitted as a component of the Monthly Progress Report (further described below).
- B. The Design-Builder’s Monthly Progress Report shall include the following:
1. Document control certification sheet (verification that all field documentation is being maintained);
  2. Specific construction activities and deliverables occurring during the previous month (reporting period);
  3. Specific construction activities and deliverables planned for the next two reporting periods;
  4. Progress narrative that describes, at a minimum, the overall progress for the preceding month, a critical path analysis, a discussion of problems encountered and proposed solutions thereof, any pending delay analysis or TIAs, and float. With each submission of the Fred Ex Project Schedule, the Design-Builder also shall include:
    - (i) An electronic working copy of the Fred Ex Project Schedule (in XER file format). Each submission shall have a unique file name to indicate the type and order of submission. Each compact disk shall be labeled to indicate the type of submission, file name, and schedule data date;
    - (ii) A narrative progress report of the Fred Ex Project Schedule that describes, at a minimum, the Design-Builder’s plan of operation for meeting the interim milestones and the Fred Ex Final Completion Date, an evaluation of the critical path, a discussion of Fred Ex Project-specific issues encountered since the last submission as such issues relate to the schedule, proposed solutions thereof, work calendars, constraints, delays experienced, and the status of any submitted or pending Time Impact Analyses, float consumption, documentation of

**Execution Version**

---

any logic changes, duration changes, resource changes or other relevant changes;

(iii) Time-scaled logic diagram indicating the critical path, early start and early finish dates, total float, sorted and grouped by the WBS;

(iv) Tabular schedule reports grouped by WBS and sorted by Start indicating for each WBS, activity, the activity number, description, original duration, remaining duration, physical percentage completion, cost percentage complete, original budgeted cost, cost this period, cost to date, and cost to complete;

5. A comparison of actual and planned progress including (1) illustrating schedule variance graphically by plotting and budgeted cost of work performed (BCWP) and the budgeted cost of work scheduled (BCWS), and (2) reporting the scheduled performance index (SPI), defined as the ratio of BCWP divided by BCWS;
6. Identification of activities requiring Concessionaire, VDOT, or FHWA input or assistance, to the extent reasonably known;
7. Action items/outstanding issues;
8. A work breakdown structure Level 3, 4 or greater design and construction schedule;
9. Fred Ex Project cost summary;
10. Quality management reporting, as defined within the Design-Builder's QMSP, including quality inspection reports and daily inspection reports;
11. A statement by the Design-Builder that the Baseline Schedule is the schedule being executed to perform the Work;
12. Nonconformance reports and resolution reports, Deficiency, Field Design Change, Notice of Design Change, and Variance reports;
13. Right of way acquisition activities;
14. Environmental permitting and compliance activities;
15. Utility relocation activities;
16. Disadvantage Business Enterprise (DBE), Small, Women-owned, and Minority-owned Business (SWaM) and on the job (OJT) training quarterly usage;
17. Safety activities, including discussion on incidents and monthly metrics as required by the Concessionaire;
18. Sustainability reporting related to the use, re-use, and savings of energy, materials, and environmental resources;
19. Digital photographs with descriptions of the progress of the Fred Ex Project;

**Execution Version**

---

20. A summary of any outstanding potential issues, potential change orders, any delays and the measures adopted (or to be adopted) to overcome such issues; and
  21. A summary of complaints, property damage claims, and OCIP insurance claims.
- C. The Monthly Progress Report shall describe the work performed since the previous update as well as the Design-Builder’s plan for accomplishing the remaining Work. It shall describe the current status of the Fred Ex Project and any deviations from scheduled performance as well as the causes and effects of the deviations. It shall also describe any progress deficiencies or schedule slippages as well as any actions taken or proposed to avoid or mitigate the progress deficiencies or schedule slippages.
- D. Monthly Progress Reports shall have a reporting period ending on the last day of each calendar month and shall be submitted on or before the 15th of the month following the reporting period.
- E. The Concessionaire will notify the Design-Builder of any comments within five days of receipt of an acceptable submission of a Monthly Progress Report. If the Concessionaire requests that the Monthly Progress Report needs a specific revision, the Design-Builder shall make the requested changes within five (5) days after receiving the Concessionaire’s request or such other time frame as mutually agreed between the parties. If the Design-Builder objects to the Concessionaire’s request for revisions, the Design-Builder may refer the matter to dispute resolution pursuant to the Fred Ex Design-Build Contract.
- F. Fred Ex Project Schedule Updates:
1. The Design-Builder shall update the Fred Ex Project Schedule no less than monthly to reflect actual progress to date and to forecast progress going forward (the “Fred Ex Project Schedule Updates”). The Fred Ex Project Schedule Update shall be submitted as an attachment to the Monthly Progress Report or as required by the Fred Ex Design-Build Contract. The Data Date used to calculate the schedule shall be the first day following the last day of the reporting period. Fred Ex Project Schedule Updates shall comply in all respects with the schedule requirements set forth in this section.
  2. The Approved Initial Fred Ex Baseline Schedule will be the basis for Fred Ex Project Schedule Updates until such time as the Baseline Schedule is approved by the Concessionaire. Thereafter the Baseline Schedule shall be the basis for Fred Ex Project Schedule Updates.
  3. Fred Ex Project Schedule Updates shall depict activities that have started, are on-going, or completed as of the new data date; show actual start dates for activities that have started; and actual finish dates for completed activities.
  4. Fred Ex Project Schedule Updates shall depict percent complete for in progress activities. Activity percent complete for work-in-place shall be based

**Execution Version**

---

on the amount of work completed relative to the total amount of work planned for the activity.

5. Fred Ex Project Schedule Updates shall depict remaining duration for on-going activities. Remaining duration for unfinished activities shall be based on the amount of time required to complete the remaining work as of the new data date.
6. Activity relationships for the remaining activities shall be modified as necessary to correct out-of-sequence progress for on-going activities or to reflect the Design-Builder's current plan for completing the remaining Work.
7. All changes to the Fred Ex Project Schedule shall be documented in detail in the Monthly Progress Report. Such changes include but are not limited to: additional, revised or deleted activities, durations, calendar assignments, or logic ties.
8. The Fred Ex Project Schedule Update submitted with the last Monthly Progress Report will be identified by the Design-Builder as the As-Built Schedule.

**1.4.5 Weekly Reporting**

During the performance of the Work, the Design-Builder shall provide a weekly report, which shall include the following:

- A. Specific design and construction schedule activities, including locations for the week concluding and the upcoming week;
- B. Rolling 3-week forward-looking inspection notice, which shall include the fabrication schedule and planned construction activities; and
- C. MOT weekly update, regarding any scheduled lane closures and identification of work areas for the ensuing two weeks.

**1.4.6 Revisions To Baseline Schedule**

- A. If the Concessionaire believes in its reasonable discretion that the Baseline Schedule needs a specific revision either in logic, activity duration, WBS, manpower, or cost, the Concessionaire will request the Design-Builder in writing to make such revisions. The Design-Builder shall give due consideration to the Concessionaire's suggested revision and, upon consultation with the Concessionaire, if determined appropriate, make such revisions within ten days after receiving the Concessionaire's request or such other timeframe as mutually agreed between the parties. Once approved, this update shall then become the Baseline Schedule. At no time shall the Design-Builder continue to reflect an item of non-concurrence from the Concessionaire in the updates to the Baseline Schedule; provided that if an item of non-concurrence has been referred to dispute resolution, then the Design-Builder shall continue to perform its Work in accordance with the then current Baseline Schedule in effect, until such time

**Execution Version**

---

as the dispute is resolved and an updated Baseline Schedule is agreed to. If the Design-Builder objects to the Concessionaire's request for revisions, the Design-Builder may refer the matter to dispute resolution pursuant to the Fred Ex Design-Build Contract.

- B. In the event of a delay for which the Concessionaire grants relief from the Fred Ex Final Completion Date to the Design-Builder in accordance with the terms of the Fred Ex Design-Build Contract, the Baseline Schedule will be revised to reflect the relief granted and submitted to the Concessionaire for approval in accordance with the Fred Ex Design-Build Contract.

**1.4.7 Project Recovery Schedule**

- A. Pursuant to the Fred Ex Design-Build Contract, whenever the Monthly Progress Report shows either of the Service Commencement Date or the Fred Ex Final Completion Date has 30 days or greater of negative float, the Design-Builder shall submit a Fred Ex Project Recovery Schedule to the Concessionaire for approval. Fred Ex Project Recovery Schedule submittals shall include a list of all activities changed, added or deleted along with all logic changes, and an accompanying narrative explaining the nature of the changes.
- B. Once a Fred Ex Project Recovery Schedule is reviewed and approved by the Concessionaire, it shall become the Baseline Schedule and be used as the basis for subsequent Monthly Progress Reports. The Design-Builder shall archive all approved Fred Ex Project Schedules.
- C. Submission of a Project Recovery Schedule does not waive any rights under the Fred Ex Design-Build Contract.

**1.4.8 Time Impact Analysis (TIA)**

- A. Time Impact Analysis (TIA) for Proposed Extensions of Time (Prospective) (Also referred to as Schedule Impact Analysis or SIA).
- B. In conjunction with the submission of a proposed change, the Design-Builder shall submit any proposed schedule impact as a result of impacts it claims to the Critical Path, if any, that the proposed change will create, in the TIA format, as prescribed in AACE Recommended Practice 52R-06 and submitted as outlined herein. Failure to submit a TIA in conjunction with the submission of a proposed change shall be tacit agreement that the proposed change does not impact the time of performance of the Fred Ex Design-Build Contract.

The following shall apply if a TIA is required by the Fred Ex Design-Build Contract:

1. The TIA shall be based on the date on which the alleged delay is claimed to have occurred, or, in the event of a proposed change, the date on which the implementation of such change is proposed to be commenced.

**Execution Version**

---

2. The TIA shall show the current status of the Work using the current Baseline Schedule. The time computation of all affected activities shall be detailed in the TIA along with a demonstration of steps used to mitigate impacts. Cost of mitigation measures shall be fully documented within the TIA, if applicable.
3. Each TIA shall include a Fragmentary Network (“fragnet”) demonstrating how the Design-Builder proposes to incorporate the impact into the Baseline Schedule. A fragnet is defined as the sequence of new activities and/or activity revisions, logic relationships, and resource changes that are proposed to be added to the existing schedule to demonstrate the influence of impacts to the schedule. The Design-Builder understands it has a duty to mitigate any and all alleged delay events, whether prospective or retrospective, and such analysis will take advantage of the factual events leading to the alleged delay impacts; take into consideration all possible mitigation methods, techniques, and available resources, including but not limited to logic changes, resource allocations, activity durations, and consideration of calendar changes. The fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. The Design-Builder shall insert the fragnet into the Baseline Schedule, run the schedule calculations, and submit the impacted schedule in accordance with this section. The Design-Builder shall include a narrative report describing the effects of new activities and relationships to milestones and the Fred Ex Final Completion Date with each TIA.
4. Except as provided in the Fred Ex Design-Build Contract, the Design-Builder shall not be entitled to any extension of the Term automatically as the result of an activity delay. The Design-Builder recognizes that certain events will not affect the existing critical activities or cause non-critical activities to become critical, thereby not causing any effect on the Fred Ex Final Completion Date.
5. Two copies of each TIA report together with an electronic file (in .xer file format) of the Fred Ex Project Schedule impact analysis shall be submitted to the Concessionaire in accordance with the Fred Ex Design-Build Contract.
6. Upon approval, a copy of the TIA signed by the Concessionaire will be returned to the Design-Builder and incorporated into the next update to the Baseline Schedule. The TIA will be reviewed by the Concessionaire in accordance with AACE International Recommended Practice No. 52R-06 “Time Impact Analysis As Applied in Construction”.
7. A TIA will be approved or disapproved by the Concessionaire in its reasonable discretion within 28 days following receipt thereof, unless subsequent meetings or negotiations are necessary. The approved TIA related to a Change shall be incorporated into, and attached to the applicable Change Order. A disapproved TIA will be returned to the Design-Builder with appropriate comments for revisions or the Concessionaire’s basis for denying

the alleged delay. If no agreement is reached, either party may refer the matter to dispute resolution pursuant to the Fred Ex Design-Build Contract.

#### **1.4.9 Delay Claim Analysis (Non-Prospective)**

- A. In the event of a claimed delay event that the Design-Builder alleges has impacted the Critical Path of the Fred Ex Project, the claim analysis shall use a retrospective observational analysis format as prescribed by the AACE 29R-03 Recommended Practice for Forensic Schedule Analysis. Such analysis will take advantage of the factual events leading to the alleged delay impacts; take into consideration all possible mitigation methods, techniques, and available resources; and minimize any prospective analysis or conclusions. The Concessionaire in its reasonable discretion will approve or reject such claim within 28 days following receipt thereof, unless subsequent meetings or negotiations are necessary. A rejected claim will be returned to the Design-Builder with appropriate comments for revisions or the Concessionaire's basis for denying the alleged delay. If no agreement is reached, either party may refer the matter to dispute resolution pursuant to the Fred Ex Design-Build Contract.

#### **1.4.10 Design-Builder Schedule Manager**

- A. The Design-Builder shall within 30 days of the Notice of the Intent to Award the Design-Build Contract, identify and submit for Concessionaire approval, the individual that will be designated as the Design-Builder's Schedule Manager, including a summary of relevant qualifications and experience.
- B. This individual shall be responsible for the development and approval of the all project schedules required by the Design-Build Contract, including the Baseline Schedule, monthly updates, any Revised Baseline Schedules and any required Recovery Schedule(s). The Schedule Manager shall be experienced with developing and managing Critical Path Method schedules for design-build projects of a similar size, scope and complexity as the Project. Proficiency with the most current version of Primavera scheduling software and a minimum of ten (10) years of experience in design-build project scheduling is required. The designated Schedule Manager shall be an individual who is dedicated to the Project and is required to be available to the Project on an as-needed basis immediately upon Contract Award and for the duration of construction operations, including pre-construction activities.
- C. If for any reason, including a request from the Concessionaire related to performance, the approved Schedule Manager must be replaced during the Contract term, the Design-Builder shall provide notice of such within 7 days and seek formal approval of the replacement from the Concessionaire.

## 1.5 Standards and Specifications

### 1.5.1 General Requirements

- A. The Work shall conform to the Standards and Specifications set forth in the Fred Ex Design-Build Contract and Attachment 1.5a, considering life cycle, operations and maintenance requirements. Where the Design-Builder's design requires design methods or construction procedures not covered by the attached list of Standards and Specifications, the Design-Builder shall obtain the Concessionaire's approval before using such methods or procedures, not to be unreasonably withheld or delayed. The Design-Builder's obligations to conform the Work to the requirements set forth in manuals described in the Fred Ex Design-Build Contract and Attachment 1.5a will be satisfied if the Work meets the engineering objectives set forth in such manuals. Requirements appearing in such manuals that dictate how or what should be shown on a given plan unless deemed necessary by the Design-Builder are not applicable to the Fred Ex Project and will be mutually agreed upon for purposes of complying with the Fred Ex Design-Build Contract.
- B. Subject to the provisions of the Fred Ex Design-Build Contract, Work carried out during the Operating Period shall comply with VDOT's then current Standards and Specifications including any revisions or supplements. The Design-Builder should use non-VDOT standards only if specific VDOT standards do not exist, unless otherwise approved by the Concessionaire. The Design-Builder is responsible for demonstrating that any non-VDOT standard used conforms to AASHTO Standards.
- C. The Design-Builder shall derive the functional classifications, design speeds, special load requirements, design criteria, and other applicable design issues using the Technical Requirements and the standards and specifications set forth in Attachment 1.5a. The Design-Builder shall convert metric units to English units, as applicable.
- D. When a provision of "Division I – General Provisions" of the 2016 Road and Bridge Specification is applicable, Part 5 of the Fred Ex Design-Build Contract ("Division I Amendments to the Standard Specifications") shall apply.

### 1.5.2 Interpretation of Standards and Specifications

- A. VDOT Standards for Performance are interpreted using the following guidelines: The Virginia Department of Transportation Road and Bridge Standards (2016), the Virginia Department of Transportation Road and Bridge Specifications (2016) including Supplemental Specifications, Special Provisions, Special Provision Copied Notes, and supplementary documents listed in Attachment 1.5a are part of the Technical Requirements. A requirement occurring in one shall be as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Fred Ex Project. In case of a discrepancy, the following order of priority will apply, with the highest governing item appearing first and the least governing item appearing last:



**Execution Version**

---

1. These Technical Requirements
  2. Special provision copied notes
  3. Special provisions
  4. Supplemental specifications
  5. Standards and Specifications listed in Attachment 1.5a
  6. Reference documents listed in Attachment 1.5a
  7. Standard Drawings (calculated dimensions, unless obviously incorrect, will govern over scaled dimensions)
- B. Each party shall promptly notify the other party if it discovers an obvious and plain error or omission in the text of the Technical Requirements attributable to a word processing, administrative or similar oversight. The parties will then coordinate to make such corrections as are necessary to restore the intent of the language.
- C. The standards, special provisions and reference guides applicable for the Construction Period shall be the version of those documents as listed in Attachment 1.5a or those in effect as of the issuance date of the RFP, including all supplements, errata, revisions and interims as of the issuance date of the RFP. Following the Construction Period, all subsequent design and construction must meet the standards current at the time the Work is performed. It is the responsibility of the Design-Builder to ensure that all relevant standards and specifications have been applied.

**1.6 Right of Way**

- A. Right-of-way costs will be handled in accordance with the Fred Ex Design-Build Contract.
- B. The Design-Builder shall provide right-of-way (ROW) acquisition services for the Fred Ex Project, as required by the Fred Ex Design-Build Contract. ROW acquisition services shall include the preparation of ROW plans or plats in accordance with VDOT Location and Design policies and procedures, attorney-certified title reports and attorney's final certification of title, appraisal, appraisal review, negotiations, relocation assistance and advisory services, closings, and legal services. The Design-Builder will coordinate and determine required right-of-way for Utility Relocations and coordinate preparation of all required easement agreements, right-of-way plans and documentation for acquisition and vacation of existing property rights. All appraisers and acquisition firms shall be selected from VDOT's pre-approved lists. VDOT will retain authority for approving just compensation, relocation benefits, and settlements. VDOT must issue a Notice to Commence Right of Way Acquisition to the Concessionaire, who will then notify the Design-Builder accordingly, before any offers are made to acquire property. The Concessionaire must also issue a Notice to Commence Construction to the Design-Builder once the property has been acquired prior to commencing construction on the property. The required right-of-way plans

**Execution Version**

---

and documentation will be reviewed and approved by the Concessionaire and VDOT, and, if necessary, FHWA.

- C. The Design-Builder shall adhere to the requirements set forth in the Right of Way Manual of Instructions, 3rd Edition, FHWA Update January 1, 2016, Chapter 10 (as revised through October 13, 2017).
- D. The Design-Builder shall be responsible for the Commonwealth Transportation Board (CTB) approval of any change to Limited Access, including but not limited to, the development of supporting documentation and schedule impacts. VDOT will be responsible for making the request to the CTB. The Design-Builder shall also be responsible for replacement of Limited Access fence impacted by the Project and where necessary installing new fence for new Limited Access lines.
- E. The Design-Builder shall carry out its responsibilities in accordance with the following requirements:
  - 1. The Design-Builder shall acquire property in accordance with all applicable federal and state laws and regulations, including but not limited to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (the “Uniform Act”), and titles 25.1 and 33.2 of the 1950 Code of Virginia, as amended. The acquisition of property shall follow the guidelines as established by VDOT and other state and federal guidelines that are required and VDOT’s Right of Way Manual of Instructions.
  - 2. The Design-Builder shall submit a project-specific ROW Acquisition and Relocation Plan for the Concessionaire’s review and approval. In the event the Concessionaire fails to respond in 28 days, such failure by the Concessionaire shall not be deemed approval of the ROW Acquisition Plan.
  - 3. The Design-Builder shall submit, as part of the ROW Acquisition and Relocation Plan, procedures for handling ROW acquisitions and relocations to the Concessionaire for review and approval before beginning ROW activities. These procedures must show the Design-Builder’s methods, including the appropriate steps and workflow required for title examinations, appraisals, and review of appraisals, negotiations, acquisition, and relocation. The Concessionaire shall have a period of twenty-eight 28 days to review and either approve or refuse said documents, submittals including its review and approval of just compensation, relocation benefits, and administrative settlements.
  - 4. The Design-Builder shall have access to, and use VDOT’s ROW and Utilities Management System (RUMS) to manage and track the acquisition process, including easements. All entries made into RUMS shall be made in a timely manner to accurately reflect current project status. VDOT’s standard forms and documents, as found in RUMS, will be used to the extent possible. Any changes to the forms and documents must be approved by VDOT. The Concessionaire will coordinate with VDOT to provide training and technical assistance to the Design-Builder in the use of RUMS.

**Execution Version**

---

5. The Design-Builder shall provide a current title examination (no older than 60 days) for each parcel at the time of the initial offer to the landowner. Each title examination report shall be prepared by a VDOT-approved title company, in accordance with VDOT's Right of Way Manual of Instructions, and shall include title insurance commitment. Should the Design-Builder select a law firm to certify title examinations, the certifying attorney shall provide evidence of professional liability insurance. The Concessionaire reserves the right to determine if the professional liability insurance coverage is sufficient. If any title examination report has an effective date that is older than 60 days, an update is required before making an initial offer to the landowner.
6. The Design-Builder shall prepare appraisals in accordance with VDOT's Right of Way Manual of Instructions.
7. The Design-Builder shall provide appraisal reviews complying with technical review guidelines of VDOT's appraisal guidelines. The reviewer shall be on VDOT's approved fee appraiser list. The Concessionaire will review the Design-Builder's appraisal waiver, appraisal, and appraisal review for each parcel, and shall have the decision of final approval of each appraisal and just compensation offer.
8. VDOT shall make direct payments to property owners for negotiated settlements and relocation benefits and make deposits with the appropriate court for condemnation cases. Payment documentation is to be prepared and submitted with the Acquisition Report (Form RW-24). VDOT will process vouchers and issue State Warrants or checks for all payments and send to the Design-Builder who will be responsible for disbursement to the property owner and providing indefeasible title to VDOT. The Design-Builder shall be responsible for ensuring that sufficient funds to cover all direct payments are provided to VDOT in advance of submitting the payment documentation and Acquisition Report for each property acquisition.
9. The Design-Builder shall prepare, obtain execution of, and record documents conveying title to such properties to the Commonwealth of Virginia and deliver all executed and recorded general warranty deeds to the Concessionaire and VDOT. For all property purchased in conjunction with the Fred Ex Project, title will be acquired in fee simple, except that, with the Concessionaire and VDOT's prior written approval, permanent easements may be acquired in lieu of fee simple interest for the construction, maintenance, and use of items such as noise barriers, retaining walls, storm drainage structures, and earthen slopes. All property shall be conveyed to "Commonwealth of Virginia, Grantee" by a VDOT-approved general warranty deed, free and clear of all liens and encumbrances except encumbrances expressly permitted in writing by VDOT in advance. All easements, except for private utility company easements, shall be acquired in the name of "Commonwealth of Virginia, Grantee." Private utility company easements will be acquired in the name of each utility company unless they

are acquired by eminent domain in which case they will be acquired in the name of the Commonwealth of Virginia.

10. The Design-Builder shall use its best efforts to settle claims with landowners amicably. VDOT shall make the ultimate determination in each case as to whether settlement is appropriate or whether the filing of a condemnation action is necessary. The Design-Builder shall not request the filing of a certificate until the landowner has been given a minimum of 30 days to consider the offer or terminate the negotiations. If, despite the Design-Builder's best efforts, it is unable to reach a settlement with any landowners, as a last resort VDOT will handle any necessary condemnation proceedings subject to the following. Prior to VDOT filing a condemnation proceeding, the Design-Builder shall prepare or cause to be prepared all necessary paperwork and supporting documentation required for the proceeding and it shall deliver that documentation to VDOT, including the notice of filing certificate. The VDOT will review the submitted documentation for compliance with VDOT's rules and regulations, and when approved, will then file the condemnation proceeding(s) and handle such proceeding(s) in accordance with VDOT's Right of Way Manual of Instructions.
11. The Office of Attorney General, Commonwealth of Virginia, shall act as VDOT's legal counsel and will assign cases to fee counsel and review and approve their billing. Support and testimony for condemnations will be provided by the Design-Builder for a period of 12 months after the final condemnation certificate of take/deposit is recorded.
12. The Design-Builder shall be responsible for all contacts with landowners for ROW or construction items, prior to initiation of condemnation proceedings by VDOT. The Design-Builder will provide documentation of all contact with property owners (including participants and organizations), a summary of discussions, agreed upon items, follow-up activities, and copies of items distributed, including but not limited to appropriate and timely documentation in the RUMS.
13. The Design-Builder shall use reasonable care in determining whether there is reason to believe that property to be acquired for rights of way may contain concealed or hidden wastes or other materials or hazards requiring remedial action or treatment. When there is reason to believe that such materials may be present, the Design-Builder shall notify the Concessionaire within three (3) days. The Design-Builder shall not proceed with acquiring such property until they receive written notification from the Concessionaire.
14. During the acquisition process and for a period of three years after the later of Final Completion or the Commonwealth has indefeasible title to the property, all Fred Ex Project documents and records not previously delivered to the Concessionaire, including design and engineering costs, construction costs, costs of acquisition of ROW, and all documents and records necessary to determine compliance with the laws relating to ROW Acquisition and the costs of relocation of Utilities shall be maintained and made available by

**Execution Version**

---

Design-Builder to the Concessionaire, VDOT and/or the FHWA for inspection or audit.

- F. The Design-Builder shall be responsible, at its sole expense, for demolishing and disposing of all existing buildings from the ROW and permanent and temporary easements. All such work shall comply with the Standard of Care and these Technical Requirements.
- G. The Design-Builder will exercise the Standard of Care to minimize impacts and damages to property, businesses, and residences, including noise, vibrations, temporary traffic patterns, and clearing of tree buffers. The Design-Builder will address public, business, and government comments in coordination with the Concessionaire within 28 days of receipt; however, the responsibility to coordinate and address the comments will be the Design-Builder's. Where requested, the Design-Builder will provide stakeout and marking of existing property lines and impacts.

## **1.7 Utilities**

### **1.7.1 General Requirements**

- A. All efforts and costs necessary for all Utility (including the Concessionaire and VDOT's communications and power cables and conduits) designations, Utility locates (test holes), conflict evaluations, cost responsibility determination, Utility Relocation designs, Utility Relocations and adjustments, Utility reimbursements, determination of existing Utility easements and the inclusion of such easements on plans, replacement land rights acquisition and Utility coordination shall be included in the Design-Builder's cost. Costs for any Utility (including the Concessionaire and VDOT's communications and power cables and conduits) betterment(s) shall not be included in the Design-Builder's cost but shall be reimbursed directly to the Design-Builder from the Utility Owner through agreement with the requesting Utility Owner.
- B. This is a VDOT-sanctioned project and the Design-Builder shall enjoy all of the benefits and responsibilities of VDOT as it pertains to prior rights, statutory rights, or any other right relating to Utility Relocations, subject to VDOT's ability to assign those rights.
- C. The Design-Builder is responsible for identifying the owner, type, size, height and number of overhead cables, number of underground cable/conduits, pipes, services, and horizontal and vertical (depth) location of underground utilities to include service connections and laterals with the utility owners. Prior to Construction Notice to Proceed, the Design-Builder shall submit, for review and approval by the Concessionaire, a Utilities Plan in accordance with Attachment 1.3, which details the schedule and proposed activities of the Design-Builder, the Utility Owners, VDOT and the Concessionaire (as owners of other utilities located within the Fred Ex Project limits) during the Fred Ex Project to the level of detail and extent to which such information is known at the time of submission, such information will be updated

**Execution Version**

---

from time to time as additional information becomes available during later stages of design, and includes, but is not limited to, assertions of the following:

1. Durations and schedules for planned Utility Relocations have been coordinated with the Utility Owners.
  2. Durations for the Utility Relocations by Utility Owners are adequate for the type and scope of services being provided.
  3. The use of Float for Utility Relocation activities is in accordance with the Technical Requirements.
- D. The Design-Builder shall be responsible for all Utility (including the Concessionaire and VDOT's communications and power cables and conduits) 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, determination of existing Utility easements and the inclusion of such easements on plans, replacement land rights acquisition, and coordination of Utility betterments required for the Fred Ex Project. The Design-Builder shall be responsible for causing all necessary Utility (including the Concessionaire and VDOT's communications and power cables and conduits) Relocations, adjustments, and betterments to occur in accordance with the accepted Baseline Schedule.
- E. The Design-Builder shall be responsible for new Utility service connections, including full coordination with the Utility Owners, acquisition of easements and payment of connection fees. The Design-Builder shall also be responsible for paying the monthly Utility bills associated with new service panels, up to and including the Fred Ex Final Completion Date. Service shall be transferred to either VDOT or Concessionaire, as applicable, upon the Fred Ex Final Completion Date.
- F. The Design-Builder shall be responsible for coordinating the Fred Ex Project construction with all utilities that may be affected (including the Concessionaire and VDOT's communications and power cables and conduits). The Design-Builder shall be responsible for coordinating the work of its Contractors and the various utilities. The resolution of any conflicts between utilities and the construction of the Fred Ex 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 utilities or the operation of relocating utilities or betterments.
- G. If the Design-Builder desires the temporary or permanent adjustment of utilities (including the Concessionaire and VDOT's communications and power cables and conduits) for its own benefit, it shall conduct all negotiations with the Utility Owners and pay all costs in connection with the adjustment.
- H. The Design-Builder shall initiate early coordination with all Utilities (including the Concessionaire and VDOT's communications and power cables and conduits)

**Execution Version**

---

located within the Fred Ex Project limits. 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 Fred Ex Project. The Design-Builder shall coordinate with the Utility Owners to obtain temporary construction easements or agreements.

- I. The Design-Builder shall provide all Utility Owners with roadway/bridge design plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the Fred Ex 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 signs and accepts the relocation plans as shown. The Design-Builder shall be responsible for design and construction for the relocation of any/all communications and power cables and conduits, lightings, ITS devices, generators and service panels owned by VDOT or the Concessionaire as required for the Fred Ex Project.
- J. The Design-Builder shall coordinate and conduct a preliminary Utility review meeting with all affected Utility Owners to assess and explain the impact of the Fred Ex Project. The VDOT Project Manager and Regional Utilities Manager/Design-Build Projects Utility Coordinator (or designee) shall be included in this meeting.
- K. The Design-Builder shall schedule and conduct a Utility field inspection for each Fred Ex Project segment in accordance with the procedures set forth in the VDOT's Utility Manual. The Design-Builder will provide meeting minutes for each Utility field inspection.
- L. 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 should prepare and submit to the Concessionaire a preliminary Utility Status Report within 60 days of issuance of either a Limited or Design Work Notice to Proceed that includes a listing of all known Utilities located within the Fred Ex Project limits and a conflict evaluation and cost responsibility determination for each Utility. This report shall include copies of easements, plans, or other supporting documentation that substantiates any compensable rights of the Utility Owner. In addition, a written Utility status update shall be provided monthly to the Concessionaire to document the status of coordination.
- M. The Design-Builder shall obtain the following from each Utility that is located within the Fred Ex Project limits:
  1. relocation plans including letter of "no cost" where the Utility does not have a compensable right;
  2. utility agreements including cost estimate and relocation plans where the Utility has a compensable right;

**Execution Version**

---

3. utility easement forms to be executed by the landowner, if necessary;
  4. letters of "no conflict" where the utility's facilities will not be impacted by the Fred Ex Project; and
  5. prepare bridge attachment agreements between VDOT and the Utility Owner, if necessary.
- N. The Design-Builder will use a two-party agreement, similar to the Master Utility Agreement (MUA) utilized by VDOT (provided for in VDOT's Utility Manual) to establish the general framework for addressing the Utility issues within the Fred Ex Project affecting a Utility Owner. The two-party agreement between the Design-Builder and the Utility company will set forth the terms and conditions under which the Utility work will be performed, and will adhere to VDOT's Utility Manual. Included in the two party agreement, similar to the MUA utilized by VDOT (provided for in VDOT's Utility Manual), will be the statement (with reference to CA) that this work is being performed as a VDOT project. Preparing all agreements relative to the Utility Relocation is to be between the Design-Builder and the Utility. This includes the agreements for authorization to relocate facilities as well as any reimbursement terms/agreements. In addition, a written monthly utility status update shall be provided to the Concessionaire to document the status to the coordination.
- O. The Design-Builder shall review all relocation plans to ensure that relocations comply with VDOT Utilities Manual of Instruction, the Utility Relocation Policies and Procedures and VDOT's Land Use Permit Regulations. 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 the Concessionaire all relocation plans. The Design-Builder is expected to assemble the information included in the relocation plans in a final and complete format and in such a manner that the Concessionaire may approve the submittals with minimal review. The Design-Builder shall meet with VDOT's Regional Utilities Manager within 30 days of Limited Notice to Proceed to gain a full understanding of what is required with each submittal. The Design-Builder shall receive written approvals from the Concessionaire 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.
- P. The Concessionaire, in coordination with VDOT, will provide reasonable assistance in negotiations with Utility Owners and will provide available VDOT documents concerning prior rights in a timely manner as requested by the Design-Builder, but neither the Concessionaire or VDOT shall incur any liability in providing such reasonable assistance and shall not be required to initiate or participate in any legal action other than as a witness or to produce documents.



**Execution Version**

---

- Q. The Design-Builder shall make all reasonable efforts to design the Fred Ex Project to avoid conflicts with Utilities, and minimize impacts where conflicts cannot be avoided. The Design-Builder shall be responsible for ensuring that Utility service interruptions are minimized.
- R. The Design-Builder shall ensure the Utility Owners submits as-built drawings and Land Use Permit applications upon completion of its relocation and (or) adjustments. VDOT will issue an as-built permit to the Utility Owners within 28 days of receipt of as-built drawings and Land Use Permit applications.
- S. The Design-Builder shall be responsible for ensuring the appropriate abandonment or removal of all abandoned Utilities (including the Concessionaire and VDOT's communications and power cables and conduits) within the Fred Ex Project ROW.
- T. At the time that the Design-Builder notifies the Concessionaire that the Design-Builder deems the Fred Ex Project to have reached Final Completion, the Design-Builder shall certify to the Concessionaire that all Utilities have been identified and conflicts have been resolved and that those Utilities with compensable rights or other claims related to relocation or coordination with the Fred Ex Project have been relocated and their claims and compensable rights satisfied or will be satisfied by the Design-Builder.
- U. The Design-Builder shall accurately show the final location of all Utilities (including the Concessionaire and VDOT's communications and power cables and conduits) on the As-Built Plans in accordance with Section 3.18 of these Technical Requirements.
- V. All underground utility data provided with the RFP was obtained and depicted in accordance with "CI/ASCE 38-02, Standard Guidelines for the Collection and Depiction of Subsurface Utility Data", and is S.U.E. Quality Level C. Surveys were performed to locate existing utility surface features (i.e., manholes, handholes, etc.) where found, and this information was correlated with information obtained from utility records (S.U.E. Quality Level D info). It is possible that utilities exist within the Project area that are not depicted on the plans. Utility records were obtained for the Project area using the following sources:
1. G.I.S. data available from utility owners.
  2. Mapping available from utility owners.
  3. VDOT plans from adjacent projects (or past projects) depicting utility information.

It is the Design-Builder'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.

**Execution Version**

---

- W. As part of the Falls Run Interceptor Sewer Project, Stafford County is supplementing the existing 18” sanitary sewer line which crosses under I-95 at approximately Milepost 134.2 with an upgraded (36”) sanitary sewer line that crosses under I-95 just north of the existing triple box culvert. Boring and placement of steel casings for this new sewer line under I-95 have been initiated by Stafford County, but are not yet completed. Additional work by Stafford County will be required within the Fred Ex Project limits to finish this sewer line under I-95 and on the west side of I-95. Reasonable and timely access to the Fred Ex Project site shall be provided to Stafford County and/or its contractors to complete this work. The Design-Builder shall coordinate its designs and any proposed utility relocations with Stafford County to ensure that the new locations of the sewer lines and manholes meet the County’s requirements for the Falls Run Interceptor and do not conflict with any Fred Ex project elements (including, but not limited to utilities, roadways and drainage). The Design-Builder will be responsible for maintaining all existing sewer line connections and ensuring that relocations of any sewer lines are properly connected to existing sewer lines and the future Falls Run Interceptor sewer line.

**1.7.2 Design-Builder’s Responsibility for Utility Property and Services**

- A. At points where the Design-Builder’s operations are on or adjacent to the properties of any Utility, including railroads, (including the Concessionaire and VDOT’s communications and power cables and conduits), and damage to which might result in expense, loss, or inconvenience, Work shall not commence until arrangements necessary for the protection thereof have been completed. The Design-Builder shall cooperate with owners of Utilities so that:
1. removal and adjustment operations may progress in a timely, responsible, and reasonable manner,
  2. duplication of adjustment work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted.
- B. If any Utility (including the Concessionaire and VDOT’s communications and power cables and conduits) service is interrupted as a result of accidental breakage or of being exposed or unsupported, the Design-Builder shall promptly notify the proper authority and shall cooperate fully with the authority in the restoration of service. If Utility service is interrupted, repair work shall be continuous until service is restored.
- C. The Concessionaire and VDOT’s TMS fiber optic communication lines and associated electrical distribution lines are located throughout the Fred Ex Project limits in conjunction with other public utilities. These TMS utilities will not be located by Miss Utility. . The Design-Builder shall exercise care to prevent damage or disruption to any existing TMS infrastructure. However, in the event the Design-Builder and/or its contractor(s) damage the TMS due to his operations, the Design-Builder shall immediately notify the McConnell Public Safety and Transportation Operations Center (PSTOC) as well as VDOT Project Manager and cease all construction operations until repairs are completed and the system is fully operational. Except as set forth in the Fred Ex Design-Build Contract, the Design-

**Execution Version**

---

Builder will be responsible for all cost necessary for repair and any time impact to the Fred Ex Project.

- D. The Design-Builder shall comply with all requirements of the Virginia Underground Utility Damage Prevention Act (the Miss Utility law).
- E. The Concessionaire and VDOT's facilities including roadway lighting cable and conduit, traffic management systems cable and conduit as well as Concessionaire and VDOT owned fiber optic lines are not marked by the Miss Utility. For VDOT facilities, the Design-Builder may either elect to use, at its own discretion and cost, the VDOT on-call consultant or alternatively use a different, competent contractor/consultant familiar with VDOT owned utilities. For the Concessionaire's facilities, the Design-Builder may either elect to use, at its own discretion and cost, the Concessionaire's on-call consultant or alternatively use a different, competent contractor/consultant familiar with the Concessionaire-owned utilities. It is the Design-Builder's sole responsibility to have these utilities marked, maintain the markings throughout the life of the Fred Ex Project as well as assume physical and financial arrangements to have these utilities marked/re-marked. The Design-Builder will be responsible for all cost necessary for these utility markings.
- F. The Design-Builder shall determine whether other Utilities are present in addition to those identified by the VDOT Notification Center Report and shall afford those additional Utilities an equivalent notification protocol.

**1.7.3 Restoration of Work Performed by Others**

- A. The Concessionaire or VDOT may construct or reconstruct any Utilities within the limits of the Fred Ex Project or grant a permit for the same at any time.
- B. Subject to any relief to which the Design-Builder may be entitled to in the Fred Ex Design-Build Contract, when authorized by the Concessionaire, the Design-Builder shall allow any person, firm, or corporation to make an opening in the highway within the limits of the Fred Ex Project upon presentation of a duly executed permit from VDOT or any municipality for sections within its corporate limits.

**1.8 Work Restrictions****1.8.1 General Requirements**

- A. The Design-Builder shall follow all federal and State laws, rules, and regulations when working on any federal properties, including the Marines Corps Base Quantico property. The work restrictions on the Marines Corps Base Quantico property includes any specific restrictions on Russell Road.
- B. The Design-Builder shall be responsible for a Maintenance of Traffic Plan (MOT) in accordance with Instructional and Information Memorandum IIM-LD-241 (Work

**Execution Version**

---

Zone Safety and Mobility) and TE 351 on Work Zone Speed Analysis, which shall include but not be limited to the following:

1. The Design-Builder's MOT plans development shall be consistent with the Fred Ex Design-Build Contract, including these Technical Requirements.
2. The Design-Builder shall comply with pertinent requirements for maintenance of traffic for the Work. The Design-Builder is responsible for the safety of the work zone. The Design-Builder shall appoint a single point of contact to address MOT and safety requirements for the work zone.
3. The Design-Builder shall conduct all work necessary to provide safe and efficient MOT during construction, including provisions for the movement of people, goods, and services through and around the Fred Ex Project while minimizing impacts to pedestrians, bicyclists, local residents, businesses, and commuters. In no event shall sidewalks or shared use paths be closed unless first approved by the Concessionaire, considering planned and designed alternative facilities by the Design-Builder.
4. The Design-Builder shall coordinate activities including but not limited to communications, public outreach, and stakeholder engagement; lane closures; and MOT and TCP implementation with the Transportation Management Plan (TMP) program.
5. Lane closure coordination and notification to all stakeholders.
6. The Design-Builder shall coordinate construction and MOT activities that impact transit services with the transit agencies.

**1.8.2 Work Hours**

- A. The Design-Builder is advised that its general operations may proceed seven days a week, 24 hours a day, except as may be modified herein.
- B. This is contingent upon the Design-Builder obtaining a variance or waiver of all applicable noise restrictions, as stated in the Fred Ex Design-Build Contract.

**1.8.3 Temporary Roadway Closures**

- A. 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 the Concessionaire (for the Express Lanes) or VDOT (for the General Purpose lanes). The Design-Builder shall restore all lanes of traffic per the times specified in this section. Restoration of traffic shall mean the completion of all construction work, the removal of all traffic control devices, signs, workers, materials, and equipment from the roadway. To facilitate construction and minimize inconvenience to the public, the Design-Builder is advised of the closure limitations listed in the Technical Requirements. The Concessionaire reserves the right to modify the closure limitations in the Technical Requirements, and any modification shall be handled under Section 1.8.6 – Allowance for

Execution Version

Additional Lane Closure Restriction by the Concessionaire and/or Design-Builder Request for Additional Lane Closures.

B. Allowable Lane Closure Hours:

INTERSTATE 95-Allowable Lane Closure Times - September to April			
Day	NORTHBOUND		
	Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	12:00 AM to 4:30 AM 9:30 AM to 3:30 PM 9:00 PM to 11:59 PM	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday-Sunday	12:00 AM to 7:00 AM	Not Permitted	Not Permitted
Day	SOUTHBOUND		
	Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	12:00 AM to 10:00 AM 9:00 PM to 11:59 PM	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 6:00 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday-Sunday	12:00 AM to 7:00 AM	Not Permitted	Not Permitted

INTERSTATE 95-Allowable Lane Closure Times - May to August			
Day	NORTHBOUND		
	Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	12:00 AM to 4:30 AM 9:00 PM to 11:59 PM	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM
Saturday-Sunday	12:00 AM to 5:00 AM	Not Permitted	Not Permitted
Day	SOUTHBOUND		
	Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	12:00 AM to 10:00 AM 9:00 PM to 11:59 PM	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 3:00 AM
Friday	12:00 AM to 4:30 AM 10:00 PM to 11:59 PM	12:00 AM to 4:30 AM	12:00 AM to 3:00 AM

Execution Version

---

Saturday-Sunday	12:00 AM to 5:00 AM	Not Permitted	Not Permitted
-----------------	---------------------	---------------	---------------

Execution Version

Route 17 Allowable Lane Closure Times				
Day		NORTHBOUND		
		Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	Existing 3 Lane Section	12:00 AM to 5:00 PM 6:00 PM to 11:59 PM	12:00 AM to 8:00 AM 9:00 PM to 11:59 PM	12:00 AM to 3:00 AM
	Existing 2 Lane Section	12:00 AM to 6:00 AM 10:00 AM to 2:00 PM 7:00 PM to 11:59 PM	N/A	12:00 AM to 3:00 AM
Friday	Existing 3 Lane Section	12:00 AM to 11:59 AM 10:00 PM to 11:59 PM	12:00 AM to 8:00 AM 11:00 PM to 11:59 PM	12:00 AM to 3:00 AM
	Existing 2 Lane Section	12:00 AM to 6:00 AM 8:00 PM to 11:59 PM	N/A	12:00 AM to 3:00 AM
Saturday-Sunday	Existing 3 Lane Section	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	12:00 AM to 9:00 AM 11:00 PM to 11:59 PM	Not Permitted
	Existing 2 Lane Section	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	N/A	

Route 17 Allowable Lane Closure Times ****				
Day		SOUTHBOUND		
		Single-Lane Closures or Shoulder	Two-Lane Closure	Complete Closure 30 Minute Duration (Maximum)
Monday-Thursday	Existing 3 Lane Section	12:00 AM to 3:00 PM 7:00 PM to 11:59 PM	12:00 AM to 5:00 AM 9:00 PM to 11:59 PM	12:00 AM to 3:00 AM
	Existing 2 Lane Section	12:00 AM to 7:00 AM 8:00 PM to 11:59 PM	N/A	
Friday	Existing 3 Lane Section	12:00 AM to 11:59 AM 10:00 PM to 11:59 PM	12:00 AM to 5:00 AM 11:00 PM to 11:59PM	12:00 AM to 3:00 AM
	Existing 2 Lane Section	12:00 AM to 7:00 AM 10:00 PM to 11:59 PM	N/A	
Saturday-Sunday	Existing 3 Lane Section	12:00 AM to 9:00 AM 10:00 PM to 11:59PM	12:00 AM to 9:00 AM 10:00 PM to 11:59 PM	Not Permitted
	Existing 2 Lane Section	12:00 AM to 9:00 AM 10:00 PM to 11:59PM	N/A	

Execution Version

All Other Roadways Single-Lane Closures* or Shoulder					
ARTERIAL	WEEKDAY		WEEKEND		
	Monday to Thursday	Friday	Friday to Saturday	Saturday to Sunday	Sunday to Monday
Major Arterials**	9:30AM to 3:00PM	9:30AM to 2:00 PM	10:00PM to 9:00AM	10:00PM to 8:00AM	10:00PM to 5:00AM
	10:00PM to 5:00AM				
All Other Roadways	9:00AM to 3:30PM	9:00AM to 2:00 PM	10:00PM to 9:00AM	9:00PM to 9:00AM	10:00PM to 5:00AM
	9:00PM to 5:00AM				

All Other Roadways Multiple-Lane Closures					
ARTERIAL	WEEKDAY		WEEKEND		
	Monday to Thursday	Friday	Friday to Saturday	Saturday to Sunday	Sunday to Monday
Major Arterials**	10:00PM to 5:00AM	Not allowed until 11:00PM	11:00PM to 5:00AM	11:00PM to 6:00AM	11:00PM to 5:00AM
All Other Roadways	9:00PM to 5:00AM	Not allowed until 10:00PM	10:00PM to 6:00AM	10:00PM to 6:00AM	10:00PM to 5:00AM

\*Single-lane closures are only permitted for multiple-lane roadways

\*\*Major Arterials are defined as Primary Roads, high volume Secondary Roads, and all other routes that connect directly to Interstates

\*\*\* Other roadway closures will require coordination and possibly permitting with the agency having jurisdiction over the roadway.

\*\*\*\*No closures will be allowed on Route 17 and Route 17 Ramps beginning 2 days in advance of Thanksgiving until January 2<sup>nd</sup>.

- C. These allowable hours shall be applicable to both stationary and mobile lane closures, as well as shoulder closures.
- D. Both left and right shoulders on I-95 GP lanes shall not be closed at the same time.
- E. Lane Closure Request Procedure
  - 1. Multi-lane closures of I-95 for any Work will require coordination with appropriate Governmental Authorities, stakeholders and public notice. The Design-BUILDER shall provide a minimum of three (3) weeks advance notice to the Concessionaire and VDOT. This advance notice will allow the Concessionaire and Design-BUILDER to coordinate on a public outreach campaign and/or advertising to reach affected motorists and target audiences. Alternate dates can be advertised in the event of inclement weather.
  - 2. Total closures of I-95 for any overhead work including but not limited to installation and removal of overhead sign panels and structures, installation for pipe installation across I-95, pavement joint repair with substantiation of need by the Contractor will require coordination with appropriate Governmental Authorities, stakeholders and public notice. The Design-BUILDER shall provide a minimum of six (6) weeks advance notice to the



Execution Version

---

- Concessionaire. This advance notice will allow the Concessionaire and Design-Builder to coordinate on a public outreach campaign and/or advertising to reach affected motorists and target audiences. Alternate dates can be advertised in the event of inclement weather.
3. The Design-Builder shall submit all lane and/or shoulder closure requests to the designated VDOT representative and VDOT Project Manager for coordination purposes (for determination of conflicts with other projects, for instance) at least seven (7) days in advance of the proposed lane and/or shoulder closure and no later than close of business Wednesday the week prior to closure, stating the location, purpose, date, time, and duration of the closure. The Design-Builder shall confirm at least twenty-four (24) hours before any scheduled lane and/or shoulder closure and shall include a written reiteration of the proposed tasks and a listing of materials, labor, and equipment to be utilized, in order for the VDOT TOC to post the information on the VDOT website and VA511 system.
  4. For all 95 Express Lanes closures, the Design-Builder is required to coordinate directly with the Concessionaire and comply with the current Permit to Work processes in place for the Express Lanes, including the use of electronic forms and submittals. An approved Permit to Work will be required prior to commencing any work within the 95 Express Lanes, or work impacting any 95 Express Lanes facilities or equipment. All Permit to Work requests shall be submitted a minimum of five (5) business Days prior to the intended work start date.
  5. 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 (revised April 2015) Virginia Work Area Protection Manual and the *Manual on Uniform Traffic Control Devices* (MUTCD). Once a closing is in place, Work shall commence immediately and shall progress on a continuous basis to completion or to a designated time.
- F. In addition to the Liquidated Damages as per Section 1.8.13 of these Technical Requirements, 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 required contract lane closure restrictions and the proposed corrective measures is to be provided to the Concessionaire within two (2) days of the occurrence. The Concessionaire 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.
- G. The Concessionaire reserves the right to monitor traffic conditions impacted by the Work and to make necessary restrictions as may be warranted or as Emergency

Execution Version

situations dictate. Additional restrictions for other holidays or special local events may also be necessary, however, in these situations the Concessionaire will endeavor to inform the Design-Builder of any additional restrictions as early as practicable and in no case less than forty-eight (48) hours prior to the holiday or special local event.

- H. Confirmation shall be made 24 hours before any scheduled lane closure and shall include a written reiteration of the proposed tasks and a listing of materials, labor, and major equipment to be used. Complete road closures require a 72-hour advance confirmation for coordination. The Design-Builder is responsible for providing adequate advance notification via variable message and required static signing for lane closures in accordance with the Virginia Work Area Protection Manual (VWAPM) and the Manual on Uniform Traffic Control Devices (MUTCD). Once a closing is in place, Work shall begin immediately and shall progress on a continuous basis to completion or to a designated time. The closure may be delayed if excessive traffic backup or queuing is already present at the scheduled start of Work and will be adjusted in accordance with Section 1.8.5 of these Technical Requirements.
- I. Traffic backups must dissipate before successive closings can be implemented.
- J. The minimum clear distance between two separate lane closings, that is, from the last traffic cone of the first closing to the first cone of the second closing in the same roadway, shall be two miles.
- K. The Design-Builder shall be responsible for entering all scheduled lane closures into VDOT’s LCAM system. The Design-Builder shall also be responsible for coordinating and eliminating all LCAMS conflicts related to the Design-Builder’s scheduled lane closures.

**1.8.4 Reversible Facilities**

- A. Hours of Operations: The existing reversible facility hours of operations shall remain in place during of the Construction Period, unless otherwise specified by the Concessionaire with adequate advance notice to the Design-Builder. . The Design-Builder shall be responsible for scheduling all Work to accommodate the reversal schedule. This shall include adjustment of all MOT as necessary to be consistent with the direction of traffic.
- B. Allowable Lane Closures Hours

	REVERSIBLE 95 EXPRESS LANES*	
	Single-Lane Closures or Shoulder	Short-term Complete Road Closure**
<b>WEEKDAY</b>	8:00PM (Sun to Thur) to 5:00AM (Mon to Fri)	8:00PM (Mon to Thur) to 4:00AM (Tues to Fri)
<b>WEEKEND</b>	11:00PM (Fri to Sat) to 10:00AM (Sat to Sun)	11:00PM (Fri, Sat) to 4:00AM (Sat, Sun)

\* Direction of traffic control for all lane closures in reversible lanes will need to be adjusted as necessary to face direction of traffic.

\*\* Complete Road Closure on Reversible Lanes limited to 30 minutes or less

## Execution Version

**1.8.5 Lane Closure Types**

- A. The Design-Builder shall provide a weekly work zone plan of all closures on the Wednesday prior to the next week’s planned work activity.
- B. All lane closures shall be identified as one of the following types:
1. Type 1 – A lane closure resulting in a significant impact on traffic, such as stopping traffic completely, closing two or more lanes, any lane closures in the existing reversible facility, closing an exit or entrance ramp at freeway interchanges or changing traffic patterns. This type of closure would require extensive media and stakeholder notification and coordination among various local and state agencies, as identified in the PIP.
  2. Type 2 – A lane closure resulting in minor or no impact on the flow of traffic, such as closing one lane on a four-lane roadway during off-peak traffic hours.
  3. Type 3 – A lane closure that would close a shoulder (right or left) on a roadway or ramp.
- C. The Design-Builder shall provide advance notice for each lane closure or in accordance with the following table:

Lane and Shoulder Closure Notification Requirements		
Type	Minimum Advance Notice (days)	Maximum Advance Notice (days)
1	10	21
2	5	14
3	3	14

**1.8.6 Allowance for Additional Lane Closure Restriction by the Concessionaire and/or Design-Builder Request for Additional Lane Closures**

- A. At the Concessionaire’s reasonable discretion and approval, the Design-Builder may submit a request to Work outside the stated lane closure hours by providing adequate justification (including traffic analysis) demonstrating the viability of the request.
- B. Closures of longer durations than those listed in Section 1.8.5 will require a review of plans, implementation of detours, and public outreach.
- C. The Concessionaire reserves the right to monitor traffic conditions affected by the Work and to make additional restrictions as may be necessary, such as terminating a lane closure early or adjusting the Fred Ex Project’s allowable lane closure hours.
- D. General Requirements:
1. The Concessionaire will track any additional lane closure time granted outside of time allowed in the Fred Ex Design-Build Contract.

**Execution Version**

---

2. Any additional time granted must comply with all the requirements set forth in the Fred Ex Design-Build Contract.
3. The Design-Builder acknowledges that there will be instances where the Design-Builder may not be allowed to implement an approved lane closure during events that are beyond the Concessionaire's control.
4. The Concessionaire will track all instances where the Design-Builder is directed by the Concessionaire not to implement any lane closures for special events such as, but not limited to, the following list:
  - (i) Presidential motorcades traveling through project limits
  - (ii) Special events with regional impacts
  - (iii) Special sport events with regional impacts
  - (iv) Major accidents/Incidents with regional impacts
  - (v) Seasonal traffic patterns

**E. Calculating Hours:**

1. Additional time (lane closures) – Any additional time requested by the Design-Builder and granted by the Concessionaire beyond the approved hours within the Fred Ex Design-Build Contract will be added for every instance and every location at 15 minute intervals.
2. Additional Time (complete closures) – If a full closure of roadway not specified in the Fred Ex Design-Build Contract is implemented in lieu of 30 minute total temporary closure, hours will be calculated in the same manner as the hours that were requested/approved for the specific closure.
3. Time Deducted – When the Design-Builder is not allowed to implement a lane closure by the Concessionaire during the approved hours within the Fred Ex Design-Build Contract, the hours during which such lane closure is not allowed will be deducted from the total hours accumulated.

**F. Documentation:**

1. Within the first 60 days, the Concessionaire and Design-Builder will develop and agree on a format of documenting this information. The form should at least contain date, hours allowed, hours disallowed, impacted time and other agreed upon elements.
2. By the 10th of each month, the Concessionaire and Design-Builder will reconsolidate and agree on the resultant amount of hours allowed/disallowed.

**Execution Version**

---

## G. Allowance:

1. At the end of the Fred Ex Project, the Concessionaire and the Design-Builder will reconcile the resultant impacted time or additional granted time by subtracting the additional time granted by the Concessionaire from the time Design-Builder was disallowed per the Technical Requirements in accordance with the Fred Ex Design-Build Contract to implement the lane closures. The Concessionaire and Design-Builder will endeavor to maintain a neutral balance of resultant impacted and additional granted time throughout the duration of the Fred Ex Project.
2. Any lane closures affected by inclement weather, snow and snow removal process, emergency VDOT maintenance repairs safety shutdowns and from major accidents are not subject to above allowance and are excluded from the calculations and compensations.

## H. General

Notwithstanding anything to the contrary, it is agreed that:

1. The Concessionaire will provide the Design-Builder with as much notice as is possible with respect to any lane closure request by the Design-Builder which is not approved by the Concessionaire.
2. The Design-Builder will provide the Concessionaire with as much notice as is possible with respect to any inability of the Design-Builder to implement lane closures which are otherwise allowed within the Fred Ex Design-Build Contract.
3. At the end of the Fred Ex Project, the Concessionaire and the Design-Builder will reconsolidate the impacted time by subtracting the additional time granted by the Concessionaire from the time the Design-Builder was disallowed per the technical requirements to implement the lane closures. If the Concessionaire disapproves requests for lane closures from Design-Builder, or otherwise prevents Design-Builder from implementing lane closures which are otherwise permitted by the Fred Ex Design-Build Contract, and the impact of such actions by the Concessionaire is more than 120 cumulative hours, such actions shall constitute a Design-Build Contract Work Order.

**1.8.7 Night Work**

- A. In areas where Work is to be performed during the hours of dusk or darkness, the Design-Builder shall furnish, place, and maintain lighting facilities capable of providing light of sufficient intensity to facilitate good workmanship and proper inspection at all times. The lights shall be arranged so as not to interfere with or impede traffic approaching the work site(s) from either direction or produce undue glare to property owners.

**Execution Version**

---

- B. Lighting of work site(s) may be accomplished using any combination of portable floodlights, standard equipment lights, existing street lights, and temporary street lights that will provide the proper illumination.
- C. The Design-Builder shall furnish and place warning signs to alert approaching motorists of lighted construction area(s). These warning signs shall be four feet (1200 mm) x four feet (1200 mm). The Design-Builder's vehicles used on the Fred Ex Project shall be provided with amber flashing lights that shall be in operation while in the work area. The Design-Builder's equipment shall be provided with a minimum of three square feet of reflective sheeting that is visible to approaching motorists. The Design-Builder shall provide his personnel with proper Personal Protective Equipment (PPE), which shall be worn at all times while the workers are within the work area. The Design-Builder shall provide a light meter to demonstrate that the minimum light intensity is being maintained.
- D. The Design-Builder shall provide sufficient fuel, spare lamps, generators, and other necessary equipment to maintain the lighting of the work site. The Design-Builder shall utilize padding or shielding or locate mechanical and electrical equipment to minimize noise generated by lighting operations as directed by the Concessionaire. Noise generated by portable generators shall comply with all Law.
- E. The Design-Builder shall provide sufficient Virginia State Police officers with a marked law enforcement vehicle equipped with a blue flashing light for all nighttime work that is performed within the travel lanes.

**1.8.8 Law Enforcement Utilization**

- A. The Design-Builder shall be responsible for all costs and coordinating directly with the Virginia State Police 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.

**1.8.9 Size and Weight Limitations**

- A. Hauling or Moving Material and Equipment on Public Roads Open to Traffic: The Design-Builder shall comply with legal size and weight limitations in the hauling or moving of material and equipment on public roads open to traffic unless the hauling or moving is covered by a hauling permit.
- B. Hauling or Moving Material and Equipment on Public Roads Not Open to Traffic: The Design-Builder shall comply with the legal weight limitations in the hauling or moving of material and equipment on public roads that are not open to traffic unless the hauling or moving is permitted elsewhere herein or is otherwise covered by a hauling permit. The Design-Builder shall be liable for damage that results from the hauling or moving of materials and equipment.

**Execution Version**

---

- C. The hauling or moving of material and equipment on the final road surface or across any structure during various stages of construction shall be subject to engineering analysis and approved by the Concessionaire.
- D. **Furnishing Items in Component Parts of Sections:** If the size or weight of fabricated or manufactured items together with that of the hauling or moving vehicle exceeds the limitations covered by hauling permit policies and other means of transportation are not available, permission will be given to furnish the items in component parts of sections with adequately designed splices or connections at appropriate points. Permission for such adjustments shall be requested in writing, and approval in writing shall be secured from the Concessionaire prior to fabrication or manufacture of the items. The request shall state the reasons for adjustment and shall be accompanied by supporting data, including working drawings where necessary.

**1.8.10 Use of Explosives**

- A. Explosives shall be stored and used in a secure manner. 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 excavating work. Where feasible, the Design-Builder shall explore other means of loosening and or reducing the size of the excavation without blasting. When blasting becomes necessary, the Design-Builder's plan of operations shall include a blasting plan detailing the blasting techniques to be used during excavation operations requiring the use of explosives. Both plans shall be submitted to the Concessionaire for review prior to commencing blasting operations.
- B. Explosives shall be purchased, transported, stored, used, and disposed of by a Virginia Certified Blaster in possession of a current criminal history record check and commercial driver's license with hazardous materials endorsement and a valid medical examiner's certificate.
- C. The Design-Builder shall be responsible for damage resulting from the use of explosives. The Design-Builder shall notify each property and Utility Owner having a building, structure, or other installation above or below ground in proximity to the site of the Work of its intention to use explosives. Notice shall be given sufficiently in advance of the start of blasting operations to enable owners to take steps to protect their property. The review of the Design-Builder's plan of operations, blasting plan, and notification of property owners shall in no way relieve the Design-Builder of its responsibility for damage resulting from its blasting operations.

**1.8.11 95 Express Lanes**

For any temporary impacts or isolated shut-down of system elements, the Design-Builder is required to coordinate directly with the Concessionaire regarding any Work within the 95 Express Lanes, or Work impacting any 95 Express Lanes facilities or equipment and comply with the current Permit to Work processes in place for the Express Lanes, including the use of electronic forms and submittals . An approved Permit to Work will be required prior to commencing any

**Execution Version**

---

Work within the 95 Express Lanes, or Work impacting any 95 Express Lanes facilities or equipment. All Permit to Work requests shall be submitted a minimum of 5 business days prior to the intended Work start date.

**1.8.12 Holidays**

- A. Moving/mobile, short duration, short-term stationary, or intermediate-term stationary temporary traffic control zone lane closures on mainline lanes, shoulders, or ramps shall not be performed during the following Holiday time periods without the written permission of the Concessionaire. Additionally, a long-term stationary temporary traffic control zone shall not be initially put in place, adjusted, or removed during the following Holiday time periods without the written permission of the Concessionaire:
- **January 1:** From 5:00 a.m. on the preceding day until Noon on the following day, except as indicated below.
  - **Inauguration Day:** From 5:00 a.m. on the preceding day until Noon on the following day.
  - **Martin Luther King, Jr. Day and Lee Jackson Day:** From 5:00 a.m. on the preceding Thursday to Noon on the following Tuesday.
  - **Presidents Day:** As indicated below below in Section 1.8.12.B.
  - **Easter:** As indicated below below in Section 1.8.12.B.
  - **Memorial Day:** As indicated below below in Section 1.8.12.B.
  - **July 4:** From 5:00 a.m. on the preceding day until Noon on the following day, except as indicated below.
  - **Labor Day:** As indicated below below in Section 1.8.12.B.
  - **September 11:** No daytime closures.
  - **Columbus Day:** As indicated below below in Section 1.8.12.B.
  - **Veterans Day:** From 5:00 a.m. on the preceding day until Noon on the following day, except as indicated below.
  - **Thanksgiving Day:** From 5:00 a.m. on the Friday proceeding Thanksgiving Day until Noon on the Tuesday following Thanksgiving Day.
  - **Christmas Day:** . Holiday restrictions start from 5:00 a.m on December 23<sup>rd</sup>. If December 23<sup>rd</sup> is a Saturday, Sunday or Monday, then the holiday restrictions are from 5:00 a.m on the preceding Friday.
  - **Christmas Day through New Year’s Day:** As indicated below in Section 1.8.12.B.
- B. If the Holiday occurs on a Friday or Saturday: From 5:00 a.m. on the preceding Thursday to Noon on the following Monday. If the Holiday occurs on a Sunday or Monday: From 5:00 a.m. on the preceding Friday to Noon on the following Tuesday.



## Execution Version

**1.8.13 Damage Recovery for Lane Closures**

- A. Damage recovery/user costs will be assessed against the Design-Builder if all lanes are not open to traffic during the times 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 Concessionaire. This assessment will be in accordance with the following table:

<b>Liquidated Damages for Lane Closures</b>			
<b>Liquidated Damage (\$ per minute)</b>			
<b>Elapsed Time (min)</b>	<b>I-95, , and all ramps which includes General Purpose Lanes, HOV, and HOT Lanes</b>	<b>Major Arterials</b>	<b>All other roads</b>
1-5, or any portion thereof	\$0	\$0	\$0
Every additional minute or any portion thereof after initial 5 minutes stated above	\$1,000 for the sixth minute plus \$1,000 per each additional minute	\$1,000 for the sixth minute plus \$500 per each additional minute	\$500 for the sixth minute plus \$500 per each additional minute

The liquidated damage charges are set forth in the above table. If a Non-Permitted Closure occurs, the Concessionaire will notify the Design-Builder thereof and of the amount of associated Lane Closure Damages in writing within 48 hours of the Non-Permitted Closure. If there are no additional Non-Permitted Closures occurring within 90 days, the Concessionaire shall refrain charging of the Lane Closure Damages for the prior Non-Permitted Closures. Otherwise, the Design-Builder shall pay all Lane Closure Damages to the Concessionaire within 30 days of the date on which last written notice of Lane Closure Damages is given to the Design-Builder for violating having two (2) or more Non-Permitted Closure occurrences within 90 days. Once there is a clean period of 90 days without a Non-Permitted Closure occurrence, the new 90 days period will start for future Lane Closure Damages. All liquidated damage charges will be capped at \$100,000 per violated Non-Permitted Closure. For avoidance of doubt, the Design-Builder shall pay all Lane Closure Damages to the Concessionaire for Non-Permitted Closures that occur on all roadways except for the Non-Permitted Closures occurring within the 95 Express Lanes. If there are Non-Permitted Closures that occur on the 95 Express Lanes and another adjoining roadway, the Design-Builder shall be responsible for 50% of the resulting Lane Closure Damages. Non-Permitted Closure: Any lane closure outside the Technical Requirements unless approved by the Concessionaire.

- B. In addition to the assessed 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 Concessionaire within two (2) days of the occurrence. The Concessionaire will respond to the adequacy of the submission within two (2) working days of receipt. No modification of the Contract Price or Contract time(s) will be granted or considered for these days.
- C. The Concessionaire may, at its sole discretion, choose not to assess 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 Concessionaire for concurrence. The

**Execution Version**

---

Concessionaire will make a deduction in the assessed amount from funds otherwise due to the Design-Builder under the Fred Ex Design-Build Contract.

- D. The Concessionaire reserves the right to monitor traffic conditions affected by the Work and to make additional restrictions as may be necessary, such as terminating a lane closure early. These adjustments shall be handled under Section 1.8.6 – Allowance for Additional Lane Closure Restriction by the Concessionaire and/or Design-Builder Request for Additional Lane Closures.

**1.8.14 Marines Corps Base Quantico Work**

- A. The Design-Builder shall follow all rules and regulations when working on Marines Corps Base Quantico, including but not limited to: additional lane closure restrictions on approach roadways, additional Marines Corps Base Quantico security procedures, including the prohibition of ammunition, mace, brass knuckles, or any items that could readily be used as a weapon to cause harm.
- B. Designs for Work on Marines Corps Base Quantico may be subject to additional coordination, review and comment, and approval by Marines Corps Base Quantico representatives. If applicable, the Design-Builder shall prepare separate design submittals for Work on Marines Corps Base Quantico at least at the preliminary, interim and final stages to secure the Base’s approval.
- C. The Design-Builder shall support and attend technical and coordination meetings with the Concessionaire and Marines Corps Base Quantico representatives throughout the Construction Period, including but not limited to design, access, security, and construction coordination related meetings. The Design-Builder shall prepare the necessary documents for review in advance of these meetings.

**1.8.15 Bridge and Road Closures**

- A. The Design-Builder is permitted to close Route 652 (Truslow Road) and Route 628 (American Legion Road/Ramoth Church Road) to all traffic in the vicinity of I-95 during the Construction Period to facilitate replacement of each bridge. These roadways may be closed for up to a nine-month period. Concurrent closure of the existing American Legion Road and Truslow Road bridges over I-95 is not allowed. At least one of the bridges must remain fully open and operational while the other is under construction.
- B. The Design-Builder shall maintain at minimum one of these roadways in an open condition during the Construction Period. The Design-Builder shall establish a permanent detour prior to closing the roadway and provide to the Concessionaire for approval prior to closing the roadway. The Design-Builder shall be responsible for providing operational analysis and design and construction of any other improvements necessary for implementation of the detour.

**Execution Version**

---

- C. The Design-Builder shall provide and maintain access to all properties along Route 652 (Truslow Road) and Route 628 (American Legion Road/Ramoth Church Road) at all times.
- D. The Design-Builder shall provide a minimum of six (6) weeks advance notice to the Concessionaire prior to closure of the roadway.
- E. For the Truslow Road Bridge, the Design-Builder shall complete all demolition of the existing bridge piers and the abutment adjacent to the southbound I-95 general purpose lanes by October 31, 2020. This demolition work shall include any foundation removal and undercutting necessary to allow the placement of new roadway and shoulder paving by the Southbound RRC contractor in these locations in accordance with VDOT specifications.

## **1.9 Maintenance of Traffic**

### **1.9.1 General Requirements**

- A. MOT development shall be consistent with the Fred Ex Design-Build Contract, including these Technical Requirements.
- B. Work zone information shall be shared with VDOT’s Northern Region Operations Advanced Traffic Management System (ATMS) and any other regional ATMS and shall be approved by the Concessionaire.
- C. The Design-Builder shall provide an MOT engineer to perform the following:
  - 1. Coordinate implementation of the TMP as developed by the Design-Builder;
  - 2. Oversee the design and implementation of the MOT Plans;
  - 3. Coordinate MOT activities with the public/community outreach staff and the Concessionaire;
  - 4. Implement traffic management strategies;
  - 5. Be continuously available during construction until Final Completion of the Fred Ex Project and elimination of all construction traffic control; and
  - 6. Coordinate MOT activities with adjacent projects
- D. Unless otherwise approved by the Concessionaire, the MOT engineer shall be a Professional Engineer licensed in the Commonwealth who demonstrates MOT design and implementation experience of similar project complexity. The MOT engineer shall have completed the training and examination by VDOT on the proper practices and methods for the MOT installation, maintenance and removal of temporary traffic control devices and hold the “Verification of Completion of Advanced Work Zone Traffic Control Training” certificate in his/her possession.

**Execution Version**

---

- E. The Design-Builder shall prepare traffic analyses and modeling for all MOT phases and stages, exclusive of short-term closures identified in the Fred Ex Design-Build Contract, in order to identify traffic impacts. The Design-Builder shall use analytical/deterministic (HCM-based) or traffic simulation/optimization tools for the analyses. Traffic analyses and modeling shall also be required for all construction activities requiring a detour, requiring closure of multiple lanes, or deviating in any way from what is set forth in the Fred Ex Design-Build Contract.
- F. Traffic analyses will vary depending on the magnitude of the closure, detour or other change. The scope of the traffic analyses and the assumptions to be used will be determined in a meeting held with the Concessionaire.
- G. All MOT plans and documents shall have a valid digital professional engineering stamp held by the MOT engineer.

**1.9.2 Maintenance of Traffic during Construction**

- A. The MOT engineer or designee shall be continuously available for MOT related activities during construction until Final Completion and elimination of all construction traffic control.
- B. The construction activities will be completed in accordance with the TMP, and with the requirements of the Fred Ex Design-Build Contract and VDOT's Instructional and Information Memorandum IIM-LD-241.5 (Work Zone Safety and Mobility) and TE 350.1 on Work Zone Speed Analysis will be adopted for MOT on the Fred Ex Project.
- C. The Design-Builder shall maintain traffic consistent with the agreed upon Transportation Management Plan.
- D. The Design-Builder shall conduct daily and weekly MOT inspection to ensure all traffic devices and traffic patterns are in compliance with the VWAPM and MUTCD standards. Provide a weekly MUTCD report to the Concessionaire to include the following:
  - 1. Date discrepancy was identified
  - 2. Description of discrepancy
  - 3. Corrective action required
  - 4. Date corrective action should be taken
  - 5. Date corrective action was completed
- E. The Design-Builder shall develop Temporary Traffic Control Plans (TCP) for each stage of construction that shows the Design-Builder's proposed construction staging and proposed traffic control devices consistent with the MOT Plan.

**Execution Version**

---

- F. The Design-Builder, at its sole cost and expense, will be required to provide a uniformed law enforcement officer with a marked law enforcement vehicle equipped with a blue flashing light during set-up and take-down of all daytime intersection closures involving two or more lanes of traffic.
- G. Detour plans shall be developed by the Design-Builder and presented to the Concessionaire for approval. The Design-Builder shall coordinate detour plans with local, state and federal agencies (as applicable) and submit and update the MOT Plan well in advance of any planned detour activity. The Design-Builder shall be responsible for all planning, consultation and coordination with impacted parties, design, implementation and monitoring, and maintenance of detours-whether within or outside the Fred Ex Project Right of Way. The provision of detours and marking of alternate routes will not relieve the Design-Builder of the responsibility for ensuring the safety of the public or from complying with any requirements of the Fred Ex Design-Build Contract.
- H. The Design-Builder shall be responsible for design and construction of any additional improvements that may be needed on alternate routes based on the traffic analyses and coordination with the Concessionaire.
- I. Right of way for temporary highways, diversion channels, sediment and erosion control features or bridges required by the Technical Requirements will be planned, designed and provided by the Design-Builder.
- J. During any suspension of Work, the Design-Builder shall temporarily open to traffic such portions of the Fred Ex Project and temporary roadways as may be agreed upon by the Concessionaire and Design-Builder.
- K. Unless a design exception or design waiver is granted, the geometric design for temporary roadways and temporary traffic control shall be designed, at a minimum, to the existing posted speed limit.
- L. Certified flaggers shall be provided in sufficient number and locations as necessary for control and protection of vehicular and pedestrian traffic in accordance with the requirements of the Virginia Work Area Protection Manual (VWAPM). Flaggers shall be able to communicate to the traveling public in English while performing the job duty as a flagger at the flagger station. Flaggers shall use sign paddles to regulate traffic in accordance with the requirements of the VWAPM. Flagger certification cards shall be carried by flaggers while performing flagging duties. Flaggers found not to be in possession of their certification card shall be removed from the flagging site and operations requiring flagging will be suspended. Further, flaggers performing duties improperly will have their certifications revoked.
- M. Restrictions on lane closures are defined in the Fred Ex Design-Build Contract.

**Execution Version**

---

- N. Long-term closures of the shoulders adjacent to the general purpose lanes are allowable provided the closure is separated by concrete barrier as approved by the Concessionaire.
- O. Where concrete barriers are used to close the shoulder, the Design-Builder will be required to provide pull off areas in accordance with the Virginia Work Area Protection Manual.
- P. Connections with roads and public and private entrances shall be kept in a reasonably smooth condition at all times. Stabilization or surfacing material shall be applied to connections and entrances.
- Q. The Design-Builder shall schedule construction operations so that approved continuous access is provided for all roads and properties. Connections or entrances shall not be disturbed by the Design-Builder until necessary. Once connections or entrances have been disturbed, they shall be maintained and completed as follows:
1. Connections that had an original paved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using pavement. Connections that had an original unpaved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using either the required material or a temporary aggregate stabilization course that shall be placed as soon as practicable after connections are disturbed.
  2. Mainline connections shall have all lanes open during construction. If there are delays in prosecution of work for other connections, connections that were originally paved shall have at least two lanes maintained with a temporary paved surface. Those that were not originally paved shall be maintained with a temporary aggregate stabilization course.
  3. Mainline access/egress connections shall have all lanes open during construction unless otherwise agreed with the Concessionaire. Other entrances shall be graded concurrently with the roadway with which they intersect. Once an entrance has been disturbed, it shall be completed as soon as is practicable, including placing the required base and surface course or stabilization. If the entrance must be constructed in stages, such as when there is a substantial change in the elevation of the roadway with which it intersects, the surface shall be covered with a temporary aggregate stabilization course or other suitable salvaged material until the entrance can be completed and the required base and surface or stabilization course can be placed.
- R. When the Design-Builder elects to complete the rough grading operations for the entire Fred Ex Project or exceed the length of one full day's surfacing operations, the rough grade shall be machined to a uniform slope from the top edge of the existing pavement to the ditch line.

**Execution Version**

---

- S. When the surface is to be widened on both sides of the existing pavement, construction operations involving grading or paving shall not be conducted simultaneously directly opposite each other and the surface of pavement shall be kept free from soil and other materials that might be hazardous to traffic. Prior to opening of new pavement to traffic, shoulders shall be roughly dressed for a distance of three feet from the edge of the paved surface.
- T. Where the Design-Builder places obstructions such as suction or discharge pipes, pump hoses, steel plates or any other obstruction that must be crossed by vehicular traffic, they shall be bridged in accordance with plans submitted by the Design-Builder and approved by the Concessionaire. Traffic shall be protected by the display of warning devices both day and night. If operations or obstructions placed by the Design-Builder damage an existing traveled roadway, the Design-Builder shall cease operations and repair damages.
- U. Where existing hydraulic cement concrete pavement is to be patched, the operation of breaking and excavating old pavement shall extend for a distance of not more than two miles. Patching shall be coordinated with excavating so that an area of not more than one-half mile in which excavated patches are located shall be left at the end of any day's work. Necessary precautions shall be taken to protect traffic during patching operations.
- V. The Design-Builder shall construct, maintain, and remove temporary structures and approaches necessary for use by traffic. After new structures have been opened to traffic, temporary structures and approaches shall be removed. The proposed design of temporary structures shall be submitted to the Concessionaire for its approval together with other associated Design Documentation.
- W. If the Design-Builder fails to remedy unsatisfactory maintenance not complying with these Technical Requirements within a mutually agreed upon time after receipt of a written notice by the Concessionaire, the Concessionaire may proceed with adequate forces, equipment, and material to maintain the Fred Ex Project. Any compensation will be in accordance with the Fred Ex Design-Build Contract. The Design-Builder shall have the right to dispute the Concessionaire's determination that maintenance is unsatisfactory.
- X. All MOT plans and documents shall have a valid digital professional engineering stamp held by the MOT engineer.
- Y. All Temporary Traffic Controls shall be shown on Approved For Construction Plans.
- Z. Only TL-3, Type I Re-Directive Impact Attenuators shall be used on interstates, limited access highways, major arterials, and its associated ramps unless otherwise approved by the Concessionaire in its sole discretion. TL-3, Type II Non-Redirective Impact Attenuators may only be used with movable barrier.

**Execution Version**

---

- AA. All stages and phases of construction, including installation and testing of the Tolling and Traffic Management (TTMS) system, shall be covered by an MOT plan.
- BB. If any sidewalk or shared use path is requested to be closed, the alternative routes considered shall be covered by an MOT plan and approved by the Concessionaire.

**1.9.3 MOT During Operation for Routine Maintenance and Major Rehabilitation Maintenance Work**

- A. Lane/s and Shoulder/s Closures: To facilitate construction and minimize inconvenience to the public for the routine maintenance and for major rehabilitation maintenance work, the Design-Builder is advised of the closure limitations listed in Section 1.8 and lane closures limitations mutually agreed between the Concessionaire and the Design-Builder.
- B. Both the Design-Builder and the Concessionaire will coordinate and mutually agree the requirements for lane closures of the Project Assets and the GP Lanes to facilitate the routine and major rehabilitation maintenance work.

**1.9.4 Transportation Management Plan**

- A. 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 Fred Ex Project. The TMP shall document how traffic shall be managed during the construction of the Fred Ex Project. This Fred Ex Project is classified as a Type C, Category V in terms of the TMP. 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 Concessionaire 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 this Section 1.9.
- B. The Design-Builder's TMP shall include a Maintenance of Traffic (MOT) Plan detailing all phases of Work, proposed lane closures, maintenance of traffic through the work area, and all construction accesses for approval by the Concessionaire. The MOT Plan shall also address safe and efficient operation of adjacent public transportation facilities and State Highways. The MOT Plan shall also include coordination with local agencies and other contractors performing work in the vicinity of I-95. This MOT 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. The TMP shall also accommodate safe and efficient snow removal operations and ensure proper drainage during all phases of construction. Access must be maintained to all businesses, residential communities, Emergency crossovers and private entrances at all times. The phases in the Design-Builder's suggested sequence of construction that accompany an approved work package shall be followed unless the Design-Builder submits and secures



**Execution Version**

---

Concessionaire approval for a sequence which will both expedite construction while lessening the effect of such construction upon the traveling public.

- C. If additional traffic counts are required, it will be the responsibility of the Design-Builder to collect such data. The Design-Builder shall note that any proposed detour utilizing local neighborhood streets will require coordination with the applicable locality, as appropriate, and are subject to the terms and conditions of the Concessionaire's approval.
- D. Construction signs and pavement markings (temporary) shall be installed, maintained, adjusted, and removed by the Design-Builder throughout the duration of the Fred Ex Project. These items shall be shown on and coordinated with the Sign Sequencing Plan defined in Section 3.9.3 of these Technical Requirements. If the Design-Builder chooses to remove any existing pavement markings from any roadway to install temporary markings to facilitate his work, the Design-Builder shall resurface the roadway in accordance with Section 3.8 of these Technical Requirements.
- E. All entrances, intersections or pedestrian access points/routes that will be affected by the work zone or by the traffic control devices shall be maintained or an acceptable alternate must be provided by the Design-Builder.
- F. Temporary barriers shall be shown in the MOT Plans and shall be in accordance with Attachment 1.5a. If Traffic Barrier Service Concrete (TBSC) is warranted based on the criteria for determining the application of barrier per the 2011 (revised April 2015) 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.

## **1.10 Not Used**

## **1.11 Third Parties and Permitting**

### **1.11.1 Permitting**

- A. The Design-Builder shall obtain permits, approvals, and coordinate with any relevant Governmental Authorities and other entities necessary to complete the Fred Ex Project, with assistance from the Concessionaire as reasonably requested. All Governmental Approvals applicable to construction Work will be the responsibility of the Design-Builder, with the exception of those Governmental Approvals for which the Concessionaire is responsible per the Fred Ex Design-Build Contract. The Design-Builder shall provide copies of all permits and permit modifications to the Concessionaire upon receipt.
- B. The Design-Builder shall obtain any required waiver or variance from each applicable local government regarding a local noise ordinance, as needed to prosecute the Work. The Concessionaire will make reasonable efforts to assist the Design-

**Execution Version**

---

Builder in obtaining any such waiver or variance. The Design-Builder shall adhere to the requirements of the noise waiver in planning and performing any construction. If the local government identifies a violation all costs associated with any delays or corrective action is the responsibility of the Design-Builder.

- C. The Design-Builder will be responsible for all costs associated with compliance with any ordinance and Law or any violations of Law attributed to the activities of the Design-Builder in accordance with the Fred Ex Design-Build Contract.
- D. If any work is performed on the Marine Corps Base Quantico property, the Design-Builder shall follow MCBQ permitting requirements (see Section 1.11.6 of these Technical Requirements).

**1.11.2 Third Parties**

- A. If any portion of the Fred Ex Project is located within the limits of a municipality or locality, military installation, or other federally owned property, the Design-Builder shall cooperate with the appropriate officials and agents in the prosecution of the Work to the same extent as with the Concessionaire.
- B. The Design-Builder shall coordinate its activities with municipalities and localities, Marines Corps Base Quantico, and other contractors working in the area. As provided in the Fred Ex Design-Build Contract, the Design-Builder's work program and schedule shall consider and coordinate with the work of other contractors involved with adjacent work, including maintenance, in the corridor.
- C. If other separate contracts are awarded by the Concessionaire or by other Governmental Authorities, including projects under the PPTA, that affect the Design-Builder's work, including work related to abutting roadways and connectors and work associated with a TAMS contract, the Design-Builder will coordinate its work with the work being performed by the other contractors. The Concessionaire will contractually require its separate contractors to cooperate with, and coordinate their activities with, the Design-Builder.
- D. The Design-Builder shall be responsible for contacting other contractors regarding their anticipated schedules to complete the associated projects or key milestones of the associated projects they are/will be working on. See Section of 1.14 of these Technical Requirements for additional details.
- E. The Design-Builder shall not impede the access or progress of such work by other contractors, but shall cooperate and coordinate with other contractors for the timely completion of all construction activities. This shall include attendance at coordination meetings deemed necessary or advantageous by the Concessionaire or its contractors.

### 1.11.3 Fire Hydrants

- A. No Work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.
- B. When the Design-Builder's Work requires the disconnection of "in service" fire hydrants, the Design-Builder shall notify the locality's fire department or communications center at least 24 hours prior to disconnection. In addition, the Design-Builder shall notify the locality's fire department or communications center no later than 24 hours after reconnection of such hydrants.

### 1.11.4 Construction Over or Adjacent to Navigable Waters

- A. The Design-Builder shall be responsible for obtaining a permit from the U.S. Coast Guard for the anticipated construction activities that cross a waterway under the jurisdiction of the U.S. Coast Guard.
- B. Prior to starting demolition or construction operations the Design-Builder shall attend a coordination meeting with the Concessionaire and the U.S. Coast Guard to present its planned operations and the potential impacts those operations may pose to water traffic. The Design-Builder shall, in consultation with the U.S. Coast Guard, establish the proper protocol for Emergency closures and be governed accordingly. The protocols will be confirmed in writing with the Concessionaire and the U.S. Coast Guard and incorporated in the Fred Ex Project Development Plans.
  - 1. **Activities subject to Coast Guard regulation under the Permit.** Following the U.S. Coast Guard coordination meeting, the Design-Builder shall incorporate its proposed schedule of operations as part of its Baseline Schedule. The Design-Builder shall incorporate the Concessionaire's comments and submit its notice of scheduled operations to the Concessionaire and to the U.S. Coast Guard at least 45 days prior to commencement of any permitted construction activities. U.S. Coast Guard acceptance of the Design-Builder's written schedule of operations affecting navigable waters is a condition precedent to the Design-Builder's commencement of any construction activities.
  - 2. **Activities that require channel closures or restrictions.** In addition to the submittal of its proposed schedule of operations as described above, Design-Builder shall submit plans that comply with the Coast Guard Permit for falsework, cofferdams, floating equipment and other obstructions to the channel or channels to the Concessionaire. The Design-Builder's attention is directed to the possibility that advance notification for consideration of approval may vary depending on the type and duration of proposed closure(s), the time of year for requested closure(s), and location of existing bridge(s) and waterway(s) involved, and the impact to entities served along or through the waterway(s).

**Execution Version**

---

- C. The Concessionaire shall review and provide written comments, if applicable, to the Design-Builder within 28 days following receipt of the Design-Builder's plans. The Design-Builder shall give due consideration to the Concessionaire's suggested amendments or comments and, to the extent it deems appropriate, incorporate the Concessionaire's comments and submit its plans to the Concessionaire and to the U.S. Coast Guard at least 45 days prior to commencement of any permitted construction or demolition operations. The Design-Builder may not commence activities that require channel closures or restrictions without the prior written approval of the Concessionaire and the U.S. Coast Guard. The Design-Builder shall be responsible for complying with all operational requirements that the U.S. Coast Guard may place on the Design-Builder as conditions of approval.
- D. In addition, the Design-Builder shall request and obtain Concessionaire and U.S. Coast Guard approval in writing before commencing any operations that deviate from the Design-Builder's schedule of operations when these operations interfere or have the potential to interfere with navigation of water traffic outside of timeframes previously approved by the Concessionaire and the U.S. Coast Guard.
- E. Notices shall be sent to the U.S. Coast Guard, Fifth District Bridge Office (OBR), 431 Crawford Street, Portsmouth, VA 23704-5004. Payment of any penalty or fine that may be levied by the U.S. Coast Guard for Design-Builder violations of bridge regulations found in 33 CFR Parts 115, 116, 117 and 118 shall be the responsibility of the Design-Builder.

**1.11.5 Other Permitting for Construction In, Over and/or Adjacent to Navigable Waters**

- A. Subject to the Fred Ex Design-Build Contract, the Design-Builder shall be responsible for obtaining any other permits required by other federal and state agencies including but not limited to the U.S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission for the anticipated construction activities that cross a waterway and/or are otherwise under the respective agency's jurisdiction. The Concessionaire shall provide assistance as needed.
- B. Prior to starting demolition or construction operations the Design-Builder shall organize and attend coordination meeting(s) with the Concessionaire and the respective agencies to present its planned operations and the potential impacts those operations may pose. The Design-Builder shall, in consultation with the agency or agencies, establish the proper protocol for permit compliance and conditions for work stoppage and be governed accordingly. The protocols shall be confirmed in writing with the Concessionaire and the agency or agencies and shall be incorporated in the Fred Ex Project Development Plans. The Concessionaire and agency approval is required prior to commencement of construction activities.

### 1.11.6 Marines Corps Base Quantico

- A. Permit Requirements: The Design-Builder shall be listed as the permittee for all Marines Corps Base Quantico permits, and the Design-Builder will perform the relevant Work under these permits. The Design-Builder shall prepare all permit applications, and applicable supporting data, necessary to obtain the relevant permits required to perform the relevant Work at Marines Corps Base Quantico.
- B. Before the Design-Builder begins any Work on Marines Corps Base Quantico outside the existing VDOT easement area, it must secure the necessary permits. The Design-Builder will prepare the information required for approval of the necessary permit forms and forward them to the Concessionaire. The Design-Builder shall be listed as the permittee for all Marines Corps Base Quantico related permits. If the information is incomplete, the Concessionaire will return the forms to the Design-Builder for corrections. The Design-Builder or the Concessionaire will submit the forms to the Base representatives for their review and approval. Permit forms will need to be completed well in advance of the corresponding Work covered by a requested permit. Properly completed forms can take up to four (4) months for review and approval by Base representatives.
- C. Violation of the conditions of an issued permit is prohibited and may result in the loss of access to Marines Corps Base Quantico.
- D. The Design-Builder shall follow all rules and regulations when working on Marines Corps Base Quantico, including but not limited to working in accordance with approved permits, following the Conduct on Marines Corps Base Quantico, and working within approved hours.
- E. The Design-Builder is responsible for compliance with all conditions of the Environmental Permitting requirements as determined by the Marines Corps Base Quantico, including Stormwater Management.

## 1.12 Emergency Services

### 1.12.1 Liaison

The Design-Builder shall comply with the Concessionaire requirements for participation in industry and statutory initiatives regarding Emergency management, where applicable.

### 1.12.2 Emergencies and Extraordinary Circumstances

- A. Subject to the Fred Ex Design-Build Contract, the Design-Builder's response to Emergencies and extraordinary circumstances as part of the Fred Ex Project will be in accordance with the Fred Ex Design-Build Contract and not inconsistent with VDOT's Emergency evacuation plan and shall ensure that:
  - 1. safety of motorists, pedestrians and workforce personnel shall be the primary objective for all decisions and actions;

**Execution Version**

---

2. clearance of a travel lane for Emergency response vehicles shall be by the most expedient route whether GP Lanes or HOT Lanes (in such circumstances, the decision of VDOT or the Emergency services in charge shall govern);
  3. military vehicles acting in an Emergency response capacity or in defense of the sovereign homeland of the United States of America shall be given free and unrestricted access to the HOT Lanes;
  4. if the U.S. Secret Service (USSS), in coordination with the Virginia State Police (VSP), determines movements of the President of the United States require use of the HOT Lanes, the Design-Builder shall cooperate and comply fully with USSS and VSP instructions with respect to Work activities, lane closures and traffic management;
  5. VDOT reserves the right, by direction of the Fredericksburg and Northern Virginia District Administrators or the NRO Director, to assume and exercise control of the HOT Lanes in part and/or in their entirety, including all applicable systems and field devices via available interfaces, pursuant to the Fred Ex Design-Build Contract; and
  6. the Design-Builder will, as needed, participate in Emergency exercises conducted by the Concessionaire, VDOT or other Governmental Authorities.
- B. During special events that have significant impact on traffic flow, the Design-Builder shall designate a responsible party in charge to work with VDOT's NRO Special Events and Incident Management Coordinator to develop traffic management plans for the event.
- C. Should the Design-Builder fail to respond to an Emergency or extraordinary circumstance in a timely manner in accordance with the requirements of the Fred Ex Design-Build Contract, the Concessionaire shall have the right to take necessary and appropriate action to handle such Emergency or extraordinary circumstance.

## **1.13 Safety**

### **1.13.1 General Requirements**

- A. The Concessionaire and the Design-Builder recognize that in every circumstance, activity, and decision related to the Fred Ex Project, safety of the public, Design-Builder personnel, and Concessionaire personnel is the primary concern. Ensuring and maintaining safety on the Fred Ex Project shall supersede any and all other objectives.
- B. The Design-Builder shall designate a full-time Fred Ex Project Safety Manager for the Project. The Fred Ex Project Safety Manager will ensure that designated Fred Ex Project personnel can be contacted by the Concessionaire and Emergency services personnel at all times.

**Execution Version**

---

- C. The Design-Builder shall comply with the Health, Safety and Environment Requirements included in Attachment 1.13 to these Technical Requirements.

**1.13.2 Construction Safety and Health Standards**

- A. Compliance with construction safety and health standards is a condition of the Fred Ex Design-Build Contract, and shall be made a condition of each subcontract entered into pursuant to the Fred Ex Design-Build Contract. The Design-Builder and any Contractor shall not require any worker employed in performance of the Fred Ex Design-Build Contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to their health or safety, as determined under construction safety and health standards promulgated by the U.S. Secretary of Labor in accordance with the requirements of Section 107 of the Contract Work Hours and Safety Standards Act.
- B. The Design-Builder shall comply with the Virginia Occupational Safety and Health Standards adopted under the Code of Virginia and the duties imposed under the Code. Any violation of the requirements or duties that is brought to the attention of the Design-Builder by the Concessionaire or any other person shall be immediately abated.
- C. Pursuant to the above, the Design-Builder shall comply with the safety requirements as listed below, and as outlined in the Health, Safety and Security Plan as prepared under the Fred Ex Design-Build Contract and Attachment 1.3. The Design-Builder shall ensure that proper safety training that satisfies all Law and the Health, Safety and Security Plan is provided to all relevant personnel before such personnel are permitted access to the Fred Ex Project or Fred Ex Project site.
1. Hard hats and appropriate safety footwear (steel or composite toe) as per OSHA 1926.100 and ASTM F 2413 (Specification for Performance Requirements for Protective Footwear) shall be worn while participating in or observing all types of field Work when outside of a building or outside the cab of a vehicle, and exposed to, participating in or supervising construction.
  2. 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 that the employee is protected by engineering controls.
  3. Adequate eye protection (safety glasses as per ANSI/ISEA Z87.1-2010 (Z87+) - Standard for Occupational and Educational Eye and Face Protection Devices) 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.
  4. A Class 3 high visibility shirt, vest or jacket as per ANSI/ISEA 107-2004 (Standard for High-Visibility Safety Apparel and Headwear) shall be required at all times when on or near any roadway, whether or not protected by a concrete or steel barrier. In addition, Class 3 pants are required whenever not

**Execution Version**

---

- protected by a concrete or steel barrier. Note: This must be worn over any other clothing such as rain coats.
5. Standards and guidelines of the current Virginia Work Area Protection Manual shall be used when setting, reviewing, maintaining, and removing traffic controls.
  6. Flaggers shall be certified in accordance with the Virginia Flagger Certification Program.
  7. 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 safety bar or blocking.
  8. 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.
  9. 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.
  10. No person shall enter a confined space without training, permits, and authorization.
  11. Fall protection shall be required whenever an employee is exposed to a fall six feet or greater.
  12. Hearing protection as per ANSI/ISEA S12.68-2007 for hearing protection must be carried at all times and must be worn when working near areas where excessive noise is being generated.
  13. When working near hot areas, such as road asphaltting, long sleeve cotton shirts and pants must be worn whether night or day.
  14. All damaged or worn PPE must be replaced immediately. No person may undertake any task using or wearing faulty PPE.
- D. If required by the Design-Builder's or any subcontractor's performance, or as requested by the Concessionaire, the Design-Builder shall conduct root cause analyses to determine those factors which are contributing to safety-related incidents and/or trends which are negatively affecting the performance of the work, the health and safety of workers, or the travelling public. In each instance, the Design-Builder shall identify and implement appropriate corrective actions.
- E. The Design-Builder shall comply with all Marine Corps Base Quantico related safety rules and guidelines when working on the Marine Corps Base Quantico.



**Execution Version**

---

**F. Safety Reporting**

1. The Design-Builder shall submit, on a monthly basis, a Safety Statistics Report that shall, at a minimum, include the following information:
  - Number and Rate of First Aid Cases;
  - Number and Rate of Recordable Cases;
  - Number and Rate of Lost Work Day Cases;
  - Number of Days Away from Work;
  - Number of Field Work Hours;
  - Number of Near-Miss Incidents;
  - Number of Utility Hits;
  - Number of Investigation Reports;
  - Number of Property Damage Claims; and
  - Number of Field Personnel.

This information shall be provided for Direct Hire, Subcontract, and Total Labor on the Project. Information shall be provided for Current Month, Year-to-Date, and Project-to-Date.

2. For any First Aid, Near Miss, Injury, Illness, or Property Damage incident, the Design-Builder shall provided to the Concessionaire, a detailed Report of Incident which shall include time and date, brief description, classification type, location of injury, and an analysis of the Root Cause of the incident.
3. The Design-Builder shall submit, on a monthly basis, a Safety Corrective Actions Register showing all actions for the month (not just from incident sources, i.e. audits and inspections) , their corrective action type (e.g. elimination, administration, isolation, engineering) and their status (open or closed).

**G. Safety Leadership Team**

1. The Design-Builder shall participate in and support the HSE Leadership Team established for the Fred Ex Project. The HSE Leadership Team will operate under a charter to provide strategic direction for continuing improvement of the Project's safety performance.
2. The Safety Leadership Team shall be chaired by the Design-Builder's Fred Ex Safety Manager and shall include senior representatives from the Design-Builder, Concessionaire and VDOT.
3. The Safety Leadership team shall meet on at least a monthly basis to review the following performance metrics:
  - HSE KPIs, to assure they are suitable and remain suitable for the entire project

**Execution Version**

---

- Analyses of trends or incidents, near misses, hazards, observations, and implement appropriate corrective actions
  - Status of corrective actions and HSE Leadership Team actions
  - Effectiveness of hazard and risk controls
  - Innovative ideas and actions to improve HSE performance
4. The Safety Leadership team shall undertake regular Project HSE site visits and establish a Project HSE observation program that encourages all parties to make and record HSE observations (both positive and areas for improvement) with a view to discussing trends at the monthly meetings.

## **1.14 Adjacent VDOT Project Coordination**

### **1.14.1 General**

- A. The timing and scope of the Fred Ex Project will overlap with other VDOT projects, including the Route 630 Interchange Replacement (Courthouse Road) Project, the Southbound Rappahannock River Crossing (RRC) Project and the Northbound RRC Project. The Design-Builder shall coordinate and interface with the respective project teams, including VDOT and their associated consultants and contractors throughout the duration of the project to ensure that the respective projects are safely and properly coordinated and scheduled. Specific requirements associated with each project are summarized below.
- B. The Southbound and Northbound RRC and Courthouse Road Project's scopes of work will be performed by other contractors under a direct contract with the VDOT. Design-Builder acknowledges that the Fred Ex Project's success is dependent upon the ability of Design-Builder and VDOT's contractors to perform their respective obligations in a cooperative, collaborative and integrated manner. To help accomplish this, Design-Builder and VDOT's contractors will reasonably cooperate with each other to meet the mutual goals of successful and timely completion of their respective work and the Fred Ex Project as a whole.
- C. Although the Southbound and Northbound RRC and Courthouse Road Project's scopes of work do not form part of the Fred Ex Work, Design-Builder shall be responsible for: (a) scheduling and coordinating all Fred Ex work and services; (b) directly obtaining all information it requires from the RRC and Courthouse Road contractors needed to perform the Fred Ex Work; and (c) providing all information the Southbound and Northbound RRC and Courthouse Road contractors require to perform its work. In performing its scheduling and coordination services, Design-Builder shall consider the reasonable requirements of these contractors, recognizing that each party not only has contractual obligations to complete its work timely, but that the ability of the Concessionaire to use the Fred Ex Project for its

**Execution Version**

---

intended purpose requires the timely completion of both the Fred Ex Work and the Southbound and Northbound RRC and Courthouse Road Project's scopes of work.

- D. The Design-Builder shall be responsible for coordinating with contractors of other active construction projects in the vicinity of the Fred Ex Project. In addition, the Design-Builder shall actively participate in a joint project coordination meeting organized and conducted by VDOT on a monthly basis (or as required) with all contractors working in I-95 corridor.

**I-95 Southbound CD Lanes – Rappahannock River Crossing**

Location: I-95 from Truslow Road to South of Route 3

Status: Design Build Contract awarded in January 2018

Scheduled Construction Completion: May 26, 2022

VDOT Contact: Robert G. Ridgell, P.E. (540) 903-8692  
Robert.Ridgell@vdot.virginia.gov

**Route 630 Interchange Reconstruction**

Location: I-95 Exit 140

Project No.: 0095-089-F09; 0630-089-202; 0095-089-282 (UPC #13558, 108573, 4632)

Status: Design-Build contract was awarded in October 2016

Scheduled Construction Completion: July 31, 2020

VDOT Contact: Randall McKinney, P.E. (540) 372-3570  
Randall.McKinney@vdot.virginia.gov

**I-95 Northbound CD Lanes – Rappahannock River Crossing**

Location: I-95 from South of Route 3 to North of Route 17

Status: Preliminary Engineering; Design Bid Build Contract Award anticipated in 2019

Scheduled Construction Completion: 2023

VDOT Contact: William Arel, P.E. (540) 899-4494  
william.arel@vdot.virginia.gov

**Route 1 Over Potomac Creek Bridge Replacement**

Location: Route 1 at Potomac Creek

Project No.: 0001-089-625 (UPC #102936)

Status: Preliminary Engineering; Design Bid Build Contract Award anticipated in 2019

Scheduled Construction Completion: 2022

VDOT Contact: Khalil Minhas, P.E. (540) 374-3369  
Khalil.Minhas@vdot.virginia.gov

- E. In addition to the projects listed above, VDOT will conduct yearly structural and bridge inspection/maintenance and paving maintenance that may include work on

**Execution Version**

---

Route 1, Route 3, or Route 17. The Design-Builder shall cooperate with these projects during the March to November paving season. In all cases, the existing projects that have been awarded for construction and any emergency maintenance projects and their respective contractors shall have priority in scheduling activities.

**1.14.2 Southbound Rappahannock River Crossing Project**

- A. The Design-Builder shall be responsible for coordinating the Fred Ex Project with the design and construction of the Southbound RRC Project. It is not anticipated that the Southbound RRC Project will install permanent features that preclude the Fred Ex Project configuration shown in the RFP Conceptual Plans. If it is observed that permanent features will preclude any part of the Fred Ex Project, the Design-Builder will notify the Concessionaire immediately.
  
- B. The Southbound RRC Project will provide the following elements required for the completion of the Fred Ex Project as shown in the RFP Conceptual Plans. The Design-Builder shall coordinate with the Southbound RRC contractor to ensure proper construction of all elements associated with the Fred Ex Project.
  - 1. Permanent full depth, full strength pavement and guardrail barrier for the exit slip ramp from southbound 95 Express Lanes to southbound Interstate 95 general purpose lanes south of approximately milepost 134.35.
  - 2. Permanent full depth, full strength pavement and concrete median barrier for the Exit 133 CD Road (Ramp WGS/WHs) south of approximately milepost 134.
  - 3. Overhead sign structures, foundations, and panels shown as “RRC Sign by Others” on the RFP Conceptual Plans. . Locations, panels and utilities for these signs are subject to change as the Southbound RRC design is finalized.
  - 4. Two 4-inch diameter conduits across the northbound I-95 general purpose lane bridge over US Route 17 with junction boxes located in the median on either side of the bridge.
  - 5. Permanent full depth, full strength pavement for the Exit 130 CD Road (Ramp PHS) south of approximately milepost 134.2. The Fred Ex Design-Builder is responsible for the concrete barrier (including overhead sign structure blister) and drainage between the Exit 130 CD Road and Exit 133 CD Road north of approximately milepost 134.
  - 6. Permanent full depth, full strength pavement for the Exit 133 CD Road (Ramp WGS) north of approximately milepost 134.6.
  
- C. For work including, but not limited to, Section 1.14.2.B above, the Design-Builder must design and construct all connections and tie-ins to match the designs established by the Southbound RRC contractor.

**Execution Version**

---

- D. The Design-Builder shall be responsible for receiving approval from the Concessionaire and VDOT for any desired changes to the Southbound RRC Project to accommodate the Fred Ex Project. Construction and field investigation activities associated with the Fred Ex Project may not occur within the Southbound RRC Project limits without the permission and approval from VDOT and its contractor.
- E. In order for both projects to interface while maintaining traffic on I-95, the Design-Builder shall complete the Interim Milestone as described in Section 5.2.3 of Part 3. The Southbound RRC Project has an interim milestone to complete all construction work at Exit 133 by September 15, 2021. Final completion for VDOT's Southbound RRC Project is scheduled for May 26, 2022.

**1.14.3 Courthouse Road Interchange Project**

- A. The Design-Builder shall be responsible for coordinating the Fred Ex Project with the proposed construction of the Courthouse Road Project. The Courthouse Road Project will provide the following interfaces:
  - 1. Route 630 bridge over 95 Express Lanes (at approximately Milepost 140.4)
  - 2. Ramp A bridge over Old Courthouse Road (existing Route 630) at approximately Milepost 140.55
  - 3. Cul-de-sac at the proposed terminus of Old Courthouse Road (existing Route 630)
  - 4. Maintaining the existing pavement of Old Courthouse Road (existing Route 630) in its near-present condition from approximately the proposed Cul-de-sac at the terminus to the southbound I-95 bridge over Old Courthouse Road
- B. The Design-Builder shall be responsible for receiving approval from the Concessionaire and VDOT for any desired changes to the Courthouse Road Project to accommodate the Fred Ex Project. Construction and field investigation activities associated with the Fred Ex Project may not occur within the Courthouse DDI Project limits without the permission and approval from VDOT and its contractor.
- C. Access to the median of I-95 will not be allowed from the existing Courthouse Road (Route 630) until all traffic is shifted to the new Courthouse Road bridge being constructed as part of this project without permission from VDOT and the Courthouse Road contractor. Design-Builder shall coordinate with the Courthouse Road contractor for access through the existing Exit 140 interchange in accordance with the Maintenance of Traffic/Sequence of Construction plans until traffic is shifted into the final configuration. Final Completion for VDOT's Courthouse Road Project is scheduled for July 31, 2020.

## 1.15 Sustainability

### 1.15.1 General

- A. Sustainability requirements shall be integrated by the Design-Builder into design and construction of the Project. In general, sustainability shall address practices in the following categories:
  - 1. Energy use
  - 2. Land and Water use
  - 3. Materials use
  - 4. Environmental quality
- B. The Concessionaire has established a goal to achieve a Silver Award rating as recognized by the Envision™ Sustainable Infrastructure Rating System of the Institute for Sustainable Infrastructure (ISI). The Design-Builder shall register the Project with the ISI and achieve at least a Silver Award rating for the Project.
- C. The Design-Builder shall provide a qualified Sustainability Coordinator to manage the development of a Sustainability Plan and coordinate implementation of the Plan. This individual shall be an ISI credentialed Envision Sustainability Professional with experience in linear infrastructure projects and a full understanding of the sustainability design and construction processes and programs.
- D. The Design-Builder shall comply with the Concessionaire's monthly sustainability reporting requirements and include such reporting in the Monthly Progress Report.

### 1.15.2 Energy Use

- A. The Design-Builder shall identify and implement an energy use and emissions strategy that identifies processes and methods to:
  - 1. Avoid or reduce energy use;
  - 2. Improve energy efficiency;
  - 3. Source low carbon energy (onsite); and
  - 4. Source low carbon energy (offsite).

### 1.15.3 Land and Water Use

- A. The Design-Builder shall identify and implement initiatives to reduce the construction footprint of the Work (permanent and temporary).
- B. The Design-Builder shall minimize total water consumption and potable water consumptions by:
  - 1. Using water efficient controls, fixtures, and fittings;

**Execution Version**

---

2. Collecting, treating, and reusing process water;
  3. Using recycled water or treated water;
  4. Rainwater reuse;
  5. Using water from recycled water networks; and
  6. Collecting, treating and reusing groundwater and stormwater.
- C. The Design-Builder shall meter and record water consumed within temporary facilities and used within the construction site, including but not limited to major plant and processing equipment.

**1.15.4 Materials Use****A. Waste and Materials**

1. The Design-Builder shall reduce materials use through materials avoidance and reduction strategies and minimize construction materials volumes through design refinement, construction planning and construction methods.
2. The Design-Builder shall reuse construction and demolition waste where practicable.
3. The Design-Builder shall source all lumber products used in the Work (permanent and temporary) from either re-used lumber, post-consumer recycled lumber or from Forest Stewardship Council (FSC) certified lumber suppliers where practicable.
4. The Design-Builder shall avoid the production of hazardous waste.
5. The Design-Builder shall ensure that at least 90% of inert and non-hazardous construction waste, excluding spoil, and at least 90% of office waste is recycled or alternatively beneficially reused.
6. The Design-Builder shall negotiate and implement packaging take back arrangements with suppliers where practicable.
7. The Design-Builder shall select compostable or reusable temporary erosion control devices where practicable.
8. The Design-Builder shall provide recycling facilities within the Construction Site.
9. The Design-Builder shall mulch all cleared vegetation (excluding weeds). The mulch must be stored onsite for future reuse or sent to an offsite compost facility.

**B. Spoil Management**

1. The Design-Builder shall identify and implement initiatives to both reduce spoil quantities which will be generated during the performance of the Work and maximize the beneficial reuse of spoil.

2. The Design-Builder shall ensure that the environmental and social impacts of spoil transfer and reuse are effectively managed and minimized.

#### **1.15.5 Environmental Quality**

- A. The Design-Builder shall identify and implement initiatives for biodiversity enhancement and enhancing habitat connectivity.
- B. The Design-Builder shall minimize clearance of vegetation during construction of the Work.
- C. The Design-Builder shall undertake any revegetation work as soon as practicable.
- D. The Design-Builder shall identify and implement pollution control initiatives and target zero pollution incidents.

#### **1.15.6 Sustainable Procurement**

- A. The Design-Builder shall develop, implement and maintain procurement processes for informing subcontractors regarding sustainable procurement requirements for purchase of materials, goods, and services.

#### **1.15.7 Sustainability Plan**

- A. The Design-Builder shall prepare and submit a project-specific Sustainability Plan within 60 days after Limited Notice to Proceed and Concessionaire approval of the project-specific Sustainability Plan is a condition precedent to issuance of the Construction Notice to Proceed.
- B. The Design-Builder's Sustainability Plan shall include the following elements:
  1. Introduction and Basis
  2. Goals
  3. Sustainability Commitments – list all sustainability elements (mandatory, voluntary, or optional)
  4. Implementation Process and Responsibilities
  5. Monitoring Implementation, Measurement, Reporting and Verification
  6. References

The Sustainability Plan shall also be consistent with, or include as a component, the Envision Guidance Manual, Envision Credit Cover Sheets, and Envision Pre-Assessment Checklist.

- C. The Design-Builder's Sustainability Plan shall include mandatory and voluntary elements for sustainability on the Project and include a process for identifying and



**Execution Version**

---

submitting to the Concessionaire for additional cost-effective sustainability opportunities as the Project progresses.

- D. Capture of existing regulatory standards, local government policies and programs, and project requirements that reflect sustainability elements.
- E. The Design-Builders progress reporting on each criteria element shall be provided to the Concessionaire on a monthly basis in a tabulated format, list the following for each criteria element:
  - 1. Basis of the Criteria (Code/Document Reference)
  - 2. Detailed description of the Sustainability Criteria Element/commitment
  - 3. Benefits: including Functional, Maintenance, Cost, Schedule, and Life Cycle
  - 4. Environmental Benefits – Short and Long Term
  - 5. Implementation Method/Status/verification including reasons for non-implementation.

## **2 Public Information and Communications**

### **2.1 Public Information**

#### **2.1.1 General Requirements**

The Design-Builder in collaboration with the Concessionaire shall develop the required process and procedures for public and stakeholder outreach, media relations and public information during the Work period in the form of a Communications, Consultation, Public Outreach, and Community Engagement Plan (hereafter “Communications Plan”), which will be consistent with the Fred Ex Design-Build Contract and the requirements included in Attachment 1.3. These processes and procedures will acknowledge that there are differing responsibilities for Concessionaire, Design-Builder, and VDOT during the Work period.

#### **2.1.2 Interface and Liaison with the Concessionaire and VDOT**

- A. Management protocols shall be developed between the Design-Builder’s Fred Ex Project communications team, the Concessionaire and VDOT. These protocols shall address:
1. a regime for regular reporting to the Concessionaire communications activities, current and outstanding community issues, and recent media activity;
  2. media interfaces, providing clarity of responsibility in relation to media comment on particular aspects of the Fred Ex Project;
  3. stakeholder relations, including Design-Builder’s responsibilities for briefing and providing information to stakeholders on Fred Ex Project progress and construction milestones;
  4. requirements for the Concessionaire’s review and comment on Fred Ex Project communications, and public outreach materials; and
  5. processes for managing communications surrounding emergency management and recovery operations.
  6. requirements for interface and liaison with VDOT on public and stakeholder outreach, media relations and public information matters.
- B. Meetings and public interface required by federal and state law will be conducted in accordance with the current version of VDOT’s Policy Manual for Public Participation in Transportation Projects. The Design-Builder will conduct additional meetings, public interface and marketing activities in accordance with the approved Communications Plan.
- C. The Design-Builder shall collaborate with the Concessionaire in the development of all communications and marketing strategies to ensure they are consistent with both parties’ values, needs, and goals. The Design-Builder shall provide the

**Execution Version**

---

Concessionaire with advance copies of project-related communications materials for review and approval prior to dissemination. The Concessionaire will provide any comments in a timely fashion.

- D. The Concessionaire reserves the right to review and comment on any public communications materials prepared by the Design-Builder related to the Fred Ex Project, including publicity and branding materials.

**2.1.3 Project Communications Team**

- A. The Design-Builder shall establish a Fred Ex Project communications team through which all communication and public outreach activities on the Fred Ex Project on behalf of the Design-Builder will be coordinated. The project communications team will include representatives from the Concessionaire, Design-Builder, and VDOT.
- B. The Fred Ex Project communications team will include:
1. the Concessionaire's Public Affairs Manager and adequate support staff and/or consultants, who shall have responsibility for coordinating delivery of the Communications Plan. The Public Affairs Manager will manage the relationship with VDOT's communication team and reporting on all communications and outreach activities;
  2. a Public Information Manager and adequate support staff and/or consultants, who shall have responsibility for coordinating the Design-Builder's community outreach and public information activities during the Work period. The Public Information Manager will report to the Design-Builder's Project Manager but also will support the broader Fred Ex Project communications team.
- C. The Fred Ex Project communications team to develop and agree upon team protocols for communication between team members, incorporating measures related to notification and approval timeframes, media interface, and preparation of Fred Ex Project communication materials.
- D. The Design-Builder shall within 30 days of the Notice of Intent to Award the Design-Build Contract, identify and submit for Concessionaire approval, the individual that will be designated as the Design-Builder's Public Information Manager, including a summary of relevant qualifications and experience.
1. This individual shall be responsible for overall administration and management of the comprehensive design-build phase communications and public engagement program in coordination with communications representatives from VDOT and the Concessionaire. The individual shall have the necessary expertise and experience required to develop and manage communications programs to mitigate relevant project risks and provide stakeholders with necessary information. The designated Public Information Manager shall be an individual who is dedicated to the Project and is required

**Execution Version**

---

to be available to the Project on an as-needed basis immediately upon Contract Award and for the duration of construction operations, including pre-construction activities. The individual shall be employed or engaged as a consultant directly by the Design-Builder entity. The Public Information Manager shall be experienced with developing and executing communications programs for design-build projects of a similar size, scope and complexity as the Project. This individual shall attend any required public outreach, public meetings, and participate in all construction-related communications activities on behalf of the Design-Builder.

2. If for any reason, including a request from the Concessionaire related to performance, the approved Public Information Manager must be replaced during the Contract term, the Design-Builder shall provide notice of such within 7 days and seek formal approval of the replacement from the Concessionaire. The Design-Builder shall ensure this function is maintained during any transition period.

**2.1.4 Integrated Design-Builder’s Communications, Consultation, Public Outreach, and Community Engagement Plan**

- A. The Design-Builder shall deliver an integrated Communications Plan for the Work period that:
  1. provides an effective framework for communication between the Design-Builder, Concessionaire, VDOT, travelers, residents and stakeholders;
  2. effectively engages and educates the community in the design and construction of the Fred Ex Project to minimize negative impacts and maximize positive outcomes;
  3. builds a strong and effective relationship with stakeholders and the community within the Project area during the Work period, and;
  4. identifies and manages risks associated with the Fred Ex Project.
- B. The Communications Plan, consistent with the Concessionaire’s goals for the Fred Ex Project, will be presented to the Concessionaire for review comment and acceptance and will form the basis for all Design-Builder communication activities during the design and construction of the Fred Ex Project.
- C. The Communications Plan shall provide a detailed outline of communication tools and strategies to be employed during each phase of the Work period.
- D. The Communications Plan shall contain a crisis communications plan and procedures for timely identification and notification of a crisis, coordination with the Concessionaire and responsiveness to the media. VDOT will serve as the official spokesperson for matters related to construction crisis communications.

### 2.1.5 Public Engagement and Awareness

- A. The Design-Builder shall develop and implement a notification program with the provision of information to motorists and stakeholders to facilitate the MOT during ongoing construction activities. This shall include packaging of all MOT information, such as anticipated delays and lane closures, for provision to the Fred Ex Project communications team on a regular basis throughout the Work period, to facilitate communication with the media, stakeholders, and the broader community. The Design-Builder may need to create graphics to support the program around construction activities.
- B. The Design-Builder shall support the Concessionaire’s development of a public engagement and awareness program to fit within the context of the broader Communications Plan for the Fred Ex Project. The Design-Builder shall provide design information or graphics as requested to support the Concessionaire’s efforts related to:
  - 1. Education about dynamic pricing;
  - 2. information on requirements for using HOT Lanes, including HOV eligibility and transponder requirements;
  - 3. plans for the opening of the Fred Ex Project to traffic and communications that will facilitate a safe and smooth Service Commencement;
  - 4. education about driver information systems in use on the HOT Lanes, so motorists understand on-road sources of information and lane controls signals.

### 2.1.6 Stakeholder Outreach and Information

- A. The Design-Builder’s and the Concessionaire’s communications team shall maintain an open dialogue with the stakeholders and communities surrounding the Fred Ex Project with the objective of building a long-term relationship based on trust and respect. The Design-Builder will work with the communities to identify specific concerns and strategies for mitigation.
- B. The Design-Builder shall participate in any Fred Ex Project public hearings, citizen information meetings and informational briefings in collaboration with the Concessionaire and VDOT. The Design-Builder shall be responsible for the preparation and production of all materials necessary for such meetings or hearings – including roll plots, static visuals and fact sheet handouts – as well as provide the necessary support staff members to participate and answer questions as required.
- C. The Design-Builder’s Public Information Manager shall be the designated point of contact for the stakeholders to ask questions and share concerns and information during the Work period. The point of contact shall respond to inquiries or forward them to the Concessionaire within three (3) business days.

**Execution Version**

---

- D. The Design-Builder’s communication team will be responsible for informing direct-impact residents of relevant upcoming design or construction activities that will or have the potential to be disruptive to the community. These activities include:
1. anything requiring access to neighborhood common area or resident property for any reason.
  2. any work conducted in VDOT right-of-way related to sound barrier construction, demolition, vegetation removal, closure of local streets, and earthwork.
  3. outreach, communication and coordination related to the sound wall balloting process.
  4. communications tactics which may be required by the Design-Builder may include:
    - a. Door to door outreach,
    - b. Direct Mail,
    - c. Automated dialer campaigns,
    - d. Broad e-mail campaigns,
    - e. Mail campaigns,
    - f. Geo-targeted social media campaigns,
    - g. Staffing community events to answer questions from the general public.
- E. The Design-Builder shall join the Concessionaire and VDOT at all informal and formal meetings and briefings with affected stakeholders, including:
1. communication with property owners in direct impact areas.
  2. businesses, non-profit organizations and chambers of commerce;
  3. local, regional, state and federal transit and transportation groups, including operators and groups advancing the interests of bicyclists and pedestrians;
  4. homeowner associations, citizen’s associations, civic associations, rotary and social organizations, groups of renters and other local community members; and
  5. schools, churches and environmental or other interest groups.
- F. The Design-Builder shall also:
1. Develop and maintain a comprehensive stakeholder database to track and manage stakeholder communication that will be shared with VDOT’s

**Execution Version**

---

Customer Relations Management (CRM) system and the Concessionaire's system;

2. Support the Concessionaire's efforts in developing and maintaining the Fred Ex Project website or webpage; ensuring that the website shall at a minimum contain a graphical Fred Ex Project overview, maps and graphics, contact information, plan of work for the coming month, overall Fred Ex Project schedule, a frequently asked questions area, and updated Fred Ex Project photos. The Design-Builder shall use a professional photographer to capture project progress during corridor-wide photo shoots on annual quarterly basis. The Design-Builder will coordinate with the Concessionaire to create a photo shot list for the photographer. The website shall be updated as necessary throughout the duration of the Work period;
3. Develop, in collaboration with the Concessionaire, a proactive program of stakeholder engagements to brief local stakeholders on the Fred Ex Project's progress, features and benefits;
4. Where possible, afford stakeholders the opportunity to provide input to project planning and development;
5. Develop tailored marketing and communications material for relevant stakeholder groups; and
6. Establish partnerships with local groups and organizations where there is mutual benefit in supporting the Fred Ex Project.

## **2.2 Media Relations**

### **2.2.1 Media Outreach**

- A. While there will be some overlap between the Parties on some communications and outreach activities during the Work period, the Concessionaire and VDOT will serve as the sole source to the news media and community stakeholders on specific lane closures, delays, detours, and other construction-related impacts associated with the Fred Ex Project. The Design-Builder's communications team will put processes in place to ensure close coordination with the VDOT and the Concessionaire on media outreach activities, issues, and responses, and will promote consistency with the Communications Plan.
- B. The Design-Builder shall: support and follow the media protocols developed by the Concessionaire and the VDOT, including:
  1. share any media inquiries directly with VDOT and the Concessionaire to allow VDOT and the Concessionaire to provide timely response to media inquiries regarding the Fred Ex Project;
  2. provide relevant Fred Ex Project information to Concessionaire in support of the media in a timely fashion; and

3. assist the Concessionaire and VDOT in identifying media opportunities and implementing media events.

## **2.3 Project Marketing**

### **2.3.1 Project Branding**

All public communications on the Fred Ex Project will be undertaken within the framework of a uniform project ‘brand’ to ensure consistency of the marketing and communications across all project phases. The branding will be developed by the Concessionaire. The Design-Builder shall follow the project branding guidelines when performing public communications.

### **2.3.2 Market Research and Analysis**

The Concessionaire will design communication, marketing, and public outreach activities to respond to the issues, attitudes, and attributes of the communities and market segments relevant to the Fred Ex Project. The Design-Builder shall support these efforts as requested by the Concessionaire.

## **2.4 Elected Official and Agency Outreach**

- A. The Design-Builder and the Concessionaire will coordinate closely in outreach and communications to elected officials related to the Fred Ex Project. The Fred Ex Project communications team will develop and agree upon a protocol to ensure consistent and effective communications to elected officials directly related to the Fred Ex Project. Both the Concessionaire and the Design-Builder will have ongoing dialogues with the elected officials and other key stakeholders.
- B. The Design-Builder shall support the Concessionaire and the VDOT as requested to implement the elected official and agency outreach plan by:
  1. Creating information materials such as letters, electronic newsletters, fact sheets, maps, graphics, FAQs and press releases as requested;
  2. Attending and/or delivering briefings and meetings with local, state and federal elected and appointed officials and their aides related to the design and construction of the Fred Ex Project



### 3 Design and Construction Requirements

#### 3.1 General

- A. The Fred Ex Project shall be designed and constructed pursuant to the design criteria and specifications set forth in the Fred Ex Design-Build Contract including these Technical Requirements.
- B. The Work shall not preclude the local, state, and federal long-range transportation planning improvements.
- C. All Design Documentation and Construction Documentation shall comply with the requirements of applicable Governmental Authorities.
- D. Where the Work to be performed does not meet minimum American Association of State Highway and Transportation Officials (AASHTO) standards and specifications, the Design-Builder shall submit to the Concessionaire a design exception, pursuant to VDOT's Instructional and Informational Memorandum on design exceptions, (using LD-440 format) for Concessionaire, VDOT and FHWA approval. Attachment 1.5c identifies design exceptions already approved for use on the Fred Ex Project.
- E. Where the Work to be performed meets or exceeds minimum AASHTO design criteria, but does not meet VDOT's minimum standards and specifications, the Design-Builder shall submit to the Concessionaire a design waiver (using LD-448 format) for Concessionaire and VDOT approval. Attachment 1.5c identifies design waivers already approved for use on the Fred Ex Project.
- F. The Design-Builder is responsible for design and construction of any mitigation measures identified in design exceptions and design waivers
- G. The Design-Builder is solely responsible for acquiring design exceptions and design waivers. The Concessionaire's approval of a Design-Builder request for a design exception does not guarantee VDOT or FHWA approval. Previously submitted design exceptions and design waivers are subject to reevaluation if additional information becomes available that was not known at the time of initial submittal or conditions change that were used in the analysis of the original design exception or design waiver and, in either case, if such additional information or changed conditions materially affect the premise on which the original design exception or design waiver at issue was based.
- H. The Design-Builder shall take all reasonable efforts to ensure that the condition of existing buildings, structures, roadways, sidewalks, paths, trails, signs, lighting, TTMS and signal equipment, or other property that is to remain is not adversely affected by the performance of the Work. Prior to commencing Work the Design-Builder shall perform property pre-condition surveys and monitor their condition during the Work period. The Design-Builder shall repair any damage caused by the Work to at least a condition comparable to that which existed immediately prior to

**Execution Version**

---

the damage. The Concessionaire shall be given the opportunity to witness any pre-condition surveys and/or monitoring and the Design-Builder shall make the results available to the Concessionaire before commencing any Work that may affect the property.

- I. Values for properties of materials to be used in the Work shall conform to the specified values or range of values in the Standard Documents and specified in the Technical Requirements. Less than complete conformity may be tolerated if obtaining exact or complete conformity would not be feasible and if authorized by the Concessionaire. If permissible tolerances are exceeded or if consistent deviations from the plans or abrupt changes in grade occur, even though within the tolerances, the Design-Builder shall ensure that the affected areas are reconstructed to conform to the specified tolerance such that the Work is fit for its intended purpose.
- J. The Fred Ex Project is considered part of the Strategic Highway Network (STRAHNET).
- K. All Design Documentation and Construction Documentation shall be in US Customary units.
- L. The Design-Builder shall ensure that areas impacted by the Work are subject to continual and un-interrupted removal of rubbish, scrap material, and debris. Work sites shall have a neat, safe and orderly appearance at all times. Prior to Final Completion the Design-Builder shall remove its construction equipment, materials and debris from the Fred Ex Project Right of Way and other property used by or adjacent to the Fred Ex Project.
- M. When removal of mailboxes and newspaper boxes is made necessary by construction operations, the Design-Builder shall place them in temporary locations so that access to the boxes will not be impaired. Prior to Final Completion, boxes shall be placed in their permanent locations as agreed with the Concessionaire, upgraded to current criteria, and left in as good condition as when found.
- N. The Design-Builder shall take all reasonable efforts to preserve property and improvements along the boundary lines of and adjacent to the Work unless the removal or destruction is absolutely required and consistent with the Construction Documentation. The Design-Builder shall use suitable precautions to prevent damage to such property. If property is damaged, the Design-Builder shall restore property to a condition similar or equal to that existing before such damage was done by repairing, rebuilding, or restoring, or making settlement with the property owner. Where property of third parties has been damaged and repaired by the Design-Builder, the Design-Builder shall secure from the owner a release from any claim against the Concessionaire. A copy of this release shall be furnished to the Concessionaire.
- O. The Design-Builder shall provide certified letters to the property owners at the address on record that comply with the Code of Virginia §33.2-1011, Right of Entry.

**Execution Version**

---

A draft copy of these letters must be approved by the Concessionaire prior to sending to the property owners. Copies of the letters, signed return receipt or proof of delivery shall be provided to the Concessionaire fifteen days after the proof of delivery. Notice of intent to enter shall be deemed made on the earlier of the date of mailing, if mailed, or on the date delivered.

- P. The design and construction of Fred Ex Project shall be coordinated with I-95 Southbound RRC Project final design and I-95 Northbound RRC Project conceptual design to avoid any conflicts. The Design-Builder shall coordinate with the Concessionaire and VDOT's contractors for Southbound and Northbound RRC Projects in accordance with the Design-Build Contract and Section 1.14 of these Technical Requirements to ensure that the Fred Ex final design features work in conjunction with the respective RRC Projects and avoid any rework.

## **3.2 Inspection of Work**

### **3.2.1 Inspection of Work**

- A. The Design-Builder is responsible for continuous quality control and quality assurance in accordance with the QMSP. All stages, materials, and details of the Work are subject to independent inspection by the Concessionaire in accordance with the Fred Ex Design-Build Contract. The Concessionaire shall be allowed access to all parts of the Work in accordance with the Fred Ex Design-Build Contract, subject to meeting the requirements under the Health, Safety and Security Plan, and shall be furnished such information and assistance by the Design-Builder in accordance with the Fred Ex Design-Build Contract. The Concessionaire shall have ready access to machines and plant equipment used in processing or placing materials.
- B. The Design-Builder shall keep the Concessionaire informed of planned operations in accordance with the requirements of the Fred Ex Design-Build Contract.
- C. If materials are used or Work is performed without following the relevant QMSP, the Concessionaire may require the Design-Builder to remove and replace nonconforming Work or material at no additional cost to the Concessionaire. The Design-Builder shall abide by the relevant QMSP in terms of correcting defective, deficient, or non-conforming Work. Any such defective, deficient, or non-conforming Work that is not completely replaced or otherwise remains in place, must be accepted by the Concessionaire prior to the addition of any new Work being constructed on or adjacent to the defective, deficient, or non-conforming Work, unless otherwise mutually agreed by all parties. Approval or disapproval of non-conforming Work shall be given by the Concessionaire within fourteen (14) days of submittal to the Concessionaire, or as otherwise mutually agreed. Any basis for disapproval must be submitted to the Design-Builder in writing by the Concessionaire. At the sole discretion of the Concessionaire, the Concessionaire may allow the Design-Builder to provide the Concessionaire with a credit to the Fred Ex contract value for the Concessionaire's acceptance of such non-conforming Work.

**Execution Version**

---

- D. If an inspection reveals that Work has not been properly performed, the Design-Builder shall promptly inform the Concessionaire of its Project Schedule update for correcting such Work and the time when an inspection of the corrected Work can be made in accordance with the relevant QMSP.

**3.2.2 Removal of Unacceptable or Unauthorized Work**

- A. The QMSP must ensure that Work that does not conform to the requirements of the Fred Ex Design-Build Contract, is promptly identified by the responsible party, as identified in the QMSP. Such Work shall be designated as unacceptable and shall be remedied or removed and replaced within 30 days or as agreed to by the Concessionaire and will not be covered or incorporated into the Fred Ex Project, unless as otherwise agreed by the Concessionaire. The Concessionaire will not pay for non-conforming work elements.
- B. No Work shall be done until the Design-Builder establishes the applicable right-of-way, lines and grades. Work that is done beyond the lines shown on the plans, unless otherwise agreed, will be considered unauthorized. Such Work shall be subject to review by the Concessionaire and may be ordered removed or replaced.
- C. If the Design-Builder fails to comply promptly with any order of the Concessionaire or the Quality Assurance Manager made under the provisions of the Quality Management System Plan or VDOT's Minimum Requirements for Quality Assurance & Quality Control on Design-Build & Public-Private Transportation Act Projects – July 2018, the Concessionaire or the Quality Assurance Manager will have the authority to cause unacceptable Work to be remedied or removed and replaced and unauthorized Work to be removed. If the Design-Builder has failed to exercise the appropriate oversight of the Fred Ex Project with regards to the remedy of defective, deficient, or non-conforming Work, or the prevention of such defective, deficient, or non-conforming Work from re-occurring, the Concessionaire shall have the right to stop or suspend the affected Work until such time the defective, deficient, or non-conforming Work is remedied.

**3.3 Environmental****3.3.1 Environmental Documentation**

- A. The Design-Builder will comply with the environmental commitments set forth in the approved NEPA Document(s) as defined in the Fred Ex Design-Build Contract.
- B. The Design-Builder will ensure that the environmental commitments and all conditions of regulatory approvals made in the approved NEPA Document(s), including the documentation referenced in Table 3.3 are implemented at the appropriate phase of the Fred Ex Project development. The Design-Builder will provide documentation to the Concessionaire as each environmental commitment and/or condition of a regulatory approval is implemented.

Execution Version

Table 3.3 NEPA Documentation for the Fred Ex Project	
Document	Date
Draft Environmental Assessment	September 2017
Final Environmental Assessment	March 2018
Finding of No Significant Impact (FONSI)	March 2018
Right of Way Re-evaluation review (Fred Ex Project)	To be completed by Design-Builder
Environmental Certification review (Fred Ex Project)	To be completed by Design-Builder
Plans, Specification and Estimate (PS&E) Re-evaluation review (Fred Ex Project)	To be completed by Design-Builder

- C. If the Design-Builder becomes aware of new information that may have a bearing on environmental impacts or the Design-Builder proposes changes to the Fred Ex Project design and/or footprint, it shall notify the Concessionaire who will then determine the need for a re-evaluation of the NEPA approvals. The Design-Builder shall be responsible for preparation of any studies or information required for the re-evaluation of the NEPA approvals. The Design-Builder will perform any right of way re-evaluation reviews needed to determine that the Right of Way to be acquired is in compliance with the NEPA approvals. The Design-Builder shall perform all such studies and additional environmental investigations that result from such circumstances at its sole expense with no increase to the Contract Price nor extension of the Contract Time.
  
- D. Prior to right of way authorization for total and partial takes, the Design-Builder shall provide the Concessionaire with the right of way plans (approved as per the Fred Ex Design-Build Contract) and the Re-evaluation for RW Authorization (EQ-201). The Design-Builder will perform the right of way re-evaluation review to determine the Right of Way to be acquired is in compliance with the NEPA approvals. For all acquisitions of Fred Ex Project Right of Way, if the Concessionaire determines that the plans are not consistent with the NEPA approvals, the Design-Builder shall revise the plans until they are consistent; or the Design-Builder shall provide necessary studies and other information needed to support VDOT’s completion and re-evaluation of the NEPA documentation for FHWA approval at the expense of the Design-Builder. VDOT will provide copies of all right of way re-evaluation reviews to the FHWA.
  
- E. Prior to approval of the Final for Approval Documents, the Design-Builder shall provide the Concessionaire with final construction plans. The Design-Builder shall update and finalize the Document Re-evaluation for Plans, Specifications, and Estimates (PS&E) Authorization (EQ-200), and update and finalize the Environmental Certification/Commitments Checklist (EQ-103) prior to VDOT releasing the Project for construction. VDOT will perform the Environmental Certification review and Plans, Specifications, and Estimates (PS&E) re-evaluation

**Execution Version**

---

review and determine if plans are consistent with the scope of the NEPA approvals and all environmental commitments. If VDOT or FHWA determines that the plans are not consistent with the NEPA approvals, the Design-Builder shall revise the plans until they are consistent; or the Design-Builder shall provide necessary studies and other information needed to support VDOT's completion and re-evaluation of the NEPA documentation for FHWA approval at the expense of the Design-Builder. VDOT will provide copies of all Environmental Certification reviews and PS&E re-evaluation reviews to the FHWA.

- F. If the Project includes phased work, each phase will be clearly identified and provided to the Concessionaire so that VDOT can update and finalize versions of these documents prior to authorizing right-of-way acquisition and construction for each phase. The Design-Builder 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 acquisition and construction approval
- G. The Design-Builder is responsible for compliance with the Law for potential staging and disposal areas outside the Fred Ex Project limits. The Design-Builder is also responsible for obtaining a property owner agreement for potential areas outside the existing State right-of-way. Any such potential locations within the existing VDOT right-of-way (outside the Project limits) will require the Design-Builder to obtain a Land Use Permit from VDOT.

**3.3.2 Water Quality Permits**

- A. A Preliminary Jurisdictional Determination (PJD), dated November 11, 2017 was received for this project, and jurisdictional areas are present within the Project limits
- B. The Design-Builder is responsible for any determinations, delineations, coordination, applications, mitigation, avoidance measures, acquisitions for impacts to streams and wetlands, and administration of required state and federal water quality permits and permit modifications required for construction of the Fred Ex Project. The Design-Builder shall be responsible for compliance with pre-construction, construction-related and post-construction permit conditions. Compensation, per the Fred Ex Design-Build Contract, for impacts to streams and wetlands mitigated by the purchase of wetland and stream credits are the responsibility of the Design-Builder. Compensation, per the Fred Ex Design-Build Contract, for impacts to streams and wetlands mitigated by stream restoration construction are the responsibility of the Design-Builder. Any fines or delays associated with water quality permit violations arising out of the performance of the Design-Builder's obligations under the Fred Ex Design-Build Contract are the responsibility of the Design-Builder.
- C. The Design-Builder is responsible for obtaining all water quality permits required to construct the Project, including utility relocations. Should the Concessionaire propose design changes acceptable to VDOT, permitting requirements may also change; the Concessionaire remains responsible for obtaining any and all necessary water quality permits and permit modifications required by the regulatory agencies

**Execution Version**

---

- D. The Design-Builder or its nominee will be listed as the “permittee” in all cases. These permits, and any permit modifications, will be obtained by the Design-Builder, copies provided to the Concessionaire, and verified prior to commencing construction.
- E. After receiving the Concessionaire's release of the work, the Design-Builder's shall notify VDOT and the regulatory permitting agencies in writing fourteen (14) days prior to beginning work in the jurisdictional areas covered by the water quality permits.
- F. The Design-Builder shall provide to the Concessionaire copies of all permits, documentation, and correspondence with regulatory agencies. Construction activities shall not impact regulated areas within the Project limits until all applicable water quality permits have been issued to the Design-Builder. The Design-Builder shall not proceed with work covered by the water quality permits until the Concessionaire releases the work in writing. The Concessionaire may release a portion or all of such work not in jurisdictional areas, but may order a suspension of the same work after its release. The Design-Builder shall not be allowed to begin work that pre-determines the work required in the jurisdictional areas until the permits are secured.
- G. At the conclusion of the Project, the Design-Builder shall notify the Concessionaire, VDOT and the regulatory permitting agencies in writing of the completion of the work in the jurisdictional areas covered by the water quality permits. At the completion of the Project, the Design-Builder is required to transfer any Virginia Marine Resources Commission (VMRC) permit back to the Concessionaire.
- H. If in the course of performing its obligations under the Fred Ex Design-Build Contract the Design-Builder dumps, discharges, or spills any oil or chemical that reaches or has the potential to reach a waterway in violation of Law, it shall immediately notify all appropriate jurisdictional state and federal agencies and shall take immediate actions to contain, remove, and properly dispose of the oil or chemical in accordance with local, state and federal requirements.
- I. Constructing new bridge(s) and dismantling and removing existing bridge(s) shall be accomplished in a manner that will prevent the dumping or discharge of construction or disposable materials into rivers, streams, or impoundments in violation of Law. Construction operations in rivers, streams, or impoundments shall be restricted to those areas where channel changes are permitted and must be entered for the construction of structures. Rivers, streams, and impoundments shall be cleared of falsework, piling, debris, or other obstructions placed therein or caused by construction operations.
- J. Excavation material shall be disposed of in approved areas above the mean high water mark shown on the plans in a manner that will prevent the return of solid or suspended materials to state waters. If the mark is not shown on the plans, the mean high water mark shall be considered the elevation of the top of stream banks.

**Execution Version**

---

- K. The Design-Builder shall conduct all operations near rivers, streams, or impoundments in accordance with applicable water quality permits and shall not conduct clearing or grubbing within 100 feet of the limits of ordinary high water or a delineated wetland unless specifically authorized in the permits.
- L. The Design-Builder shall ensure that Project schedules accommodate any Special Provisions, Time of Year Restrictions (TOYR), and the duration of permit acquisition from the regulatory agencies. The Design-Builder shall be responsible for adhering to permit conditions and Special Provisions, as identified in the permit authorizations including but not limited to TOYR, avoidance and minimization recommendations, restoration of temporary impact areas, and countersinking culverts.

**3.3.3 Water Pollution**

- A. The Design-Builder shall exercise every reasonable precaution throughout the Term to prevent pollution of rivers, streams, and impoundments. Pollutants such as chemicals, fuels, lubricants, bitumens, raw sewage, paints, sedimentation, and other harmful material shall not be discharged into or alongside rivers, streams, or impoundments or into channels leading to them.
- B. The Environmental Management Plan shall include a contingency plan for reporting and immediate actions to be taken in the event of a dump, discharge, or spill. Construction discharge water shall be filtered to remove deleterious materials prior to discharge into state waters. During specified spawning seasons, discharges and construction activities in spawning areas of state waters shall be restricted so as not to disturb or inhibit aquatic species that are indigenous to the waters. Neither water nor other effluence shall be discharged onto wetlands or breeding or nesting areas of migratory waterfowl. When used extensively in wetlands, heavy equipment shall be placed on mats.
- C. Temporary construction fills and mats in wetlands and flood plains shall be constructed of approved non-erodible materials and shall be removed by the Design-Builder to natural ground upon completion of the Work in the wetlands or flood plains, unless specifically approved by the Concessionaire (in writing) to be left in place.
- D. If the Design-Builder dumps, discharges, or spills any oil or chemical that reaches or has the potential to reach a waterway, it shall immediately notify all appropriate jurisdictional state and federal agencies and shall take immediate actions to contain, remove, and properly dispose of the oil or chemical in accordance with the local, State and federal requirements.
- E. Excavation material shall be disposed of in approved areas above the mean high water mark shown on the plans in a manner that will prevent the return of solid or suspended materials to state waters. If the mark is not shown on the plans, the mean high water mark shall be considered the elevation of the top of stream banks.



**Execution Version**

---

- F. Constructing new bridge(s) and dismantling and removing existing bridge(s) shall be accomplished in a manner that will prevent the dumping or discharge of construction or disposable materials into rivers, streams, or impoundments in violation of Law. Construction operations in rivers, streams, or impoundments shall be restricted to those areas where channel changes are permitted and must be entered for the construction of structures. Rivers, streams, and impoundments shall be cleared of falsework, piling, debris, or other obstructions placed therein or caused by the performance of the Work.
- G. Stabilization of the streambed and banks shall occur immediately upon completion of Work if Work is suspended for more than 15 days. The Design-Builder shall prevent stream constriction that would reduce stream flows below the minimum, as defined by the State Water Control Board, during construction operations.
- H. If it is necessary to relocate an existing stream or drainage facility temporarily to facilitate construction, the Design-Builder shall design and provide temporary channels or culverts of adequate size to carry the normal flow of the stream or drainage facility. Stabilization of the streambed and banks shall occur immediately upon completion of, or during the Work if the Work is suspended for more than 15 days.
- I. The Design-Builder shall submit a temporary relocation design to the Concessionaire for review and acceptance in sufficient time to allow for discussion and correction prior to beginning the Work the design covers. The Design-Builder shall pay costs for the temporary relocation of the stream or drainage facility shall be included in appropriate items of the Fred Ex Design-Build Contract. Temporary bridges or other structures shall be used wherever an appreciable number of stream crossings will be made.
- J. The Design-Builder shall conduct all operations near rivers, streams, or impoundments in accordance with applicable water quality permits and shall not conduct clearing or grubbing within 100 feet of the limits of ordinary high water or a delineated wetland unless specifically authorized in the permits.

**3.3.4 Hazardous Materials**

- A. In accordance with the Fred Ex Design-Build Contract, the Design-Builder shall perform any additional studies and investigations as necessary to constitute an appropriate level of due diligence and/or determine actions to ensure due care with respect to Hazardous Materials. Known Pre-Existing Hazardous Materials Locations. The Design-Builder shall submit a summary of findings to the Concessionaire.
- B. The Design-Builder's Environmental Management Plan shall include a construction hazardous materials management plan, which shall include:
  - 1. copies of any environmental site assessments undertaken;

**Execution Version**

---

2. detailed recommendations for further study or site evaluation, where such studies or evaluations are considered necessary to determine impacts to the Fred Ex Project from identified or suspected contamination;
  3. plans for management of any Hazardous Materials used or generated by the Design-Builder during the Work period, and
  4. for any property proposed for acquisition which contains, or could reasonably be expected to contain, a Hazardous Environmental Condition attributable to Known Pre-Existing Hazardous Materials, the appropriate plan for containment, management, mitigation, and/or remediation. The plan shall be submitted for review and comment in accordance with Attachment 1.3.
- C. The Design-Builder shall not acquire property until any required Phase I Environmental Site Assessment is complete and approved.
- D. Following the acquisition and vacation of properties and associated activities, the Design-Builder shall perform asbestos inspections of all structures (including bridge structures) and if necessary, shall perform asbestos abatement and asbestos monitoring in accordance with the Concessionaire's asbestos inspection procedures and asbestos abatement specifications. The Design-Builder shall perform abatement of asbestos-containing materials and asbestos project monitoring in accordance with all Law, as well as the applicable standards referenced in Attachment 1.5a.
- E. 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 Concessionaire 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 Concessionaire 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.
- F. The Design-Builder shall manage solid waste, hazardous waste, and hazardous materials in accordance with all applicable federal and state environmental regulations and shall implement good housekeeping, waste minimization and pollution prevention practices.
- G. Unless a structure has been otherwise classified, the Design-Builder shall assume all coated structures are Type B.
- H. Asbestos inspection, abatement and project monitoring shall be performed by individuals and firms licensed by the Virginia Department of Professional and Occupational Regulation. Asbestos abatements shall not be performed by an asbestos contractor who has an employee/employer relationship with, or financial interest in,

**Execution Version**

---

the laboratory utilized for asbestos sample analysis nor shall the asbestos contractor have an employee/employer relationship with, or financial interest in, the asbestos inspector and project designer working on the Project. Copies of all asbestos inspection, monitoring and disposal records shall be provided to the Concessionaire.

- I. For any asbestos waste and other non-hazardous waste, the Design-Builder shall have the signatory responsibility for the waste shipping manifest(s) and/or bill(s) of lading. For hazardous waste, the Design-Builder shall be considered the co-generator and shall be responsible for preparing the hazardous waste shipping manifest(s) for the VDOT's signature and as otherwise consistent with the signatory requirement under Section 411 of the VDOT Road and Bridge Specifications.
- J. The Design-Builder shall retain copies of all property studies, documents prepared for containment, management, mitigation and/or remediation, asbestos-related records and any other construction-related Hazardous Materials records in accordance with the requirements of the Fred Ex Design-Build Contract. A final copy of all such records shall be submitted to the Concessionaire within 30 days after Final Completion.

**3.3.5 Environmental Monitoring**

- A. The Design-Builder shall carry out environmental commitments during design and construction, as applicable, as identified in the EA, the final Document Re-evaluation for Right of Way 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 Concessionaire to VDOT.
- B. The Design-Builder is responsible for the monitoring of compliance, in accordance with environmental permit requirements, with all applicable environmental laws and regulations. Should any non-compliant item(s) be identified by the Design-Builder or Concessionaire, continuous corrective action will be taken by the Design-Builder to bring the item(s) back into compliance. Notification of this circumstance shall be provided promptly by the Design-Builder to the Concessionaire.
- C. 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.
- D. The Design-Builder will be responsible for, but not limited to, monitoring the Fred Ex Project Right of Way for nesting migratory bird species and complying with the Migratory Bird Treaty Act for recommended time of year restrictions.
- E. Except as set forth in the Fred Ex Design-Build Contract, the Design-Builder will be responsible for all costs, fines, penalties, and delays associated with any non-compliant items.

**Execution Version**

---

- F. The Concessionaire reserves the right to perform quality assurance environmental monitoring of the Fred Ex Project to determine whether the Design-Builder is complying with environmental commitments to Governmental Authorities and is performing activities in accordance with Law and VDOT specifications.

**3.3.6 Environmental Stipulations**

- A. The Design-Builder hereby stipulates that any facility used in the performance of the Fred Ex Design-Build Contract is not listed on the EPA’s List of Violating Facilities pursuant to 40 C.F.R. 15.20 (unless the Design-Builder confirms that the Fred Ex Project is exempt under the Clean Air Act as amended (42 U.S.C. 1857, et seq., as amended by P.L. 91-604), the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq. as amended by P.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 C.F.R., Part 15) during the Term of the Fred Ex Design-Build Contract.

**3.3.7 Not Used****3.3.8 Air Quality**

- A. The Project has been assessed for potential air quality impacts and conformity with all applicable Federal and state air quality regulations and requirements. This project is located in an area that is currently in Attainment with the National Ambient Air Quality Standards (NAAQS), and in a volatile organic compounds (VOC) and nitrogen oxides (NOx) Emissions Control Area. As such, all reasonable precautions should be taken to limit the emissions of VOC and NOx during construction of the project. In addition, the following VDEQ air pollution regulations shall be adhered to during the construction of this project: 9 VAC 5-130-10 et seq., Open Burning restrictions; 9 VAC 5-45-760 et seq., Cutback Asphalt restrictions; and 9 VAC 5-50-60 et seq., Fugitive Dust precautions. The Design-Builder shall adhere to the limitations outlined in Special Provision 107E for Volatile Organic Compound Emissions Control Areas
- B. The Design-Builder shall comply with the provisions of the Fred Ex Design-Build Contract, all applicable Federal requirements, the State Air Pollution Control Law and Rules of the State Air Pollution Control Board, including notifications required therein.
- C. Burning shall be performed in accordance with all applicable state and local laws and ordinances and under the constant surveillance of watchpersons. Care shall be taken so that the burning of materials does not destroy or damage property or cause excessive air pollution. The Design-Builder shall not burn rubber tires, asphalt, used crankcase oil, or other materials that produce dense smoke. Burning shall not be initiated when atmospheric conditions are such that smoke will create a hazard to the motoring public or airport operations. Provisions shall be made for flagging vehicular traffic if visibility is obstructed or impaired by smoke. At no time shall a fire be left unattended.

**Execution Version**

---

- D. Asphalt mixing plants shall be designed, equipped, and operated so that the amount and quality of air pollutants emitted will conform to the Rules of the State Air Pollution Control Board. Emission standards for asbestos incorporated in the EPA's National Emission Standards for Hazardous Air Pollutants apply to the demolition or renovation of any institutional, commercial, or industrial building, structure, facility, installation, or portion thereof that contains friable asbestos.

**3.3.9 Noise Mitigation****A. Noise Barriers**

1. As part of the NEPA Document for the Fred Ex Project, a preliminary noise report, entitled “Interstate 95 Express Lanes Fredericksburg Extension Study Noise Analysis Technical Report” was prepared. The Design-Builder, at its sole cost and expense, will be responsible for the design and construction of all required noise barriers.
2. As part of the Work, the Design-Builder shall prepare final design and Noise Abatement Design Reports (NADR) in accordance with the requirements of this Section 3.3.9 for the Fred Ex Project. The Final Design Noise Analysis shall consist of a re-analysis of all noise sensitive receptors in the project area to confirm whether noise mitigation is required.
3. The Design-Builder shall be advised that noise abatement measures that were found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the Final Design Noise Analysis. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction.
4. The final barrier location(s) and dimension(s) will be determined during the final design noise analysis. A draft NADR shall be submitted to the Concessionaire for review and approval prior to the submittal of the final NADR. The NADR shall be furnished by the Design-Builder at its sole cost and expense. The Design-Builder shall be responsible for developing the ENTRADA for the final NADR based on the approved design and or latest design information.
5. In accordance with the results of the final NADR, the Design-Builder will provide permanent noise mitigation in compliance with the Virginia State Noise Abatement Policy, the Highway Traffic Noise Impact Analysis Guidance Manual (July 2015), FHWA, Highway Traffic Noise Analysis and Abatement Guidance (January 2011), the VDOT Noise Report Development and Guidance Document Version 5, Special Provision for Sound Barrier Walls, Special Provision for Sound Barrier Walls/Architectural Finishes, and the Soil Design Parameters for Sound Barrier Walls, Retaining Walls and Non-Critical Slopes, and the (updated January 2016) VDOT Road Design Manual.

**Execution Version**

---

6. Upon approval of the final NADR VDOT shall prepare a concurrence letter outlining the results of the analysis for VDOT's Chief Engineer and FHWA. Once concurrence is achieved, the Design-Builder shall prepare and mail letters "certified return receipt" to benefitted receptors to ascertain the desire to have noise barriers constructed as part of the Fred Ex Project. In the event a sufficient number of benefitted receptors do not reply, a second mailing may be required. Upon completion of the citizen survey VDOT shall prepare a second concurrence letter documenting the results, if necessary. All noise barriers should be named as presented in the NEPA Noise Analysis Technical Report.
7. All noise barriers recommended for construction and concurred with by the Chief Engineer and FHWA are included in the scope of the Fred Ex Project and shall be designed, procured and constructed by the Design-Builder in accordance with the Fred Ex Design-Build Contract. This includes barriers with conditions, as long as those conditions have been met.
8. Prior to submitting a noise barrier wall plan for the Concessionaire's review, the Design-Builder will have the noise consultant that completed the NADR review the plan set and certify that the proposed design meets the noise abatement requirements. This certification will be included in the plan set when it is submitted to the Concessionaire for review.
9. If deviations in the horizontal or vertical alignment of a noise barrier are proposed following concurrence from the Chief Engineer or FHWA, then the Design-Builder shall perform any additional noise analysis and provide the results to the Concessionaire for review and approval prior to construction (to include fabrication of any unique panels or posts). This will include a plan and profile view of the roadway with the alignments recommended barrier and the proposed design. A justification of the deviation will be included with the plan set. The revised NADR chapter for the noise barrier for which modification is requested will be submitted with this additional information.
10. The Concessionaire's written approval of the barrier deviation will be required before the Design-Builder can approve Final for Approval Documentation.
11. A key plan will be clearly labeled to show the location of the ground-mounted combo walls (noise barrier on retaining wall) and bridge-mounted noise barriers.
12. Plan view will provide the alignment of the noise barrier with the roadway plan view.
13. Profiles of the wall alignment will include the noise attenuation line and the existing and proposed elevation. If combo walls or bridge-mounted barriers are present along the alignment, the pattern of the line will be different so that all lines can be distinguished.

**Execution Version**

---

14. Stations of the roadway and noise barrier will be included on both the plan and profile views.
15. Noise barrier walls will be designed (including location, grading, and drainage) with a 10-foot wide maintenance area behind the walls with access for personnel and equipment. The back of the noise barrier wall shall be a minimum of 10 feet from the existing VDOT right of way line or existing wall or roadway element. If the 10-foot wide maintenance area is unavailable, requires support of excavation or right-of way acquisition, the 10-foot maintenance area dimension may be reduced as approved by the Concessionaire.
16. A minimum 3 foot wide bench of a slope of 4:1 or flatter shall be provided at the front and back of the noise wall to allow for inspection and maintenance access. The bench shall be sloped away from the wall.
17. The color, texture, and finish of all noise barrier walls constructed on the Fred Ex Project (both the roadway side and the back side) shall be in accordance with Section 3.11.
18. Use of access doors is not allowed unless approved by the Concessionaire. Access shall be provided via overlapping wall gaps. Gaps may be provided in the walls with a 3:1 overlap to gap ratio. If the use of access doors is approved by the Concessionaire, the Design-Builder shall provide the plans for review and approval by the Concessionaire prior to fabrication. Personnel access doors shall have:
  - (i) A minimum inside frame dimension of 48-inches by 86-inches;
  - (ii) Stainless steel hardware, industrial grade pull handle;
  - (iii) A deadbolt lock with key on both sides;
  - (iv) Open away from I-95; and
  - (v) A minimum 4-ft by 4-ft 4-inch thick concrete pad on both sides of the door.
19. Where adjacent to concrete barrier, noise barrier walls will have a setback from the back of the barrier no more than one foot, where feasible. The area between the barrier and wall will be filled to prevent debris from collecting in the area, if setback is one foot or less.
20. Noise barrier wall design will be coordinated with first responders to ensure access to fire hydrants and other Emergency equipment, where feasible.
21. The Design-Builder shall begin construction of new noise barriers within 60 days of the demolition of an existing noise barrier and/or cutting of trees which were acting as a screen for adjacent properties. The Design-Builder shall complete construction of any new noise barrier intended to replace an

**Execution Version**

---

existing noise barrier and/or trees which were acting as a screen for adjacent properties within 180 days from the start of construction of that noise barrier.

22. If the Design-Builder is unable to begin construction of a new noise barrier within 60 days of the demolition of an existing noise barrier and/or cutting of trees which were acting as a screen for adjacent properties, the Design-Builder shall provide temporary noise mitigation to noise sensitive receptors where the existing noise barriers and/or trees were removed.

**B. Construction Noise**

1. The Design-Builder's operations shall be performed so that exterior noise levels measured during a noise-sensitive activity shall be not more than 80 decibels. Noise-sensitive activity is any activity for which lowered noise levels are essential if the activity is to serve its intended purpose. Such activities include those associated with residences, hospitals, nursing homes, churches, schools, libraries, parks, and recreational areas.
2. Design-Builder shall monitor its construction-related noise if requested by local agencies, the Concessionaire or neighboring property owners. If construction noise levels exceed 80 decibels during noise-sensitive activities, the Design-Builder shall take corrective action before proceeding with operations.
3. The Design-Builder shall be responsible for costs associated with the abatement of construction noise and the delay of operations attributable to non-compliance with these requirements.
4. The Design-Builder is responsible for obtaining any necessary local noise ordinance variances prior to the scheduling of night time operations
5. Design-Builder shall determine whether certain portions of the Fred Ex Project that produce objectionable noise should be restricted or prohibited between 10 PM and 6 AM. If other hours are established by local ordinance, the local ordinance shall govern.
6. Equipment shall in no way be altered so as to result in noise levels that are greater than those produced by the original equipment. When feasible, the Design-Builder shall establish haul routes that direct his vehicles away from developed areas and ensure that noise from hauling operations is kept to a minimum.
7. These requirements are not applicable if the noise produced by sources other than the Design-Builder's operation at the point of reception is greater than the noise from the Design-Builder's operation at the same point.

**3.3.10 Forests**

- A. The Design-Builder shall take all reasonable precautions to prevent and suppress forest fires in any area involved in construction operations or occupied by it or its contractors as a result of such operations.



**Execution Version**

---

- B. The Design-Builder shall cooperate with the proper authorities of the state and federal governments in reporting, preventing, and suppressing forest fires. Labor, tools, or equipment furnished by the Design-Builder upon the order of any forest official issued under authority granted the official by law shall not be considered a part of the Fred Ex Design-Build Contract.
- C. The Design-Builder shall negotiate with the proper forest official for compensation for such labor, tools, or equipment.

**3.3.11 Cultural Resources**

- A. In the event that a previously unidentified historic property (prehistoric or historic district, archaeological site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places) is discovered once construction has begun, the Design-Builder shall immediately halt all construction work in the area of the resource and in surrounding areas where additional subsurface remains can reasonably be expected to occur. Work in all other areas of the Fred Ex Project may continue. The Design-Builder shall immediately notify the Concessionaire, which will in turn notify VDOT. The Concessionaire and VDOT, in cooperation with the Design-Builder, shall then address the discovery in accordance with one of the applicable processes described at 36 CFR 800.13. The Design-Builder shall be responsible for conducting any technical studies needed to determine whether the resource is eligible for inclusion on the National Register of Historic Places and whether the Fred Ex Project will affect the resource, and for implementing appropriate treatment as determined through FHWA's consultation with the Virginia State Historic Preservation Officer (SHPO). Subject to the exception in the Fred Ex Design-Build Contract, all costs associated with these technical studies and treatment actions shall be the responsibility of the Design-Builder. Pursuant to §10.1- 2302 of the Code of Virginia, prior to conducting any archaeological investigations on state-controlled lands (including state-owned highway right of way), the Design-Builder must first obtain a permit from the Director of the Virginia Department of Historic Resources.
- B. In the event fossils, meteorites, or other articles of paleontological or rare mineralogical interest are discovered once construction has begun, the Design-Builder shall immediately suspend work at the site of the discovery and notify the Concessionaire. The Concessionaire will immediately notify the proper state authority charged with the responsibility of investigating and evaluating such finds. The Design-Builder shall cooperate and assist the Concessionaire in protecting, mapping, and removing the finds as determined necessary by the Concessionaire in consultation with the proper state authority.
- C. Any archaeological remains, fossils, meteorites, or other articles of paleontological or rare mineralogical interest found on state-controlled lands (including state-owned highway right of way) are the property of the Commonwealth of Virginia. Articles recovered from other than state-controlled lands are the property of the landowner unless other agreement is reached with the owner.

**Execution Version**

---

- D. When the discovery of historic properties, fossils, meteorites, or other articles of paleontological or rare mineralogical interest delay the progress or performance of the Work, the Design-Builder shall notify the Concessionaire immediately.
- E. The Design-Builder shall consider historic properties to be design constraints and avoid impacting them. In addition, the Design-Builder shall notify the Concessionaire 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 viewshed of historic properties. These activities, any changes to the design, alignment, right-of-way limits, or easements, or any additions to the Project such as stormwater management facilities, stream or wetland mitigation sites, or noise barriers, may require review by the Concessionaire and/or 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 Archeology and Historic Preservation*, and the Virginia Department of Historic Resources' most current *Guidelines for Conducting Survey in Virginia*, while the Department is responsible for coordinating both the studies and the proposed changes with the VA SHPO. The Design-Builder shall then carry out any additional cultural resources commitments that result from such coordination at its sole expense and at no additional cost to the Project.
- F. Although archaeological site 44ST0909 identified in the Fred Ex Project *Cultural Resources Technical Report* (August 2017) lies outside of the proposed limits of disturbance for the Fred Ex Project (in the median of I-95 near Russell Road), the Design-Builder will ensure that the site is not harmed in any manner, including but not limited to potential construction-related activities such as the staging or stockpiling of equipment or materials that could occur within the interstate median during Project construction. The Design-Builder shall erect safety fence along the perimeter of the site and maintain the fence throughout the construction period, and will allow no construction activities, such as clearing and grubbing, vehicle traffic, stockpiling, staging, etc., to take place within the fenced area.

**3.3.12 Not Used****3.3.13 Section 4(f) Resources**

- A. There is no Use of Section 4(f) Resources on this Project.
- B. Any changes to the right-of-way or easements as shown on the RFP Conceptual Plans, proposed by the Design-Builder may require additional technical studies and analysis to be performed by the Design-Builder. The Design-Builder shall be responsible for notifying VDOT of plan revisions, right-of-way/easement changes, and providing any necessary studies and other necessary information to support the Design-Builder's completion of any required Section 4(f) documentation. VDOT will be responsible for the coordination of any Section 4(f) documentation with FHWA.

**Execution Version**

---

The Design-Builder shall then carry out any additional commitments that result from such coordination at its sole expense and no additional cost or time delays to the Project.

**3.3.14 Threatened and Endangered Species**

- A. VDOT has performed preliminary database reviews to determine the Project's potential effects on threatened and endangered (T&E) species, indicating that the following state and federally listed T&E species were identified in the required search area: northern long-eared bat (*Myotis septentrionalis*), harperella (*Ptilimnium nodosum*), small whorled pogonia (*Isotria medeoloides*), dwarf wedgemussel (*Alasmidonta heterodon*), brook floater (*Alasmidonta varicosa*), green floater (*Lasmigona subviridis*) and yellow lance mussel (*Elliptio lanceolata*). An additional species, tri-colored bat (*Perimyotis subflavus*), is under a USFWS Status Review and could become federally listed in the next two years.
- B. Prior to Contract Award, the Concessionaire will complete field surveys of the following T&E species: harperella (*Ptilimnium nodosum*), small whorled pogonia (*Isotria medeoloides*), dwarf wedgemussel (*Alasmidonta heterodon*), brook floater (*Alasmidonta varicosa*), green floater (*Lasmigona subviridis*) and yellow lance mussel (*Elliptio lanceolata*). Additional coordination for a waiver of time of year restrictions for the northern long-eared bat (*Myotis septentrionalis*) relying on the findings of the Programmatic Biological Opinion for Final 4(d) Rule on the Northern Long-Eared Bat and Activities Excepted from Take Prohibition will also be conducted. Reports and/or correspondence documenting the findings of these surveys and coordination efforts will be provided to the Design-Builder for use in completing any additional required T&E species coordination required for the Fred Ex Project.
- C. Following the completion of the initial coordination with USFWS referenced in Section 3.3.14.B, the Concessionaire was advised by VDOT that the presence of another known endangered species – the Indiana bat (*Myotis sodalis*) – has been documented in the vicinity of Marine Corps Base Quantico and it is considered a species of concern for locations within or abutting MCBQ. Additional coordination, surveys, or approvals required for this species shall be completed by the Design-Builder in accordance with Section 3.3.14.D.
- D. The Design-Builder 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 VDOT's 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 will be responsible. The Design-Builder is responsible for ensuring that all T&E species are

**Execution Version**

---

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 Concessionaire and VDOT copies of all documentation and correspondence with regulatory agencies.

- E. For Endangered Species Act consultation on all federally-eligible projects/activities:
1. VDOT's District Environmental Manager must review the USFWS Project Review Package and transmittal letter prior to submittal to USFWS for informal consultation and must be copied on any submittal by non-VDOT entities.
  2. For formal consultation, VDOT's District Environmental Manager must submit formal consultations through the FHWA. If formal consultation is required, the Design-Builder is responsible for developing or obtaining any necessary documentation to support its effect determination.

### **3.4 Geotechnical**

#### **3.4.1 Geotechnical Design**

- A. **Geotechnical Design Engineer** – This individual shall be responsible for ensuring that all geotechnical investigations, analysis and recommendations that are necessary for the design and construction of the Fred Ex Project are performed in accordance with the Technical Requirements. The geotechnical design engineer shall coordinate with the design manager to ensure that all geotechnical design and construction considerations have been properly considered in the design and included in the work plans, specifications, copied notes, and constructability reviews for the Fred Ex Project. This individual shall have a minimum fifteen (15) years of geotechnical engineering experience and expertise working in the region and/or in areas of similar geologic settings with similar project features for this Fred Ex Project. The geotechnical design engineer shall be a professional engineer licensed in the Commonwealth.
- B. The minimum soil parameters to be used for design of foundations for noise barrier walls, minor retaining walls (e.g., less than 15 feet in height) and for the design of non-critical slopes (e.g., less than 25 feet in height) shall be in accordance with the standards and specifications set forth in Attachment 1.5a.
- C. The Design-Builder shall collect appropriate data for geotechnical evaluation of embankments, soil and rock cuts, culverts, bridge and wall structures, noise barriers, storm water management facilities, minor structures including drainage pipes, and any other earth-supported structures or elements of highway design and construction. The Design-Builder shall be responsible for obtaining any Regulatory Approvals

**Execution Version**

---

required for any borings needed in performance of the Design-Builder's geotechnical investigation for the Fred Ex Project. The Design-Builder shall complete laboratory tests in accordance with pertinent VTM, ASTM or AASHTO standards and analyze the data to provide design and construction requirements. Soils and materials tests shall be performed by a laboratory accredited by AASHTO for each test it conducts for the Fred Ex Project, unless otherwise approved by the Concessionaire. The Design-Builder shall have a geotechnical data report approved by the Concessionaire before beginning construction.

- D. The Design-Builder shall provide to the Concessionaire records of all subsurface explorations and describe the soils encountered and their depth limits, in accordance with the requirements outlined in Chapter 3 of VDOT Manual of Instructions for Materials Division and conduct the investigation in accordance with an approved exploratory boring plan(s) approved by the Concessionaire. Preliminary and final/design geotechnical investigations shall be performed to meet the minimum requirements set forth in Attachment 1.5a. The final geotechnical investigation plan(s) shall be in compliance with Chapter 3 of VDOT's Materials Manual of Instructions, the AASHTO LRFD Bridge Design Specifications, and VDOT Modifications; and Section 700.05 (c) of the VDOT Road and Bridge Specifications unless otherwise approved by the Concessionaire. The Design-Builder shall provide electronic copies of all subsurface explorations in accordance with the boring log template available on the website address included in Chapter 3 of VDOT Manual of Instructions for Materials Division. The electronic files shall be provided by a certified Professional Geologist or a suitably qualified registered Professional Engineer licensed in the Commonwealth, in gINT© software, before beginning of construction. Upon request, the Concessionaire will provide VDOT's gINT© and Microsoft Access file structures for the Geotechnical Database Management System.
- E. When deviating from the standards and specifications outlined in Attachment 1.5a, the Design-Builder shall incorporate reliability assessments in conjunction with standard analysis methods. An acceptable method for evaluation of reliability is given by Duncan, J.M. (April 2000) *Factors of Safety and Reliability in Geotechnical Engineering*, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Discussions and Closure August 2001. A suitable design will provide a probability of success equal to or greater than 99%.

The aspects of the Fred Ex Project for which reliability assessments shall be made include: 1) the selection of soil parameters used in the design of all foundations and retaining walls, 2) the factors of safety for slope stability, and 3) the settlement and bearing capacity of embankments. Except as mentioned in (1) above, reliability assessments need not be performed for structural foundations and retaining walls, which will be evaluated based on the required limit stated in the AASHTO LRFD Bridge Design Specifications. The Design-Builder may propose to identify specific, non-critical features, and alternative methods for evaluating variability of subsurface conditions, reliability and minimum factors of safety, prior to submission of its design

**Execution Version**

---

calculations and drawings. The Concessionaire may accept or reject such proposed methods.

- F. The Design-Builder shall provide to the Concessionaire a geotechnical design report and construction memoranda that summarize pertinent subsurface investigations, test, and engineering evaluations. Technical specifications for construction methods that are not adequately addressed in the standards and specifications set forth in Attachment 1.5a shall be provided by the Design-Builder. The Design-Builder shall review the Construction Documentation to assure that they have appropriately incorporated the geotechnical components. The quality control-quality assurance documents shall document how each specific geotechnical recommendation or requirement is addressed in the Construction Documentation, and shall reference the drawings that incorporate the pertinent results. The results of the geotechnical investigation and laboratory results shall support the design and construction efforts to meet the requirements for the pavement design set forth in Attachment 1.5a, and Attachment 3.4.
- G. The Design-Builder shall minimize differential settlements of the approach to a bridge for new construction and when applicable provide construction recommendations to address soil-structure interaction to accommodate the unique construction methods applied to the Fred Ex Project. All geotechnical work shall be completed to satisfy baseline and post- construction contract performance requirements, as described below.
- H. The Design-Builder shall design and construct pavements, subgrades, and embankments to meet the following post-construction settlement tolerances:
1. Total vertical settlement less than two inches over the initial 20-years, and less than one inch over the initial 20-years within one hundred (100) feet of bridge abutments;
  2. Settlement that will not impede positive drainage of the pavement surface especially within the travel lanes nor subject the roadway to flooding in area where it is applicable;
  3. Settlement that does not result in damage to adjacent or underlying structures, including utilities; and
  4. For pavement sections of approach slabs, bridge decks, and tie-ins to the Project, grade tolerances shall be measured with a 10-foot straightedge. The variation of the surface from the testing edge of the straightedge between any two contacts with the surface shall not be more than plus (+) 0.25-inch to minus (-) 0.125 -inch at structures and (+/-) 0.25-inch at Project tie-ins.
  5. Humps, depressions, and irregularities exceeding the specified tolerance will be subject to correction by the Design-Builder. The Design-Builder shall notify the Concessionaire for any non-conformance items

**Execution Version**

---

- I. The Design-Builder shall consider settlement and design foundations (bridges, retaining walls, pipes and other structures) based upon Attachment 3.4b.

In summary, Attachment 3.4b outlines two options for managing settlement of structures: (i) limit total settlement to ½” and subsequently limit the need for a refined analysis of the superstructure and substructure; or (ii) allow the Design-Builder to design the structure for its estimates of elastic, consolidation, and secondary settlement (total settlement) and subsequently communicate the total and differential settlement in the general note to the Design Documentation. In either case, a general note shall be placed on the Design Documentation which communicates the amount of settlement evaluated and accommodated by the structure. Specific general note language, along with notes to the designer, are set forth in Attachment 3.4b.

- J. In either case defined in Attachment 3.4b, the total vertical and/or differential settlements of the proposed structures shall not exceed the performance tolerance noted above for pavements and of the bridge decking. In addition, angular distortion between adjacent foundations greater than 0.008 radians in simple span and 0.004 radians in continuous span structures is not permitted unless first approved by VDOT.
- K. In the vicinity of existing structures, the Design-Builder shall analyze settlement and flexibility of the existing substructure elements due to additional fill and shall minimize the impact on the existing structure. In any case, the total settlement of the existing ground shall be limited to ½ inch over 20 years within 100 feet of the structure. If the reduction of total settlement is not feasible, the Design-Builder shall develop an engineered solution that isolates any existing structure(s) from the adjoining settlement.
- L. The Design-Builder’s qualified geotechnical engineer shall perform an inspection of all pavement subgrades and minor structure excavations immediately prior to placement of aggregate base, subbase or bedding materials to identify excessively soft/loose or saturated soils that exhibit excessive pumping, weaving or rutting under the weight of the construction equipment. Such soils are also considered unsuitable and must be removed or modified in place to provide adequate support for embankment, pavement subgrade or minor structures.

### 3.4.2 Slope Design

- A. Embankments and certain aspects of retaining wall design are not addressed by LRFD. Embankments and cut slopes shall be designed in accordance with Section 305 of VDOT’s Materials Division’s MOI. Cut and fill slopes shall be no steeper than 2H:1V, unless supported by an engineering analysis and design based on site-specific field investigation and site-specific laboratory strength testing. Slopes steeper than 2H:1V must be approved by the Concessionaire. All cut and fill slopes shall be designed to be stable for the interim construction stages, for the end-of-construction condition, and for design-life conditions. The Design-Builder is

Execution Version

responsible for verifying the stability of all slopes, including those retained by structures.

- B. The following factors of safety are to be used with limit equilibrium methods of analysis to identify factors of safety for representative sections of all soil cut and soil embankment fill slope areas higher than 10 feet, and/or where slopes are supporting, or are supported by, retaining structures. The factors of safety listed in Table 3.4 are valid for subsurface investigations performed in accordance with Chapter III of VDOT’s Materials Division’s Manual of Instructions or for site-specific investigation plans approved by VDOT’s Materials Engineer. Approval of site-specific investigation plans with reduced boring frequency may require higher factors of safety. Table 3.4 is not applicable for rock cut slopes.

Table 3.4		
Minimum Factors of Safety for Soil Cut/Fill Slopes		
Soil Slope analysis parameters based on:	Factor of Safety	
	Involves Structure or Critical Slope <sup>1</sup>	Non-Critical Slope
In-situ or lab. tests and measurements <sup>2,3</sup>	1.5	1.3
No site specific tests	N/A <sup>3</sup>	1.5

1. A critical slope is defined as any slope that is greater than 25 ft. in height, affects or supports a structure, or whose failure would result in significant cost for repair, or damage to, private property
2. Site specific in-situ tests include both groundwater measurements and SPT testing but may also include CPT or DMT
3. Parameters for critical slopes involving structures must be based on specific laboratory testing
4. Problem soils (fissured or heavily over-consolidated soils), must be analyzed using shear strength parameters determined from appropriate laboratory strength tests
5. Problem soils should be analyzed for short- and long-term stability using residual strength parameters obtained from laboratory shear testing. These parameters should be determined by drained direct shear tests using sufficient stress reversals to obtain large strains as discussed in the U.S. Army Corps of Engineers laboratory testing procedures EM-1110-2-1906. Many reversals are required to reach residual strengths and some references suggest using a pre-split sample (Ref. Engineering properties of Clay Shales, Report No. 1 by W. Haley and B.N. MacIver).
6. Construction plans shall specify use of soil types consistent with the parameters used in slope analyses

- C. Potomac Formation clay/silts are known to be present within the limits of the proposed construction. Global and slope stability analyses of Potomac Formation clay/silts shall be analyzed using residual strength parameters for problem soils wherever they are encountered and/or mapped on local geologic/soils maps.



### 3.4.3 Pipe Installation Methods

- A. Culverts or utility pipes shall be installed by either conventional methods in accordance with Section 302.03 of VDOT's Road and Bridge Specifications, or Jack and Bore and/or by Micro-tunneling in accordance with the applicable Special Provisions. Trenchless technology other than these methods of installation is not permitted unless otherwise approved by Concessionaire. The Design-Builder's design Professional Engineer shall choose which of the methods of installation is best suited for the ground and site conditions where the work is to be performed and that will meet the design requirements of the proposed culverts or utility pipes.
- B. Any utility or storm drain installations which crosses the I-95 mainline travel lanes or ramps shall be installed using trenchless methods. Under no circumstance shall open trench installation of a utility or storm drain be allowable across any mainline travel lanes, shoulders, or ramps which are actively in use during full pipe installation (i.e. lane or ramp closures for pipe installation will not be permitted). Additional changes to traffic patterns utilized only for the installation of pipes using open cut methods shall not be permitted. The Design-Builder shall be responsible for requesting and receiving VDOT approval for any installations proposed to use the open cut method prior to plan submissions reflecting this work.
- C. The design Professional Engineer shall be responsible to establish both the vertical and horizontal tolerances in support of the design. Such tolerances shall be noted on the construction plans. The design tolerance may be more stringent than what is called for in the both the Jack and Bore and Micro-Tunneling Special Provisions; however, under no circumstances shall the performance requirements and design tolerances used in design of either culverts or utility pipes exceed those specified in Road and Bridge Specifications and the applicable Special Provisions unless first approved by the Concessionaire. Performance requirements and tolerance stipulated in the Special Provision for Micro-Tunneling shall also apply to conventional tunneling methods.

### 3.4.4 Geotechnical Exploration Plan Submission and Approval

- A. The Design-Builder shall develop a Geotechnical Exploration Plan (GEP) to supplement information provided in the Geotechnical Data Report provided in the RFP. Additional explorations shall be performed, as determined necessary by the Design-Builder and to meet the minimum requirements of the Project.
- B. The exploration shall meet or exceed the minimum requirements stated in Chapter III of the MOI, AASHTO LRFD Bridge Design Specifications, and AASHTO Manual on Subsurface Investigations. The Design-Builder shall determine the specific scope of the GEP (exploration locations, depths, etc.).
- C. No field exploration work for the Design-Builder's GEP can proceed without written approval by the Concessionaire.

**Execution Version**

---

- D. Any exploration work performed by the Design-Builder without written approval of the Concessionaire may not be considered part of the supplemental information required for final design.
- E. The Design-Builder's Geotechnical Engineer of Record (GER) shall submit the GEP to the Concessionaire for review and comment at least 30 days before commencement of the work. This shall include at a minimum:
1. An overview of the GEP and objectives.
  2. GEP phases and schedule.
  3. Number and depths of the proposed borings/cone penetrometer soundings or other proposed explorations, monitoring wells, and other field investigations to meet the minimum requirements of the Project.
  4. Drilling methodology
  5. In-Situ Soil sampling types and frequency.
  6. Lab tests and quantities.
  7. Site access and restoration plans and right-of-entry permits
  8. Maintenance of Traffic Plan, if required
  9. Utility clearance procedure
  10. A Hard copy and electronic pdf file graphically presenting the GEP including proposed boring and sounding locations.
- F. The Concessionaire will provide written comments on the Design-Builder's proposed GEP within seven business days.
- G. A Comment Resolution Meeting (CRM) shall be held after the Concessionaire receives the responses to the Concessionaire's GEP comments. The Design-Builder shall be responsible for meeting coordination, meeting minutes, and distributing the final resolution for concurrence.
- H. The Design-Builder shall resubmit for review and final approval, the GEP that addresses all the Concessionaire's GEP comments according to the approved CRM minutes.
- I. Following completion of exploratory work, all as-performed boring/field testing locations shall be surveyed. The survey shall determine station and offset, elevation, and state plane coordinates, which shall be included on the boring logs with accuracy as stated in MOI Chapter III. Following drilling and laboratory Work, the Design-Builder shall retain all samples until Final Completion and shall provide such samples to VDOT in accordance with Section 303.06, Chapter III of the MOI.
- J. Laboratory testing of soil and groundwater samples shall be performed in accordance with AASHTO testing procedures. Laboratories conducting geotechnical testing

**Execution Version**

---

shall be either AASHTO accredited for the testing being performed or fulfill the requirements of AASHTO R18 for qualifying testers and calibrating/verifying of testing equipment for those tests being performed. All lab test results shall be included in the GER.

**3.4.5 Unsuitable Materials**

- A. Unsuitable Material is defined as material used as embankment fill, and in cut areas to a depth of at least two (2) feet below subgrade directly beneath pavements and at least two (2) feet beneath the bedding of minor structures and laterally at least two (2) feet beyond the outside edge of the pavement shoulders and bedding limits of the minor structures that meets one or more of the following criteria: classifies as CH, MH, OH and OL in accordance with the Unified Soil Classification System (USCS); contains more than five (5) percent by weight organic matter; exhibits a swell greater than five (5) percent as determined from the California Bearing Ratio (CBR) test using VTM-8; exhibits strength, consolidation, durability of rock or any other characteristics that are deemed unsuitable by the Design-Builder's geotechnical engineer for use in the Work. All materials within the uppermost two (2) feet of a pavement subgrade that exhibits a CBR value less than that stipulated in the pavement design shall also be considered unsuitable.
- B. The anticipated locations and methods of treatment for unsuitable materials identified by the Design-Builder's qualified geotechnical engineer shall be shown on the design plans and cross sections. Acceptable methods of treating unsuitable soils are: a) complete removal from 2 feet beyond the outside edge of shoulder on each side of the pavement or bedding limits of minor structures and replacement with structural fill b) partial removal to at least 2 feet below final pavement subgrade or minor structure bedding elevation to within the limits noted in (a) and replacement with select fill and geosynthetic material c) raising grades with select fill and geosynthetic material to provide a minimum 2 feet of separation between these soils and final pavement subgrade or minor structure bedding d) chemical stabilization of the soils to a minimum depth of 12 inches below final pavement subgrade. Highly plastic clays or elastic silts may be used by compacting them in confined embankment fills and capping them with at least 2 feet of suitable subgrade fill material provided these fills are adequately engineered and constructed. Unsuitable materials and methods of treatment shall be identified on the plans and cross-sections as required by the Location and Design Division's Road Design Manual.
- C. Saturated or very dry and/or loose or very soft coarse- and fine-grained soils that exhibit excessive pumping, weaving or rutting under the weight of construction equipment are also considered unsuitable unless they can be moisture conditioned through either mechanical or chemical means to an acceptable moisture content that allows adequate compaction to meet project specifications, and classification testing indicates they are not otherwise unsuitable. Topsoil, peat, coal and carbonaceous shale shall also be considered unsuitable material. All unsuitable material shall be disposed of and/or treated as discussed in Section 106.04 of the VDOT 2016 Road

**Execution Version**

---

and Bridge Specifications at no additional cost to the Concessionaire. 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.

- D. The Design-Builder's qualified geotechnical engineer shall perform an inspection of all pavement subgrades and minor structure excavations immediately prior to placement of aggregate base, subbase or bedding materials to identify excessively soft/loose or saturated soils that exhibit excessive pumping, weaving or rutting under the weight of the construction equipment. Such soils are also considered unsuitable and must be removed or modified in place to provide adequate support for embankment, pavement subgrade or minor structures.

**3.4.6 Chemically Aggressive Soil Conditions**

- A. The potential presence of chemically aggressive soils (CAS) and potentially chemically aggressive soils (PCAS) have been reported within the project limits. When naturally occurring, these soils typically consist of unconsolidated sulfide-rich sediments in Coastal Plain formations and in some slate and phyllite formations along the I-95 corridor. Previous construction activities associated with the I-95 Express Lanes resulted in the disposal of CAS and PCAS within the project limits.
- B. Exposure of sulfidic materials can severely inhibit roadside vegetation leading to increased erosion, acid run-off and decreased slope stability due to oxidation and degradation of the exposed materials. Prior to final seeding, the Design-Builder shall perform Acid-Base Accounting Tests per EPA Publication 600/2-78-054 at a rate of 20 tests per acre. The samples will be collected from the top 6 inches of any area designated to receive seeding. Upon completion of the testing, the Design-Builder shall submit a written report containing the test results and plan for the application of lime. Lime shall be applied at 1.25 times the net neutralizer deficiency noted in the test results. As an example, if the net neutralizer deficiency is found to be 12.77 tons (calcium carbonate equivalent in tons per acre/1000 tons of material), lime shall be applied at 15.96 tons per acre. In no case shall lime be applied at a rate less than 4 tons per acre, despite the results of the Acid-Base Accounting. In areas where the amount of lime needed is greater than 4 tons per acre, the contractor shall blend the lime into the upper six inches of soil by discing or similar blending method to fully incorporate the lime in to the soil.
- C. Volumetric changes detrimental to pavements have also been reported within fills constructed from sulfidic materials. Acid rock drainage is also a major environmental concern while the effects on structural elements (steel, concrete, etc.) can be seriously damaging within short time periods. The Design-Builder shall investigate for the presence of chemically aggressive soils along the alignment (both naturally occurring and as a result of encapsulation) of the proposed construction, assess the potential impacts and implement appropriate avoidance and/or mitigation measures, if encountered. Soil borings and chemical laboratory testing shall be performed considering the guidance presented in Orndorff and Daniels (2002) during the

Execution Version

---

geotechnical investigation to characterize and assess the potential impact of these soils.

- D. Mitigation measures (singularly or in combination) that may be considered by include, but are not limited to:
- Avoidance
    - Adjust alignment to avoid CAS and PCAS.
    - Covering unexcavated, undisturbed CAS and PCAS with non-aggressive fill soil.
  - Minimization of Disturbance
    - Adjust alignment and cut/fill areas to avoid CAS and PCAS that is cohesive and/or contains high PPA levels.
    - Adjust alignment so earthwork operations avoid CAS and PCAS layers.
    - Design drainage structures and piping not to penetrate CAS and PCAS layers.
    - Avoid activities resulting in fluctuations (lowering) of the groundwater table as they may lead to the exposure of PCAS to oxygen.
  - Neutralization
    - Commonly used mitigation technique where CAS is mixed with alkaline materials.
    - Alkaline materials may include fine agricultural lime, dolomite, magnesite, hydrated lime, and sodium bicarbonate.
    - Must be supported by the appropriate level of field and laboratory testing.
  - Strategic Reburial
    - Suitable for CAS that has been neutralized and effectively covered with non-aggressive fill.
    - Suitable for PCAS provided they are placed in a condition that will remain submerged by standing or surface waters.

### 3.4.7 Vibration Control

The Design-Builder shall control vibrations in accordance with the requirements of the *Monitoring of Adjacent Structures During Construction Special Provision* included in Attachment 1.5a. In addition to private/adjacent properties, this includes structures under construction, structures owned by VDOT, and structures constructed by the Design-Builder within the scope of the Fred Ex Project. Adjacent structures shall be defined as structures within a 200' radius of driving, drilling, or excavation activities. The Design-Builder shall be responsible for providing vibration monitoring and repairing any and all damage to adjacent facilities and structures for construction-induced damage. The Design-Builder shall provide vibration monitoring data reports to the Concessionaire.

### **3.4.8 Coordination and Review by Geotechnical Engineer**

The Design-Builder's geotechnical engineer of record shall identify the elements of the Project in which the geotechnical engineer or their qualified designated representative is required to monitor/inspect during construction to ensure that the completed Project will function in accordance with the design intent over its expected lifetime. This shall include, but not limited to foundation subgrades, installation and load testing of deep foundations, embankment and pavement subgrades, instrumentation and monitoring of settlement, assessment and treatment for potential weak or unsuitable soils, rock excavation and rock slopes, and retaining structures that include tie-backs and anchors. These items shall be included as part of the Fred Ex Design-Builder's inspection plan outlined in the QA/QC plans.

## **3.5 Materials**

### **3.5.1 Rights for and Use of Materials Found on the Fred Ex Project**

A. With approval of the Concessionaire, the Design-Builder may use in the Fred Ex Project any materials found in the excavation that comply with the standards and specifications set forth in Attachment 1.5a. The Design-Builder shall replace at its own expense with other acceptable material the excavation material removed and used that is needed for use in embankments, backfills, approaches, or otherwise, unless used on the Fred Ex Project. The Design-Builder shall not excavate or remove any material from within the construction limits that is not within the grading limits, as indicated by the slope and grade lines. The Design-Builder shall not waste, bury, deposit, or abandon any material within the Fred Ex Project limits.

### **3.5.2 Not Applicable**

### **3.5.3 Not Applicable**

### **3.5.4 Not Applicable**

### **3.5.5 Samples, Tests, and Cited Specifications**

The responsibility for quality control, quality assurance, and ensuring compliance with applicable specifications and testing requirements lies with the Design-Builder. The Design-Builder's QMSP shall outline the procedures for quality assurance, quality control, and compliance with the Technical Requirements. The Concessionaire, at its discretion, may conduct testing and audits in its performance of Oversight Services.

### **3.5.6 Material Delivery**

The Design-Builder shall advise the Concessionaire at least two weeks prior to the delivery of any material from a commercial source. Upon delivery of any such material to the Fred Ex Project, the Design-Builder shall confirm that the material meets the requirements of

**Execution Version**

---

the Technical Requirements and, if so, shall provide the Concessionaire with one copy of all invoices (prices are not required).

**3.5.7 Plant Inspections**

If the Concessionaire inspects materials at the source, the following conditions shall be met:

- A. The Concessionaire shall have the cooperation and assistance of the Design-Builder and producer of the materials.
- B. The Concessionaire shall have full access to parts of the plant that concern the manufacture or production of the materials being furnished.
- C. The Design-Builder shall arrange and bear any cost associated with travel and lodging for the Concessionaire to witness factory acceptance testing (FAT) of any TMS Equipment which the Design-Builder is responsible for providing and which occurs more than 200 miles from the Fred Ex Project site.

**3.5.8 Storing Materials**

- A. Materials shall be stored in a manner so as to ensure the preservation of their quality and fitness for the Work. When considered necessary by the Design-Builder's quality assurance manager or the Concessionaire, materials shall be stored in weatherproof buildings on wooden platforms or other hard, clean surfaces that will keep the material off the ground. Materials shall be covered when directed by the Concessionaire. Stored material shall be located so as to facilitate its prompt inspection. Portions of the Fred Ex Project Right of Way approved by the Concessionaire may be used for storage of material and equipment and for plant operations. However, equipment and materials shall not be stored within the clear zone of the travel lanes open to traffic.
- B. Additional required storage space shall be provided by the Design-Builder. Private property shall not be used for storage purposes without the written permission of the owner. Copies of the written permission shall be furnished to the Concessionaire. Upon completion of the use of the property, the Design-Builder shall furnish to the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored.
- C. Chemicals, fuels, lubricants, bitumens, paints, raw sewage, and other harmful materials as determined by the Design-Builder's quality assurance manager or the Concessionaire shall not be stored within any floodplain unless no other location is available and only then shall the materials be stored in a secondary containment structure(s) with an impervious liner. Also, any storage of these materials in proximity to natural or man-made drainage conveyances or otherwise where the materials could potentially reach a waterway if released under adverse weather conditions, must be stored in bermed or diked area or inside a container capable of

**Execution Version**

---

preventing a release. Double-walled storage tanks shall meet the berm/dike containment requirement except for storage within flood plains. Any spills, leaks, or releases of such materials shall be addressed in accordance with the Fred Ex Design-Build Contract. Accumulated rain water may also be pumped out of the impoundment area into approved dewatering devices.

- D. ITS and TMS equipment, electronic devices, network and computer gear shall be stored in an environmentally controlled space as might be required in accordance with manufacture's recommendation.

**3.5.9 Handling Materials**

Materials shall be handled in a manner that will preserve their quality and fitness for the Work. Aggregates shall be transported from storage to the Work in vehicles constructed to prevent loss or segregation of materials.

**3.5.10 Unacceptable Materials**

Materials that do not conform to the Technical Requirements shall be considered unacceptable. Such materials, whether in place or not, will be rejected and shall be removed from the site of the Work. If it is not practical for the Design-Builder to remove rejected material immediately, the Design-Builder will mark the material for identification. Rejected material whose defects have been corrected shall not be used until approval has been given by the Concessionaire in accordance with the QMSP.

**3.5.11 Materials Furnished by the Concessionaire**

- A. The Design-Builder shall furnish all materials required to complete the Work except those specified to be furnished by the Concessionaire.
- B. Material furnished by the Concessionaire will be delivered or made available to the Design-Builder at the points specified in the Fred Ex Design-Build Contract.
- C. After receipt of the materials, the Design-Builder shall be responsible for material delivered to it, including shortages, deficiencies, and damages that occur after delivery, and any demurrage charges.

**3.5.12 Local Material Sources (Pits and Quarries)**

- A. Local material sources, other than active commercial sand and gravel and quarry operations, opened by the Design-Builder or its subcontractors shall be concealed from view from the completed roadway and any existing public roadway. Concealment shall be accomplished by selectively locating the pit or quarry and spoil pile, providing environmentally compatible screening between the pit or quarry site and the roadway, or using the site for another purpose after removal of the material, or restoration equivalent to the original use (such as farm land, pasture, or turf).



**Execution Version**

---

- B. Should the Design-Builder wish to source construction materials from (non-commercial) new pits or quarries the Design-Builder shall furnish the Concessionaire a statement signed by the property owner in which the property owner agrees to the use of their property as a source of material for the Fred Ex Project. Upon completion of the use of the property as a material source, the Design-Builder shall furnish the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored. This requirement will be waived for commercial sources, sources owned by the Design-Builder, and sources furnished by the Concessionaire.
- C. Local material pits and quarries that are not operated under a local or State permit shall not be opened or reopened without authorization by the Concessionaire. The Design-Builder shall prepare a site plan, including the following:
1. the location and approximate boundaries of the excavation;
  2. procedures to minimize erosion and siltation;
  3. provision of environmentally compatible screening;
  4. restoration;
  5. cover vegetation;
  6. other use of the pit or quarry after removal of material, including the spoil pile;
  7. the drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations;
  8. location of haul roads and stabilized construction entrances if construction equipment will enter a paved roadway;
  9. constructed or natural waterways used for discharge;
  10. a sequence and schedule to achieve the approved plan; and
  11. the total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Design-Builder shall certify that the sediment trap or basin design is in compliance with the standards and specifications set forth in Attachment 1.5a. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.
- D. The Design-Builder's design and restoration shall be in accordance with good industry practice.

### 3.5.13 Disposal Areas

- A. Unsuitable or surplus material shall be disposed of by the Design-Builder off the Fred Ex Project Right of Way. The Design-Builder shall obtain the necessary rights to property to be used as an approved disposal area. An approved disposal area is defined as that which is owned privately, not operated under a local or State permit and has been approved by the Concessionaire for use in disposing unsuitable or surplus material.
- B. Prior to the Concessionaire approving a disposal area, the Design-Builder shall submit a site plan. The plan shall show:
1. the location and approximate boundaries of the disposal area;
  2. procedures to minimize erosion and siltation;
  3. provision of environmentally compatible screening;
  4. restoration;
  5. cover vegetation;
  6. other use of the disposal site;
  7. the drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations;
  8. location of haul roads and stabilized construction entrances if construction equipment will enter a paved roadway;
  9. constructed or natural waterways used for discharge;
  10. a sequence and schedule to achieve the approved plan; and
  11. the total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Design-Builder shall certify that the sediment trap or basin design is in compliance with the standards and specifications set forth in Attachment 1.5a. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.
- C. Disposal areas shall be cleared but need not be grubbed. The clearing work shall not damage grass, shrubs, or vegetation outside the limits of the approved area and haul roads thereto. After the material has been deposited, the area shall be shaped to minimize erosion and siltation of nearby streams and landscaped in accordance with the approved plan for such work or shall be used as approved by the Concessionaire. The Design-Builder's design and restoration shall conform to the requirements of the Fred Ex Design-Build Contract.

**Execution Version**

---

- D. The Design-Builder shall furnish the Concessionaire a statement signed by the property owner in which the owner agrees to the use of their property for the deposit of material from the Fred Ex Project. The property owner will hold harmless the Concessionaire, their officers, their agents, and their employees. Upon completion of the use of the property as an approved disposal area, the Design-Builder shall furnish the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored. This requirement will be waived for commercial sources and sources owned by the Design-Builder.
- E. The Design-Builder will obtain a VPDES Construction Permit as well as any other applicable permits for a disposal area, which shall be in compliance with the standards and specifications set forth in Attachment 1.5a.
- F. The Design-Builder shall dispose of all defunct ITS, TMS, cable, devices, electric, and electronic equipment properly and provide documentation to the Concessionaire.

### **3.6 Drainage, Erosion and Siltation and Stormwater Management**

#### **3.6.1 Drainage**

- A. The criterion detailed herein is shown in VDOT's Drainage Manual and associated Instructional and Informational Memoranda (IIM) and shall be used to provide for flood protection, drainage design, erosion and sediment control, and stormwater management. All "should" and "may" statements in VDOT's Drainage Manual shall be interpreted as "shall" and "will" statements respectively, unless other approved by the Concessionaire. All other hydraulic criteria not referenced herein, including but not limited to, increases in existing flood levels, bridge scour protection, protection of downstream waterways, upstream and downstream property impacts, and compliance with environmental and safety requirements, shall be in accordance with the Attachment 1.5a.
- B. The Fred Ex Project will be governed by the Part II-B Technical Criteria under the VSMP Regulations. Final Design Documentation for any hydraulic design shall include a complete set of final drainage computations sealed and signed in accordance with latest IIM-243.
- C. The drainage design will include but not be limited to enclosed storm sewer systems, curb inlets, drop inlets, stormwater management systems for water quality and water quantity, manholes, junction boxes, culverts, headwalls, channels, ditches, bridge drainage assemblies and structures that remove and transport runoff or convey stream flows, adequate outfalls, and erosion and sediment control. These efforts shall be in compliance with the Attachment 1.5a.

**Execution Version**

---

- D. The Design-Builder will prepare drainage design criteria and a list of software packages to be used in the design prior to commencement of Work for review and approval by the Concessionaire.
- E. The Design-Builder will assemble and review all available data, studies, and development plans impacting the Fred Ex Project corridor for use in preparing the drainage design. The Design-Builder will perform a hydrologic and hydraulic analysis within the limits of the Fred Ex Project and extend the analysis to include all offsite areas that will drain through or impact the Fred Ex Project.
- F. The Design-Builder shall design and install new drainage facilities and will be permitted to use existing drainage systems that have adequate hydraulic capacities and adequate structural integrity in accordance with applicable standards and specifications set forth in Attachment 1.5a. Existing drainage assets determined not to be needed for the Design-Builder’s drainage design or other VDOT use, as determined by the Concessionaire, shall be abandoned in place or removed by the Design-Builder at its sole cost.
- G. All existing drainage facilities within the Fred Ex Project Right of Way that are adversely impacted by the Design-Builder’s activities and that the Design-Builder intends to leave in place shall be evaluated and verified to have adequate hydraulic capacity for the ultimate land use conditions in accordance with the 2002 (Revised May 2017) VDOT Drainage Manual at Design-Builder’s cost. The evaluation of existing drainage facilities shall be based on the applicable design storm frequency per the current Department criteria.
- H. The Design-Builder shall provide the Fred Ex Drainage Existing Condition Assessment Report to the Concessionaire for review and approval prior to proceeding to final design. The report shall include all the pipes that the Design-Builder intends to leave in place for continued use and also the pipes which will be subjected to additional embankment, and/or live loading. 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.
- I. If any existing drainage facility within the Fred Ex Project Right of Way is not utilized as a functional element in the proposed drainage design or adversely impacted by Fred Ex project, but is determined to be structurally or hydraulically deficient, then the Concessionaire shall determine whether to rehabilitate/replace the drainage system to ensure a continued service life of 70 years or leave as is. Where the Concessionaire desires the Design-Builder to carry out the rehabilitation, the Design-Builder will produce a proposal for the work required and agree with the Concessionaire on a schedule and cost for carrying out such work as a Fred Ex Work Order.
- J. The Design-Builder shall provide for new storm water management facilities and the replacement of capacity for any existing storm water management facilities that may

**Execution Version**

---

be removed in accordance with applicable standards and specifications set forth in Attachment 1.5a and Section 3.6.3 of these Technical Requirements.

- K. No drainage inlet grate or at-grade structure will be permitted to be located or extend within the travel way of the Interstate or the associated Interstate ramps, unless approved by the Concessionaire.
- L. Prior to the commencement of construction Work, the Design-Builder will determine all existing drainage facilities it intends to utilize and leave in place for continued use. The Design-Builder shall perform such activities as may be necessary to cause such facilities to be completely clean and free of debris and silt prior to the commencement of construction Work on or near such existing drainage facilities. The Design-Builder shall be responsible, at its sole cost and expense, for cleaning any debris or silt accumulation caused by performance of the construction Work from all (pre-existing and new) Fred Ex Express Lanes drainage facilities.
- M. As part of the Work, the Design-Builder may tie in or connect new drainage assets it is designing and constructing to existing drainage assets present along the I-95 Corridor as of the Fred Ex Design-Build Contract Date. If there is an existing drainage asset the Design-Builder desires to tie in or connect to, but is prevented from doing so because of physical damage to such existing drainage asset not caused by or attributable to the Design-Builder's activities, the Design-Builder shall repair or replace the existing drainage asset in the immediate area of the proposed tie-in or connection so it can perform the proposed tie-in or connection. Any such repair or replacement work shall be completed in accordance with the standards and specifications set forth in Attachment 1.5a.
- N. The above provisions shall not apply if the hydraulic capacity or structural integrity of the existing drainage asset to which the Design-Builder desires to connect is verified to be inadequate by the Design-Builder as a result of the proposed tie-in or connection. In that case, the Design-Builder shall, at its sole cost and expense, replace, repair, or otherwise upgrade the existing drainage asset (in accordance with the standards and specifications set forth in Attachment 1.5a) in order to accommodate the proposed tie-in or connection.
- O. All existing culverts, storm sewer, and drainage appurtenances to be abandoned shall be removed and backfilled or filled and plugged with flowable fill.
- P. See Structures and Bridge Section 3.15 of these Technical Requirements for bridge deck drainage requirements.
- Q. For all impacted permanent structures, the bridge, hydrology, hydraulics, and scour requirements shall be in accordance with the requirements set forth in Attachment 1.5a, including but not limited to AASHTO LRFD Bridge Design Specifications and VDOT Modifications (the more stringent requirements shall govern).

**Execution Version**

---

- R. The Design-Builder will perform a comprehensive Hydrologic and Hydraulic Design Analysis (H&HA) for impacted major culvert and/or bridge-crossing locations where the 100-year discharge is 500 cfs or more, and/or floodplain studies have been published by federal agencies. The outline for the H&HA will be in accordance with the standards and specifications set forth in Attachment 1.5a. The Design-Builder will ensure the H&HA is coordinated with the bridge design when bridges over waterways are involved. The Design-Builder will deliver the final H&HA to VDOT for review and approval prior to the commencement of construction at each impacted major culvert and/or bridge crossing location.
- S. The scour analysis and reporting shall be in accordance with the standards and specifications set forth in Attachment 1.5a and shall include all existing structures undergoing Major Rehabilitations and new and replacement bridges at stream crossings. The scour profile shall also include the effects of existing adjacent bridges and the effect of the new bridge on the existing adjacent bridge. Countermeasures to accommodate scour at existing piers shall only be used when approved by the Concessionaire. Scour countermeasures shall be provided at existing and new abutments in accordance with the standards and specification as set forth in Attachment 1.5a.
- T. The Design-Builder will perform a scour analysis on all new retaining walls parallel to stream flow or subject to longitudinal scour. Retaining walls subject to longitudinal scour will be designed to withstand the 500-year super flood scour without the aid of scour countermeasures, unless otherwise agreed by the Concessionaire. Appropriate bank protections and revetments are required for walls subject to flows and potential bank erosion.
- U. During the Work period the Design-Builder shall provide for positive drainage of all roadway facilities open to construction traffic. Construction activities shall not redirect or add drainage run-off to a private property.
- V. Where justified by site conditions within the Fred Ex Project corridor, the Design-Builder may submit a design for the slotted barrier drains and trench drains for Concessionaire review and acceptance. However, for all other locations and the general purpose lanes, such use of slotted barrier drains and trench drains would not be accepted.
- W. Metal pipes shall not be utilized for permanent installations

**3.6.2 Erosion and Siltation**

- A. The Design-Builder will develop and implement an erosion and sediment control plan, a stormwater pollution prevention plan and a post development stormwater management plan in compliance with VDOT's approved Erosion and Sediment Control and Stormwater Management Standards and Specifications. The Design-Builder shall comply with VDOT's Approved Erosion and Sediment Control

**Execution Version**

---

Standards and Specifications (including IIM 11, IIM 246 and VDOT Drainage Manual, Chapters 10 and 11).

- B. The Design-Builder shall exercise temporary and permanent measures, throughout the Term, to control erosion and prevent or minimize siltation of rivers, streams, lakes, and impoundments. Erosion and sediment control measures will be installed in accordance with applicable standards and specifications set forth in Attachment 1.5a.
- C. Erosion and sediment control measures shall be applied to erodible material exposed by any activity associated with construction, including local material sources, stockpiles, disposal areas, and haul roads. Temporary measures shall be coordinated with the Work to ensure effective and continuous erosion and siltation control. Permanent erosion control measures and drainage facilities shall be installed and operational as the Work progresses before temporary measures are removed.
- D. Erosion and siltation control devices and measures shall be maintained in a functional condition at all times. The Design-Builder shall have, within the limits of the Fred Ex Project during all land disturbing activities, an employee certified by VDOT in Erosion and Sediment Control who shall inspect erosion and siltation control devices and measures for proper installation and deficiencies immediately after each rainfall, at least daily during prolonged rainfall, and weekly when no rainfall event occurs. The Design-Builder shall make a daily review of the location of silt fences and filter barriers to ensure that they are properly located for effectiveness. Deficiencies shall be corrected immediately. Such employee shall also be certified through VDOT of Environmental Quality Inspection Certification Program.
- E. Failure on the part of the Design-Builder to maintain appropriate erosion and siltation control devices in a functioning condition may result in the Concessionaire notifying the Design-Builder in writing of specific deficiencies. The Design-Builder shall correct or take appropriate actions to correct the specified deficiencies within 24 hours after receipt of such notification.
- F. Failure of the Design-Builder to maintain a VDOT-certified Erosion and Sediment Control employee within the Fred Ex Project Right of Way will result in a Fred Ex Project non-compliance and suspension of Work related to any land disturbing activity until such time as a certified Erosion and Sediment Control employee is present on the Fred Ex Project.
- G. Except as set forth in the Fred Ex Design-Build Contract, the Design-Builder shall be responsible for all costs, fines, penalties, and delays associated with any non-compliant items.

### 3.6.3 Storm Water Pollution Prevention Plan and Virginia Stormwater Management Program General Permit for the Discharge of Stormwater from Construction Activities

- A. The Design-Builder shall develop and provide for the Concessionaire’s review and approval a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is comprised of, but not limited to, an Erosion and Sediment Control (ESC) Plan and Narrative, a Pollution Prevention (P2) Plan, a post construction Stormwater Management (SWM) Plan, and the related specifications and standards contained within the Fred Ex Design-Build Contract. The SWPPP shall be prepared and implemented by the Design-Builder in compliance with applicable requirements of the standards and reference documents contained within the Fred Ex Design-Build Contract including the Virginia Erosion and Sediment Control Law and Regulations, the Virginia Stormwater Management Act (VSMA), and the Virginia Stormwater Management Program (VSMP) Regulations. The Fred Ex Project will be subject to the Part II-B Technical Criteria in the VSMP Regulations (9VAC25-870). A SWPPP shall be required for all land-disturbing activities that disturb 10,000 square feet or greater, or 2,500 square feet or greater in a Chesapeake Bay Preservation Area. Land-disturbing activities that disturb 1 acre or greater require coverage under VDOT of Environmental Quality’s Virginia Pollutant Discharge Elimination System (VPDES) General Permit for the Discharge of Stormwater from Construction Activities (“VPDES Construction Permit”). Where applicable, the Design-Builder will apply for and retain coverage under the VPDES Construction Permit for those land disturbing activities for which it has control. The required contents of a SWPPP for those land disturbance activities requiring coverage under the VPDES Construction Permit are found in Part II-A of the General Permit section of the VSMP Regulations (9VAC25-880-70).
- B. A working conceptual ESC and post construction SWM plan and SWPPP for the entire Fred Ex project must be reviewed and approved by the Concessionaire prior to the Design-Builder applying for coverage under the VPDES General Construction Permit. This initial Plan Submittal shall include the proposed total expected Land Disturbance Area and Land Development Area, including off-site facilities, for the entire Project. Such plans shall be prepared in accordance with the standards and specifications set forth in Attachment 1.5a and submitted to the Concessionaire for its approval before the commencement of any land disturbing activities. The SWPPP, including ESC Plan and SWM Plan, shall be kept current as design work progresses. Updated versions of the SWPPP, including ESC Plan, and SWM Plan, must be submitted to the Concessionaire for its review and approval before the Concessionaire will approve Final for Approval Documents. The Design-Builder shall be responsible for reading, understanding, and complying with all the terms, conditions and requirements of the permit and the SWPPP, including the following:
1. **Fred Ex Project Implementation Responsibilities.** The Design-Builder shall be responsible for the installation, maintenance, inspection, and, on a daily basis, ensuring the functionality of all erosion and sediment control measures and all other stormwater and pollutant runoff control measures



**Execution Version**

---

identified within or referenced within the SWPPP, plans, specifications, permits, and elsewhere in the Fred Ex Design-Build Contract, including these Technical Requirements. The Design-Builder shall take all reasonable steps to prevent or minimize any stormwater or non-stormwater discharge that will have a reasonable likelihood of adversely affecting human health or public and/or private properties.

2. **Certification Requirements.** In addition to satisfying the personnel certification requirements contained herein, the Design-Builder shall certify its activities by completing, signing, and submitting Form C-45 VDOT SWPPP Contractor and Subcontractor Certification Statement to the Concessionaire at least seven days prior to commencing any Fred Ex Project related land- disturbing activities, both on-site and off-site.
3. **SWPPP Requirements for Support Facilities.** The Design-Builder shall develop a SWPPP with an ESC Plan, a P2 Plan, and a SWM Plan for submission and acceptance by the Concessionaire prior to usage of any on-site or off-site support facilities, including borrow and disposal areas, construction and waste material storage areas, equipment and vehicle storage and fueling areas, storage areas for fertilizers or chemicals, sanitary waste facilities, and any other areas that may generate a stormwater or non-storm water discharge related to performance of the Work. Such plans shall document the location and description of potential pollutant sources from these areas and shall include a description of the controls to reduce, prevent and control pollutants from these sources including spill prevention and response. The Design-Builder shall submit such plans and documentation as specified herein to the Concessionaire for review and approval with the initial Plan Submittal. If the VPDES permit was previously applied for without including the Support Facilities, the Design-Builder will need to revise the SWPPP and may need to file a VPDES permit modification.
4. **Reporting Procedures:**
  - (i) **Inspection Requirements.** The Design-Builder shall be responsible for conducting inspections in accordance with the requirements herein. The Design-Builder shall document such inspections by completion of Form C-107, Construction Runoff Control Inspection Form and Continuation Sheet, in strict accordance with the directions contained within the form.
  - (ii) **Unauthorized Discharge Requirements.** The Design-Builder shall not discharge into state waters sewage, industrial wastes, other wastes or any noxious or deleterious substances nor shall otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational or other public uses.

**Execution Version**

---

- (iii) **Notification of non-compliant discharges.** The Design-Builder shall immediately notify the Concessionaire upon the discovery of, or potential of, any unauthorized, unusual, extraordinary, or non-compliant discharge from the land disturbing activity. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.
- (iv) **Detailed report requirements for non-compliant discharges.** The Design-Builder shall submit to the Concessionaire within five days of the discovery of any actual or potential non-compliant discharge, a written report describing details of the discharge to include its volume, location, cause, and any apparent or potential effects on private and/or public properties and state waters or endangerment to public health, as well as steps being taken to eliminate the discharge. A completed Form C-107 shall be included in such reports.

**5. Changes, Deficiencies and Revisions**

- (i) **Changes and Deficiencies.** The Design-Builder shall report to the Concessionaire when any planned physical alterations or additions are made to the land disturbing activity or deficiencies in the Fred Ex Project plans or the Fred Ex Design-Build Contract, including these Technical Requirements are discovered that could significantly change the nature or increase the quantity of the pollutants discharged from the land disturbing activity to surface waters.
- (ii) **Revisions to the SWPPP.** Where site conditions or construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan, storm water management plan, or any other component of the SWPPP for the land disturbing activity, such revisions or modifications shall be approved by the Concessionaire and shall be documented by the Design-Builder on a designated plan set. Such plans shall be kept on the Fred Ex Project site at all times and shall be available for review upon request. If a revision to the SWPPP results in a significant increase to the project Land Disturbance Area, the Design-Builder, in consultation with DEQ, may need to file a VPDES permit modification.
- (iii) The Design-Builder shall prepare a post-construction Storm Water Management Plan (SWMP) for the entire Fred Ex Project. Plans shall be prepared in accordance with the Standard Documents and submitted to the Concessionaire for its review and acceptance before any land disturbing activity.

- 6. Where the Project will be constructed in segments, the Design-Builder shall submit a finalized ESC Plan, a post construction SWM Plan and a P2 Plan, including the expected Land Disturbance Area, for the proposed initial work segment in addition to the conceptual plan for the entire Project. It is expected

**Execution Version**

---

that the individual work segment submittals will be self-sustaining and not incur a deficit in post construction SWM design requirements requiring mitigation on future work segments. Subsequent work segment submittals shall include required modifications to the Land Disturbance Area value. However, these modifications, in total, shall not exceed the initially submitted Land Development Area value.

7. The Design-Builder shall not proceed with work to be covered by the permit until permit coverage is secured and the Concessionaire 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. 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 per 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.
8. 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, provide As-Built drawings of all post-construction stormwater management facilities located 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. The Design-Builder's VDEQ certified ESC Inspector must represent the Quality Assurance firm for the Project. The inspections carried out by the Concessionaire'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

**Execution Version**

---

Projects and Public–Private Transportation Act Projects Manual and Part 5 Section 107.16(e). 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).

- C. The Design-Builder shall be responsible for the design and construction of stormwater management facilities as required for the Project in accordance with the latest version of IIM-LD-195, and the other standards and reference documents listed in Attachment 1.5a including the Virginia Stormwater Management Program Act and the Virginia Stormwater Management Program (VSMP) Regulation, and shall comply with the minimum geotechnical requirements contained therein. The locations of potential stormwater management facilities identified in the RFP Conceptual Plans are preliminary and have not been fully evaluated to determine if these locations are suitable, feasible or sufficient to address all of the stormwater management requirements of the Project. The Design-Builder, as a part of final design, shall develop a final post-construction stormwater management plan and construct facilities that meet all applicable requirements.
1. The Design-Builder is to insure proper ingress and egress to any stormwater management facility and that any specific proprietary facilities have proper maintenance details included in the Record (As-Built) Plans. When a stormwater management basin is located outside limited access fencing, maintenance access should be provided from a separate public road where economically feasible. When maintenance access can only be provided from a limited access roadway, a locked gate shall be provided.
  2. The Design-Builder shall provide interim and a final sealed Drainage Report incorporating all drainage, hydraulic and SWM calculations and analysis including pre and post development discharges at project limit outfall locations, capacities, and supporting data such as drainage areas (with maps), ground cover calculations, etc. in accordance with the documentation requirements as outlined in the VDOT Drainage Manual. Drainage area maps shall show at a minimum the basin limits, flow path used for the time of concentration calculations and the different land uses. For offsite drainage areas the most detailed available mapping shall be used such as County GIS mapping. Summary tables for ditches, spread, storm sewer and hydraulic gradelines shall be prepared per the VDOT Drainage Manual and contain as a minimum all the information shown in the standard VDOT forms. The summary forms for ditches, spread and storm sewer calculations shall be organized and show the drainage system in order from upstream to downstream with a separate table for each individual ditch or storm sewer system. Hydraulic gradelines summary tables shall show the hydraulic gradeline elevations for each individual system in a downstream to upstream order.
  3. For connections where a new drainage pipe is required between the culverts underneath the southbound and northbound General Purpose lanes and where

Execution Version

the height of fill is over 20 feet, a minimum diameter of 60-inches shall be used.

- 4. Use of underground detention facilities for SWM is prohibited. Hydrodynamic Structures and Manufactured Filter Unit BMPs may be used to treat up to ten percent (10%) of the total impervious area for the Project. All Hydrodynamic Structures and Manufactured Filter Unit BMPs must be approved for use in Virginia and are subject to Concessionaire and VDOT approval during the detailed design phase.
  
- D. The Design-Builder is to ensure proper ingress and egress to any stormwater management facility and that any specific proprietary facilities have proper maintenance details included in the As-Built Plans. When maintenance access can only be provided from a limited access roadway, a locked gate shall be provided.

### 3.7 Roadway Design

#### 3.7.1 General Requirements

- A. The Design-Builder will prepare the final geometric design of the roadway elements in accordance with good industry practice. Functional classifications for roadways and specific design criteria on the Fred Ex Project are to be developed per the standards and specifications set forth in Attachment 1.5a.
  
- B. Except as outlined in design exceptions and design waivers, the design speed for the Fred Ex portion of the 95 Express Lanes shall be 75 miles per hour and the existing 95 Express Lanes and modifications to the existing I-95 general purpose lanes shall be 70 miles per hour. The design speed for all exit or entrance ramps and other roadways shall meet AASHTO criteria as shown in the following table:

Fred Ex Project Design Speeds			
Limits	95 Express Lanes	I-95 General Purpose Lanes	Ramps
Mile Markers 133 and 143	75	70	*
Mile Markers 143 and 148	70	70	*
Route 652 (Truslow Road) Route 628 (American Legion Road/ Ramoth Church Road)	40		

\* Ramp design speeds to be per AASHTO criteria (Minimum 40 mph)

- C. Except as outlined in design exceptions and design waivers, the Fred Ex portion of the 95 Express Lanes and shoulders, and I-95 general purpose lanes and shoulders shall meet VDOT’s criteria for freeways, as described in the standards and specifications set forth in Attachment 1.5a. The widths of reversible shoulders shall be equal and meet the wider criteria established in VDOT and FHWA criteria.
  
- D. Design-Builder will have the flexibility to propose revised designs that produce time and cost benefits to the Concessionaire and/or the Design-Builder without impairing

**Execution Version**

---

the essential functions and characteristics of the design, including safety, traffic operations, desired appearance, maintainability, environmental protection, drainage, and the constraints of any Regulatory Approvals. In accordance with the Fred Ex Design-Build Contract, the Technical Requirements, or the above conditions, the Concessionaire will have the right to accept or reject such revised design criteria or designs. The alignments and profile as provided in the RFP Conceptual Plans have been reviewed and approved for use on the Fred Ex Project for potential future general purpose lane improvements. The Design-Builder shall not change the alignment unless approved by the Concessionaire.

- E. Reversible ramp shoulder widths shall be the same width on both sides of the ramp and shall be the greater width as required in VDOT Standard GS-R except as noted in DW-30. DW-30 is not applicable in the physical gore areas for reversible ramps.
- F. All new and existing ramps shall be designed with a parallel design. Acceleration and deceleration lengths shall be designed to meet AASHTO requirements including operational characteristics of the ramp. Where AASHTO indicates a desirable dimension or a range of lengths, the desirable or larger values shall be used unless constraints prohibit this length and the reduction justification is approved by the Concessionaire.
- G. In order to preclude toll violations and wrong-way access, Design-Builder shall provide a continuous physical barrier system throughout the corridor. Cross-overs from the GP lanes to HOT Lanes will utilize channelizing posts consistent with those in use on the 95 Express Lanes to deter unauthorized use. The Concessionaire will have the final approval on the location and type of such barrier system.
- H. The Design-Builder shall be responsible for compliance with applicable commitments and operational improvements required by the approved Fred Ex Interchange Justification Report (IJR).
- I. Where Standard MC-3B Asphalt Curb is used in conjunction with paving under guardrail on high fills, high fills shall be defined as fill heights over 7.5 feet.
- J. The MGS-1/1A standard shall be applied to all areas of guardrail installation, including those along I-95 SB and NB general purpose lanes.

**3.7.2 Requirements for Operational Analysis**

- A. The Design-Builder shall provide an operational analysis for any changes to the Fred Ex Project designs as presented in the RFP Conceptual Plans and/or the Fred Ex Interchange Justification Report (IJR) and the analysis shall require an amendment to the Fred Ex Project Interchange Justification Report.
- B. The operational analysis shall demonstrate that the Design-Builder's revised design does not have an adverse impact on the safety and operation of the existing and proposed facility based on an analysis of current and future design year traffic. Traffic

and operational analysis shall conform to the requirements of IIM-LD-200 - *Development of Justification for Additional or Revised Access Points: Creation of Interchange Justification/Modification Reports* and the *Traffic Operations and Safety Analysis Manual (TOSAM), Version 1.0*.

## **3.8 Pavement**

### **3.8.1 Minimum Pavement Sections**

- A. Pavement designs must meet the requirements of this Section 3.8.1. The Design-Builder may propose changes to the specified minimum pavement section(s) for the Express Lanes travel lanes that either a) increases the thickness of the base or subbase layers specified below or b) uses an alternative base, drainage, and/or subbase layer type and thickness that meets or exceeds the Structural Number of the minimum pavement section(s) specified below without compromising long-term strength or durability. Use of a consistent pavement design for Express Lanes travel lanes and shoulders for the entire length of the Project is required. Shoulder pavement designs shall also meet the requirements of Section 3.8.1.H. Changes to the minimum pavement section(s) that rely on a CBR value that exceeds the requirements of Section 3.8.1.G are not acceptable. Any proposed variations to the pavement designs must be presented and accepted as an Alternative Technical Concept during the RFP phase. Final details for any accepted ATC are subject to Concessionaire and VDOT approval during the detailed design phase.
- B. The Design-Builder shall prepare and incorporate into the plans, typical sections, profiles, and cross-sections with the validated pavement sections in accordance with the applicable manuals noted in Attachment 1.5a. This includes drainage and subdrainage requirements to ensure positive drainage both within the pavement structure and on the pavement surface.
- C. All existing paved shoulders and existing gore areas shall be cut with a smooth vertical face to expose the original Portland cement concrete pavement, demolished and reconstructed with the mainline I-95 pavement section identified below. The existing general purpose lanes and paved shoulders shall be milled to a depth of 2” and resurfaced with 2” Asphalt Concrete, Type SM-12.5E as indicated on the RFP Conceptual Plans. All underdrains beneath the existing paved shoulders shall be removed and replaced to the nearest available outlet.
- D. All travel lane and shoulder pavements shall be constructed or resurfaced in accordance with the pavement criteria below:

Execution Version

Facility	Minimum New Travel Lane Pavement Requirements	Minimum Existing Pavement Resurfacing Requirements	Minimum New Shoulder Pavement Requirements
95 Express Lanes	<ul style="list-style-type: none"> <li>• <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> <li>• <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A</li> <li>• <u>Base</u>: minimum 11.0 inches of Asphalt Concrete Base Course BM-25.0A</li> <li>• <u>Drainage</u>: 4.0 inches of Aggregate Base Material, Type 1, Size No. 21B</li> <li>• <u>Subbase</u>: 6.0 inches of Aggregate Base Material, Type I, Size No. 21A, pugmill mixed with 4% hydraulic cement by weight</li> </ul>	<ul style="list-style-type: none"> <li>• Where existing pavement markings and/or existing snow plowable raised pavement markers that conflict with the proposed pavement marking design are to be eradicated and removed or the pavement is behind barrier and not subjected to traffic, the existing pavement shall be milled and overlaid to the following depths and materials up to the nearest longitudinal lane divide:                             <ul style="list-style-type: none"> <li>○ <u>Milling Existing Pavement</u>: minimum 2.0 inches</li> <li>○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> <li>• <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A</li> <li>• <u>Subbase</u>: 21.0 inches of Aggregate Base Material, Type 1, Size No. 21B</li> <li>• Paving adjacent to guardrail shall be in accordance with the Design Waivers listed in Attachment 1.5c</li> </ul>



Execution Version

Facility	Minimum New Travel Lane Pavement Requirements	Minimum Existing Pavement Resurfacing Requirements	Minimum New Shoulder Pavement Requirements
<p>I-95 General Purpose Lanes and Ramps</p>	<ul style="list-style-type: none"> <li>• <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> <li>• <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A</li> <li>• <u>Base</u>: minimum 11.0 inches of Asphalt Concrete Base Course BM-25.0A</li> <li>• <u>Drainage</u>: 4.0 inches of Aggregate Base Material, Type 1, Size No. 21B</li> <li>• <u>Subbase</u>: 6.0 inches of Aggregate Base Material, Type I, Size No. 21A, pugmill mixed with 4% hydraulic cement by weight</li> </ul>	<ul style="list-style-type: none"> <li>• For use as a travel lane, existing shoulder pavement after proposed wedge and level must be resurfaced to the following depths and materials:                             <ul style="list-style-type: none"> <li>○ <u>Milling Existing Pavement</u>: minimum 4.0 inches</li> <li>○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> <li>○ <u>Wedge and Leveling</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A</li> </ul> </li> <li>• Where existing pavement markings and/or existing snow plowable raised pavement markers are to be eradicated and removed for temporary lane shifts, the existing pavement shall be milled and overlaid to the following depths and materials up to the nearest longitudinal lane divide:                             <ul style="list-style-type: none"> <li>○ <u>Milling Existing Pavement</u>: minimum 2.0 inches</li> <li>○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Same as Minimum New Travel Lane Pavement Requirements</li> <li>• Paving adjacent to guardrail shall be in accordance with VDOT standard MC-4</li> </ul>

Execution Version

Facility	Minimum New Travel Lane Pavement Requirements	Minimum Existing Pavement Resurfacing Requirements	Minimum New Shoulder Pavement Requirements
Route 652 Truslow Road and Route 628 American Legion Road/Ramoth Church Road	<ul style="list-style-type: none"> <li>• <u>Surface</u>: 1.5 inches of Asphalt Concrete Surface Course SM-9.5A</li> <li>• <u>Base</u>: 4.0 inches of Asphalt Concrete Base Course BM-25.0A</li> <li>• <u>Subbase</u>: 6.0 inches of Aggregate Base Material, Type 1, Size No. 21B</li> </ul>	<ul style="list-style-type: none"> <li>• No less than 25 feet from the end of full depth pavement reconstruction, the existing pavement shall be milled and overlaid to the following depths and materials up to the nearest longitudinal lane divide:                             <ul style="list-style-type: none"> <li>○ <u>Milling Existing Pavement</u>: minimum 2.0 inches</li> <li>○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-9.5A</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Same as Minimum New Travel Lane Pavement Requirements</li> <li>• Paving adjacent to guardrail shall be in accordance with VDOT standard MC-4</li> </ul>
Emergency Crossover	The existing emergency crossover pavement shall be demolished and reconstructed to the following depths and materials: <ul style="list-style-type: none"> <li>• <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM- 12.5E</li> <li>• <u>Intermediate</u>: 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A</li> </ul> Subbase: 6.0 inches of Aggregate Base Material, Type 1, Size No. 21B		

- E. The Design-Builder shall add the following note to the typical section sheets in the construction plans: “The VDOT District Materials Engineer shall be notified within 24 hours of exposing the existing concrete, and at least 48 hours prior to placement of widening pavement, to allow for verification of the exposed edge of pavement.”
- F. Pavement design and construction shall meet the requirements of the federal pavement policy, 23 CFR 626 (Chapter 1).
- G. The minimum pavement sections are based upon the following requirements:
  1. a minimum soil CBR value of 5 within 2 feet of subgrade (therefore all imported fill material shall have a minimum CBR value of 5),
  2. all subgrade is compacted in accordance with the applicable sections of the VDOT Road and Bridge specifications and applicable special provisions and,
  3. all unsuitable materials have been removed or modified in accordance with Section 3.5.13.
- H. Pavements shall be designed to ensure positive drainage on the pavement surface and within the pavement structure, including connecting to existing or any new sub-

**Execution Version**

---

drainage systems. Pavement drainage layers between adjacent pavement sections must consist of similar material and permeability. Drainage layers shall extend continuously across travel lanes and shoulders, connect to appropriate sub-drainage systems, and accommodate pavement drainage from existing or adjacent pavement.

1. Standard UD-4 edgedrains shall be required for all pavements on this project. Modified UD-1 underdrains shall be installed, in lieu of standard UD-4 edgedrain for pavement sub-drainage, in wet areas, areas of high groundwater, springs, and in cuts greater than 25 feet. The modification consists of wrapping the aggregate with geotextile drainage fabric.
  2. Standard Combination Underdrain (CD-1) shall be provided at the lower end of cuts.
  3. Standard Combination Underdrain (CD-2) shall be provided at grade sags, bridge approaches, and at the lower end of undercut areas.
- I. Any pavement reconstruction on arterials, local streets, or interchange ramps not specifically noted above shall be designed to meet the design-year traffic and match the existing pavement type at tie-in in accordance with standard WP-2 and in accordance with VDOT's pavement design standards and guidelines.
- J. Approach slabs for all bridges shall be full width – from face to face of barrier/parapet (including extending under sidewalks and shared-use paths).
- K. Design-Builder's plans, typical sections, profiles and cross-sections shall include the appropriate elements identified as a result of the drainage analysis/design and the pavement design. This shall include, but is not limited to, underdrains, stormwater inlets and pipes, and pavement sections reflecting the elements identified in the Design-Builder's final pavement design.
- L. The area surrounding pavements shall be graded to direct surface water away from paved areas. Any utility excavations or excavations for storm drains within pavement areas shall be backfilled with compacted structural fill in accordance with applicable sections of VDOT's Road and Bridge specifications and applicable special provisions.
- M. The Design-Builder shall submit to the Concessionaire for its review, 30 days before the submission of associated final Design Documentation, a pavement design report that documents the assumptions, considerations, and decisions contributing to the Design-Builder's proposed pavement design, including the following:
1. pavement design details by location, including structural layer materials, general specifications, and thicknesses;
  2. relevant pavement evaluation data (structural and functional) and condition information on adjacent roads;
  3. relevant geotechnical data and drainage information to verify the pavement design(s);

**Execution Version**

---

4. design criteria used in determining the pavement design(s), including annual average daily traffic, percentage heavy vehicles, cumulative traffic loading, pavement material strength factors, and pavement design life; and
5. design calculations documenting the pavement design(s) in accordance with the specified design methodology.
6. a minimum soil CBR value of 5 within 2 feet of subgrade (therefore all imported fill material shall have a minimum CBR value of 5),
7. all subgrade is compacted in accordance with the applicable sections of the VDOT Road and Bridge specifications and applicable special provisions and,
8. all unsuitable materials have been removed or modified in accordance with the requirements of the Design-Builder's final roadway plans and specifications and the geotechnical engineering reports.

**3.8.2 Temporary Pavement**

- A. The Design-Builder shall be responsible for any temporary pavement design and construction. 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 the Concessionaire for review and approval. All temporary pavement designs for interstate mainline or ramp pavements shall have a minimum 6 inches of asphalt concrete and shall meet the following minimum design criteria:
  - Design Life – 6 months minimum or such longer duration as may be required per the Design-Builder's MOT sequencing
  - 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.
- B. Temporary pavement shall be required for all locations where the Design-Builder will shift traffic onto an existing shoulder. If the existing shoulder is currently paved, the pavement must either meet or be modified to meet the requirements in Section 3.8.2.A.
- C. Temporary pavement that is installed to strengthen the existing shoulder pavement to meet the requirements of Section 3.8.2.A. shall remain in place once the Work is complete. Temporary pavement that is installed outside the limits of the existing shoulder pavement shall be completely removed once it is no longer in service.
- D. The Design-Builder shall be responsible for maintenance of all temporary pavements and temporary pavement markings.

**Execution Version**

---

- E. Any paved shoulder areas used for temporary traffic shall be restored after any such temporary use for the Project has concluded. This restoration work must include the milling of two inches of existing asphalt and placement of a new two-inch asphalt concrete surface course (SM-12.5E) overlay, and the installation of rumble strips, pavement markings and/or raised markers in accordance with VDOT requirements.

### **3.9 Traffic Engineering**

#### **3.9.1 General**

- A. The Design-Builder shall provide plans for all traffic control devices with its Design Documentation. Transitions from new markings, markers, and delineators to existing shall be planned such that road users will discern only a minimum change in delineation concept. Design Documentation for the Concessionaire's review and approval for traffic control devices shall be submitted as a complete package for each construction segment. All new and existing traffic control devices within the Fred Ex Project limits and those signs outside the Fred Ex Project limits shall be installed modified or replaced in accordance with the standards and specifications set forth in Attachment 1.5a.
- B. All traffic control devices shall be designed and installed to comply with the standards and specifications set forth in Attachment 1.5a and the requirements of the maintaining agency.
- C. The Design-Builder shall be responsible for the design and construction of the Fred Ex Project signing, pavement markings, pavement markers, delineators, roadway and sign lighting, and traffic signals. Traffic control devices shall include:
  - 1. all signs, signals, pavement markings, pavement markers, roadway and interchange lighting, overhead signs and delineators necessary within the Fred Ex Project limits; and
  - 2. signs, mounting structures, and associated lighting outside the Fred Ex Project limits that are necessary to orderly lead, guide, and regulate traffic to the Fred Ex Project.

#### **3.9.2 Pavement Markings**

- A. The Design-Builder shall provide and maintain pavement markings and reflective pavement markers meeting the standards and specifications set forth in Attachment 1.5a.
- B. On any pavement reconstruction undertaken by the Design-Builder, the Design-Builder shall tie in and match the existing permanent pavement marking systems.
- C. Temporary pavement markings and striping shall not be placed on the final surface course unless approved by the Concessionaire.

**Execution Version**

---

- D. All existing pavement markings and markers that do not conform to the final traffic patterns shall be eradicated and removed in accordance with the standards and specifications in Attachment 1.5a.
- E. Thermoplastic permanent marking may be used for final markings in the Fred Ex Express Lanes only. Permanent pavement markings on I-95 and ramps shall be Type B, Class VI, patterned preformed tape. All other pavement markings shall conform to VDOT Road and Bridge Specifications.
- F. Purple E-Z Pass Logos shall be installed at the locations shown on the RFP Conceptual Plans. The logos shall meet the criteria shown in Attachment 3.9a, including the installation of the pavement message “ONLY” at each location as indicated.
- G. High-Contrast Pavement Markings shall be used on all bridge decks or concrete pavements.
- H. Pavement marking tape shall conform to the requirements shown in Attachment 1.5a and Attachment 3.9b.
- I. Channelizing posts used in the Emergency crossovers shall match existing channelizing posts on 95 Express Lanes and be yellow in color.

**3.9.3 Static Signs**

- A. The Design-Builder shall design, fabricate, and install all new guide, supplemental, route marker, trail blazers, regulatory and warning signs required for this Fred Ex Project to meet standards and specifications set forth in Attachment 1.5a. The Design-Builder shall also modify or remove any signage, including associated structure, foundation and lighting, outside of the limits of the Fred Ex Project that is no longer appropriate or pertinent to the Fred Ex Project.
- B. The Design-Builder shall not change the signing concept approved as part of the RFP Conceptual Plans unless approved by the Concessionaire. The Design-Builder shall prepare a final Signage Plan consisting of the Project Roll Plan and the Trail Blazer Roll Plan, and present the plans for review and comment by the Concessionaire. The Project Roll Plan will be used for reviewing the dynamic messaging and static signs on the I-95 corridor and connecting roadways to include proposed sign locations and messages for all guide signs and HOT lane signs applications. The Trail Blazer Roll Plan will be used for reviewing existing and proposed static signs (trail blazers and route marker assemblies) on highways, feeder roadways and other roadways directing and notifying motorists of the access to the Fred Ex Project.
  - 1. The roll plans shall show proposed locations for relocating existing signs, and proposed locations for existing and new structures. All proposed signs shall have an identification reference number and existing structures identified with corresponding VDOT structure number. The roll plans shall also identify all

**Execution Version**

---

- existing structures, which are scheduled for modification or require a structural analysis for re-use (including adding, deleting or modifying sign panels).
2. The roll plans shall also display signing, both existing (to remain) and proposed, for all mainlines, ramps and interchanges, as well as for the arterial streets, frontage roads, and any other roadways that contain signing that is affected by the Fred Ex Project.
  3. The roll plans shall also include the locations of all proposed and existing Dynamic Message Signs. The roll plan features shall include but are not limited to, the existing and proposed roadway alignments, right-of-way, baseline of construction (including stationing), and existing topography at the tie-in points of the roadway limits of work. The proposed pavement markings may also be shown on the roll plan.
  4. The Trail Blazer Roll Plan shall show all existing and proposed highways and feeders with all existing and proposed trail blazers and router marker assemblies to I-95 and Fred Ex Express Lanes for at least one mile from the nearest Express Lanes entrance point or to the extent of the existing I-95 routing signs. New Express Lanes trailblazers should be co-located with existing I-95 trailblazers to the extent possible. All trail blazing signs (Express Lanes and GP Lanes) shall be of the same size.
  5. Submittal of the roll plans to the Concessionaire shall occur prior to final design.
- C. Existing fixed sign panels can be re-used or relocated if they are demonstrated to be in good condition with no damage or deterioration and in accordance with the requirements of Attachment 1.5a.
- D. The Fred Ex Express Lanes signage scheme will:
1. support the integration of the Fred Ex Express Lanes with the existing road network;
  2. facilitate navigation of the road network, including access to, travel along and egress from the Fred Ex Express Lanes; and
  3. be consistent with the existing directional and regulatory signing system on the existing road network and the 95 Express Lanes.
- E. The types of signage that constitutes directional and Fred Ex Project signage include:
1. advance direction signs
  2. intersection direction signs
  3. trailblazer signs
  4. advance exit signs
  5. exit direction signs

**Execution Version**

---

6. reassurance signs (static and dynamic)
  7. permission signs
- F. All new full span sign structures and foundations shall be designed to accommodate an additional static sign load of 200 sq. ft. for future use. All cantilever and butterfly sign structures and foundations shall be designed to accommodate an additional static sign load of either 50 sq. ft., or a 25% increase in the sign panel area shown in the RFP Conceptual Plans, whichever is greater, for future use.
- G. The Design-Builder shall be responsible for planning, coordinating, and obtaining Regulatory Approvals, if required, and removing and disposing of structures and obstructions. The Design-Builder shall relocate all signs within the construction limits that conflict with construction work. Signs that are not needed for the safe and orderly control of traffic during construction may be removed and stored in a manner that will preclude damage and reinstalled in their permanent locations prior to Final Completion.
- H. No overhead sign structures shall be bridge-mounted or parapet-mounted. Sign structures built into the bridge to support signs to be viewed by traffic traveling over the bridge shall be permitted.
- I. The Design-Builder shall be responsible for coordination with the Concessionaire or the pertinent local agencies or jurisdictions in order to install directional signage, including, without limitation, obtaining all applicable Regulatory Approval.
- J. The Design-Builder shall provide the necessary guide, warning and regulatory signs and corresponding sign foundations and overhead supports for the Fred Ex Project.
- K. The Design-Builder shall maintain all existing signs during construction, unless they are to be removed permanently or have been replaced as required by the Fred Ex Project. For any existing signs that require relocation due to construction, the Design-Builder shall present pertinent details, such as sign designs, mounting details, locations, for the Concessionaire's review and comment, prior to relocation.
- L. The Design-Builder shall modify or remove existing signs and structures that are rendered inaccurate, ineffective, confusing or unnecessary. Where sign panels are replaced or added to existing sign structures, vertical strut lengths will be designed or modified as needed to not extend beyond the limits of the new sign panels. The Design-Builder shall obtain the Concessionaire's approval prior to making any such changes.
- M. The Design-Builder shall identify and provide a summary of all existing signage impacted by the Fred Ex Project, including signs and associated sign structures that are outside the physical limits of roadway construction. For modifications (including adding, deleting or modifying sign panels) to any existing overhead/cantilever sign structure affected by the Fred Ex Project, the Design-Builder shall provide a



**Execution Version**

---

comprehensive structural analysis for the Concessionaire's review and written comment prior to the commencement of design in accordance with the requirements of Section 3.15.7. To assist with the structural analysis, the Concessionaire will provide (if available) existing structural information, shop drawings, and foundation calculations to the Design-Builder for each existing sign structure identified by the Design-Builder.

- N. The Concessionaire will review the structural analysis provided by the Design-Builder for each sign structure to determine whether or not the existing structure and/or sign can be modified as proposed. If it is determined that modifications to the existing sign structure and/or signs are not structurally acceptable, the Design-Builder shall provide new signs and structures, in accordance with Attachment 1.5a, to replace the existing sign structures and signs.
- O. Sign lighting shall conform with VDOT's standard lighting requirements for freeway operations and shall be subject to the Concessionaire's approval. Signs shall incorporate highly reflective sheeting material to optimize lighting installation. The Design-Builder shall perform an Overhead Sign Lighting Study in conformance with IIM-TE-380 (Overhead Sign Lighting) to determine which, if any, overhead signs require lighting. Overhead and ground-mounted signs which do not require lighting must use Type XI reflective sheeting. The same sign lighting design shall be applied throughout the Fred Ex Project for both existing and new signs. The Design-Builder shall provide the Overhead Sign Lighting Study to the Concessionaire for review and approval prior to final design. Luminaire retrieval systems will not be required for luminaires that are maintained by the Concessionaire.
- P. Post Interchange Signs (as defined in MUTCD Section 2E.35) shall be installed on the Fred Ex Project in accordance with applicable standards where space and/or permanent structures permit.
- Q. The Design-Builder shall place milepost and intermediate markers at 0.2 mile intervals facing northbound on the right side of the roadway on the reversible lanes and facing southbound on the left side of the roadway.
- R. The mile markers shall conform to MUTCD Figure 2H-2, Reference Location Signs, and intermediate markers shall conform to MUTCD Figure 2H-3, Intermediate Reference Location Signs.
- S. For signing along I-95, all guide signs, dynamic message signs and supplemental guide signs on overhead structures shall be installed such that 800 foot minimum spacing is maintained between signs. In areas where the 800 foot minimum spacing cannot be maintained the Design-Builder shall obtain approval from the Concessionaire to reduce the spacing.
- T. The limits of directional and Fred Ex Express Lanes signage, for the Fred Ex Project for which the Design-Builder is responsible, shall extend to provide sufficient

**Execution Version**

---

information to users of the Fred Ex Express Lanes for direction and access purposes to all entry and exit points.

- U. The Design-Builder shall perform line of sight analysis for all sign structures as necessary to confirm drivers have sufficient time to read the sign messages, and signs are not visually obstructed.
- V. The Design-Builder shall provide accurate and detailed elevations for all sign structures, including all dimensions, existing physical features and proposed constructed features to confirm physical locations and orientation.
- W. Clearview font will not be allowed on any new signs.
- X. The Design-Builder shall prepare and submit for approval a Sign Sequencing Plan and a Sign Unveiling Plan. The Sign Sequencing Plan shall be coordinated with and included in the Traffic Management Plan defined in Section 1.9 of these Technical Requirements. The Sign Unveiling Plan shall be coordinated with the events of, and included in the Traffic Management Plan and the opening schedule of the completed lanes. Both plans shall be approved by the Concessionaire prior to implementation. These plans shall be coordinated with I-95 Southbound and Northbound Rappahanock River Crossing projects prior to implementation. These plans shall provide a detailed sequence for covering and removing the existing signs and unveiling the covered existing and completed proposed signs. The Sign Sequencing Plan shall be focused on signs during construction activities while the Sign Unveiling Plan shall be focused on opening the completed lanes to traffic. The Concessionaire will coordinate with the Design-Builder to provide a permitted timeframe to implement these plans. The Sign Unveiling Plan shall be finalized no later than sixty (60) days prior to Service Commencement.
- Y. The use of purple backgrounds shall be as depicted in the Fred Ex Express Lanes signing concept as provided in the RFP Conceptual Plans. The Design-Builder is responsible for getting approval from the Concessionaire, VDOT and FHWA for any deviations from the RFP Conceptual Plans. The Concessionaire will facilitate coordination with FHWA and support the Design-Builder in obtaining such approval.

**3.9.4 Traffic Signals**

- A. The Design-Builder shall design, supply and install all necessary temporary and permanent traffic signals and related infrastructure for the Fred Ex Project as provided by this section and the standards and specifications set forth in Attachment 1.5a.
- B. The Design-Builder shall design the Fred Ex Project to include new traffic signal installations and modifications to existing traffic signal installations meeting the design requirements of the maintaining agency. The Concessionaire shall provide reasonable assistance to the Design-Builder in obtaining the relevant design requirements from any maintaining agency.

**Execution Version**

---

- C. The Design-Builder shall provide communications between all temporary and permanent traffic signals for the Fred Ex Project and the maintaining agency's traffic signal system. The communications medium shall be broadband compatible with the maintaining agency's communication system or plan.
- D. New traffic signals on the Fred Ex Project will be integrated with existing traffic signals using the following approach:
1. The Design-Builder shall design, program, adjust controller timings, test, and commission the new signalized intersections for coordinated operations matching the maintaining agency's existing coordination plans. The Design-Builder shall provide timing for existing signal coordination plans.
  2. The Concessionaire or the maintaining agency will test and commission any new local signalized intersection for network operations with the existing traffic signal system and will re-time network signals, as needed, to accommodate network demand.
  3. The Concessionaire or maintaining agency will be responsible for optimizing traffic signal timing at intersections with Fred Ex Project entry and exit ramps and approaching roadways to ensure that traffic does not normally produce queues that create a safety hazard on either the Fred Ex Project or the approaching roadways.
- E. The Design-Builder shall keep the existing signalized intersections within the Rights of Way functional during the Work period. If signals must be shut down, the Design-Builder shall provide temporary signals or appropriate traffic controls. Temporary signal shut down shall not be permitted.
- F. For each phase defined in the MOT Plan and temporary traffic control plans, the Design-Builder shall develop signal timing plans for the Fred Ex Project and roadways designated as detours and submit the plans to the Concessionaire. The Design-Builder shall implement, test, and adjust signal timings to prevailing conditions. The Design-Builder shall develop signal timing plans for all peak and non-peak periods which may require more than eight (8) plans.
- G. The Design-Builder shall install and be responsible for all aspects of temporary and permanent traffic signal installation to include but not be limited to design, obtaining permits, installation, rehabilitation of disturbed areas, and acquiring dedicated SE-5 metered electric service power and broadband communication connections.
- H. The Design-Builder shall install and connect dedicated SE-5 metered electric service power service for temporary and permanent traffic signals for the Fred Ex Project.
- I. Conductor/communication cables shall be placed in buried conduit, embedded conduit, and structure and bridge-mounted conduit.

**Execution Version**

---

- J. The Design-Builder shall not open trench any existing pavement for the installation of conduit, except in areas that will be overlaid or rebuilt. For overlays over trench areas, the new pavement section shall match the existing pavement section.

**3.9.5 Roadway Lighting**

- A. The Design-Builder shall maintain roadway lighting conditions that conform to the VDOT's standard lighting requirements for freeway operations and shall be subject to the Concessionaire's approval.
- B. **Lighting During Construction.** The Design-Builder shall preserve all existing lighting assets along the I-95 Corridor throughout the Construction Period in order to avoid a diminution of the existing lighting conditions for a period of more than 30 days unless otherwise approved by the Concessionaire. The Design-Builder may accomplish this by staging its construction operations for the repair or replacement of existing lighting assets impacted by the Work is completed within 30 days of such assets being taken out of service or otherwise impacted so as to cause a diminution of the existing lighting conditions. If the necessary repair or replacement of an existing lighting asset cannot be completed within the 30 day period, the Design-Builder shall provide, prior to the expiration of the 30 day period, temporary lighting equipment until the completion of the repair or replacement Work.
- C. The Design-Builder shall install Partial Interchange Lighting for new or modified entry and exit connections to the Fred Ex Express Lanes. Continuous roadway lighting is not required for the Fred Ex Express Lanes.
- D. Light Emitting Diode (LED) luminaires shall be used for all new lighting including conventional, high mast, wall mount, and sign lighting. The Design-Builder shall complete a lighting analysis for the Partial Interchange Lighting locations and provide to the Concessionaire for review.
- E. At all locations where existing lighting standards are present and impacted by construction, the Design-Builder shall provide a lighting analysis to determine the relocated luminaire spacing based on the new roadway layout and meet the lighting criteria as required by the Concessionaire. The Design-Builder shall also analyze all structures within the project limits for under bridge lighting. The Design-Builder shall complete a lighting analysis for these locations and provide to the Concessionaire for review.
- F. Temporary and permanent lighting facilities for the project shall be installed to ensure lighting facilities meet current Department Lighting Design Standards and Guidelines (found in Chapter 2 of the VDOT Traffic Engineering Design Manual) and ANSI/IESNA RP-8 requirements.
- G. All lighting design shall:

**Execution Version**

---

1. Be prepared in accordance with the USDOT Roadway Lighting Handbook; VDOT Road and Bridge Specifications and Illuminating Engineering Society of North America Recommended Practices;
2. Be performed using AGI-32 computer software;
3. Include point-to-point lighting analysis and calculations submitted to the Concessionaire for review and approval; and
4. Use full cut off fixtures.

**3.9.6 Power**

- A. The Design-Builder shall design, install, and connect electrical power service to sustain all operations for the Tolling and Traffic Management Systems (including ETC and ITS equipment) including all other facilities required for the Fred Ex Project.
- B. Junction boxes shall not be combined for Concessionaire and VDOT power facilities.
- C. The Design-Builder shall be responsible for new utility service connections, including full coordination with the utility owners and payment of connection fees. The Design-Builder shall be responsible for paying the monthly utility bills associated with new service panels, up to and including the date of Service Commencement. The Design-Builder is responsible to perform or cause to be performed the design, supply, and installation of all new power feeds (from service panel to power source) necessary or feed modifications requiring service upgrade from the electric utility company as part of the Work. All service panels shall be capable of monitoring and reporting alarms for the main power and each branch circuit, the current flow and any tripped breakers. Provide telemetry equipment at each Express Lanes service panel to report the current and breaker status of each circuit and main power. The telemetry equipment shall be capable of providing status information for troubleshooting power related outages and help to determine if the trouble is a loss of power from the utility provider, a tripped circuit breaker or a severed distribution line between the service panel and the field device.
- D. The Design-Builder shall install and have connected power service dedicated metered SE-5 for new or relocated traffic signals and separate dedicated metered SE-5 for lighting (sign, roadway, and interchange) for the Fred Ex Project.
- E. The Design-Builder shall provide back-up electrical power service to support Operations and Maintenance Work in Emergency situations where the primary power source is not available, where practical.
- F. The power supply for the TTMS Equipment shall be metered independent from any non-TTMS Equipment. The power supply for any Fred Ex equipment (including lighting) shall be metered independent from any VDOT power supply. The power

**Execution Version**

---

supplies for all (both Concessionaire and VDOT owned) existing roadside equipment and infrastructure must remain in service at all times.

- G. Where approved by the Concessionaire, and consistent with 3.9.6.F above, new Fred Ex Express Lanes lighting, ITS and TMS roadside equipment may be connected to existing VDOT electrical service panels if separately metered.
- H. The Design-Builder shall provide back-up power (generators and UPS) for the operation of toll locations and the gate systems (which includes the reversible gates, the pricing confirmation DMS signs, CCTV cameras), and other TTMS Equipment if part of the gate system.
  - 1. Generator sizing shall be determined by the Design-Builder based on the projected equipment loading.
  - 2. Propane fuel supply lines between the generators and the fuel storage tank shall be above ground.
- I. The Design-Builder shall provide an uninterruptible power supply (UPS) back-up power for the operations of all DMS, which includes the pricing confirmation DMS signs and all parts of the gate system.
- J. Vehicle access shall be provided at each generator site for refueling. Such access shall accommodate safe ingress/egress for a typical refueling vehicle.
- K. Phase taping of electrical conductors shall not be permitted. Electrical conductors shall have a continuous colored jacket between connection and termination points.
- L. Power infrastructure shall not share conduit or junction boxes with communications infrastructure.
- M. Conduit and junction box locations for the Fred Ex Project power infrastructure as shown in the RFP Conceptual Plans have been reviewed and approved for use on the Fred Ex Project. The Design-Builder shall not change the location of the Fred Ex Project conduit and junction box locations for power infrastructure unless approved by the Concessionaire.
- N. Grounding and Surge Protection for all TTMS equipment, structures and infrastructure shall meet the requirements as specified in the TTMS Special Provisions and as shown on the RFP Conceptual Plans. In addition, where applicable, the Contractor shall adhere to the latest edition of the National Electric Code (NEC) and the 2016 Edition of the VDOT Road and Bridge Specifications. Grounding at Toll Locations shall adhere to the ETC Civil Requirements as identified in the TTMS Interface Plan.

### 3.10 Fences and Barriers

- A. The Design-Builder shall be responsible for securing the Work and providing all temporary fencing necessary to ensure the safety of the work force and members of the public.
- B. The Design-Builder shall perform a safety risk analysis to determine whether fencing should be used to separate the noise barrier wall erection work zones from adjacent properties and, if such analysis shows that fencing is required, the Design-Builder shall provide temporary six- foot-high (minimum) chain link security fencing at any such locations.
- C. Except for temporary fencing, all chain link fabric, posts, rails and other associated hardware for fences, including these items on permanent structures, shall be black vinyl-coated and the details for fences shall be in accordance with the standards in Attachment 1.5a.
- D. Fencing surrounding all generator sites shall include screening to match that in use on existing 95 Express Lanes generator sites. The open area within the generator site fencing shall be covered with 6 inches of compacted gravel (Aggregate Base Material Type 1, Size 21) and a 4 inch concrete slab to provide a level surface for installation of equipment and fuel tank.
- E. Limited access fencing shall be VDOT Standard Fence Woven Wire Fabric to match existing limited access fencing in accordance with the standards in Attachment 1.5a.

### 3.11 Aesthetics

- A. Aesthetic treatments shall be designed to be consistent with the local landscape and architecture, as well as the developed themes of the local setting. The Design-Builder shall coordinate with local and state agencies to develop an aesthetic concept, including coordination with the State Historic Preservation Office, as applicable, while maintaining applicable design standards
- B. The following items will be considered in defining the aesthetics concepts for the Fred Ex Project design when these features will be visible to the public upon completion:
  - 1. material, finish, color, and texture of noise barrier walls, retaining walls (including MSE walls, soil nail walls, tieback walls, and gravity walls), bridge elements (barriers, railings, parapets walls, abutments, wingwalls, and piers;
  - 2. paved slope treatments and hardscape at interchanges and intersections;
  - 3. median or other specialty paving, including material, finish, and color;
  - 4. fencing;
  - 5. signage (including overhead, attached, ground-mounted, and gantries);

**Execution Version**

---

6. lighting poles and lamps; and
  7. any permanent building construction for the Fred Ex Project, including ancillary support, operational, and toll collections.
- C. All permanent structures shall be carefully detailed to achieve the greatest level of aesthetic quality and fit in accordance with (A) above. All permanent structures shall be proportioned to avoid excessive size, bulk and mass.
- D. Graphics, signage, and lighting shall be consistent along the entire length of the Fred Ex Project.
- E. Aesthetic elements shall be easy to maintain and resistant to vandalism and graffiti.
- F. Aesthetics elements shall be fully integrated with the overall landscape design.
- G. Specific Requirements
1. Noise Barrier Walls  
Architectural treatment shall be provided for both the roadway and the landowner side of all noise barrier walls. Architectural treatment details shall be in accordance with the requirements of the Manual of Structure and Bridge Division, Part 12 Sound Walls – Architectural Treatment and any relevant Special Provisions in Attachment 1.5a. Architectural treatment shall be Custom Rock Pattern #1203, New England Dry Stack or similiar. Color staining or coating of noise barrier wall panels and posts is not required.
  2. Retaining Walls  
Architectural treatment details shall be in accordance with the requirements of the Manual of Structure and Bridge Division, Part 2 Chapter 5. Architectural treatment shall be Custom Rock Pattern #1203, New England Dry Stack or similiar.
  3. Bridge Piers  
Architectural treatment details shall be in accordance with the requirements of the Manual of Structure and Bridge Division, Part 2 Chapter 5. Architectural treatment shall be Custom Rock Pattern #1203, New England Dry Stack or similiar.
- H. Where existing structural elements that are to be incorporated into the Fred Ex Project have aesthetic treatments, the surface finish and color for noise barriers, retaining walls, bridge parapets and walls, and bridge abutments shall match existing.
- I. Where structural elements have no aesthetic surface treatments specified, elements shall receive a smooth concrete finish in accordance with the standards and specifications set forth in Attachment 1.5a.



### 3.12 Landscaping

- A. If determined by the Concessionaire to be required, landscaping will be handled as a Design-Build Contract Work Order, without any time extensions. This shall include design and installation of plant material, sodding, associated watering, necessary maintenance, a guaranteed 2 year post-Final Completion establishment period, and other associated costs to complete the landscaping work.
- B. The landscaping species and locations will be finalized with the Concessionaire's input. The Design-Builder shall complete the landscaping plans within 60 days, once the final noise walls study, design and are approved by the Concessionaire.
- C. A Work Order authorizing the initial design efforts shall be issued in a timely manner.
- D. Any Work Order subject to Section 3.12 will be issued before 365 days from Final Completion Date.
- E. Any Work Orders for landscaping will generally be limited to reforestation and enhancement of area disturbed during construction.
- F. Stabilization of disturbed areas of the project to maintain permit conditions shall not be included in the Work Order for landscaping and shall be the Design-Builder's responsibility.
- G. The Design-Builder shall provide landscaping as required to mitigate Project impacts to the community.
- H. Landscape plans shall be prepared by a Virginia Licensed Landscape Architect and shall be submitted to the Concessionaire for review and approval. The plans shall be prepared in a format consistent with VDOT's standards for roadway plans.
- I. The Design-Builder shall assume that adequate locations will be identified within the proposed Right Of Way.
- J. Progress payments will be made monthly by the Concessionaire in accordance with the Fred Ex Design-Build Contract.

### 3.13 Not Used

### 3.14 Bicycle and Pedestrian Facilities

- A. The Design-Builder shall design and construct the Fred Ex Project to include reconstruction of any disturbed pedestrian and bicycle facilities in accordance with IIM-TMPD-1.0 *Bicycle and Pedestrian Accommodations* and the latest version of the *Manual on Uniform Traffic Control Devices (MUTCD)*.

**Execution Version**

---

- B. All existing pedestrian and bicycle facilities shall be maintained throughout construction until permanent facilities can be fully opened. Any temporary pedestrian or bicycle facility closure request shall be submitted in writing to the Concessionaire for review and comment.
- C. All new facilities and modifications to existing facilities will be designed in accordance with the standards and specifications set forth in Attachment 1.5a. Where a box culvert is replaced along a proposed or existing trail, the replacement shall have sufficient width and vertical clearance to accommodate a shared-use path adjacent to the stream. The walking surface of the path shall be located above the five-year storm.
- D. If applicable, the Design-Builder shall conduct coordination meetings with all local jurisdictions and the Concessionaire to ensure all existing and planned pedestrian and bicycle facilities are identified along the Fred Ex Project corridor.
- E. If applicable, the Design-Builder shall coordinate with VDOT’s District Bicycle Pedestrian Coordinator and local jurisdictions on the design, maintenance of traffic and construction staging of the bicycle and pedestrian facilities within the project limits.
- F. All pedestrian signal displays shall be countdown signals.
- G. Pedestrian pushbuttons shall be a minimum of 2 in across in one dimension and shall contrast visually with the housing or mounting.
- H. Pavement designs for sidewalks and paths shall include a minimum four inch layer of Aggregate Base Material Type 1, Size 21 B, or comply with site and subsurface conditions, whichever is greater.
- I. The Design-Builder shall design and provide drainage, if needed, for any new independent pedestrian or shared-use path bridges. Drainage scupper grates on the bridge should preferably be located within the 2-foot shoulder of the path.

### **3.15 Structures and Bridges**

#### **3.15.1 General**

- A. Type of Structures
  - 1. Bridges;
  - 2. Bridge Class Culverts including “tunnels” below embankments for local access between property;
  - 3. Buildings for storage, system equipment, occupation, and related facilities;
  - 4. Retaining Walls;
  - 5. Overhead Sign Structures;

**Execution Version**

---

6. High Mast Lighting Poles;
7. Light Poles;
8. Traffic Signal Poles;
9. Noise barriers; and
10. Toll Gantries

**3.15.2 Definitions****A. Permanent Structures**

1. Permanent structures include but are not limited to bridges, retaining walls, noise barriers, bridge class culverts, sign structures, lighting structures, and system equipment structures, toll gantries, control rooms, and other buildings.
2. Bridges and Culverts are defined in IIM-S&B-27 *Bridge Safety Inspection*
3. Traffic Structures are listed in IIM-S&B-82 *Traffic Structures, including Toll Gantries*
4. A “bridge class culvert” is defined as follows:
  - (i) A culvert having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening; or other culverts that may be defined as a bridge class culvert in accordance with National Bridge Inspection Standards, the Code of Federal Regulations (23 CFR 650.3), and/or
  - (ii) Culverts that do not meet National Bridge Inventory definitions and have an opening equal to or greater than 36 square feet, and bridges less than 20 feet between undercopings of abutments or between springlines of arches as defined in IIM-S&B 27-Bridge Safety Inspections.

**3.15.3 Design**

- A. In addition to the requirements in this section and the Standards and Specifications set forth in Attachment 1.5a, the Design-Builder shall also meet the scope items.
- B. Design Standards

Execution Version

---

1. All new bridges, bridge replacements, widening and/or modifications of existing bridges (including any geometric changes to roadways on and underneath the existing bridge), repair of existing bridges, new culverts and retaining walls, and modifications to existing culverts and retaining walls shall be designed in accordance with AASHTO LRFD Bridge Design Specifications (“AASHTO LRFD”) and all current revisions and VDOT modifications (IIM-S&B-80 *VDOT Modifications to AASHTO LRFD Bridge Design Specifications*) issued as of the issuance date of the RFP. All other structures shall be designed to the appropriate design specifications set forth in Attachment 1.5a.
2. The Design-Builder shall comply with VDOT’s Manual for the Structure and Bridge Division.
3. Bridge width and length shall be determined by the functional classification of roadway(s) being considered and the facility being intersected. Under no circumstance shall the minimum vertical clearance be less than 16 feet 6 inches over existing and proposed roadways and streets carrying vehicular traffic, unless an applicable Design Exception or Design Waiver is approved.
4. The Design-Builder shall comply with VDOT’s Road & Bridge Standards, Vol. I & II. Should any standard for retaining walls and culverts not be in accordance with AASHTO LRFD, then the Design-Builder shall verify design and/or implement a modified version of the requirement such that it is in compliance with AASHTO LRFD.
5. The minimum vertical clearance to overpass bridges above the proposed 95 Express Lanes shall not be less than 16 feet and 6 inches except for locations where a Design Exception or Design Waiver has been previously approved.
6. The horizontal clearance of all bridge substructure elements are shown on the RFP Conceptual Plans and have been reviewed and approved for use on the Fred Ex Project. The layout takes into account future requirements and other proposed improvements. The Design-Builder shall not change these horizontal clearances unless approved by the Concessionaire.
7. Each new bridge parapet or barrier shall include a bridge conduit system at locations where an existing conduit system is in place. At a minimum, the replacement conduit system shall be comprised of two 2-inch diameter conduits. Refer to the RFP Conceptual Plans for conduit requirements. The location of the first conduit shall be as shown in the Standard Drawing for Bridge Conduit System per the Manual of the Structure and Bridge Division. The second conduit shall be located such that the crash test criteria for the parapet or barrier are not voided, as determined by the Concessionaire. Existing electrical service shall be maintained throughout construction.
8. Concrete Low Shrinkage Class A4 Modified shall be used for all bridge decks, and bridge parapets/barriers, except as shown in the RFP Conceptual Plans..

**Execution Version**

---

9. A three-dimensional finite element analysis modeling software shall be used to analyze and design any reverse curve flyover bridge superstructure components, including, but not limited to, plate girders and crossframes.
10. The Design-Builder shall submit girder erection plans, procedures and calculations to the Concessionaire in accordance with the Special Provision for Stability Requirements for Girder Erection.
11. Use of fracture critical elements is not preferred. The use of integral pier caps will not be allowed if the element is located above the General Purpose Lanes, CD Lanes, or bodies of water. The use of straddle bents will be considered if it can be demonstrated that the use of a straddle bent is of critical importance and adds value. Any proposed use of fracture critical elements must be presented and accepted as an Alternative Technical Concept (ATC) during the RFP phase. Final details for any accepted ATC are subject to Concessionaire and VDOT approval during the detailed design phase.
12. Bridge span lengths in excess of 275 feet will not be allowed, nor will any geometric changes that reduce the design speed of ramps be considered. Additional requirements for bridge span lengths greater than 240 feet include:
  - (i) No variable depth girders.
  - (ii) No hybrid girder sections.
  - (iii) No elastomeric bearings.
  - (iv) No uplift, no counterweights and no tie-downs allowed for any support location.
  - (v) Virginia style abutments with tooth joints are required.
  - (vi) Any variation in bay spacing to be limited and exterior girder shall have a constant width deck overhang.
  - (vii) Since AASHTO distribution factors do not apply, grid or 3D analysis shall be performed. If radial layout for bridge, only 3D analysis shall be performed.
  - (viii) Thermal analysis by LARSA to be performed to account for deck stiffness and determine bearing orientation and substructure loads.
  - (ix) Load rating shall be in accordance with IIM-SB-86.1 using LARSA.
  - (x) Shipping, Erection, and Stability Report shall be submitted prior to construction. This Report shall include consideration of effective width of shipped girder, effect of skew as needed and method of detailing.

**Execution Version**

---

- (xi) Neither detailing method nor deck placement sequence shall be changed during construction unless a revised Shipping, Erection, and Stability Report is submitted.
- (xii) Permanent lateral bracing shall be subject to Concessionaire and VDOT approval during the detailed design phase.
- (xiii) Temporary lateral bracing, if used, must be included in the structural analysis as well as the effect when it is removed.

**C. Details and Drawings for Permanent Structures**

1. All details and drawings should be in accordance with VDOT's Manual of the Structure and Bridge Division.
2. Details and drawings not specifically included in the Manual of the Structure and Bridge Division may only be included in structural plans and working drawings after review and approval by the Concessionaire. Should any such details not be acceptable, the Design-Builder shall make the necessary modifications or shall submit an alternate detail that is acceptable to the Concessionaire.
3. Any new bridge, replacement bridge or repairs and modifications to existing bridges or structures (including any geometric changes to roadways on or underneath the existing bridge) shall be designed, detailed and submitted to the Concessionaire as a plan package for review and approval. A preliminary type, size and location plan, including all proposed stages of construction (as applicable), shall be submitted by the Design-Builder to the Concessionaire for review and approval prior to proceeding with final design. The stage construction plans shall outline expected methods of protecting roadway users and pedestrian traffic during each stage. Additional requirements for Plan Submittals shall be as outlined in other sections.
4. Retaining walls associated with any bridge shall be included with the bridge Stage I plan submittal package. Shop drawings for these retaining walls are not required at the Stage II plan submittal.
5. The use of continuous span units and jointless bridge design technologies shall be used as outlined in VDOT Manual of the Structure and Bridge Division. The Virginia Abutment details shall be developed as shown in VDOT Manual of the Structure and Bridge Division
6. VDOT standard parapets and rails shall be used.
7. File No. 06.07 of Part 2, of the Manual of the Structure and Bridge Division, shall be extended as follows: Approach slabs shall be full width – from face to face of barrier/parapet (including extending the approach slab under sidewalks, shared-use paths, medians, and/or other such features).
8. On the plans, all deep foundation units shall be numbered.

9. Infinite life fatigue requirements shall apply to bridges.
10. The use of asphalt overlay on concrete bridge decks shall not be permitted.

### 3.15.4 Bridges & Structures

#### A. General Requirements

1. The requirements below are in addition to those listed in Section 3.15.3.
2. The Design-Builder is required to submit plans for the modification of existing structures. Plan sets are also required to show all changes, including but not limited to vertical and horizontal clearances, lane configurations on and beneath bridge, addition of pier protection systems, addition of bridge conduit systems and other modifications.
3. All modifications to existing bridges, including complete or partial removal of a bridge, shall be staged as necessary to maintain travel lanes for the duration of construction and in accordance with these Technical Requirements. Additionally, the Design-Builder shall provide continuous and safe access for pedestrians and bicycle traffic through or around the limits of construction. Temporary pedestrian and bicycle access must comply with Americans with Disabilities Act Guidelines for State and Local Government facilities.
4. It is the Design-Builder's responsibility to obtain and verify any required as-built field details and dimensions needed for any purpose including, but not limited to, modifying or dismantling any existing bridge.
5. To obtain copies of Bridge Safety Inspection Reports, Design-Builder shall complete a CII/SSI Non-Disclosure Agreement as outlined in IIM-S&B-71 CRITICAL INFRASTRUCTURE INFORMATION (CII)/SENSITIVE SECURITY INFORMATION (SSI).
6. At the locations where standard VDOT Bridge Pier Protection System (BPPS Standards) is indicated in the RFP Conceptual Plans, existing bridge piers shall be protected by a pier protection system consisting of the standard VDOT Bridge Pier Protection System (BPPS series). The standard BPPS series barriers shall be designed and detailed in accordance with the VDOT Manual of Structure and Bridge Division.

#### B. Not Used

#### C. Dismantling and Removing Existing Structures or Removing Portions of Existing Structures

1. Any demolition and temporary support over or adjacent to live traffic, the Design-Builder shall submit to the Concessionaire an approved plan for review and concurrence prior to the commencement of any demolition work. The demolition plan shall include, but is not limited

**Execution Version**

---

to, details of protection of the underlying bridges, roadway, and users. The Design-Builder shall determine the effect of equipment loads on the bridge structure, and develop and submit plans which show the procedures for using the loaded equipment without exceeding the structure's design capacity. The Design-Builder's plans shall be signed and sealed by a Professional Engineer licensed by the Commonwealth.

**D. Load Ratings for Bridges**

1. Structure load ratings are required and shall be performed in accordance with the requirements of IIM-S&B-86 – *Load Rating and Posting of Structures (Bridges and Culverts)* and the following:
  - (i) When a phased portion of a newly constructed structure is intended to carry traffic in a temporary configuration.
  - (ii) Load rating of any partial configuration of the existing structure.
  - (iii) A final, as-built, load rating analysis of each new structure reflecting traffic in its final configuration. This load rating should incorporate any as-built changes that may have been made, which in the judgment of the Concessionaire will affect the load rating (e.g., minor changes to stiffener or diaphragm locations may not affect a load rating).
2. No partial or completed structure shall be placed into service if a Load Restriction (Posting) is required based upon the load rating analyses. The Design-Builder is responsible for all remedial measures and corrective action required to provide the Concessionaire a structure which satisfies the load rating requirement outlined in IIM-S&B-86– *Load Rating and Posting of Structures (Bridges and Culverts)*.

**E. Safety and Acceptance Inspection for Bridges**

1. Acceptance of the bridge structure will require the following two independent inspections by the Concessionaire:
  - (i) A satisfactory safety and inventory inspection by the Concessionaire as described below is required prior to opening the structure or portion of the structure to public traffic. This safety and inventory inspection by the Concessionaire will serve as the initial inspection of the structure. Data gathered will include, at a minimum, location, date completed, alignment, description, horizontal and vertical clearances, structure element description and condition data, and traffic safety features. Such inspections will be required prior to opening any newly constructed portion or phase of the bridge to traffic.
  - (ii) A satisfactory final construction inspection by the Concessionaire is required prior to acceptance of the structure. To facilitate inspection



**Execution Version**

---

of the structure by the Concessionaire, the Design-Builder shall ensure that all structural elements are accessible and shall provide adequate resources including:

- a. Man-lifts, bucket trucks, under bridge inspection vehicles, or other equipment necessary to inspect the structure as well as properly trained staff of sufficient composition to support the inspections.
  - b. Plans, procedures, personnel, and equipment to implement traffic control measures.
2. The Design-Builder shall provide a minimum of thirty (30) days' notice to the Concessionaire whenever it requires the Concessionaire to undertake an inspection. The Design-Builder's notice to the Concessionaire shall include the latest version of the plans (including all field design changes), traffic control procedures, a description of the items to be inspected and an anticipated schedule for the inspections.
  3. Unless otherwise approved by the Concessionaire, structures shall be substantially complete (i.e., roadway, slopes on the approaches and slopes underneath the structure are already in place) before the final construction inspection will be performed.

**F. Plan Submission**

1. The Design-Builder shall make Stage I (Preliminary Plan) submissions and Stage II (Final Plan) Submissions.
2. Stage I (Preliminary Plan) Submission
  - (i) The Design-Builder shall submit a Stage I (Preliminary Plan) submission for each new bridge, bridge replacement, and bridge widening and modification.
  - (ii) Stage I submission must be submitted to the Concessionaire prior to any final design submittal, and at other appropriate times pursuant to the Concessionaire's concurrent engineering process. Final design prior to Concessionaire approval of the Stage I submission shall be solely at the risk of the Design-Builder.
  - (iii) Stage I submission shall include Stage I drawings prepared in accordance with the Stage I Plan Review Checklist, Stage I Report, Stage I Report Summary Form, and other preliminary plan requirements indicated in the standards and specifications as set forth in Attachment 1.5a.
  - (iv) The Stage I report shall follow the "Stage I – Report Template" except as modified below.

**Execution Version**

---

- Section 3.10 “Constructability Issues”: The Report need not consider constructability issues (except for how it relates to maintenance of traffic; the report shall include a section on maintenance of traffic).
- Section 6, “Bridge Preliminary Recommendation” is modified as follows: the report need only describe the single alternative being presented to the Concessionaire for approval.
- Section 6, the report requirements are extended to specifically address in detail all non-standard items, unique or complex features.
- Section 7, “Engineer’s Cost Estimate for each Alternative” is not required.
- Section 8, “Schedule” is not required.
- The report will include copies of design exceptions and waivers that influence the design of the structure or roadway approaches both over and under and shall include a write up on how the design exceptions and design waivers affect the bridge.

**3. Stage II (Final Plan) Submission**

- (i) The Design-Builder shall submit structure Stage II (Final Plan) submission for each new bridge, modification to an existing bridge, bridge rehabilitation, modification to lane and shoulder configuration on or under an existing bridge and culvert or modifications to culvert structures.
- (ii) Final plans may be submitted as completed plan set(s) or in plan submission packages as approved by the Concessionaire (such as foundation plan package, substructure plan package, and superstructure plan package). The final plans are to be submitted according to the submission schedule provided by the Design-Builder.
- (iii) The Stage II drawings shall be prepared in accordance with the Stage II Plan Review Checklist.
- (iv) Final design calculations and construction drawings shall be signed and sealed in accordance with the VDOT Manual of the Structure and Bridge Division, Part 2, Chapter 1, Section 16: Sealing and Signing of Plans and Documents.

**4. Additional Requirements for Bridges**

**Execution Version**

---

- (i) It shall be the responsibility of the Design-Builder to request the following data from the Concessionaire's project manager:
    - a. B-number, federal identification and plan number for each new bridge in the Fred Ex Design-Build Contract
  - (ii) Plan sets should contain sheets which are arranged and detailed as outlined in the Manual of Structure and Bridge Division Part 2.
- G. Bridge Drainage
- 1. The minimum dimension of pipe used in a drainage system for existing bridges shall be 8 inches.
    - (i) To the extent possible, pipes and downspouts shall be designed to avoid interference with aesthetics of the bridge.
    - (ii) The use of ditches and open channels with grades greater than 10% shall not be permitted on slopes directly underneath a bridge or on slopes located within 100 ft. of a bridge structure. An enclosed drainage system shall be used to capture the bridge deck runoff including runoff from its approach slab, and convey the runoff to the bottom of the slope or into a drainage system.

**3.15.5 Retaining Walls****A. General Requirements**

- 1. The retaining walls shall be designed using AASHTO *LRFD Bridge Design Specifications*; Interim Specifications; VDOT Modifications (IIM S&B-80 *VDOT Modifications to AASHTO LRFD Bridge Design Specifications*); The Manual of Structure and Bridge Division Part 11 Chapter 10 Earth Retaining Structures; and applicable sections of Road and Bridge Standards, Vol. I & II and as specified in the Technical Requirements.
- 2. 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 the 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 the Concessionaire and submit the results of the analysis, including boring logs, laboratory data, and any other applicable data, to the Concessionaire for review. The wall supplier shall provide to the Design-Builder, for submittal to the Concessionaire, an internal stability analysis that validates the design of the wall. Retaining walls shall be designed to control settlements within tolerances identified by VDOT's Guidelines for Preparation of Alternate Retaining Wall Plans.

**Execution Version**

---

3. Should any standard for retaining walls not be in accordance with AASHTO LRFD, then the Design-Builder shall verify design and implement a modified version of the requirement such that it is in compliance with AASHTO LRFD.
  - (i) Retaining walls at bridge abutments shall be designed for a minimum service life of 100 years.
  - (ii) Except for tie-backs required for the support of retaining walls, all components of the retaining walls shall be contained within VDOT's right-of-way. Tie-backs for retaining walls may be located within permanent underground easements provided that such easements are approved by the Concessionaire.
  - (iii) MSE walls that require traffic protection at the top shall use barriers or railings on moment slabs.
4. Parapets/railings located on top of all retaining walls shall use Concrete Low Shrinkage Class A4 Modified. All HR-1 railing shall be powder coated.
5. Concrete paved ditches shall be used behind retaining walls except where the top of the wall is located adjacent to a roadway shoulder in which case an approved concrete barrier system shall be used. Paved ditches shall extend to the back face of the retaining wall. For soldier pile retaining walls, where a post extends behind a retaining wall panel, the ditch shall be located adjacent to the post. The area between the edge of the ditch and the back of the retaining wall panel shall be paved with 4 inches thick concrete, graded to drain away from the wall.
6. For future maintenance of areas at the top of newly constructed wall or working surface, appropriate fall protection measures shall be required and approved by the Concessionaire when the following condition exists:
  - (i) Maintenance or inspection will be performed from the working surface or platform for which there is a 4-foot or greater distance above the next lower surface (OSHA 1910.23(c)1).

**B. Modifications to Existing Retaining Walls**

1. Retaining wall modifications shall be carried out in accordance with General Requirements for Retaining Walls.
2. If any Significant Work is completed on an existing retaining wall, the Design-Builder shall ensure that all safety elements of existing retaining walls are brought up to current standards (example: traffic barrier). Significant Work includes, but is not limited to, the following:
  - (i) Raising the existing retaining wall;
  - (ii) Reconstructing portions of existing retaining wall; and

**Execution Version**

---

- (iii) Adding a noise barrier wall or other feature to an existing retaining wall.
  - 3. The slope stability and structural integrity of the existing shotcrete face soil nail wall located along the southbound I-95 GP lanes west side slope in the vicinity of Ramp HRS Station 8040+00 shall be maintained.
- C. Repair of Existing Retaining Walls
  - 1. Repair of existing retaining walls shall be performed when Significant Work is completed on an existing retaining wall.
  - 2. Inspection and evaluation of retaining wall repairs shall be limited to delineating spalls and delaminated concrete for removal prior to performing patching and/or crack repairs. Delineated areas shall be expanded 12 inches beyond each side, and top and bottom.
- D. Plan Submission
  - 1. The Design-Builder shall submit a preliminary plan for each new or modified retaining wall.

Preliminary plans shall be submitted prior to any final design submittal. The Design-Builder shall not submit any final plans until the preliminary wall submittal has been approved by the Concessionaire.
  - 2. A retaining wall preliminary plan submittal shall include:
    - (i) A plan and elevation view of the wall showing all existing and proposed design features associated with the project and including existing and future utilities, noise barrier walls, sign structures, landscaping, irrigation systems, barriers, existing and proposed drainage structures, adjacent bridges, and any other necessary features identified by Design-Builder
    - (ii) A preliminary geotechnical report completed in accordance with the requirements of Section 3.4 Geotechnical.
    - (iii) Where applicable, approval of the preliminary wall submittal shall be subject to the approval of an H&HA study and scour analysis.
  - 3. Where retaining wall(s) are located at a bridge abutment(s) for a specific bridge, retaining wall plan(s), including preliminary plan(s), shall be included in the specific bridge plan submittal.

**3.15.6 Modifications to Existing Culverts**

- A. If the Design-Builder extends and/or modifies structural elements of any existing Bridge Class Culvert, then the Design-Builder is required to provide a design and plan set for that extension and/or modifications. The design calculations shall include

**Execution Version**

---

assessments of any imposed settlement or differential settlement due to the new load conditions. The Concessionaire will provide existing as-built documents if available.

- B. Work to Bridge Class Culverts shall be in accordance with and consistent with the Fred Ex Design-Build Contract. Culvert load rating shall be performed for culvert extensions when the extended portion of the culvert will be subjected to live loading.
- C. All modifications to existing culverts as identified in the Fred Ex Design-Build Contract shall be evaluated for their impacts on the live load carrying capacity of the culvert. In addition to the requirements set forth below, modifications to an existing culvert shall not result in the culvert requiring a posting for live load carrying capacity.
  - 1. If the current HS-20 rating load is greater than or equal to 36 tons at the inventory level, then the HS-20 inventory rating load for the modified structure shall be greater than or equal to 36 tons.
  - 2. If the current HS-20 rating load is less than 36 tons at the inventory level, then the HS-20 inventory rating load for the modified structure shall be greater than or equal to the inventory rating load for the unmodified subject structure.

**3.15.7 Traffic Structures****A. General**

- 1. Overhead sign structures (span type only, no cantilevers) shall be supported on bridge deck blisters. The main bridge beam and girders shall be investigated for fatigue loading from wind loads of the sign structure. The minimum vertical clearance between the bridge deck and sign shall be in accordance with the VDOT Road and Bridge Standards.
- 2. All poles, including poles for lights, cameras, and microwave vehicle detectors, which are located within the clear zone shall be protected from vehicular impact by guardrail or barrier.
- 3. The Design-Builder will be required to obtain a Design Waiver for any overhead sign structures that exceed the maximum span limits as defined in VDOT IIM-S&B-74 – Maximum Span Length Limits for Ancillary Structures and Bridge Parapet Mounts.

**B. Toll Gantries**

- 1. The design of structures, toll gantries and supports for the violation equipment, TMS and tolling system roadside equipment shall be standardized and be in conformance with Electronic Toll Collection civil infrastructure requirements provided by the TTMS Contractor.
- 2. The design for toll gantries will accommodate the following:

**Execution Version**

---

- (i) Dead loads, wind loads and ice loads for toll and enforcement equipment, including equipment cabling.
  - (ii) The vertical deflection of the toll gantry will not exceed the equipment manufacturer's desirable design specifications
  - (iii) Performance requirements for toll and enforcement equipment, to include but not be limited to, vertical clearance, twist about transverse axis, transverse rotation from level, member deflection, member natural frequency and resonance, foundation lateral deflection, maximum roadway cross slope at toll collection line and equipment clearance from other major infrastructure items.
3. Toll gantry structures shall be overhead span type only. The toll gantry columns and beams shall be fabricated of galvanized steel.
4. Toll gantry locations shall be installed within 100 feet of the location shown on the RFP Conceptual Plans unless otherwise approved by the Concessionaire.

**C. Existing Traffic Structures**

1. In accordance with Section 3.9.3.N, the Design-Builder shall identify and provide a summary of the existing traffic structures that are impacted by the addition, removal realignment, or replacement of sign panels, and Dynamic Message Signs, and/or other ITS devices, including structures with signage that are outside the physical limits of roadway construction. The Design-Builder may re-use existing sign structures for the combination of the existing and proposed signs and ITS devices upon the submittal and approval by the Concessionaire of documents which shall include a condition assessment based on reviews of the most recent VDOT structure inspection reports, a listing of repair items required to address any existing defects in poor or substandard condition (if applicable), existing structural information, structural calculations, details of any proposed repairs and modifications, and a certification statement sealed by a Professional Engineer licensed in the Commonwealth that the structure meets all current structure design criteria and is fully compliant with the Technical Information and Requirements and Special Provisions listed in Attachment 1.5a for the Fred Ex Project. The Concessionaire will review the structural analysis provided by the Design-Builder for each structure to determine whether or not the existing structure can be modified as proposed. If it is determined that re-use of the structures, with or without modifications, are not structurally acceptable, the Design-Builder shall provide new structures in accordance with Attachment 1.5a and remove and salvage the existing structures at no additional cost to the Concessionaire.
2. VDOT Structure ID for any sign and ITS structure to be modified for reuse or to be removed shall be clearly shown on the plans. VDOT Structure ID for any existing sign may be obtained by contacting VDOT's Fredericksburg

**Execution Version**

---

District Structure and Bridge Section. VDOT's Fredericksburg District Structure and Bridge Section shall be notified prior to the removal or relocation of any existing traffic structure.

3. Removed existing lighting poles shall not be reused (new lighting poles shall be required).
4. Removal and Disposal of Existing Bridge-Mounted Sign Structures
  - (i) If applicable, existing bridge-mounted sign structures located above the proposed HOV/HOT Lanes within the project limits shall be removed and if necessary replaced with new signs mounted on independent sign structures.
  - (ii) Bridge mounted signs shall be completely removed, including frames, sign panels, hardware, and incidentals. Removed materials shall become the property of the Design-Builder and shall be properly disposed of off-site. Connection bolts anchored into concrete parapets shall be mechanically cut flush with the surface of the parapet, and then removed by mechanical drilling to a depth of one-half inch below the surface of the parapet. The holes shall be patched to match the color and texture of the existing parapet surface with hydraulic cement mortar or grout conforming to Section 218 of the Road and Bridge Specifications. Connection bolts to steel beams shall be removed, and the affected areas of steel beams cleaned, primed, and painted in accordance with the requirements of Section 411 of the Road and Bridge Specifications to match the existing structure. Electrical service shall be disengaged at the nearest junction box, and all conductors shall be capped and sealed in place unless existing service is to be reused for lighting of replacement structures.

**D. Inspection of Traffic Structures**

1. Acceptance of new or modified sign and ITS structures will require an initial safety inspection. The purpose of an initial inspection is to verify compliance with the requirements of: Inspection and Maintenance; and IIM-S&B-82 *Traffic Structures* and to identify deficiencies, including incomplete work, and variances from approved plans and specifications and which must be rectified before the structure can be accepted.
2. The initial inspection shall be performed by the Concessionaire. The Design-Builder shall provide the Concessionaire with Approved for Construction drawings and working drawings, including all revisions at least two weeks prior to scheduling the inspections.
3. During the initial inspection, data including but not limited to location, date completed, description, horizontal and vertical clearances, structure element description and condition and traffic safety features will be gathered.



**Execution Version**

---

4. The Design-Builder shall ensure that all structural elements are accessible for inspection of all structures. This requirement may dictate that the Design-Builder provide:
  - (i) Man-lifts, barges, remote operated vehicles, bucket trucks or other equipment necessary to inspect the structure and plans, personnel, and equipment to implement traffic control.
5. Upon completion of the initial inspection, the Concessionaire will submit an inspection report to the Design-Builder within 10 days of the inspection either recommending acceptance of the structure or identifying deficiencies, including incomplete work, which must be rectified before the structure can be accepted. If a structure is not accepted, the Design-Builder shall rectify the deficiencies and notify the Concessionaire in writing, certifying the deficiencies have been corrected. Within 5 days of receipt of such certification, the Concessionaire may require that a follow-up inspection be performed to verify that the deficiencies have been corrected or recommend in writing to the Design-Builder that the structure is acceptable without a further inspection.
6. The final acceptance of sign/ITS structures will occur when the initial inspection is completed and any necessary follow-up (verification) inspections are performed. The initial inspection may be accomplished through multiple inspections as long as it is coordinated with the Concessionaire.

**3.15.8 Noise Barrier Walls**

- A. Noise barrier posts shall be designed such that the minimum unbraced length is not less than the full height of the post, measured from the top of foundation to the free end of the post.
- B. Noise barrier wall posts shall not be spliced to soldier piles of retaining wall posts unless connection details are approved by the Concessionaire.
- C. The requirements of the VDOT Road and Bridge Specification, Section 519.03(c)2. Structure-Mounted Barriers shall also apply to moment slab mounted noise barrier walls.
- D. When new noise barrier walls are attached to an existing structure (e.g. an existing retaining wall or an existing bridge) the design of all elements of the impacted existing structure and associated foundations shall be verified for compliance with requirements of AASHTO LRFD Bridge Design Specifications; Interim Specifications; VDOT Modifications (IIM S&B-80 VDOT Modifications to AASHTO LRFD Bridge Design Specifications) and other requirements of Section 3.15.

### 3.15.9 Not Used

#### 3.15.10 Miscellaneous Requirements

- A. The parapet and barrier walls on structures may be constructed using slip forming after Concessionaire review and approval of the trial section.
- B. All temporary shoring and erection elements shall be dismantled and removed in their entirety following construction, unless otherwise approved by the Concessionaire.
- C. The following utilities shall be designed, furnished, and installed by the Design-Builder at its own cost:
  - (i) Lighting on the bridge;
  - (ii) Underbridge lighting (if required); and
- D. Standpipe Fire Hydrant and Water Supply fire protection system shall comply with the requirements of NFPA 502 Section 6.6. Prior to fire protection acceptance, the Design-Builder shall test the hose and standpipe systems for compliance with NFPA 25 and provide the Concessionaire with a letter from the Fire-Marshall confirming such successful test results as a condition of Project Completion.
- E. The Design-Builder shall submit estimated quantities along with the associated unit costs for all standard and non-standard items in the final bridge plan submittal. The structure unit cost data is required to complete the VDOT Annual Bridge Construction Unit Cost Report which is provided to FHWA. This data shall be submitted to the Concessionaire within 120 days of the Concessionaire's approval of the construction plan submittal.

### 3.16 Tolling and Traffic Management System

#### 3.16.1 General

- A. The Design-Builder shall be responsible for the planning, design and installation of the Fred Ex Tolling and Traffic Management System (TTMS) as more specifically described in the TTMS Interface Plan (Exhibit 3.7.1 to Part 4 – General Conditions).
- B. The TTMS System shall be designed, implemented, maintained, repaired, and replaced in accordance with all relevant standards and specifications as set forth in Attachment 1.5a and Attachment 3.16a
- C. All TTMS Equipment, including but not limited to electronic devices, network and computer gear, shall be stored in an environmentally controlled space as required in accordance with manufacture's recommendation.
- D. The Design-Builder shall dispose all defunct TMS, cable, devices, electric and electronic equipment properly and provide documentation to the Concessionaire.

**Execution Version**

---

- E. Locations shown on the RFP Conceptual Plans for IRUs, generator sites and related equipment have been strategically located to support maximum distances for operations. These locations cannot be moved more than 100 feet from location shown on the RFP Conceptual Plans unless otherwise approved by the Concessionaire.
- F. The Design-Builder shall provide roadway cross section drawings for... roadway cross section drawings for each ITS device, cabinet, service point, and boring location showing the device height above the roadway and maintenance access to the cabinet, including roadway slope and clearances to travel lane.
- G. Definitions and abbreviations as indicated below are in addition to those noted in the Fred Ex Design-Build Contract.
  - 1. ATMS – Advanced Traffic Management System
  - 2. Burn Period – The time duration required for the ITS devices to successfully operate over consecutive days in a real-world condition, without interruption due to device or system deficiencies or failures.
  - 3. Commissioning – The systematic verification of each component or system of the Fred Ex Project in question is physically complete, checked, calibrated, and safe for initial operation.
  - 4. HOT-OC – Express Lanes Operation Center
  - 5. MPSTOC – McConnell Public Safety and Transportation Operations Center
  - 6. NRO – VDOT Northern Region Operations
  - 7. Roadside Equipment (RSE) – The Roadside Equipment is to include Dynamic Message Signs (DMS) to provide toll and driver information and general traffic management information; Pan-tilt-zoom (PTZ) CCTV and Automated Incident Detection (AID) cameras to provide video surveillance; traffic monitoring sensors to provide traffic volume, lane occupancy, and speed data; roadway gates (and all related systems) at all reversible access points, and all supporting electrical and communications equipment to support the Traffic Management System (TMS), including but not limited to service panels, generators and cabinets.
  - 8. Traffic Management System – means any application of computer, electronics and/or telecommunications equipment and software and supporting fixtures and equipment whose function is to provide information, data and/or services to the traveling public, VDOT, or to manage and control traffic, and any future systems or services conceived or developed for the same or similar purposes.

**3.16.2 Existing ITS Infrastructure**

- A. Existing ITS roadside equipment and infrastructure is located within the Project limits. Portions of the ITS roadside equipment and infrastructure are owned and

**Execution Version**

---

maintained by VDOT while other portions are owned and maintained by the Concessionaire.

- B. Existing ITS roadside equipment may include, but is not limited to, the following equipment located within the Fred Ex Project Right of Way:
1. Weather stations;
  2. DMS for the existing Express Lanes, and GP Lanes to provide general traffic management and Express Lanes regulatory information;
  3. Express Lanes access gates;
  4. CCTV and AID cameras;
  5. Traffic monitoring sensors (microwave vehicle detectors);
  6. Fiber optic cables; and
  7. Generators and UPS.
- C. The Design-Builder shall relocate existing VDOT and Concessionaire ITS roadside equipment located within the Fred Ex Project Right of Way that is affected by construction, including power and communication service to the equipment, and shall ensure that loss of functionality is minimized.
- D. The Concessionaire and VDOT will remain responsible for the operations and maintenance of the existing and relocated Concessionaire and VDOT ITS roadside equipment, respectively upon completion of construction.

**3.16.3 Not Used**

**3.16.4 Not Used**

**3.16.5 Not Used**

**3.16.6 Not Used**

**3.16.7 Not Used**

**3.16.8 Not Used**

**3.16.9 Not Used**

**3.16.10 Traffic Management System (TMS)**

- A. The TMS will enable the Concessionaire to monitor and manage traffic flow on the HOT Lanes.
- B. The TMS must allow the Concessionaire to:

**Execution Version**

---

1. support response to Emergency situations on the HOT Lanes in the shortest possible timeframe;
  2. manage traffic flow on the HOT Lanes;
  3. control reversible flow, including access gates and any regulatory DMS, on and approaching the HOT Lanes;
  4. detect and manage traffic Incidents effectively, through a comprehensive Incident management system, to mitigate the impacts of Incidents and prevent secondary Incidents occurring;
  5. provide credible and timely driver information about travel times, traffic conditions and Incident situations, contribute to the calculation of dynamic toll prices through the provision of traffic conditions data, and provide timely and accurate toll prices to motorists related to HOT Lanes;
  6. provide an interface with the NRO MPSTOC ATMS in accordance with the ICD;
  7. support provision of driver aid to motorists in vehicles that have stopped on the HOT Lanes;
  8. permit the NRO MPSTOC ATMS to control DMS (HOT Lanes) via the HOT-OC TMS in accordance with the Agreement;
  9. permit the NRO MPSTOC ATMS to control HOT Lanes access gates via the HOT-OC TMS in accordance with the Agreement;
  10. permit the NRO MPSTOC ATMS to change the time periods of reversible flow via the HOT-OC CCCS in declared Emergency events in accordance with the Agreement;
  11. provide for the control and monitoring of TMS components and subsystems through a modern and comprehensive computer-based control facility using graphical user-interface (GUI); and
  12. monitor facilities, plant, and equipment, if required.
- C. The TMS is to comprise the following equipment and/or systems:
1. ITS roadside equipment;
  2. Communications infrastructure between the ITS roadside equipment and the HOT-OC; and
  3. TMS equipment and/or systems located in the HOT-OC and IRUs.
- D. The ITS roadside equipment is to include:
1. DMS for the Fred Ex Express Lanes to provide toll and driver information and general traffic management information;
  2. Pan-tilt-zoom (PTZ) CCTV cameras to provide video surveillance;

**Execution Version**

---

3. Automated Incident Detection (AID) CCTV cameras to provide incident and wrong-way vehicle detection;
  4. traffic monitoring sensors to provide traffic volume, lane occupancy, and speed data;
  5. lane control devices, if applicable; and
  6. roadway gates (and all related systems) at all reversible access points.
- E. Not Used
- F. Not Used
- G. The ITS roadside equipment shall have an ISA of at least 99.9%, excluding the effect of any condition beyond the reasonable control of the Design-Builder.
- H. Equipment cabinets shall be provided for the ITS roadside equipment at appropriate locations along the alignment and within the Project Right of Way.
- I. Existing VDOT-owned ITS roadside equipment that may be taken over by the Concessionaire will be removed or integrated into the new TMS system.

**3.16.11 CCTV Video Coverage**

- A. Dedicated CCTV cameras shall be provided for the following functions:
1. Surveillance of the Fred Ex Express Lanes including, approaches and interchanges
  2. AID and wrong way vehicle detection on the Fred Ex Express Lanes; and
  3. Verify and confirm Fred Ex Express Lanes DMS operation as shown in the RFP Conceptual Plans.
- B. Surveillance CCTV video coverage must be provided by PTZ CCTV cameras mounted on poles to enable HOT-OC operators and VDOT operators (under agreed circumstances) to observe traffic within the limits of the HOT Lanes at all hours of the day and in all weather conditions normally encountered in Virginia, consistent with reported visibility restriction (such as during snow events, rain storms, or fog). The video provided must be stable and jitter-free and suitable for video-based AID.
- C. The Design-Builder shall replace VDOT's cameras that are disturbed by the Fred Ex Project.
- D. Dedicated cameras shall be provided for surveillance of the Fred Ex Express Lanes or to enable video-based AID under Concessionaire HOT-OC operator control.
- E. CCTV line-of-sight distances shall provide for full CCTV coverage of the Fred Ex Express Lanes without image degradation. The CCTV cameras shall be placed at a minimum mounting height of forty (40) feet. Cameras installed at heights greater

**Execution Version**

---

than forty (40) feet will require a camera lowering system. The Design-Builder shall submit a roll plot confirming line of sight coverage for Concessionaire approval.

- F. All cameras installed by the Design-Builder shall meet the requirements of the Fred Ex Special Provision for Section 814 – Camera System.
- G. The video surveillance system must enable the identification of the number and vehicle types involved in an Incident at all locations within the surveillance area.
- H. The video provided must be stable at all zoom settings when viewing objects up to one mile away.
- I. Where a Concessionaire camera is relocated from a mounting pole that also supports a VDOT camera, the Design-Builder shall modify the mounting pole upon relocation of Concessionaire camera to remove all defunct equipment to preserve functionality of VDOT camera.

**3.16.12 Video-based AID**

- A. The Design-Builder shall implement video-based AID for the Fred Express Lanes at locations where:
  - 1. Roadway gates are installed;
  - 2. Traffic enters or exits the Express Lanes;
  - 3. the risk of traffic Incidents is expected to be higher than average, and
  - 4. rapid detection of Incidents is required for special reasons, such as near critical infrastructure.
- B. The video-based AID system should be compatible to the existing HOT-OC Traffic Management System and capable of:
  - 1. detecting 95% of Incidents involving stopped vehicles, slow vehicles, and slow traffic that are within the field of view of an AID camera or other equipment as specified;
  - 2. detecting pedestrians on the roadway within the field of view of an AID camera or other equipment, as specified;
  - 3. a false alarm rate of less than one false alarm per 10 true alarms; and
  - 4. detecting Incidents and providing an alarm to the HOT-OC in less than 30 seconds
  - 5. Wrong-way vehicle detection.
- C. Upon the detection of an Incident, the AID system must be capable of recording the video at a rate of at least five frames per second for a period of 60 seconds.
- D. Use field-of-view calculator to determine video detection zones.

**Execution Version**

---

- E. The Design-Builder shall submit a roll plot confirming line of sight coverage for Concessionaire approval

**3.16.13 CCTV Video Recording**

- A. It shall be possible to simultaneously record video from CCTV cameras, as designed, at a rate of at least one (1) frame per second.
- B. Sufficient capacity must be provided to store the recorded video from CCTV cameras for a duration determined by the Concessionaire and continue to record video without intervention.

**3.16.14 CCTV Communications Standards**

- A. The CCTV communications shall support the appropriate National Transportation Communications for ITS Protocol (NTCIP) 1205 communication protocol (version 1.08 or higher) to provide for functionality with the NRO MPSTOC ATMS software in accordance with the Interface Control Document (ICD).

**3.16.15 Traffic Monitoring Sensors (Microwave Vehicle Detectors)**

- A. Traffic monitoring sensors are to be installed to monitor and report in real-time traffic volume, lane occupancy and speed data on the Fred Ex Express Lanes and, where available, the GP Lanes. Such sensors shall enable the Concessionaire to monitor the performance of the Fred Ex Project corridor.
- B. Information collected on the GP Lanes and Fred Ex Express Lanes will be made available into the existing Project systems. Data will be provided in raw form and be subject to quality control requirements prior to submittal to the Concessionaire. Data shall be aggregated in increments to be mutually agreed.
- C. Traffic monitoring sensors shall be installed by the Design-Builder approximately every 1/3 mile to 1 mile on the Fred Ex Express Lanes and, as applicable on GP Lanes, or as necessary to meet operational requirements. Under unusual circumstances or in specific situations, longer spacing may be used as long as data collection and operational requirements are met.
- D. Traffic monitoring sensors shall be installed on ITS poles based on the manufacturer's recommended mounting heights and roadway geometry. Each detection zone shall be shown on plans as a part of the final Design Documentation. Traffic monitoring sensors shall be located to gather data from both the Fred Ex Express Lanes and GP Lanes. The Design-Builder shall provide a table in the plans identifying the detection lanes for each detector for the Expresss and GP Lanes



**3.16.16 DMS**

- A. The toll and driver information DMS for the Fred Ex Express Lanes shall be located at strategic locations throughout the corridor and will display information to allow drivers to make decisions on whether to use the HOT Lanes. The proposed locations are shown on the RFP Conceptual Plans. The information to be displayed may indicate:
1. price levels for up to three major destination points for each point of entry;
  2. travel-time information for Fred Ex Express Lanes for up to three major destination points.
- B. A minimum of two DMS shall be installed at suitable distances from the HOT Lanes entry points to support motorist decision making and orderly movement of traffic.
- C. The Design-Builder shall coordinate the location of DMS with the Concessionaire to avoid over-populating signs and to seek co-gantry opportunities. The Project Roll Plan will identify over-population and potential co-gantry opportunities. The Design-Builder shall incorporate agreed upon recommendations in the final Design Documentation.
- D. The T&DI DMS shall have the following minimum features:
1. full graphics color LED display
  2. capability to display congestion levels on HOT and GP lanes on each tolling section;
  3. capability to display toll price for destination points;
  4. capability to display travel-time information for GP Lanes and HOT Lanes or, alternatively, the travel time difference between GP Lanes and HOT Lanes,
  5. capability to display traffic management information, including warning and recommended diversions;
  6. advanced fault detection and reporting; and
  7. conformance to the National Transportation Communications for ITS Protocol (NTCIP) communications protocol or other industry protocol agreed with the Concessionaire.
- E. If communication with the HOT-OC CCCS is lost and the T&DI DMS has no reported errors, the T&DI DMS shall display a user-defined graphic/message.
- F. DMS cabinets shall be placed in front of DMS at a distance such that authorized personnel can read the message displayed on the DMS while working at the DMS cabinet. Each DMS shall be viewable by at least one PTZ CCTV camera such that the message displayed on the DMS can be visually confirmed by an operator in the HOT-OC.

**Execution Version**

---

- G. The traffic management DMS shall have the following minimum features:
1. full graphics color LED display
  2. capability to display traffic management information, including warning and recommended diversions;
  3. advanced fault detection and reporting; and
  4. conformance to the NTCIP communications protocol or other industry protocol agreed with the Concessionaire.
- H. The DMS must not display erroneous information due to a fault with the sign or the loss of pixels.

**3.16.17 Not Used****3.16.18 Communications Infrastructure**

- A. The existing communications infrastructure must remain in place or be replaced in kind, as specified in the standards and specifications set forth in Attachment 1.5a.
- B. Communications between the TTMS roadside equipment and HOT-OC shall be via a fully redundant fiber optic network using Spanning Tree Protocol (or equivalent) to ensure no single points of failure and reliability and shall comprise:
1. Fred Ex Express Lanes trunk fiber optic loop;
  2. Fred Ex Express Lanes distribution fiber optic loop(s); and
  3. Necessary connections and/or interfaces with the redundant fiber optic ring provided by VDOT.
- C. The Fred Ex Express Lanes trunk and distribution fiber optic loops shall be comprised of new armored fiber optic cable.
- D. All new fiber optic cables shall be protected to prevent rodent damage, including but not limited to installing screens at bases of all ITS poles, installing completely sealed manhole covers, and installing manhole covers without manhole hook holes to eliminate rodent entry.
- E. The new communications conduit bank for the Fred Ex Project shall consist of conduits with the following configuration:
1. one four inch conduit containing a 3-barrel inner duct carrying a 36-fiber 395 Express Lanes distribution cable;
  2. one four inch conduit containing a 3-barrel inner duct carrying a 36-fiber 395 Express Lanes trunk cable; and
  3. spare conduit(s), as shown on the RFP Conceptual Plans, containing appropriate pull tape.

**Execution Version**

---

- F. Communications and conductor cables shall be placed in separate buried conduits, embedded conduits, or structure and bridge-mounted conduits. Communications and conductor cables shall not share conduits, junction boxes, or related appurtenances.
- G. The Design-Builder shall coordinate with the Concessionaire to determine which fibers will need to be spliced to the existing 95 Express Lanes fiber to provide connectivity to the Express Operations Center. The Design-Builder shall be responsible for providing the necessary switch capacity and optics to support connectivity to the existing infrastructure.
- H. The Design-Builder shall provide fiber splicing diagram plans showing details of every splice and termination for every fiber strand as a part of the final Design Documentation. The number, color, and fiber assignment of each buffer tube and fiber strand shall be included. No underground splices shall be allowed.
- I. The maximum allowed cable length of a Category 5 or 6 Ethernet cable is 328 feet. If a longer running distance is needed, a media converter shall be used to convert Ethernet data to fiber optic signals.
- J. The Design-Builder shall furnish and install new ITS equipment cabinets for exclusive use to support the Fred Ex Project devices. Existing VDOT equipment cabinets shall not be used. The Design-Builder shall remove all defunct equipment.
- K. The Design-Builder shall furnish and install new conduit for exclusive use by the Express Lanes ITS equipment. Existing VDOT conduits shall not be used. The Design-Builder shall remove all defunct equipment.
- L. Where equipment is relocated or removed from an existing VDOT cabinet, the Design-Builder shall remove all non-operational equipment, and the cabinet, if empty, in a manner that preserves the functionality of any remaining VDOT equipment.
- M. Locator Wire
  - 1. All duct banks, trenches, and bores containing non-metallic conduits with non-locatable cable (fiber optic) shall have at least one locator wire installed between all junction boxes or cabinets.
  - 2. At all locations where non-locatable conduit is installed in a common trench, and a non-locatable conduit diverges from the common trench, a locator wire shall be installed in both trenches.
  - 3. All locator wires shall be installed inside of conduit and shall run continuously from junction box to junction box.
  - 4. Locator wire shall be an insulated #8 AWG stranded copper wire. The insulation shall not be green in color.

**Execution Version**

---

- N. The Design-Builder is responsible for designing the connection diagrams, including the communications equipment to be provided in each cabinet and how the equipment connects to the fiber optic cables. The design shall be consistent with the 95 Express Lanes Network Architecture as described in the diagram in Special Provision 817.
- O. Conduit bank locations for the Express Lanes communications infrastructure as shown in the RFP Conceptual Plans have been reviewed and approved for use on the Fred Ex Project. The Design-Builder shall not change the location of the Fred Ex Express Lanes conduit bank locations for communications infrastructure unless approved by the Concessionaire.
- P. Existing VDOT owned or operated fiber optic cable will be made available to the Concessionaire to support the Express Lanes fiber optic redundant ring necessary for the operation of the tolling and traffic management system. A minimum of 3 fiber pairs (6 strands) will be reserved for use by the Concessionaire for the purposes of creating a non-collapsed fiber optic redundant ring for the Fred Ex Project. The limits of the ring shall be from approximately Milepost 133 to Route 234/95 in Dumfries. The Design-Builder shall be responsible for the construction and installation, testing, and commissioning of any necessary connections to VDOT's fiber optic network and associated interface management, including any associated connection or splicing fees. This connection shall be made at the location shown in the RFP Conceptual Plans.
- Q. The Design-Builder must provide optical time domain reflectometer optical time-domain reflectometer measurement data for all fiber connections on the Fred Ex Project.

**3.16.19 Existing VDOT TMS Roadside Equipment**

- A. Existing VDOT TMS roadside equipment or third-party TMS roadside equipment installed under permit with VDOT may include the following equipment located within the Fred Ex Project Right of Way:
  - 1. weather stations;
  - 2. DMS for the existing GP Lanes to provide general traffic management and HOV regulatory information;
  - 3. CCTV cameras; and
  - 4. traffic monitoring sensors.
- B. The Design-Builder shall relocate existing VDOT TMS roadside equipment located within the Fred Ex Project Right of Way that is affected by construction, including power and communication service to the equipment, and shall ensure that loss of functionality is minimized.
- C. Any third-party TMS roadside equipment located within the Fred Ex Project Right of Way that is affected by construction, including power and communication service

**Execution Version**

---

to the equipment, shall be relocated by the third-party equipment owner under the direction of the Concessionaire at no cost to the Design-Builder. The Design-Builder shall provide notification of disturbance of equipment three weeks prior to commencing such activities.

- D. VDOT will remain responsible for the operations and maintenance of the existing and relocated VDOT TMS roadside equipment. However, during the Operating Period, the Design-Builder shall operate and maintain the access gates and any DMS ties to the access gates.
- E. Third-party equipment owners shall remain responsible for the operation and maintenance of their existing and relocated TMS roadside equipment.

**3.16.20 Not Used****3.16.21 Not Used****3.16.22 Not Used****3.16.23 Not Used****3.16.24 Not Used****3.16.25 Not Used****3.16.26 Testing**

- A. The Design-Builder shall submit to the Concessionaire a test strategy for the Fred Ex Express Lanes in accordance with the requirements of the TTMS Interface Plan that shall include as a minimum:
  - 1. the scope, requirements and objectives of testing with a testing and systems integration period of no less than 120 days;
  - 2. an overall high-level plan for testing the TMS and ITS roadside equipment, including the test stages and processes and the scheduling of all tests prior to the Date of Service Commencement; and
  - 3. the roles and responsibilities of all those involved with the testing program and any dependencies on third parties, including Concessionaire, TTMS Contractor and VDOT personnel.
- B. Testing and commissioning, where applicable, shall be based on the application of a systems engineering methodology such as ANSI/GEIA EIA-632. Testing and commissioning shall be the primary responsibility of the Design-Builder with input and support from the Concessionaire and shall utilize:
  - 1. a Verification Cross Reference Index (VCRI), which will be developed and documented to establish the way in which requirements are satisfied. The

**Execution Version**

---

VCRI shall utilize test, demonstrate, inspect and analyze as methods for acceptance;

2. a test series that shall demonstrate compliance with the performance requirements through a test plan and procedures;
3. a testing strategy document that details how the testing plan will be implemented to demonstrate conformance of the proposed solution to the various functional, technical, and performance requirements; and
4. a test plan document that describes how the testing strategy will be executed to demonstrate the various functional, technical, and performance requirements for compliance to requirements, which shall include:
  - (i) test specifications for each of the test cycles
  - (ii) detailed requirements traceability matrix linking each of the test series to relevant requirement(s)
  - (iii) detailed test script(s) for each of the test series, including input / process / output at each of the steps so that conformance can be monitored.
5. The testing strategy for the Fred Ex Express Lanes will provide the level of detail to ensure compliance with the overall testing requirements. This testing strategy shall include:
  - (i) System design and integration overview. The Concessionaire will provide this documentation.
  - (ii) Level A Testing – The objective of this test is to certify Roadside Equipment installed by the Design-Builder is installed and fully operational in line with agreed design requirements and via executing test plans and procedures approved and witnessed by the Concessionaire. The Design-Builder shall be responsible for this test and shall be accountable for successful and on-time execution of this test.
  - (iii) Level B Testing – The objective of this test is to certify Roadside Equipment is successfully integrated with other TTMS Facilities via executing test plans and procedures approved and witnessed by the Design-Builder. The Design-Builder shall be responsible for this test and shall be accountable for successful and on-time execution of this test.
  - (iv) Level C Testing – The objective of this test is to certify that Concessionaires' TTMS System communicates and controls roadside equipment via executing test plans and procedures defined by the Design-Builder. The Concessionaire will be responsible for this test

**Execution Version**

---

and shall be accountable for successful and on-time execution of this test.

- (v) Factory Acceptance Testing - tests to be conducted at the supplier's premises to verify that the equipment, subsystem or system complies with the functional and performance requirements of that supplier's subcontract.
  - (vi) Site Acceptance Testing - tests to be conducted at the point of installation (tolling point and HOT-OC) to confirm the factory acceptance testing results, plus any omissions and/or errors noted during the factory testing
  - (vii) Integration Acceptance Testing - a test conducted to ensure that the complete ETC and TMS meets the end- to-end system-level functional and performance requirements in normal operating conditions. The Concessionaire will provide this documentation.
  - (viii) User Acceptance Testing - to ensure that individual functions operate as defined in the requirements specification or similar documents and the complete end-to-end process is tested. User Acceptance Test will be completed at least thirty (30) days before Service Commencement of the TTMS. The Concessionaire will approve successful completion of the UAT for Service Commencement. The Concessionaire will provide this documentation
6. Where a Factory Acceptance Test of TMS equipment occurs more than 200 miles from the Fred Ex Project site, the Design-Builder shall arrange for and bear all costs of any travel and lodging for required for Concessionaire to witness such Factory Acceptance Testing.

**3.16.27 Not Used****3.16.28 Not Used****3.16.29 Concessionaire Testing and Integration Obligations**

- A. The Concessionaire will participate as necessary in the requirements for testing and integration as outlined above where such testing and integration involves the Concessionaire's infrastructure. The Design-Builder shall schedule adequate time for notification and testing by the Concessionaire.

**3.16.30 Roadway Gates**

- A. Roadway gates shall be designed and installed, including but not limited to tapered lengths and height above finished roadway, to fully close the ramps at all reversible access and egress points such that vehicles cannot go around a closed gate. Installed length of gates shall consider pavement markings, gore areas, and ramp widths. The

**Execution Version**

---

Design-Builder shall submit a complete gate arm length schedule table for review and approval as a part of the Design Documentation.

- B. Gate cabinets shall be placed to ensure safe and unimpeded access by authorized personnel. A gate cabinet shall be placed at locations where the technician and other authorized personnel can see the gates while working at the gate cabinet. All gates shall be viewable by at least one PTZ CCTV camera such that the gate open or close position can be visually confirmed by appropriate HOT-OC personnel.
- C. Design-Builder shall be responsible for any modifications to the existing 95 Express Lanes roadway gate necessary because of the Design-Builder's construction means and methods or modifications to existing roadway conditions.

**3.16.31 Maintenance Access**

- A. All RSE cabinets, foundations, concrete pads, and junction boxes shall be installed at elevations and locations that facilitate maintenance and provide safe access. Handrails shall be installed for protection at locations with fall hazards. Stairs and/or platforms for performing maintenance activities shall be provided as specified.
  - 1. Cabinet heights – for all cabinets, the top of the cabinet shall not be more than 84" above the finished grade of the workspace where maintenance personnel would be expected to stand.
  - 2. Cabinet workspace – a minimum 3' x 3' flat work area shall be provided immediately adjacent to each cabinet door for maintenance personnel to stand when accessing all ITS cabinets. Fall protection, consisting of galvanized metal hand rails, shall be provided for all cabinet workspaces more than 4' high.
  - 3. Communication Junction Box workspace on slopes – for all communication junction boxes located on slopes 2:1 or steeper, and located more than 2 feet in elevation above the toe of slope, a minimum 3' x 6' flat area immediately adjacent to the downslope side of the junction box shall be provided to accommodate maintenance personnel workspace and placement of the junction box lid when removed.
  - 4. Cabinet and Communication Junction Box access on slopes –for all communication junction boxes and cabinets located on slopes 2:1 or steeper, and located more than 5 feet in elevation from the Express Lanes shoulder, stairs accessing the junction box or cabinet from the Express Lanes shoulder shall be provided to enable access to the workspace in "c)" above. The stairs shall have a hand rail on at least one side.
  - 5. Gate Housing workspace – for all gate housings, a 2' x 2' flat work area for maintenance personnel shall be provided. The gate housing workspace shall be located no more than 1' below the top of the concrete foundation for the gate housing, shall be located immediately adjacent to the foundation and shall be on the side of the housing farthest from the roadway.



**Execution Version**

- B. Junction boxes shall not be installed in roadways, driveways, parking areas, ditches or public sidewalk curb ramps. The Design-Builder shall avoid placing junction boxes in low-lying locations with poor drainage and prevent water intrusion into junction boxes. Electrical junction box length (long side) shall be parallel to the conduit run. When the conduit run is perpendicular to the roadway at the junction point, the junction box shall be parallel to the roadway. The maximum spacing between any two adjacent electrical junction boxes shall be 500 feet. The spacing between any two adjacent communication junction boxes should be approximately 2,000 feet.

**3.16.32 Specified New ITS Roadside Equipment**

- A. During the Construction Period, new ITS roadside devices for use on the Fred Ex Project shall be the following specified equipment. To ensure the equipment will be compatible with the existing 95 Express Lanes systems, substitutions are not allowed.

Device	Equipment Make/Model	Firmware Version
Generator/Tank with PLC Comm from TS&T	**Cummins 35GG + Comm Cabinet	latest
Telemetry Remote Terminal Unit	Moxa ioLogic E4200	latest
Telemetry Remote Monitor	PowerCommand PCC500 (SNMP)	latest
Layer 3 Switch	**Cisco WS-C3850-24XS (C3850-NM-4-10G Interface Module)	latest
Layer 3 Switch Redundant Power Supply	Cisco PWR-C1-715WAC Hot Plug/Redundant Power Supply	N/A
Layer 3 Switch	**Cisco WSC3850-12XS (C3850-NM-4-10G Interface Module)	latest
Layer 3 Switch Redundant Power Supply	Cisco PWR-C1-715WAC Hot Plug/Redundant Power Supply	N/A
Layer 2 Switch	Cisco IE3000 8TC	latest
Layer 2 Switch Power Supply	Cisco PWR-IE50W-AC-IEC	N/A
N-Port Device Server	Moxa IA5250A	latest
CCTV (PTZ)	CohuHD Costar 4260HD RISE 4260 Series Positioner	latest
Automatic Incident Detection Camera	Cohu 3430HD Series Fixed Barrel	latest
Microwave Vehicle Detection	Wavetronix Smart Sensor HD	latest
DMS Type 2 (20mm Pixel Pitch)	**Daktronics Vanguard VF-2420-64x192-20-RGB	latest
DMS Type 2A (20mm Pixel Pitch)	**Daktronics Vanguard VF-2420-96x288-20-RGB	latest
Gate Vertical Rise (480VAC)	B&B VW-4	latest
170 Controller	VDOT Gate Firmware	VDOT
170 Ethernet Card	McCain Ethernet Module (170 Standard)	latest
Cabinet Power Strip	Digital Loggers Web Power Switch 7	latest
Uninterruptible Power Supply	ZincFive UP Stealth UPS (SNMP) (500W Battery)	latest

**Notes:**

Firmware version indicates Equipment Make and Model Numbers required for seamless integration into existing TTMS software

\*\*Indicates verification required based on project requirements

DMS type and size shall be verified with the project requirements, design and specifications

**Execution Version**

---

*Generator type and size shall be verified with the project requirements, design and specifications*

*Transurban Operations supplies gate firmware*

*Model numbers are subject to change based on product availability (successor model numbers shall be submitted to the Concessionaire for approval)*

**3.16.33 Maintenance of 95 Express Lanes Operating Systems**

- A. No shutdown of the 95 Express Lanes System shall be permitted during the installation and testing of the Fred Ex Project elements. The Design-Builder shall install all ITS components and test the roadside equipment without causing shutdowns or outages to the existing 95 Express Lanes system.
- B. For any temporary impacts or isolated shut-down of system elements, the Design-Builder shall coordinate directly with the Concessionaire regarding any Work within the 95 Express Lanes or Concessionaire assets, or Work impacting any 95 Express Lanes facilities or equipment. The Design-Builder is required to coordinate directly with the Concessionaire and comply with the current Permit to Work processes in place for the Express Lanes, including the use of electronic forms and submittals. An approved Permit to Work issued by the Concessionaire shall be required prior to commencing any Work within the 95 Express Lanes, or Work impacting any 95 Express Lanes facilities or equipment. All Permit to Work requests shall be submitted a minimum of five (5) business days prior to the intended Work start date.

**3.16.34 Impacts to 95 Express Lanes Facilities and Operations**

- A. The Design-Builder shall be responsible for any impact to the existing ITS or ETC roadside equipment and infrastructure within the construction limits. Prompt response is required to any damage caused by the Design-Builder and in the event the repair is not completed two hours prior to the next traffic peak, the Concessionaire restore critical systems and bill the Design-Builder for such restoration.
- B. The Design-Builder shall reimburse Concessionaire for the damages caused by the Design-Builder, including but not limited to repair or replacement of the existing fiber and electrical network and the amount of lost revenue. The cost of the repair work performed will include the actual maintenance Contractor costs plus 25% for supervisory and administrative personnel. The amount of lost revenue will be determined based on the average revenue reported for the same period of the outage over the previous four week period.

**3.16.35 Notification of Impact (NOI) to Concessionaire and VDOT Equipment**

- A. As part of the overall construction of the Fred Ex Project, a process for controlling the Work that will impact existing Concessionaire and VDOT traffic management system equipment (Existing TMS Assets) is required. A significant portion of this work will depend on field conditions and the state of the system, neither of which can be determined during the design phase. The impact of construction on Existing TMS Assets shall be coordinated by the Design-Builder by the Notification of Impact

Execution Version

---

- (NOI) to the Concessionaire in accordance with the following subsections and the notification procedure outlined in Attachment 3.16b.
- B. This NOI process shall apply to all Existing TMS Assets within the Fred Ex Project limits that are impacted by the Design-Builder's construction activities.
  - C. The Work shall be governed by the general requirement that the impacted Existing TMS Assets shall be maintained or returned to a condition equal to or better than the condition at the start of construction unless otherwise indicated in the plans or approved by the Concessionaire. This shall include both the functionality and maintainability of the Existing TMS Assets.
  - D. While this NOI process is intended to provide specific controls on work impacting Existing TMS Assets, a number of factors both within and beyond the control of the Design-Builder may impact the Work. Specific elements of the proposed Work plan, such as schedule or means and methods of completing the Work, may require revisions that are not consistent with these provisions in order to safely and effectively complete the Work. As such, these provisions should be treated as a typical application and general framework for control of the Work. When deviations are required due to changing field conditions, no reasonable request for changes by the Design-Builder or the Concessionaire may be denied without good cause.
  - E. Plans related to Existing TMS Assets have been prepared using a combination of original design drawings, as-built drawings, supplemental information provided by the Concessionaire, and site visits. This NOI process recognizes that complete documentation of the existing VDOT equipment and systems may be unavailable, the ability to field verify conditions as part of design is limited, and that conditions can change between the time of design and the time of construction. As part of the design development process, it has been agreed that certain information and decisions will be made during construction at such time that the elements of the system can be verified as to precise location and operational status. The Concessionaire and the Design-Builder shall work together to identify and coordinate those items that could not be addressed during design.
  - F. The Concessionaire and the Design-Builder shall regularly work together to coordinate work that may impact Existing TMS Assets. This coordination shall include, but not be limited to, Concessionaire staff and representatives attending regularly scheduled construction coordination meetings held by the Design-Builder.
  - G. "Impact" is defined as any Work that will interrupt the normal operation of the Existing TMS Assets.
  - H. No Work that impacts Existing TMS Assets identified in the plans shall commence without prior notification to the Concessionaire per the provisions of this NOI process.

**Execution Version**

---

- I. The Design-Builder shall take all measures to protect Existing TMS Assets during the course of the Work and maintain operation of the equipment. The means and methods for protecting Existing TMS Assets shall be determined on a case-by-case basis appropriate to the scope of the Work.
- J. The Concessionaire shall make staff available upon request to assist the Design-Builder in identifying existing system conflicts and operations; conducting Equipment inspections; carrying out maintenance transfers; and testing and acceptance of completed Work. The availability of Concessionaire staff shall be coordinated per the requirements of this NOI process. When unexpected conditions arise that requires the input of the Concessionaire, the Concessionaire shall make staff or authorized representatives available within forty-eight (48) hours of Concessionaire receipt of the Design-Builder's written request.
- K. The provisions of this NOI process shall apply to all Work impacting Existing TMS Assets shown on the plans as well as to any Existing TMS Assets impacted during the course of construction but not identified on the plans. When Existing TMS Assets not identified on the plans are impacted, the Design-Builder shall follow the typical construction processes (such as RFI, FDC, and NDC) to identify and resolve the impact.
- L. The Concessionaire shall notify the Design-Builder of any impacts to operations that may be attributable to work at other sites that were not anticipated in the original notification. The Design-Builder and the Concessionaire shall coordinate as necessary for unanticipated impacts to operations.
- M. Unless specifically described on the plans or special provisions or directed by the Concessionaire in writing, means and methods for completing the Work related to impacted Existing TMS Assets shall be at the discretion of the Design-Builder. Means and methods shall be consistent with the requirements of the Design-Build Contract and the Standards and Specifications.
- N. With the exception of the notification form, written correspondence may include e-mail to those parties listed as contacts in this NOI process or the notification form. Written correspondence shall reference the relevant notification ID number and phase of the process.
- O. Responsibility for maintenance of impacted Existing TMS Assets shall transfer to the Design-Builder per the approved schedule for start of the Work unless otherwise noted on the notification form. Responsibility for maintenance will transfer back to VDOT upon Final Completion of the Work as detailed in the notification process. During the period when maintenance of Existing TMS Assets has been transferred to the Design-Builder, events outside the control of the Design-Builder that impact the condition of the Existing TMS Assets shall be addressed by the Concessionaire including warranty claims and at-fault third parties. The Concessionaire shall be notified immediately of any damage to existing Existing TMS Assets.

**Execution Version**

---

- P. The Design-Builder shall be required to submit an amended NOI if work described in initial notification is performed at least forty-eight (48) hours after date stated in the NOI form.
- Q. The Design-Builder shall document all changes to Concessionaire and VDOT infrastructure as a result of work in the NOI in the Fred Ex Project as-built plans according to the as-built plans set forth in the Technical Requirements. The as-built plan will be required for all impacted Existing TMS Assets even if such Equipment is not shown on Fred Ex Project design plans.

**3.16.36 Enforcement Areas**

- A. Enforcement areas shall be provided at locations shown on the RFP Conceptual Plans or as agreed by the Concessionaire for enforcement operations to provide a safe location adjacent to the toll gantries or other locations for a law enforcement vehicle.

**3.16.37 Electronic Tolling**

- A. The Design-Builder shall provide the infrastructure necessary to support electronic tolling on the Fred Ex Express Lanes. Such infrastructure will include:
  - 1. Toll Gantries – For the Fred Ex Express Lanes, the toll gantries will be overhead space structures to which the electronic toll collection (or ETC) roadside equipment will be mounted. Refer to Section 3.15.7.B of these Technical Requirements for additional information relating to toll gantries.
  - 2. Integrated Roadside Units – Integrated Roadside Units (or IRUs) are the specialized cabinets that contain the environmentally sensitive tolling equipment. Refer to Section 3.16.39 of these Technical Requirements for additional information relating to integrated roadside units.
  - 3. Communications Infrastructure – Communications infrastructure will be required to transfer data between the ETC roadside equipment to the IRU, and between the IRU to the HOT-OC. Refer to Section 3.16.18 of these Technical Requirements for additional information relating to communications infrastructure.
  - 4. Power Infrastructure – Power infrastructure will be required for the operation of the ETC roadside equipment and the tolling equipment in the IRUs. Refer to Section 3.9.6 of these Technical Requirements for additional information relating to power infrastructure.
  - 5. Vehicle Occupancy Detection Infrastructure – Refer to to Section 3.16.38 of these Technical Requirements for additional information relating to vehicle occupancy detection infrastructure.

**3.16.38 Vehicle Occupancy Detection System**

- A. Infrastructure to support future Vehicle Occupancy Detection System shall be designed and constructed by the Design-Builder at one Toll Location as shown in the RFP Conceptual Plans.
- B. The Design-Builder shall provide the necessary infrastructure elements to support VOD, which shall include items as shown on the RFP Conceptual Plans and as noted in the TTMS Interface Plan. The Design-Builder shall be responsible for:
  - 1. Locating, designing, procuring and installing overhead structures and associated foundations at the designated tolling and VOD location. These overhead structures and toll gantries shall be designed to support the VOD equipment and loading requirements as provided by the TTMS Designer in accordance with the TTMS Interface Plan.
  - 2. Locating, designing, procuring and installing sign structures and poles used for VDOT and related pole mounted cabinets shown on the RFP Conceptual Plans Sheet No. CC(F5). The sign structure and pole foundations/anchorages shall be integrated into a concrete blister or be ground mounted as determined by the Design-Builder. These structures shall be designed to support the VOD equipment. Equipment loading requirements will be provided by the TTMS Designer in accordance with the TTMS Interface Plan.
  - 3. Locating, designing, procuring and installing VOD related cabinets and associated foundations at the designated tolling and VOD location.
  - 4. Providing additional feeds and sizing the generators as necessary to support the equipment associated with VOD related devices and loadings.
  - 5. Designing, procuring, and installing conduit layouts to support VOD infrastructure needs (number, size and location) as provided by the TTMS Contractor in accordance with the TTMS Interface Plan.
- C. Additional requirements for the VOD System shall be provided to the Design-Builder by the Concessionaire's TTMS Contractor in accordance with the TTMS Interface Plan
- D. The work associated with VOD shall be completed to facilitate a working VOD system by the Service Commencement Date. The VOD infrastructure shall be completed and turned over to the TTMS Contractor at the same time as the related toll point turnover
- E. Design-Builder shall provide access and any required Maintenance of Traffic or Traffic Control Measures to the Concessionaire's TTMS Contractor necessary for the installation, commissioning, and testing of any VOD System equipment.

**3.16.39 Integrated Roadside Units**

- A. The Concessionaire shall provide provide suitable integrated roadside units (IRUs) for use at each toll location.
- B. The Design-Builder shall construct the appropriate foundation and install each IRU for use by the TTMS Contractor.
- C. A canopy shelter matching the existing canopies on the 95 Express Lanes shall be provided at each IRU. The canopy shelter structural design, shall be designed and constructed giving consideration to its life cycle. Allowable design bearing capacities shall be established to minimize foundation settlements and associated settlement cracking. These capacities shall be field verified by the Engineer prior to construction.
- D. The Design-Builder shall provide power and communications to each IRU, up to and including the appropriate breaker panel and patch panel. If telemetry is used, it shall be powered by an uninterruptible power source in the IRU to enable the telemetry to communicate for the first 60 minutes after a power failure.
- E. Each service panel for the Fred Ex Express Lanes IRUs shall be capable of monitoring and reporting alarms for the main power and each branch circuit, the current flow and any tripped breakers.
- F. Service panels feeding the IRUs shall be equipped with a backup generator sized to accommodate the attached electrical load and any other roadside equipment, including DMS, connected to the service panel.

**3.17 Maintenance During Construction**

- A. The Design-Builder shall prosecute the Work so as to avoid obstructions to traffic to the greatest extent practicable. The Design-Builder shall provide for the safety and convenience of the general public and residents along the roadway and the protection of persons and property.
- B. The Design-Builder shall maintain the Work from the beginning of construction operations until Final Completion.
- C. The Design-Builder shall keep the portions of the road being used by the public free from irregularities and obstructions that could present a hazard or annoyance to traffic.
- D. Existing Concessionaire and VDOT Transportation Management System (TMS) devices in the general purpose lanes and Express Lanes shall remain operational during construction unless otherwise approved by the Concessionaire. These TMS devices include, but are not limited to: (i) closed-circuit television (CCTV) cameras; (ii) dynamic message signs (DMS); (iii) ramp metering; (iv) detection; (v) mile

**Execution Version**

---

- markers; (vi) the reversible gate system; (vii) roadway lighting; and (viii) weather stations.
- E. Existing detection (traffic sensors) in the reversible facility shall remain in place during construction activities unless written approval is provided by the Concessionaire. Replacement detection shall be installed, operational, integrated, and collecting data before taking existing detection out of service.
- F. The existing continuous count stations shall remain in place and fully operational.
- G. VDOT will maintain all roadways and structures used by public, pedestrian and vehicular traffic at its expense, until such time as the paved surface and roadside appurtenances in the active construction work area are significantly impacted by the Design-Builder's construction activities. (Significant impacts include pavement marking eradication, traffic lane shifts, surface paving, placement of temporary traffic barrier service, or similar activities). The highway trucks hauling material on the paved surface are not considered significant impacts. Once the Design-Builder significantly impacts the active construction work area, the Design-Builder shall be responsible for that active construction work area until its Final Completion. The Design-Builder shall be responsible for all maintenance in significant impacted active construction work areas including repairs to the roadway surfaces (fixing holes in the hard surface, patching the potholes and providing smooth surface).
- H. The Design-Builder shall be responsible for the maintenance of the significant impacted assets in accordance with standard VDOT maintenance requirements. Significant impacted assets for which the owning authority is other than VDOT shall be maintained by the Design-Builder until such time as they are no longer impacted by construction and accepted back by the owning authority.
- I. Where the Design-Builder's MOT Plan requires traffic to operate on surfaces other than final surface or final alignment, the Design-Builder shall be responsible for maintenance of these roadways, including repair of any damage caused by its operations or use by public traffic.
- J. The existing drainage system will be maintained by VDOT until the Design-Builder or any of the Design-Builder's contractors start impacting the drainage system, at which time all drainage assets within the impacted drainage system will become the Design-Builder's responsibility.
- K. At no time shall the lights in GP Lanes and other roadways be put out of service, unless mutually agreed between the Parties for the purposes of cutover, testing or integration into the ETTM System or NRO PSTOC ATMS.
- L. The existing lighting and ITS systems will be maintained by VDOT until the Design-Builder or any of the Design-Builder's subcontractors begin impacting these assets, at which time impacted lighting and impacted ITS assets within the Fred Ex Project limits will become the Design-Builder's responsibility. If there is an existing asset



**Execution Version**

---

the Design-Builder desires to tie in or connect to, but is prevented from doing so because of physical damage to such existing asset the Design-Builder may perform the repair work at its sole cost and expense. Once the Design-Builder has completed the work, and the work is accepted by the Concessionaire, the maintenance activities will revert to VDOT's responsibility.

- M. VDOT will perform snow and ice removal on all travel ways.
- N. The Design-Builder's maintenance of the active construction work area shall be to the level of quality condition existing in the relevant active construction work area at the time Design-Builder takes control of the active construction work area.

**3.18 As-Built Documents**

- A. As a condition to Final Completion, the Design-Builder shall provide to the Concessionaire, the record drawings and documents (As-Built Plans) of the Fred Ex Project in accordance with the standards and specifications set forth in the VDOT CADD Manual, VDOT Road Design Manual, and the VDOT Post Construction Manual.
- B. As-Built Plans shall be prepared, signed and sealed by a Professional Engineer licensed in the Commonwealth. The As-Built Plans will show all adjustments and revisions to the Construction Plans made during construction (including NDC's, FDC's and NCR's) and serve as a permanent record of the actual location of all constructed elements. The As-Built Plans shall be in the same format as the construction plans. The as-built drawings and documents shall be certified by the Design-Builder to reflect the actual condition of the Fred Ex Project at the end of the Work period and organized and indexed to facilitate easy retrieval of information. Where appropriate, overlapping work packages shall be combined in the As-Built plans.
- C. Tolling and Traffic Management System
  - 1. The As-Built Plans shall have Global Positioning System (GPS) location data of all installed TTMS System field devices, including but not limited to; junction boxes (electrical and communication), splice cabinets, CCTV and AID cameras, Dynamic Message Sign (DMS), Microwave Vehicle Detectors, gates, Lane Use Management System (LUMS), pole and ground mounted cabinets, roadway lighting and electrical service panel. A detailed list or spreadsheet of all installed or modified TTMS field devices, including at least the device location, model number, serial number, and test acceptance date shall be part of the As-Built Documents.
  - 2. The As-Built Documents shall provide fiber optic splicing diagrams at every splice point (cabinet or underground) detailing all cable splices, terminations, equipment port assignments, and optical circuits within the communication network. Document the sequential cable length markings at each splice box

**Execution Version**

---

and pull box wall that the cable passes through, and include the information with the as-Built documentation.

3. The As-Built Documents shall provide splicing details for all existing VDOT cabinets that have had splicing altered. Splicing details shall include specific fiber numbers.
4. The As-Built Documents shall provide a complete set of As-Built Plans showing all bores (successful and failed) on completing the work. Ensure that the plans are dimensionally correct copies of the Construction Documentation and include roadway plan and profile, cross-section, boring location and subsurface conditions as directed by the Engineer. The plans must show appropriate elevations referenced to a permanent VDOT feature (such as mast arm foundation, manhole inlet cover, or head wall). Plans must be same scale in black ink on white paper, of the same size and weight as the Construction Documentation. Specific As-Built Plans content requirements include but may not be limited to the following:
  - (i) The construction plan view shows the center line location of each facility installed, or installed and placed out of service, to an accuracy of 1 inch at the ends and other points physically observed in accordance with the bore path report.
  - (ii) As directed by the Concessionaire, provide either a profile plan for each bore path, or a cross-section of the roadway at a station specified by the Engineer, or a roadway centerline profile. Show the ground or pavement surface and crown elevation of each facility installed, or installed and placed out of service, to an accuracy of within 1 inch at the ends and other exposed locations. On profile plans for bore paths crossing the roadway, show stationing of the crossing on the Construction Documentation. On the profile plans for the bore paths paralleling the roadway, show the Construction Documentation stationing. If the profile plan for the bore path is not made on a copy of one of the construction profile or cross-section sheets, use a 10 to 1 vertical exaggeration.
  - (iii) If, during boring, an obstruction is encountered which prevents completion of the installation in accordance with the design location and specification, and the product is left in place and taken out of service, show the failed bore path along with the final bore path on the plans. Note the failed bore path as “Failed Bore Path - Taken Out of Service”. Also show the name of the Utility Owner, location and length of the drill head and any drill stems not removed from the bore path.
  - (iv) Show the top elevation, diameter and material type of all utilities encountered and physically observed during the subsoil investigation. For all other obstructions encountered during a subsoil investigation

**Execution Version**

---

or the installation, show the type of material, horizontal and vertical location, top and lowest elevation observed, and note if the obstruction continues below the lowest point observed.

- (v) Include bore notes on each plan stating the final bore path diameter, product diameter, drilling fluid composition, composition of any other materials used to fill the annular void between the bore path and the product, or facility placed out of service. Note if the product is a casing as well as the size and type of carrier pipes placed within the casing as part of the Agreement.
5. The As-Built Plans shall show field surveyed locations of all junction boxes and roadside equipment and a coordinate table showing both the Project coordinates and latitude/longitudes for each. These plans shall also show field verified cabinet numbers, service panel numbers and roadway lighting pole electrical identification numbers.

**D. Drainage**

1. Upon completion of the installation of any major drainage structure, the Design-Builder shall prepare a final as-built survey of the major drainage structure and related upstream and downstream appurtenances and provide such survey to the Concessionaire. The as-built survey shall include the horizontal location and vertical elevations of the constructed major drainage structure in sufficient detail to confirm pre-construction hydraulic performance. A post construction as-built Hydrologic and Hydraulic Analysis (H&HA) and report shall be developed based on the as-built survey and submitted to the Concessionaire for review and acceptance. The post construction H&HA shall demonstrate that the anticipated post construction hydraulic performance of the major drainage structure matches or better than that of the pre-construction H&HA. If the post construction analysis shows an impact greater than the pre-construction H&HA or exceeds the construction tolerances established with the pre-construction H&HA, then the Design-Builder shall be responsible for mitigating the adverse impacts of the post construction condition at no additional cost to the Concessionaire.
2. The Design-Builder is to insure proper ingress and egress to any storm water management facility and that any specific proprietary facilities have proper maintenance details included in the As-Built Plans.
3. The As-Built Plans shall include the following information:
  - (i) Discharge structures – structure identification number, type, locations, dimensions and elevations of all weirs, bleeders, orifices, gates, pumps, pipes, and oil and grease skimmers;
  - (ii) Side bank and underdrain filters, or exfiltration trenches – locations, dimensions, and elevations, including clean-outs, pipes, connections to control structures and points of discharge to receiving waters;

**Execution Version**

---

- (iii) Storage areas for treatment and attenuation – storage area identification number, dimensions, elevations, contours or cross-sections of all, sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems;
  - (iv) System grading – dimensions, elevations, contours, final grades or cross-sections to determine contributing drainage areas, flow directions and conveyance of runoff to the system discharge point(s);
  - (v) Conveyance – dimensions, elevations, contours, final grades or cross-sections of systems utilized to divert off-site runoff around or through the new system;
  - (vi) Water levels – existing water elevation(s) and the date determined;
  - (vii) Benchmark(s) – location and description (minimum of one per major water control structure); and
  - (viii) Wetland mitigation or restoration areas (if any) – Show the plan view of all areas, depicting a spatial distribution of plantings conducted by zone (if plantings are required by permit), with a list showing all species planted in each zone, numbers of each species, sizes, date(s) planted and identification of source of material; also provide the dimensions, elevations, contours and representative cross-sections depicting the construction.
4. If Design-Builder prefers to abandon in place any existing drainage structures or Culverts, approval must first be obtained from the Concessionaire. All abandoned drainage structures and Culverts shall be depicted on the As-built Plans.
  5. The Design-Builder shall provide As-Built Plans of all storm water management facilities. The As-Built Plans shall show the actual finished ground contours, outlet structure dimensions and elevations and other requirements as they exist at the completion of the Fred Ex Project. These drawings shall be signed and sealed by a Licensed Professional Engineer or Land Surveyor licensed in the Commonwealth.
  6. The Design-Builder shall provide certification from an independent source that the proposed BMP facilities were constructed in accordance with applicable and current industry standards, and the manufacturer's specifications.

**E. Utilities**

1. The Design-Builder shall accurately show the final location of all utilities on the As-Built Plans for the Fred Ex Project. The Design-Builder will ensure the Utility companies submit as-built drawings upon completion of their

relocation or adjustments. VDOT shall issue an as-built permit to the Utility companies after receipt of permit application and as-built drawings.

### 3.19 Surveys

- A. Preliminary field survey and utility data has been obtained for this Project. The field survey was conducted using conventional and aerial lidar methods and data was collected within the tolerances defined in the VDOT Virginia Map Accuracy Standards. The Design-Builder is advised that this preliminary field survey and utility data provided is not represented to be complete for purposes of design and construction of the Project. The Design-Builder's scope of work shall include performing all surveying and utility designation that is necessary to design and construct the Project in accordance with VDOT's Survey Manual.
- B. The preliminary field survey and utility data provided as Supplemental Information in the RFP contains the general depiction of existing conditions which the Design-Builder is obligated to verify and finalize through survey before completing final design of the Project. The Design-Builder shall be responsible for obtaining any survey data, including all rights-of-entry and 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 updates (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.
- C. The Design-Builder shall preserve all survey control monuments established by VDOT and will notify the Concessionaire as soon as it is known that a monument is in a position that will interfere with new construction or with Design-Builder activities. If a monument is disturbed, or cannot be preserved in place, the Design-Builder shall set the new monument in accordance with the standards referenced set forth in Attachment 1.5a. The Design-Builder will be responsible to reset or relocate any survey control damaged, destroyed or located within the footprint of the final design construction limits. The control will be established by a land surveyor licensed in the Commonwealth of Virginia with LD-200 information and supporting computations submitted to the VDOT Project Manager.
- D. The Design Builder is advised that there are two large existing stone obelisk markers within the Interstate-95 median (near Mile Marker 141.9). A map of the locations of the markers is provided in the RFP Supplemental Information Package. The area containing the markers is heavily wooded and one of the markers is partially buried. If the Fred Ex project final design is in conflict with these markers, the Design Builder will carefully remove both markers and will take all appropriate measures to secure and protect the markers from damages during removal and transport. The Design Builder shall transport the markers to the VDOT-Fredericksburg District complex at

Execution Version

---

87 Deacon Road, Fredericksburg, Virginia. The Design Builder will carefully deposit the markers on wooden pallets in a designated area at the VDOT- Fredericksburg District Complex. The Design Builder will inform the District Environmental Manager (Mr. Leo Snead 540-899-4209) and the District Archaeologist (Mr. Ray Ezell 540-654-1737) no less than 5 days before transporting the markers to the VDOT-District Complex

- E. All surveying work during the Construction Period shall be performed by the Design-Builder in accordance with VDOT’s Survey Manual.
- F. The Design-Builder shall be fully responsible for examination and verification of any data made available by the Concessionaire.
- G. Immediately after or within 7 calendar days from receiving the Concessionaire’s request notice, provided the information exists, the Design-Builder shall make available to the Concessionaire electronic files of all survey data, for existing and new conditions and infrastructure, which at a minimum include:
  - 1. Survey control data
  - 2. Digital Terrain Model (DTM) and Construction Cross- Sections: Compatible to VDOT’s current DTM format.
  - 3. **Borrow Pits:** All borrow pit DTM’s or cross-sections, originals and finals.
  - 4. **Horizontal and Vertical Control for Bridges:** Certified plats, field notes, coordinates, and computations shall be furnished by the Design-Builder prior to the Design-Builder beginning work on these structures.
  - 5. **Pipes, Culverts, Ditches and Related Appurtenances:** Existing, newly installed control and as-built survey data for existing and new pipes, culverts and ditches which at a minimum include horizontal and vertical controls, type, size, materials and inlet/outlet control, catch basins and manhole and other related infrastructure.
  - 6. **Road Right of Way:** Existing, newly constructed/installed control and As-built survey data for right-of-way cross section showing roads, lane configuration, shoulders, access and egress ramps and connections, embankments, utilities, drainage and all infrastructure within the road right of way, and for areas where connecting roads and infrastructure are impacted by the work. The survey interval shall not be farther than 100-foot intervals. The data prepared by the Design-Builder shall include coordinates, type, size, material and references.
- H. The Fred Ex Project Right of Way shall be staked by the Design-Builder in areas where work shall occur between the GP Lanes and the limits of the Fred Ex Project Right of Way if no limited access fence is present prior to the start of the work. Right of Way stakes shall be placed at a minimum of 100-foot intervals on each side of the roadway or as directed by the Concessionaire and the stakes shall be marked with

**Execution Version**

---

both the station and offset back to centerline. All final boundary stakeouts shall be performed by the Design-Builder.

- I. Final right of way monumentation shall be performed by the Design-Builder in accordance with the following:
  1. RM-1: The Design-Builder shall furnish and install RM-1 right-of-way monuments in accordance with the Road and Bridge Standards.
  2. RM-2: The Design-Builder shall furnish and install RM-2 right-of-way monuments and optional locator posts, including the required caps, in accordance with the Road and Bridge Standards.
- J. The Concessionaire shall determine if an alternative form of permanent monumentation shall be used if RM-1 or RM-2 monuments are unsuitable for marking the right-of-way at various locations.
- K. The Design-Builder shall indicate this alternative monument usage on the final As-Built Plans in accordance with VDOT's Survey Manual. Electronic data files along with paper sketches and drawings shall be furnished by the Design-Builder. All electronic data files furnished by the Design-Builder shall be in the format of the Concessionaire's current computer hardware and software.
- L. Additional surveying work and supplemental layout work shall be performed by the Design-Builder as needed to successfully complete the Work. The Design-Builder shall provide and protect all construction benchmarks within the construction limits. Construction benchmarks shall be located not farther than 500 feet apart for the total length of the Fred Ex Project. Construction benchmarks that are disturbed during construction operations shall be reestablished by the Design-Builder. All drawings, field notes, and computations from such survey work performed by the Design-Builder shall be submitted to the Concessionaire as defined and approved in the Design-Builder's Fred Ex Project Development Plans.
- M. The Design-Builder shall field-verify all dimensions of the existing noise barriers within the Fred Ex Project corridor for the modeling of the existing noise barriers assumptions necessary for the final noise study.

## **3.20 Security**

### **3.20.1 General Requirements**

- A. Subject to the requirements of the Agreement, the Design-Builder shall adhere to the intent of VDOT policy on critical infrastructure information and sensitive security information (CII/SSI) to the extent such information is directly related to the Design-Builder's performance of its obligations under the Agreement. The Design-Builder shall ensure that relevant CII/SSI is protected and not disclosed to unauthorized persons. The Design-Builder shall ensure that all personnel having access to CII/SSI

**Execution Version**

---

for the Design-Builder and all subcontractors have met the requirements of IIM-LD-236 Critical Infrastructure (CII) / Sensitive Security Information (SSI).

- B. The Concessionaire may request fingerprint-based criminal history background checks on contractors working on specific structures or functions.
- C. The Design-Builder shall review with the Concessionaire any information that should be designated as CII/SSI as specific design details become available. Any requirements for security review or other inspections will be mutually agreed to with the Concessionaire.
- D. The Design-Builder shall comply with all Marine Corps Base Quantico property security rules and requirements when working on the Marine Corps Base Quantico property.

**3.20.2 Design-Builder's Responsibility During Suspension of Construction**

- A. In case of suspension of construction Work, the Design-Builder shall take such precautions as may be necessary to prevent damage to the Work, provide for erosion control and drainage, and erect any temporary structures, signs, or other facilities necessary or appropriate for the protection of the Work and the public. During the suspension of the Work, the Design-Builder shall properly and continuously maintain in acceptable growing condition all living material in newly established plantings, seeding, and soddings furnished under the Agreement and shall take adequate precautions to protect vegetation against damage.

**3.21 Not Used**



**PART 3**

**Design-Build Contract**  
**Between**  
**Concessionaire and Design-Builder**

---

This **DESIGN-BUILD CONTRACT** is made by and between the parties, the **Concessionaire**, 95 EXPRESS LANES LLC, a Delaware Limited Liability Company, and the **Design-Builder**, BRANCH-FLATIRON, JOINT VENTURE, for services in connection with the 95 Express Lanes Fredericksburg Extension Project (“**Fred Ex Project**”).

**Table of Contents**

Article 1: Scope of Fred Ex Work .....1

Article 2: Fred Ex Contract Documents .....1

Article 3: Interpretation and Intent .....2

Article 4: Ownership of Fred Ex Work Product.....3

Article 5: Fred Ex Contract Time .....4

Article 6: Fred Ex Contract Price .....11

Article 7: Procedure for Payment.....12

Article 8: Termination for Convenience .....14

Article 9: Representatives of the Parties.....18

Article 10: Bonds and Insurance .....18

Article 11: Other Provisions.....19

In consideration of the mutual covenants and obligations contained herein, Concessionaire and Design-Builder agree as set forth herein.

### **Article 1**

#### **Scope of Fred Ex Work**

**1.1** Design-Builder shall perform all design and construction services, and provide all material, equipment, tools and labor, necessary to complete the Fred Ex Work (or “**Work**”) described in and reasonably inferable from the Fred Ex Contract Documents.

### **Article 2**

#### **Fred Ex Contract Documents**

**2.1** The Fred Ex Contract Documents are comprised of the following:

**2.1.1** All written modifications, amendments and work orders to this Fred Ex Design-Build Contract issued in accordance with *Part 4 General Conditions of Contract Between Concessionaire and Design-Builder* (“**General Conditions of Contract**”);

**2.1.2** This Fred Ex Design-Build Contract (Part 3), executed by Concessionaire and Design-Builder, inclusive of all Exhibits;

**2.1.3** General Conditions of Contract (Part 4), inclusive of all Exhibits;

**2.1.4** Fred Ex Project Technical Requirements (Part 2), inclusive of all Attachments;

**2.1.5** Request for Proposals (RFP) (Part 1) dated March 27, 2018, including all Addenda (track changes depicted in the Addenda have been accepted and are incorporated herein);

**2.1.6** Division I Amendments (Part 5) to Standard Specifications, (“**Division I Amendments**”), inclusive of all Exhibits;

**2.1.7** Construction Documents prepared and approved in accordance with Section 2.4 of the General Conditions of Contract; and

**2.1.8** Design-Builder’s Technical and Price Proposals (Proposal) submitted in response to Part 1 (RFP).

### Article 3

#### **Interpretation and Intent**

**3.1** The Fred Ex Contract Documents are intended to permit the parties to complete the Fred Ex Work and all obligations required by the Fred Ex Contract Documents within the Fred Ex Contract Time(s) for the Fred Ex Contract Price. The Fred Ex Contract Documents are intended to be complementary and interpreted in harmony so as to avoid conflict, with words and phrases interpreted in a manner consistent with construction and design industry standards. In the event of any inconsistency, conflict, or ambiguity between or among the Fred Ex Contract Documents, the Fred Ex Contract Documents shall take precedence in the order in which they are listed in Section 2.1.

**3.2** Terms, words and phrases used in the Fred Ex Contract Documents, including this Fred Ex Design-Build Contract, shall have the meanings given them in this Fred Ex Design-Build Contract and the General Conditions of Contract.

**3.3** The Fred Ex Contract Documents form the entire agreement between Concessionaire and Design-Builder with respect to its subject matter and by incorporation herein are as fully binding on the parties as if repeated herein. The parties have made no oral representations or other agreement, except as specifically stated in the Fred Ex Contract Documents.

**3.4** Except as set forth in the last sentence of this Section 3.4, and notwithstanding anything to the contrary in Design-Builder’s Proposal, Design-Builder is obligated to perform the Fred Ex Work in full compliance with the Fred Ex Contract Documents. The parties agree, however, that:

**.1** Betterments and higher and/or more stringent standards or specifications and design and construction criteria, concepts, and drawings set forth in the Design-Builder’s Proposal (collectively referred to as “**Enhancements**”) shall supersede the minimum requirements of the Fred Ex Project Technical Requirements and Design-Builder is obligated to perform the Fred Ex Work in compliance with the Enhancements.

**.2** Those ATCs identified in Exhibit 3.4.2 have been approved, either fully or conditionally, by the Concessionaire and supersede the requirements of the RFP Documents. Design-Builder has the right to perform the Work in accordance with such ATCs, subject to the terms in Section 2.1.10 of Part 4 (General Conditions of Contract).

**3.5** The Concessionaire’s long-term concession agreement with VDOT for the Fred Ex Project will provide VDOT certain rights with respect to the Fred Ex Project and the Fred Ex Work. The Design Builder shall cooperate fully and promptly with VDOT’s representatives as reasonably requested by Concessionaire or VDOT. Any acceptance or comment by VDOT shall not relieve Design Builder of any of its duties, liabilities or obligations under the Contract Documents. All communications to and from VDOT regarding the Fred Ex Work shall be made through Concessionaire, except as the Design-Builder is otherwise directed by Concessionaire.

**3.6** The documents which govern Concessionaire’s transactions with the Fred Ex Financing Parties may provide to the Financing Parties’ Technical Advisers certain rights of review, inspection, certification and consultation with Concessionaire concerning the Fred Ex Project and

Execution Version

---

the Fred Ex Work in order that the Financing Parties' Technical Advisers may regularly and completely apprise the Fred Ex Financing Parties of the progress and other aspects of the Fred Ex Project and the Fred Ex Work. Design Builder shall cooperate fully and promptly with the Financing Parties' Technical Advisers as reasonably requested by Concessionaire, including providing schedule and progress documentation, participating in monthly review meetings and granting access to the Work site(s) for field inspections. Any acceptance or comment by the Financing Parties' Technical Advisers, VDOT or the Fred Ex Financing Parties shall not be construed to impose on the Financing Parties' Technical Advisers, VDOT or the Fred Ex Financing Parties any control of any portion of the Fred Ex Work, or relieve Design Builder of any of its duties, liabilities or obligations under the Contract Documents. All communications to and from the Financing Parties' Technical Advisers regarding the Fred Ex Work shall be made through Concessionaire, except as Design-Builder is otherwise directed by Concessionaire.

#### Article 4

#### **Ownership of Fred Ex Work Product**

**4.1 Fred Ex Work Product Defined.** The term “Fred Ex Work Product” is intended to include all drawings, specifications, calculations, reports, and documentation, whether in paper copy or electronic format, produced by or through Design-Builder that is furnished to Concessionaire.

**4.2 Ownership of Fred Ex Work Product.** Concessionaire shall own all rights, title and interest in the Fred Ex Work Product upon its receipt of such Fred Ex Work Product. Concessionaire's ownership rights, include, without restriction or limitation, the right of the Concessionaire, VDOT (with respect to such Fred Ex Work Product the Concessionaire has assigned to VDOT), and any of Concessionaire's counterparties, to incorporate any ideas or information from the Fred Ex Work Product into: (a) any other contract awarded in reference to the Fred Ex Project; or (b) any subsequent procurement by Concessionaire or VDOT for another project, whether during or after the completion of this Fred Ex Design-Build Contract. In receiving all rights, title and interest in the Fred Ex Work Product, Concessionaire is deemed to own all intellectual property rights, copyrights, patents, trade secrets, trademarks, and service marks in Fred Ex Work Product, and Design-Builder agrees that it shall, at the request of Concessionaire, execute all papers and perform all other acts that may be necessary (if any) to ensure that Concessionaire's rights, title and interest in the Fred Ex Work Product are protected. The rights conferred herein to Concessionaire include, without limitation, Concessionaire's ability to use the Fred Ex Work Product without the obligation to notify or seek permission from Design-Builder. In addition, upon expiration, termination, or default of the Comprehensive Agreement, the Concessionaire shall turn over a copy of all Fred Ex Work Product the Concessionaire owns. At such time, all such Fred Ex Work Product (other than Concessionaire's own proprietary Fred Ex Work Product) will be considered the sole and exclusive property of VDOT without compensation due to the Design-Builder or any other party.

**4.3 Use of Fred Ex Work Product at Concessionaire's Risk.** The Concessionaire's use of the Fred Ex Work Product on any subsequent procurement by Concessionaire on another project shall be at Concessionaire's sole risk, and Design-Builder neither warrants nor represents that the

Fred Ex Work Product is suitable for use on another project without modification. The Concessionaire waives any rights to seek recovery from Design-Builder for any claims, damages, liabilities, losses and expenses arising out of or resulting from the Concessionaire's use of the Fred Ex Work Product on another project.

## Article 5 Fred Ex Contract Time

### **5.1 Limited Notice to Proceed and Notice to Proceed.**

**5.1.1 Limited Notice to Proceed.** At any time after the execution of this Fred Ex Design-Build Contract, the Concessionaire anticipates issuing a Limited Notice to Proceed (“LNTP”) authorizing and obligating the Design-Builder to commence the Early Works. Design-Builder shall commence the Early Works within seven (7) days of its receipt of the LNTP, unless the Parties mutually agree otherwise in writing. The scope, schedule, payment amount and payment terms for such Early Works are set forth in the Early Works Scope of Work attached hereto as Exhibit 5.1.1.

#### **5.1.2 Notices to Proceed**

- (a) **Notice to Proceed with Design Work.** Except with respect to Early Work approved and undertaken pursuant to Exhibit 5.1.1 and except as may be authorized in a LNTP, the Design-Builder will not commence any Design Work unless and until the following conditions have been satisfied (or the Concessionaire has advised that it will waive such condition) and the Concessionaire has delivered notice to that effect to the Design-Builder (such notice being referred to as the “Design Work Notice to Proceed” or “Design Work NTP”):
- (i) the Design-Builder will have delivered to the Concessionaire and obtained its approval of the Submittal Register described in Part 2 (Fred Ex Project Technical Requirements);
  - (ii) the Concessionaire has approved the following Project Development Plans: (A) Design-Builder Management Plan; (B) Document Management Plan; (C) Quality Management System Plan; (D) Design Quality Management Plan; (E) Public Information and Communications Plan; and (F) DBE/SWaM and Workforce Plan;
  - (iii) there exists no court order which restrains, enjoins, or delays performance of the Work;

Execution Version

---

- (iv) the Design-Builder certifies to the Concessionaire that all insurance policies required under Part 4, Section 5.1.1 necessary for the Work, have been obtained and will be in full force and effect, and in the case of Project-specific policies, the Design-Builder has delivered to the Concessionaire duplicate originals or copies thereof certified by the Design-Builder’s insurance broker to be true and correct copies of the originals; and
- (v) there exists no Design-Builder default for which the Design-Builder has received notice from the Concessionaire, and the Design-Builder certifies to the Concessionaire that, to the best of its knowledge after diligent inquiry, there exists no condition, which with the lapse of time or delivery of notice to the Design-Builder, would constitute a Design-Builder Default or Breach.

The delivery of the Design Work Notice to Proceed does not constitute authorization to commence construction activities.

(b) **Notice to Proceed for Construction.** In addition to the conditions set forth in Section 5.1.2 (a), the Design-Builder will not commence construction of the Project unless and until the following conditions have been satisfied (or the Concessionaire, in its discretion, waives such conditions) and the Concessionaire has delivered notice to that effect to the Design-Builder (such notice being referred to as the “Construction Notice to Proceed” or “Construction NTP”):

- (i) The Design-Builder has delivered to the Concessionaire correct and complete copies of all Construction Documentation required for the commencement of construction in accordance with this Contract including the Technical Requirements, and the Design-Builder has received from the Concessionaire any prior written approvals thereof required by this Contract and Federal Requirements;
- (ii) all Governmental Approvals (including any applicable VDOT and Federal approvals and agreements) necessary for the commencement of construction have been acquired (and copies provided to the Concessionaire), and the Design-Builder has satisfied all applicable pre-construction requirements of the Government Approvals;
- (iii) all rights of access or other property rights necessary for the commencement of construction have been obtained;
- (iv) the Concessionaire has approved the following: (A) Baseline Schedule; (B) Construction Quality Management Plan; (C) Maintenance of Traffic Plan; (D) Environmental Management Plan; (E) Right of Way Acquisition and Relocation Plan; (F) Health, Safety and Security Plan; (G) Sustainability Plan, and (H) Utilities Plan; and

Execution Version

---

- (v) the Design-Builder certifies to the Concessionaire that all insurance policies required under Part 4, Section 5.1.1 necessary for the Work, have been obtained and will be in full force and effect, and in the case of Project-specific policies, the Design-Builder has delivered to the Concessionaire duplicate originals or copies thereof certified by the Design-Builder's insurance broker to be true and correct copies of the originals.
- (c) The Concessionaire may waive any condition precedent set forth in Section 5.1.2 (a) and Section 5.1.2 (b); *provided*, that no person or entity will be entitled to assume that the Concessionaire will waive any condition precedent. Unless the Concessionaire waives in writing (as distinguished from a deemed waiver) a condition precedent that requires action by the Design-Builder to be satisfied, the Design-Builder will remain bound to use diligent efforts to satisfy the condition precedent.
- (d) The Concessionaire intends to issue the Construction NTP concurrently with the Design Work NTP, provided that all conditions precedent in Section 5.1.2(b) have been met by the time the Design Work NTP is issued.
- (e) The Fred Ex Work shall commence upon Design-Builder's receipt of the Design Work NTP, unless the parties mutually agree otherwise in writing. The obligation of the Design-Builder to commence the Fred Ex Work is subject to the condition precedent that the Design-Builder shall have received, from or on behalf of the Concessionaire, notice from the Concessionaire's Representative in a form and substance satisfactory to the Design-Builder confirming that: (i) Financial Close for the Fred Ex Project has occurred; (ii) Concessionaire has adequate funds available and committed to fulfill all of Concessionaire's contractual obligations under the Fred Ex Contract Documents; and (iii) there has been no default or adverse condition that will prevent Concessionaire from making the payments required under this Fred Ex Design-Build Contract as they come due.
- (f) If the Fred Ex Financial Close occurs earlier than the anticipated date of April 30, 2019 and the Concessionaire issues a Design Work NTP prior to that date, then the Service Commencement Duration from the Design-Builder's Technical Proposal shall be increased by one day for each day the Design Work NTP is issued earlier than April 30, 2019.

**5.1.3 Delays to Notice to Proceed.** If the Design Work NTP and Construction NTP are not issued by the Concessionaire by April 30, 2019, through no fault of the Design-Builder (i.e., the Design-Builder has met all required conditions precedent for each NTP by that time), then, as Design-Builder's sole and exclusive remedy for any increased costs, impacts, delays and disruptions due to the delayed issuance, Design-Builder shall be entitled to the following:

- (i) Additional payments, not to exceed \$1,500,000 per month for actual costs incurred on approved Early Works activities included in Exhibit 5.1.1 (Early Works Scope of Work) for the period between April 30, 2019 and the date of the issuance of the Design NTP and Construction NTP. Any such payments shall not increase the Fred Ex Contract Price.



Execution Version

---

(ii) The Fred Ex Contract Price, excluding amounts to be paid for Early Works under the LNTP, shall be increased at a three percent (3.00%) annualized rate (i.e., 0.008219% per day), based on the number of days between April 30, 2019 and the date of issuance of the Design Work and Construction NTP.

(iii) The Scheduled Service Commencement Date shall be **1,250 days** following the date of issuance of the Design Work NTP and Construction NTP.

(iv) Notwithstanding the above, if Concessionaire notifies the Design-Builder that the Design Work NTP and the Construction NTP will not be issued on or before July 1, 2019, or if the Design Work NTP and the Construction NTP are not issued by Concessionaire on or before July 1, 2019, the Fred Ex Contract Price, Service Commencement Date, and the Final Completion Date shall be subject to good faith renegotiation, in accordance with the following protocol:

(1) Concessionaire shall direct Design-Builder in writing to provide a proposal, with Concessionaire identifying those assumptions upon which the proposal is to be based.

(2) Design-Builder shall promptly furnish its proposal after receipt of Concessionaire's directive.

(3) If the parties do not reach agreement on a revised Fred Ex Contract Price, Service Commencement Date, and Final Completion Date within thirty (30) days from the date Concessionaire receives Design-Builder's proposal, either Concessionaire or Design-Builder may terminate this Fred Ex Design-Build Contract. Should either party terminate for convenience under this Section 5.1.3(iv)(3), the Design-Builder shall be compensated in accordance with Section 8.1.1 below.

**5.1.4 Termination Prior to Notice to Proceed.** If Concessionaire terminates all of the Fred Ex Work for convenience before issuing an NTP, the provisions set forth in Section 8.1.1 shall be applicable.

## **5.2 Completion Dates**

**5.2.1 Scheduled Service Commencement Date.** The **Scheduled Service Commencement Date** shall be the date that is **1,250 days** following the date of issuance of the Design Work NTP except as set forth in 5.1.2(f) or 5.1.3, as applicable.

(a) At least thirty (30) days prior to the date when Design-Builder anticipates that it will submit a Notice of Service Commencement, it shall provide an Advanced Notice of Service Commencement to the Concessionaire to allow sufficient time to schedule the resources necessary for an expeditious inspection of the completed Fred Ex Work.

(b) After receipt of the Notice of Service Commencement, Concessionaire shall have thirty (30) days to inspect the Fred Ex Work completed by Design-Builder and either: (a)

Execution Version

---

deliver to Design-Builder a signed Service Commencement Certificate; or (b) if reasonable cause exists for doing so, notify Design-Builder that Service Commencement has not been achieved stating in reasonable detail the reasons therefor. Service Commencement shall only be achieved hereunder if Concessionaire has provided a signed Service Commencement Certificate to Design-Builder acknowledging that Design-Builder has satisfied all conditions set forth within Exhibit 5.2.1 (Requirements for Service Commencement). The foregoing process shall be repeated until Concessionaire is satisfied that all conditions set forth within Exhibit 5.2.1 have been satisfied. The Service Commencement Date shall be deemed to be the date of the last Notice of Service Commencement issued by Design-Builder pursuant to this Section 5.2.1 (i.e., the notice that results in the Concessionaire delivery to Design-Builder of a signed Service Commencement Certificate).

(c) **5.2.2 Scheduled Final Completion Date.** The Scheduled Final Completion Date shall be **180 days** after the Scheduled Service Commencement Date. The Design-Builder will deliver to the Concessionaire the Notice of Final Completion in accordance with Exhibit 5.2.2 (Requirements for Final Completion) after all the Fred Ex Work is complete and the Design-Builder has received the Service Commencement Certificate. After receipt of the Design-Builder's Notice of Final Completion, Concessionaire shall have (30) thirty days to inspect the Fred Ex Project and all Fred Ex Work completed by Design-Builder and either: (a) deliver to Design-Builder a signed Final Completion Certificate; or (b) if reasonable cause exists for doing so, notify Design-Builder that Final Completion has not been achieved stating in reasonable detail the reasons therefor. Final Completion shall only be achieved hereunder if Concessionaire has provided a signed Final Completion Certificate to Design-Builder acknowledging that Design-Builder has satisfied all conditions of the Fred Ex Contract Documents. The foregoing process shall be repeated until Concessionaire is satisfied that all conditions set forth within Fred Ex Contract Documents have been satisfied. The Final Completion Date shall be the date of the last Notice of Final Completion issued by Design-Builder pursuant to this Section 5.2.2 (i.e., the notice that results in the Concessionaire delivery to Design-Builder of a signed Final Completion Certificate).

If applicable, one-hundred eighty days (180) calendar days prior to the Fred Ex Long Stop Date, the Design-Builder shall prepare a detailed plan describing the actions it plans to take to achieve Final Completion by the Fred Ex Long Stop Date ("**Fred Ex Final Completion Recovery Plan**"), and in any case as soon as reasonably practicable. The Fred Ex Final Completion Recovery Plan may contain a new proposed Fred Ex Long Stop Date, if applicable. The Design-Builder agrees to prepare a second Fred Ex Final Completion Recovery Plan as needed. The Design-Builder acknowledges that approval and the terms of any Fred Ex Final Completion Recovery Plan is solely in the discretion of the Concessionaire, and subject to VDOT's approval.

**5.2.3 Scheduled Route 17 General Purpose Lane Exit Ramp Final Completion Date.** The Scheduled Route 17 General Purpose Lane Exit Ramp Final Completion Date is **July 15, 2021**. The Design-Builder will deliver to the Concessionaire the Notice of Route 17 General Purpose Lane Exit Ramp Final Completion in accordance with Exhibit 5.2.3 (Requirements for Route 17 General Purpose Lane Exit Ramp Final Completion) after all the associated Work is complete.

Execution Version

---

After receipt of the Design-Builder’s Notice of Route 17 General Purpose Lane Exit Ramp Final Completion, Concessionaire shall have (30) thirty days to inspect the Work completed by Design-Builder and either: (a) deliver to Design-Builder a signed Route 17 General Purpose Lane Exit Ramp Final Completion Certificate or (b) if reasonable cause exists for doing so, notify Design-Builder that Route 17 General Purpose Lane Exit Ramp Final Completion has not been achieved stating in reasonable detail the reasons therefor. The Route 17 General Purpose Lane Exit Ramp Final Completion shall only be achieved hereunder if Concessionaire has provided a signed Route 17 General Purpose Lane Exit Ramp Final Completion Certificate to Design-Builder acknowledging that Design-Builder has satisfied all conditions of the Fred Ex Contract Documents associated with this Work. The foregoing process shall be repeated until Concessionaire is satisfied that all applicable conditions set forth within Fred Ex Contract Documents have been satisfied. The actual Route 17 General Purpose Lane Exit Ramp Final Completion Date shall be the date the Concessionaire delivers to the Design-Builder a fully signed Route 17 General Purpose Lane Exit Ramp Final Completion Certificate.

**5.3 Adjustments.** All of the scheduled completion dates set forth in Section 5.2 above (collectively referred to as “**Fred Ex Contract Times**”) shall be subject to adjustment in accordance with the General Conditions of Contract.

**5.4 Time is of the Essence.** Concessionaire and Design-Builder mutually agree that time is of the essence with respect to the Fred Ex Contract Times.

**5.5 Liquidated Damages.** Design-Builder understands that if the Service Commencement Date, Route 17 General Purpose Lane Exit Ramp Final Completion Date or the Final Completion Date are not attained, Concessionaire will suffer damages which are difficult to determine and accurately specify. To compensate Concessionaire for such damages, Design-Builder hereby agrees as follows:

**5.5.1** If the Service Commencement Date is not attained by the Scheduled Service Commencement Date, Design-Builder shall pay Concessionaire Fifty Thousand Dollars (\$50,000.00) as liquidated damages for each day that the Service Commencement Date extends beyond the Scheduled Service Commencement Date.

**5.5.2** If Final Completion Date is not attained by the Scheduled Final Completion Date, Design-Builder shall pay Concessionaire Seventeen Thousand Five Hundred Dollars (\$17,500.00) as liquidated damages for each day that Final Completion Date extends beyond the Scheduled Final Completion Date.

**5.5.3** If the Route 17 General Purpose Lane Exit Ramp Final Completion Date is not attained by the Scheduled Route 17 General Purpose Lane Exit Ramp Final Completion Date, the Design-Builder shall pay Concessionaire Five Thousand Dollars (\$5,000.00) as liquidated damages for each day that the Route 17 General Purpose Lane Exit Ramp Final Completion Date extends beyond the Scheduled Route 17 General Purpose Lane Exit Ramp Final Completion Date.

**5.5.3** The total amount of liquidated damages paid pursuant to this Section 5.5 shall not exceed ten percent (10%) of the Fred Ex Contract Price.

Execution Version

---

**5.5.4** Any liquidated damages payable or lane closure penalties payable by the Design-Builder shall be paid by Design-Builder or withheld by Concessionaire, as applicable, in arrears at the next scheduled monthly payment intervals applicable after the Scheduled Service Commencement Date or Scheduled Final Completion Date or Scheduled Route 17 General Purpose Lane Exit Ramp Final Completion Date, as applicable, with the last such payment to occur on the date on which Service Commencement or Final Completion or Route 17 General Purpose Lane Exit Ramp Final Completion, as applicable, actually occurs.

**5.6 Liquidated Damages Not Penalty.** The parties acknowledge, recognize and agree on the following:

- (a) that because of the unique nature of the Fred Ex Project, it is difficult or impossible to determine with precision the amount of damages that would or might be incurred by Concessionaire as a result of Design-Builder's failure to complete the Fred Ex Work on or before the applicable Fred Ex Contract Time(s);
- (b) that any sums which would be payable under this Article 5 are in the nature of liquidated damages, and not a penalty, and are fair and reasonable and such payment represents a reasonable estimate of fair compensation for the losses that may reasonably be anticipated from such failure; and
- (c) that any sums which would be payable herein shall be in lieu of all liability for any and all extra costs, losses, expenses, claims, penalties and any other damages, whether special or consequential, and of whatsoever nature incurred by Concessionaire which are occasioned by any delay in achieving the applicable Fred Ex Contract Times for the above-referenced Fred Ex Work. Notwithstanding the above, liquidated damages are not intended to excuse Design-Builder from liability for any other breach of its obligations under the Fred Ex Contract Documents.

**Article 6**  
**Fred Ex Contract Price**

**6.1 Fred Ex Contract Price.** Concessionaire shall pay Design-Builder in accordance with Article 6 of the General Conditions of Contract the sum of **\$291,000,000.00** (“**Fred Ex Contract Price**”), subject to adjustments made in accordance with the General Conditions of Contract. Unless otherwise provided in the Fred Ex Contract Documents, Design-Builder shall furnish to the appropriate taxing authorities all required information and reports in connection with such taxes and promptly furnish to the appropriate taxing authorities all required information and reports in connection with such taxes, which taxes will be administered and paid by the Design-Builder. The Fred Ex Contract Price is deemed to include all sales, use, consumer and other taxes mandated by applicable Legal Requirements.

**6.2 Markups for Changes.** If the Fred Ex Contract Price requires an adjustment due to changes in the Fred Ex Work, and the cost of such changes is determined under Section 9.4.1 of Part 4 (General Conditions of Contract), markups shall be allowed on such changes in accordance with requirements of Section 109.05 of the Division I Amendments to the Standard Specifications.

**6.3 Price of Asphalt, Fuel and Steel.** Design-Builder shall be responsible for all costs related to the use of asphalt, fuel and steel required to perform the Fred Ex Work. For the avoidance of doubt, there will be no increase to the Fred Ex Contract Price due to a change in the market of asphalt, fuel and/or steel or any other similar materials used by Design-Builder during the performance of the Fred Ex Work.

**6.4 Royalties and License Fees.** Design-Builder shall pay all applicable and required initial royalties and license fees (it being understood that Design-Builder is not responsible for ongoing maintenance and support fees) and shall procure for the benefit of Concessionaire and/or VDOT, as applicable, at Design-Builder’s sole expense (other than ongoing maintenance and support fees), the appropriate rights, licenses, agreements and permissions for materials, methods, processes and systems incorporated in the Fred Ex Project. In performing the Fred Ex Work, Design-Builder shall not incorporate into the Fred Ex Project any materials, methods, processes or systems which involve the use of any confidential information, intellectual property or property rights which Concessionaire, VDOT or Design-Builder does not have the right to use or which may result in claims or suits against Concessionaire, VDOT or Design-Builder arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other proprietary rights, or applications for any such rights, or use of confidential information. Any such rights held by Design-Builder with respect to items incorporated in the Fred Ex Work shall be assigned or licensed to VDOT or Concessionaire, as applicable, at no additional cost to VDOT or Concessionaire, in connection with the use or operation of the Fred Ex Project.

**Article 7****Procedure for Payment****7.1 Progress Payments**

**7.1.1** Design-Builder shall submit to Concessionaire on or before the fifteenth (15<sup>th</sup>) day of each month, beginning with the first month after Design-Builder's receipt of Concessionaire's LNTP, Design-Builder's Application for Payment in accordance with Article 6 of the General Conditions of Contract. Applications for Payment received after the fifteenth (15<sup>th</sup>) day of the month shall not be considered properly submitted and may not be processed until the subsequent payment period. In the first Application for Payment, the Design-Builder shall provide a credit to Concessionaire in the amount of all charges invoiced as of the date thereof under the Bridging Agreement dated January 11, 2019, between Transurban (USA) Operations Inc. and Branch-Flatiron, Joint Venture.

**7.1.2** Concessionaire shall make payment within thirty (30) days after Concessionaire's receipt of each properly submitted and accurate Application for Payment in accordance with Article 6 of the General Conditions of Contract, but in each case less the total of payments previously made, and less amounts properly withheld under Section 6.3 of the General Conditions of Contract.

**7.1.3** Design-Builder agrees that, within seven (7) days following receipt of monies from the Concessionaire for work performed by any Subcontractor, Design-Builder shall either: (a) pay the Subcontractor for the proportionate share of the total payment received from the Concessionaire attributable to the work performed by the Subcontractor; or (b) notify the Concessionaire and Subcontractor, in writing, of Design-Builder's intention to withhold all or a part of the Subcontractor's payment, specifying the reason for the non-payment. Design-Builder also agrees that it shall include in all of its subcontracts a provision that: (a) obligates Design-Builder to pay interest to Subcontractors on all amounts owed by Design-Builder that remain unpaid after seven (7) days following receipt of monies from the Concessionaire for work performed by any Subcontractor, except for amounts withheld as allowed in the preceding sentence; (b) states, "Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month."; and (c) obligates each Subcontractor to include or otherwise be subject to the same payment and interest requirements as specified in this Section 7.1.3 with respect to each lower-tier Sub-subcontractor.

**7.1.4** Design-Builder's obligations to pay an interest charge to a Subcontractor pursuant to Section 7.1.3 shall not be construed to be an obligation of the Concessionaire, nor shall any modification to this Fred Ex Design-Build Contract be allowed for the purpose of providing reimbursement for the interest charge. Cost reimbursement claims shall not include any amount for reimbursement for the interest charge.

**7.1.5** Design-Builder agrees to provide the Concessionaire, within five (5) days of the Fred Ex Design-Build Contract Date, its federal employer identification number.

**7.2 Retainage on Progress Payments.** If the Concessionaire determines the Design-Builder's progress is unsatisfactory according to Section 108.03 of the VDOT Standard Specification or

Execution Version

---

other applicable Contract documents, the Concessionaire will send a notice of unsatisfactory progress to the Design-Builder advising it of such determination. This notification will also advise the Design-Builder that five percent (5%) retainage of the monthly Application for Payment is being withheld and will continue to be withheld for each month the Design-Builder's actual progress is determined to be unsatisfactory.

When the Concessionaire determines that the Design-Builder's progress is satisfactory in accordance with these requirements, the five percent (5%) retainage previously withheld because of unsatisfactory progress will be released in the next monthly Application for Payment, and the remaining monthly Application for Payment will be paid in full provided the Design-Builder's progress continues to be satisfactory.

**7.3 Final Payment.** Design-Builder shall submit its Final Application for Payment to Concessionaire in accordance with Section 6.6 of the General Conditions of Contract. Concessionaire shall make payment on Design-Builder's properly submitted and accurate Final Application for Payment within thirty (30) days after Concessionaire's receipt of the Final Application for Payment, provided that Design-Builder has satisfied the requirements for Final Payment set forth in Section 6.6.3 of the General Conditions of Contract.

**7.4 Interest.** Payments due and unpaid by Concessionaire to Design-Builder, whether progress payments or Final Payment, shall bear interest commencing ten (10) days after payment is due at an interest at a variable rate per annum equal to the reference rate announced by Bank of America, N.A., from time-to-time, plus one percent (1%).

**7.5 Record Maintenance and Retention of Records.** Design-Builder shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using accounting and control systems in accordance with generally accepted accounting principles and as may be provided in the Fred Ex Contract Documents. During the performance of the Fred Ex Work and for a period of five (5) years after Final Payment, Concessionaire and Concessionaire's accountants shall be afforded access from time-to-time, upon reasonable notice, to Design-Builder's records, books, correspondence, receipts, subcontracts, purchase orders, vouchers, memoranda and other data, including but not limited to electronic schedules and other electronic data (all collectively referred to as "**Books and Records**") relating to: (a) changes in the Fred Ex Work performed on a cost basis; or (b) any request by Design-Builder for an adjustment in the Fred Ex Contract Price or Fred Ex Contract Times. Design-Builder shall preserve all of its Books and Records for a period of five (5) years after Final Payment. The Design-Builder shall permit the Concessionaire to audit, examine, and copy all documents, computerized records, electronic mail, or other records of the Design-Builder during the life of the Contract and for a period for not less than five years after the earliest of: (i) the date of final payment, (ii) the date the Design-Builder is declared in default of Contract, and (iii) the date of termination of the Contract.

## Article 8

### Termination for Convenience

**8.1** Upon ten (10) days written notice to Design-Builder, Concessionaire may, for its convenience and without cause, elect to terminate all or part of the Fred Ex Work if Concessionaire, in its sole discretion, determines that such a termination is in the Concessionaire's best interests. The Concessionaire shall notify Design-Builder of the decision to terminate by delivering to Design-Builder a written notice of termination specifying the extent of termination and its effective date (a "**Notice of Termination**"). Pursuant to this Section 8.1, the Concessionaire shall have the right to terminate the Fred Ex Design-Build Contract immediately upon VDOT's termination of the Comprehensive Agreement.

**8.1.1** If Concessionaire terminates all of the Fred Ex Work for convenience before issuing a Notice to Proceed, Design-Builder's sole remedy shall be the payment of monies due for Early Works properly performed by Design-Builder, the amount of which shall be explicitly enumerated in the Exhibit 5.1.1 (Early Works Scope of Work). The amounts owed under any such payment will be limited to the actual costs incurred and verified by the Concessionaire. Such monies will be paid in accordance with the terms of the Early Works Scope Document. Other than its rights to be paid for Early Works properly performed, Design-Builder specifically waives any and all rights to claim from the Concessionaire for any cost, profit, overhead contribution or any other monetary relief associated with the Fred Ex Contract Documents or Fred Ex Project, including but not limited to bid and proposal costs, or any services that might have constituted Fred Ex Work under the Fred Ex Contract Documents.

**8.1.2** If Concessionaire terminates all or part of the Fred Ex Work for convenience after issuing a Notice to Proceed, then Sections 8.2 through 8.8 below shall apply.

**8.2** After receipt of a Notice of Termination, and except as directed by Concessionaire, Design-Builder shall immediately proceed as follows, regardless of any delay in determining or adjusting any amounts due under this Article 8:

- (a) Stop any Fred Ex Work as specified in the notice;
- (b) Enter into no further Subcontracts and place no further orders for materials, services or facilities, except as necessary to complete the continued portion of the Fred Ex Work, if any, or for mitigation of damages;
- (c) Unless instructed otherwise by Concessionaire, terminate all Subcontracts to the extent they relate to the Fred Ex Work terminated and except to the extent that continuation of the Subcontract is necessary in order to mitigate damages;
- (d) Assign to Concessionaire or its designee in the manner, at the times, and to the extent directed by Concessionaire, all of the right, title, and interest of Design-Builder under the Subcontracts so terminated, in which case Concessionaire will have the right, in its sole discretion, to accept performance, settle or pay any or all claims under or arising out of the termination of such Subcontracts;



Execution Version

---

(e) Settle outstanding liabilities and claims arising out of such termination of Subcontracts, with the approval or ratification of Concessionaire, to the extent it may require, which approval or ratification shall be final;

(f) Transfer and deliver to Concessionaire or its designee, as directed by Concessionaire: (1) possession and control of the Fred Ex Project; and (2) all right, title and interest of Design-Builder in and to: (i) the Fred Ex Work in process, completed Fred Ex Work, supplies and other materials produced or acquired for the Fred Ex Work terminated; (ii) the Construction Documents and all other completed or partially completed drawings (including plans, elevations, sections, details and diagrams), specifications, records, reports, books, samples, information and other Fred Ex Work Product that would have been required to be furnished to Concessionaire if the Fred Ex Work had been completed; and (iii) all intellectual property developed specifically for the Fred Ex Project; provided, however, that in the event of such transfer, the Design-Builder shall not be liable for any warranties for Fred Ex Work which has not achieved Final Completion, nor shall the Design-Builder have any liability with respect to any design materials produced with respect to the Fred Ex Project;

(g) Complete performance in accordance with the Fred Ex Contract Documents of all Fred Ex Work not terminated;

(h) Take all action that may be necessary, or that Concessionaire may direct, for the protection and preservation of the property related to the Fred Ex Contract Documents that is in the possession of Design-Builder and in which Concessionaire has or may acquire an interest; and

(i) As authorized by Concessionaire, use its best efforts to sell at fair market value any property of the types referred to in Section 8.3; provided, however, that Design-Builder: (1) shall not take any such action with respect to any items for which title has previously transferred to Concessionaire; (2) is not required to extend credit to any purchaser; and (3) may acquire the property itself, under the conditions prescribed and at prices approved by Concessionaire. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by Concessionaire under the Fred Ex Contract Documents or paid in any other manner directed by Concessionaire.

**8.3 Inventory.** Design-Builder shall submit to Concessionaire a list of termination inventory not previously disposed of and excluding items authorized for disposition by Concessionaire; and within thirty (30) days of receipt of the list, Design-Builder shall deliver such inventory to Concessionaire and Concessionaire shall accept title to such inventory as appropriate.

**8.4 Settlement Proposal.** After termination, Design-Builder shall submit a final termination settlement proposal to Concessionaire in the form and with the certification prescribed by Concessionaire. Design-Builder shall submit the proposal promptly, but no later than thirty (30) days from the effective date of termination unless Design-Builder has requested a time extension in writing within such 30-day period and Concessionaire has agreed to allow such an extension.

**8.5 Amount of Termination Settlement.** Design-Builder and Concessionaire shall negotiate in good faith to reach agreement on the settlement amount to be paid to Design-Builder by reason of the termination of Fred Ex Work pursuant to this Article 8 and any such settlement shall be subject to the provisions of Article 10 of Part 4 (General Conditions). Such negotiated settlement shall include an allowance for profit solely on Fred Ex Work that has been performed as of the termination date. Such agreed amount or amounts payable for the terminated Fred Ex Work, exclusive of demobilization costs and other shut-down costs, shall not exceed the total Fred Ex Contract Price as reduced by the Fred Ex Contract Price of Fred Ex Work not performed. Upon determination of the settlement amount, this Fred Ex Design-Build Contract will be amended accordingly, and Design-Builder will be paid the agreed amount as described in this Section 8.5. Concessionaire's execution and delivery of any settlement agreement shall not be deemed to affect any of its rights with respect to compliance of the Fred Ex Work which has achieved Final Completion, with all applicable Contract requirements, or any of its rights under payment and performance bonds or any of its rights against Subcontractors.

**8.6 No Agreement as to Amount of Claim.** In the event of failure of Design-Builder and Concessionaire to agree upon the amount to be paid Design-Builder by reason of the termination of Fred Ex Work pursuant to this Article 8, the amount payable (exclusive of interest charges) shall be determined in accordance with the dispute resolution procedures of the General Conditions.

**8.7 Reduction in Amount of Claim.** The amount otherwise due Design-Builder under this Article 8 shall be reduced by: (a) the amount of any valid claim which Concessionaire may have against Design-Builder in connection with this Fred Ex Design-Build Contract; and (b) the agreed price for, or the proceeds of sale of, materials, supplies or other things previously paid for by the Concessionaire and to be retained by Design-Builder or sold by the Design-Builder (with the proceeds being retained by the Design-Builder), pursuant to the provisions of this Article 8.

**8.8 Payment.** Concessionaire may, from time-to-time, under such terms and conditions as it may prescribe and in its sole discretion, make partial payments on account against costs incurred by Design-Builder in connection with the terminated portion of this Fred Ex Design-Build Contract, whenever in the opinion of Concessionaire the aggregate of such payments shall be within the amount to which Design-Builder will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this Article 8, such excess shall be payable by Design-Builder to Concessionaire upon demand together with interest at a variable rate per annum equal to the reference rate announced by Bank of America, N.A., from time-to-time, plus one percent (1%).

**8.9 Inclusion in Subcontracts.** Design-Builder shall insert in all Subcontracts that the Subcontractor shall stop Fred Ex Work on the date of, and to the extent specified in, a Notice of Termination from Concessionaire, and shall require that Subcontractors insert the same provision in each Subcontract at all tiers. Design-Builder shall communicate, immediately upon receipt thereof, any Notice of Termination issued by Concessionaire to all affected Subcontractors.

**8.10 No Consequential Damages.** In the event of a termination for convenience under this Article 8, Design-Builder acknowledges and agrees that it shall not be entitled to any compensation

Execution Version

---

in excess of the value of the Fred Ex Work performed plus its settlement and closeout costs. Under no circumstances shall Design-Builder or any Subcontractor be entitled to anticipatory or unearned profits, unabsorbed overhead, opportunity costs, or consequential or other damages as a result of a termination for convenience under this Article 8. The payment to Design-Builder determined in accordance with this Article 8 constitutes Design-Builder's exclusive remedy for a termination hereunder.

**8.11 No Waiver.** Anything contained in this Fred Ex Design-Build Contract to the contrary notwithstanding, a termination under this Article 8 shall not waive any right or claim to damages which Concessionaire may have with respect to Fred Ex Work which has achieved Final Completion prior to the date of termination, and Concessionaire may pursue any cause of action which it may have by law or under this Fred Ex Design-Build Contract on account of such completed Fred Ex Work. The Design-Builder makes no warranties with respect to Fred Ex Work which has not achieved Final Completion prior to the date of termination. Concessionaire's termination of this Fred Ex Design-Build Contract shall not relieve any rights Concessionaire has under any performance bonds issued on the Fred Ex Project.

**8.12 Dispute Resolution.** The failure of the parties to agree on amounts due under Article 8 shall be a dispute to be resolved in accordance with the requirements of the General Conditions, Article 10.

**8.13 Right to Use Fred Ex Work Product.** If Concessionaire terminates this Fred Ex Design-Build Contract pursuant to this Article 8, Concessionaire's rights to use the Fred Ex Work Product shall be as set forth in Article 4 hereof.

**8.14 Limitation of Certain Contractor Liabilities.** Notwithstanding anything herein to the contrary, the total liability of Design-Builder in contract, tort, equity or otherwise (including negligence, warranty, strict liability or otherwise) relative to or arising out of Fred Ex Contract Documents shall not exceed an amount equal to forty percent (40%) of the Fred Ex Contract Price; provided, that the foregoing limitation shall not apply to or include:

- (i) the proceeds of insurance, not to exceed amounts required to be maintained by Design-Builder in accordance with the terms of the Fred Ex Contract Documents;
- (ii) costs, liabilities or obligations that arise from gross negligence, willful misconduct or fraud of the Design-Builder;
- (iii) costs, liabilities or obligations that arise from Design-Builder's abandonment of the Fred Ex Work or failure to maintain the insurance and bonds required pursuant to Article 5 of Part 4;
- (iv) Design-Builder's breach of its representations made in any of its Applications for Payment contained in Section 6.2.3 of Part 4; or
- (v) Design-Builder's indemnity obligations under Article 7 of Part 4.

## Article 9

### **Representatives of the Parties**

#### **9.1 Concessionaire's Representative**

**9.1.1** (Not Used)

**9.1.2** Concessionaire designates Richard Prezioso, Jr. as its Concessionaire's Representative, which individual has the authority and responsibility set forth in Section 3.4 of the General Conditions of Contract.

#### **9.2 Design-Builder's Representatives**

**9.2.1** (Not Used)

**9.2.2** Design-Builder designates Jason Hoyle as its Design-Builder's Representative, which individual has the authority and responsibility set forth in Section 2.1.1 of the General Conditions of Contract.

**9.3** The Concessionaire and Design-Builder shall, in the spirit of cooperation, exchange information in a timely manner. While the Fred Ex Contract Documents establish a timeline and process for making decisions and managing communications on the Fred Ex Project, the parties recognize it is not possible to specify processes for all activities that may occur.

## Article 10

### **Bonds and Insurance**

**10.1 Insurance.** Design-Builder shall procure and maintain insurance in accordance Section 5.1.1 of Part 4 (General Conditions of Contract). Evidence of insurance shall be submitted following Notice of Intent to Award the Design-Build Contract and is a condition precedent to Concessionaire issuing Notice to Proceed.

**10.2 Performance and Payment Bonds.** Design-Builder shall procure and maintain performance and payment bonds executed by a surety acceptable to Concessionaire, each in the amount of one hundred percent (100%) of the Fred Ex Contract Price, and in accordance with all other requirements of the Fred Ex Contract Documents, including the Division I Amendments. Performance and Payment Bonds shall be submitted following the Notice of Intent to Award the Design-Build Contract in accordance with Part 1 (RFP) requirements. Receipt of Performance and Payment Bond for the full Contract Price and are a condition precedent to both Financial Close and the Concessionaire issuing Notices to Proceed for Design Work and Construction.

## Article 11 Other Provisions

### **11.1 Project Management and Reporting Requirements**

**11.1.1 Initial Baseline Schedule.** Design-Builder submitted an Initial Baseline Schedule with their Proposal in accordance with the Section 1.4 of Part 2 (Fred Ex Project Technical Requirements) and the RFP. This Initial Baseline Schedule, as revised and approved, shall be used to manage the Early Works Scope of Work until such time it is replaced by the approved Baseline Schedule.

**11.1.2 Baseline Schedule.** Within forty-five (45) days of Design-Builder's receipt of Concessionaire's Limited Notice to Proceed, Design-Builder shall submit to Concessionaire, for its review and approval, a Baseline Schedule in accordance with the Section 1.4 of Part 2 (Fred Ex Project Technical Requirements). Concessionaire reserves the right to withhold approval for all or part of Design-Builder's Applications for Payment until such time Design-Builder furnishes an approved Baseline Schedule. Concessionaire approval of the Baseline Schedule is a condition precedent to issuance of the Construction NTP.

**11.1.3 Schedule Updates.** Design-Builder shall submit Schedule Updates in accordance with Section 1.4 of of Part 2 (Fred Ex Project Technical Requirements). Concessionaire reserves the right to withhold approval for all or part of Design-Builder's Applications for Payment until such time Design-Builder furnishes an approved Schedule Update.

**11.1.4 Revised Baseline Schedule.** Design-Builder shall submit a Revised Baseline Schedule when required in accordance with Section 1.4 of Part 2 (Fred Ex Project Technical Requirements). Concessionaire reserves the right to withhold approval of all or part of Design-Builder's Applications for Payment until such time Design-Builder furnishes an approved Revised Baseline Schedule.

**11.1.5 Final As-Built Schedule.** Design-Builder shall submit a Final As-Built Schedule in accordance with Section 1.4 of Part 2 (Fred Ex Project Technical Requirements). Concessionaire reserves the right to withhold approval for all or part of Design-Builder's Applications for Final Payment until such time Design-Builder furnishes an approved Final As-Built Schedule.

**11.1.6 Other Information and Alteration.** Design-Builder shall, whenever required by Concessionaire, provide in writing a general description of the arrangements and methods which Design-Builder proposes to adopt for the execution of the Fred Ex Work. No significant alteration to the Baseline Schedule, or to such arrangements and methods, shall be made without informing Concessionaire and any alterations made shall reflect the requirement for coordination of the Fred Ex Work with the actions and obligations of Concessionaire and the work to be carried out by Separate Contractors and the TTMS Contractor. If any alteration affects any such actions, obligations or Fred Ex Work, it shall not be made without the prior approval of Concessionaire. If the progress of the Fred Ex Work does not conform to the Baseline Schedule, as updated herein, Concessionaire may instruct Design-Builder to revise the Baseline Schedule, showing the modifications necessary to achieve completion within the Fred Ex Contract Times.

**11.1.7 TTMS Contractor and Separate Contractors.** Design-Builder agrees to include the activities of the TTMS Contractor and Separate Contractors into the Baseline Schedule. Design-Builder shall reasonably cooperate with the TTMS Contractor and Separate Contractors and coordinate its activities with those of such Separate Contractors so that the Fred Ex Project can be completed in an orderly and coordinated manner without unreasonable disruption.

**11.1.8 Concessionaire’s Review and Approval of Schedule Submissions.** Concessionaire’s review and approval of the Baseline Schedule or subsequent Schedule Updates and Revised Baseline Schedule shall not be construed as relieving Design-Builder of its complete and exclusive control and responsibility over the means, methods, sequences and techniques for executing the Fred Ex Work and does not constitute approval or acceptance of Design-Builder’s ability to complete the Fred Ex Work within the Fred Ex Contract Time(s).

**11.1.9 Monthly Reports.** Monthly reports shall be prepared by Design-Builder and submitted to Concessionaire in accordance with Part 2 (Fred Ex Project Technical Requirements). The first report shall cover the period up to the end of the calendar month after that in which the Fred Ex Design-Build Contract Date occurred; reports shall be submitted monthly thereafter, on or before the fifteenth (15<sup>th</sup>) day of each month. Reporting shall continue until Concessionaire’s determination that the Fred Ex Project has achieved Final Completion.

Failure of Design-Builder to provide complete monthly reports, including but not limited to the monthly schedule updates, shall be grounds for Concessionaire to withhold approval for all or part of Design-Builder’s Applications for Payment until such time Design-Builder furnishes such complete reports.

**11.1.10 Fred Ex Project Records.** Design-Builder shall organize and maintain its Fred Ex Project records in a manner that allows such Fred Ex Project records to be filed by work packages, as applicable. Additionally, Design-Builder shall develop a tracking log wherein the Fred Ex Project records are provided chronologically, with the file type, description, date received/sent, entity the documentation is from/to, pay package reference, status and electronic location. If the Fred Ex Project record relates to changes in the Fred Ex Work, preferably only one work package shall be referenced in such Fred Ex Project record. If a Fred Ex Project record relates to multiple work packages, then all related work packages shall be referenced in such Fred Ex Project record. As a condition of Final Payment, Design-Builder shall provide Concessionaire with a complete set of all Fred Ex Project records by and between Design-Builder and Concessionaire exchanged on the Fred Ex Project.

**11.1.11 Estoppel Certificate.** Design-Builder shall at any time and from time to time furnish promptly upon request by Concessionaire or any Fred Ex Financing Party a written statement in such form as may be required by the requesting party stating that this Fred Ex Design-Build Contract is a valid and binding obligation of Design-Builder, enforceable against Design-Builder in accordance with its terms, except to the extent that its enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the rights of creditors generally or by general principles of equity; that this Fred Ex Design-Build Contract has not been released, subordinated or modified; and that there are no offsets or defenses against the

Execution Version

---

enforcement of this Fred Ex Design-Build Contract against Design-Builder; or if any of the foregoing statements are qualified or unable to be made in their entirety, specifying the reasons therefor.

**11.2 Miscellaneous**

**11.2.1** In executing this Fred Ex Design-Build Contract, Concessionaire and Design-Builder each individually represents that it has the necessary financial resources to fulfill its obligations under this Fred Ex Design-Build Contract, and each has the necessary approvals to execute this Fred Ex Design-Build Contract and their applicable obligations described herein.

**11.2.2** The Design Builder specifically represents and warrants the following:

.1 that it is duly organized and validly existing under the law of its state of organization, and is duly licensed or qualified to do business in the Commonwealth of Virginia and in each other jurisdiction wherein the nature of the business transacted by them makes such licensing or qualification necessary;

.2 that it has the power and authority to do all acts and things to execute and deliver all Fred Ex Contract Documents and other documents as are required to be done, observed or performed by in connection with the performance of the Fred Ex Work;

.3 that it has all necessary expertise, qualifications, experience, competence, skills and know-how to perform the Fred Ex Work;

.4 that it is not in violation of any applicable law that would have a material adverse effect on the performance of the Fred Ex Work;

.5 none of itself nor any of its affiliates, including their respective officers, directors and employees, have been debarred or prohibited from participating in state or federally-funded projects, or indicted, convicted, pled guilty or nolo contendere to a violation of law involving fraud, conspiracy, collusion, bribery, perjury, material misrepresentation, or any other violation that shows a similar lack of moral or ethical integrity;

.6 that it owns or possesses all the patents, trademarks, service marks, trade names, copyrights, licenses, franchises, Governmental Approvals and rights with respect to the foregoing necessary to perform the Fred Ex Work and to carry on its business as presently conducted and presently planned to be conducted without conflict with the rights of others;

.7 no representation or warranty by Design-Builder contained herein or in any other document furnished by Design-Builder to Concessionaire contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading in light of the circumstances under which it was made. All financial and other information furnished by Design-Builder to Concessionaire is true and correct in all material respects;

Execution Version

---

.8 to the best of Design-Builder’s knowledge after diligent inquiry, no event which, with the passage of time or the giving of notice, would constitute a default under the Fred Ex Contracts has occurred; and

.9 that it is prequalified with VDOT to perform all aspects of the Fred Ex Work in accordance with VDOT’s Rules Governing Prequalification Privileges, and covenants that it will not subcontract any part of the Fred Ex Work to a Sub-contractor or Sub-subcontractor who is not prequalified with VDOT in accordance with VDOT’s Rules Governing Prequalification Privileges; provided, that this restriction does not apply to contract specialty items, consultants, manufacturers, suppliers, haulers or snow removal service providers.

**11.3 Federal Requirements**

Design-Builder shall follow all federal requirements set forth in Exhibit 11.3.

**11.4 Exhibits**

**11.4.1** The following exhibits are made part of and incorporated into this Fred Ex Design-Build Contract:

EXHIBIT 3.4.2 – APPROVED ALTERNATIVE TECHNICAL CONCEPTS

EXHIBIT 5.1.1 – EARLY WORKS SCOPE OF WORK

EXHIBIT 5.2.1 – REQUIREMENTS FOR SERVICE COMMENCEMENT

EXHIBIT 5.2.2 – REQUIREMENTS FOR FINAL COMPLETION

EXHIBIT 5.2.3 – REQUIREMENTS FOR ROUTE 17 GENERAL PURPOSE LANE EXIT  
RAMP FINAL COMPLETION

EXHIBIT 11.3 – FEDERAL REQUIREMENTS

**END OF PART 3  
FRED EX DESIGN-BUILD CONTRACT**



---

# PART 4

## General Conditions of Contract Between Concessionaire and Design-Builder

---

### Table of Contents

<b>Article 1:</b> General .....	1
<b>Article 2:</b> Design-Builder’s Services and Responsibilities.....	1
<b>Article 3:</b> Concessionaire’s Services and Responsibilities.....	12
<b>Article 4:</b> Hazardous Environmental Conditions and Differing Site Conditions .....	16
<b>Article 5:</b> Insurance and Bonds .....	19
<b>Article 6:</b> Payment .....	20
<b>Article 7:</b> Indemnification .....	24
<b>Article 8:</b> Time.....	27
<b>Article 9:</b> Changes to the Fred Ex Contract Price and Time .....	29
<b>Article 10:</b> Contract Adjustments and Disputes .....	31
<b>Article 11:</b> Stop Fred Ex Work and Termination for Cause.....	34
<b>Article 12:</b> Miscellaneous .....	38

**Article 1**  
**General**

**1.1 Mutual Obligations**

1.1.1 Concessionaire and Design-Builder commit at all times to cooperate fully with each other, and proceed on the basis of trust and good faith, to permit each party to realize the benefits afforded under the Fred Ex Contract Documents.

**1.2 Basic Definitions**

1.2.1 For the purposes of the Fred Ex Contract Documents, certain words and terms are defined in Exhibit 1.2.1, Fred Ex Project Definitions.

**Article 2**  
**Design-Builder’s Services and Responsibilities**

**2.1 General**

2.1.1 Design-Builder’s Representative shall be reasonably available to Concessionaire and shall have the necessary expertise and experience required to supervise the Fred Ex Work. Design-Builder’s Representative shall communicate regularly with Concessionaire and shall be vested with the authority to act on behalf of Design-Builder.

2.1.2 Design-Builder will attend a kick-off meeting with Concessionaire to discuss issues affecting the administration of the Fred Ex Work and to implement the necessary procedures, including those relating to submittals and payment, to facilitate the ability of the parties to perform their obligations under the Fred Ex Contract Documents. Concessionaire will notify Design-Builder of the time and location of the kick-off meeting. All Key Personnel shall participate in this kick-off meeting.

2.1.3 Design-Builder shall provide Concessionaire with the Baseline Schedule, Schedule Updates, Schedule Revisions, monthly reports and Final As-Built Schedule set forth in Section 1.4 of Part 2 (Fred Ex Technical Requirements).

2.1.4 Design-Builder shall, at its sole cost and expense, perform all services associated with the acquisition of any other properties that are necessary, or that Design-Builder deems necessary, to enable Design-Builder to perform the Fred Ex Work.

2.1.5 Design-Builder shall provide management for the Fred Ex Work in accordance with the organization chart set forth in the Proposal and the requirements in Exhibit 2.1.5. Design-Builder acknowledges the importance of its “Key Personnel.” For the Fred Ex Project, “Key Personnel” shall include the Design-Build Project Manager (the “**Design-Builder’s Representative**”), Safety

**Execution Version**

---

Manager, Quality Assurance Manager, Design Manager, Design-Construction Integration Manager, ITS Design Manager, Construction Manager, and ITS Construction Manager (collectively, “**Key Personnel**”). Job duties and responsibilities of Key Personnel shall not be delegated to others for the duration of the Fred Ex Contract. Design-Builder 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 Concessionaire. None of the Key Personnel may be withdrawn from the Fred Ex Project without prior written approval of Concessionaire, with it being understood and agreed that Design-Builder will provide Concessionaire with at least thirty (30) days written notice of any request to withdraw any Key Personnel. Concessionaire will have the right to review the qualifications of each individual to be appointed to a Key Personnel position and to approve or disapprove use of such individual in such position prior to the commencement of any Fred Ex Work by such individual. Design-Builder shall remove or replace, or have removed or replaced, any personnel performing the Fred Ex Work if Concessionaire has a reasonable objection to such person.

**2.1.6** Design-Builder shall be responsible for acquiring additional Fred Ex Project Right of Way in accordance with Part 2 (Fred Ex Technical Requirements), Section 1.6 (Right of Way) and the Fred Ex Contract Documents.

**.1** The Concessionaire is responsible for the first \$2,500,000 of the Fred Ex Right of Way Acquisition Costs. The Fred Ex Contract Price is deemed to include any and all other costs associated with acquisition of Fred Ex Project Right of Way, including but not limited to the Design-Builder Right of Way Costs and any Fred Ex Right of Way Acquisition Costs in excess of \$2,500,000. Any payments for the Fred Ex Right of Way Acquisition Costs by the Concessionaire will only be made following the submittal of a written request by the Design-Builder (including all necessary supporting documentation) and approval of such request by the Concessionaire.

**.2** If Design-Builder determines that actual Fred Ex Right of Way Acquisition Costs will exceed \$2,500,000, then the Design-Builder shall provide written notice to the Concessionaire and provide any additional required funds to the Concessionaire within thirty (30) days of such written notice. The amount of additional funds provided shall be sufficient to cover the Design-Builder’s estimated Fred Ex Right of Way Acquisition Costs for any remaining acquisitions, including amounts included in any pending certificates of take and/or condemnation proceedings. These funds will be deposited with VDOT and used to: a) make direct payments to property owners for negotiated settlements (and relocation benefits, where applicable), b) make deposits with the appropriate court for condemnation cases in accordance with Section 1.6 of Part 2 (Fred Ex Technical Requirements), and c) cover associated administrative and condemnation costs for any remaining acquisitions. Thirty (30) days prior to Fred Ex Final Completion Date, the Concessionaire and Design-Builder shall review the status of all acquisitions and reconcile the amounts deposited by the Design-Builder against a) actual payments made by VDOT to date and b) pending payments and costs not yet made or incurred by VDOT. At that time, any funds provided by the Design-Builder not required to pay for known Fred Ex Right of Way Acquisition Costs or pending condemnations will be refunded in the Design-Builder’s final payment. If, after the Fred Ex Final Completion Date, additional payments are required to settle any outstanding condemnation cases, such payments shall be the responsibility of the Concessionaire.

**Execution Version**

---

**.3** Design-Builder waives any right to seek an adjustment in the Fred Ex Contract Price or Fred Ex Contract Time(s) associated with right-of-way or easement acquisition, including but not limited to claims based on reliance on any information depicted in the RFP Documents or Supplemental Information. For the avoidance of doubt, Design-Builder acknowledges that it has been advised that: (a) the right-of-way limits shown on the RFP Documents are not based on a final property survey and, consequently, may need to be adjusted by Design-Builder during the design process; and (b) the Fred Ex Project Right of Way Acquisition Report included as RFP Supplemental Information made available to Design-Builder during the proposal process, is not intended to determine the specific rights-of-way that will be required for the Fred Ex Project.

**.4** Design-Builder shall maintain all parts of the Fred Ex Project Right of Way until care, custody and control is transferred to Concessionaire or VDOT, as applicable, in accordance with the terms of the Fred Ex Contract Documents.

**2.1.7** Design-Builder shall submit its QA/QC Plan to the Concessionaire for review in accordance with Part 2 (Fred Ex Technical Requirements).

**2.1.8** Design-Builder shall coordinate and lead regular progress meetings on at least a monthly basis. If requested by the Concessionaire, more frequent progress meetings shall be held. During such meetings, progress during the prior month shall be reviewed. Design-Builder shall collect information from Design Consultants and any key Subcontractors responsible for work completed during the specified duration and work scheduled during the upcoming reporting duration. These meetings shall be attended by all Key Personnel, as well as any other individuals that Concessionaire may require. Meetings will occur beginning the month after Design-Builder's receipt of Concessionaire's Limited Notice to Proceed (LNTP). Design-Builder shall be responsible for preparing, maintaining and distributing minutes of the meetings to all attendees for review. The meeting minutes shall be provided to the Concessionaire within two (2) days of the each progress meeting.

**2.1.9** Design-Builder shall perform the Fred Ex Work in accordance with: (a) the Fred Ex Contract Documents; (b) applicable Legal Requirements and Governmental Approvals; and (c) the degree of skill and judgment prevailing on the Fred Ex Design-Build Contract Date that is expected to be exercised by prudent, skilled and experienced contractors and design professionals on similar projects in the Commonwealth of Virginia, taking into consideration safety, operational requirements, level of service, and life cycle costs. Notwithstanding the above, if any of (a), (b) or (c) in the preceding sentence conflict, Design-Builder shall be obligated to perform the Fred Ex Work in accordance with the more stringent standard.

**2.1.10** If the Contract Documents incorporate any Alternative Technical Concepts (ATCs) and Design-Builder, for whatever reason: (a) does not comply with one or more Department conditions of pre-approval for the ATC; (b) does not obtain required third-party approval for the ATC; or (c) fails to implement the ATC, then Design-Builder shall: (1) provide written notice thereof to Department; and (2) comply with the requirements in the Contract Documents that would have applied in the absence of such ATC. Such compliance shall be without any increase in the Contract Price or extension to the Contract Time(s). For the avoidance of doubt, Design-Builder shall not be entitled to any increase in the Contract Price or extension of the Contract Time(s) as a result of

Execution Version

---

any delay, inability or cost associated with the acquisition of any property that may be required to implement any ATC.

**2.1.11** Within sixty (60) days after Contract Award, the Design-Builder shall develop and adopt written policies establishing ethical standards of conduct for Design-Builder’s directors, officers and supervisory or management personnel in dealing with VDOT and employment relations. Design-Builder shall comply with and enforce such policies. Without limiting the foregoing, Design-Builder further agrees: (i) no gifts, gratuities, or favors of any nature whatsoever will be given or offered by it to personnel of VDOT; and (ii) it will not employ personnel of VDOT for any services during the term of the Fred Ex Design-Build Contract without the prior written consent of VDOT. If VDOT determines, after investigation, that Design-Builder or any of its employees, representatives, or agents of any person acting in its behalf have violated this provision, Design-Builder may, at the discretion of VDOT, be disqualified from bidding on future contracts with VDOT for a period of six (6) months from the date of VDOT’s determination of such a violation. Any implicated employees, agents, or representatives of Design-Builder may be prohibited from working on any contract awarded by VDOT for the period of disqualifications.

## **2.2 Scope Validation and Identification of Scope Issues**

**2.2.1 Scope Validation Period.** The term “**Scope Validation Period**” is the period of time that begins on Design-Builder’s receipt of LNTP and extends for one-hundred twenty (120) days from such date of receipt. During the Scope Validation Period, Design-Builder shall thoroughly review and compare all of the then-existing Fred Ex Contract Documents, including without limitation the RFP Documents and the Proposal, to verify and validate Design-Builder’s proposed design concept and identify any defects, errors, or inconsistencies in the RFP Documents that affect Design-Builder’s ability to complete its proposed design concept within the Fred Ex Contract Price and/or Fred Ex Contract Time(s) (collectively referred to as “**Scope Issues**”). The term “Scope Issue” shall not be deemed to include items that Design-Builder should have reasonably discovered prior to the Fred Ex Design-Build Contract Date.

**2.2.2 Scope Validation Period for Non-Accessible Areas of the Site.** The parties recognize that Design-Builder may be unable to conduct the additional investigations contemplated by Section 4.2.2 below because it will not have access to certain areas of the Site within the Scope Validation Period set forth in Section 2.2.1 above. Design-Builder shall verbally and in writing notify Concessionaire at the meeting set forth in Section 2.1.2 of all such non-accessible areas and the dates upon which such areas are expected to become accessible. If Concessionaire agrees that such areas are non-accessible, then, for the limited purpose of determining Scope Issues that directly arise from geotechnical evaluations or other such physical investigations for such areas, the term “**Scope Validation Period**” shall be deemed to be the thirty (30) day period after the date the specified area becomes accessible for purposes of conducting the geotechnical evaluation or physical investigation. Design-Builder hereby acknowledges that the areas within the Right of Way that will be necessary for the sound barrier scope of work will not be considered as “non-accessible” for purposes of extending the Scope Validation Period, notwithstanding that the final locations of sound barriers may be determined after the expiration of the Scope Validation Period.

Execution Version

---

**2.2.3 Submission Requirements for Scope Issues.** If Design-Builder intends to seek relief for a Scope Issue, it shall promptly, but in no event later than the expiration of the Scope Validation Period, provide Concessionaire in writing with a notice (“**General Notice**”) of the existence of such Scope Issue, which General Notice shall generally explain the basis for such Scope Issue. Within twenty-one (21) days of the General Notice of a Scope Issue, but no later than 120 days after the commencement of the Scope Validation Period, the Design-Builder shall provide Concessionaire with documentation that specifically explains its support for the Scope Issue (“**Supporting Documentation**”), which Supporting Documentation shall include, among other things: (a) the assumptions that Design-Builder made during the preparation of its proposal that form the basis for its allegation, along with documentation verifying that it made such assumptions in developing its proposal; (b) an explanation of the defect, error or inconsistency in the RFP Documents that Design-Builder could not have reasonably identified prior to the Fred Ex Design-Build Contract Date; and (c) the specific impact that the alleged Scope Issue has had on Design-Builder’s price and time to perform the Fred Ex Work. For the avoidance of doubt: (1) Design-Builder shall not be entitled to raise in its Supporting Documentation any Scope Issues that were not previously addressed in a General Notice; and (2) Design-Builder shall have no right to seek any relief for any Scope Issues that have not been specifically identified in a General Notice provided to Concessionaire during the Scope Validation Period.

**2.2.4 Resolution of Scope Issues.** Within a reasonable time after Concessionaire’s receipt of the Supporting Documentation described in Section 2.2.3 above, the parties shall meet and confer to discuss the resolution of such Scope Issues. If Concessionaire agrees that Design-Builder has identified a valid Scope Issue that materially impacts Design-Builder’s price or time to perform the Fred Ex Work, a Fred Ex Work Order shall be issued in accordance with Article 9 hereof. If Concessionaire disagrees that Design-Builder has identified a valid Scope Issue that materially impacts Design-Builder’s price or time to perform the Fred Ex Work, then Design-Builder’s recourse shall be as set forth in Article 10. Notwithstanding anything to the contrary in the Fred Ex Contract Documents or as a matter of law, Design-Builder shall have the burden of proving that the alleged Scope Issue could not have been reasonably identified prior to the Fred Ex Design-Build Contract Date and that such Scope Issue materially impacts its price or time to perform the Fred Ex Work. The Concessionaire and Design-Builder shall endeavor to resolve all valid Scope Issues within 30 days of the completion of the respective Scope Validation Periods established in Sections 2.2.1 and 2.2.2.

**2.2.5 Design-Builder’s Assumption of Risk of Scope Issues.** The Parties acknowledge that the purpose of the Scope Validation Period is to enable Design-Builder to identify those Scope Issues that could not reasonably be identified prior to the Fred Ex Design-Build Contract Date. By executing this Fred Ex Design-Build Contract, Design-Builder acknowledges that the Scope Validation Period is a reasonable time to enable Design-Builder to identify Scope Issues that will materially impact Design-Builder’s price or time to perform the Fred Ex Work. After the expiration of the Scope Validation Period, with the sole exception of those Scope Issues made the subject of a General Notice during the Scope Validation Period and subject to valid requests for Fred Ex Work Orders in accordance with Section 2.2.3 above, the parties agree as follows:

**Execution Version**

---

.1 Design-Builder shall assume and accept all risks, costs, and responsibilities of any Scope Issue arising from or relating to the Fred Ex Contract Documents, including but not limited to conflicts within or between the RFP Documents and Proposal;

.2 Design-Builder shall be deemed to have expressly warranted that the Fred Ex Contract Documents existing as of the end of the Scope Validation Period are sufficient to enable Design-Builder to complete the design and construction of the Fred Ex Project without any increase in the Fred Ex Contract Price or extension to the Fred Ex Contract Time(s); and

.3 Concessionaire expressly disclaims any responsibility for, and Design-Builder expressly waives its right to seek any increase in the Fred Ex Contract Price or extension to the Fred Ex Contract Time(s) for, any Scope Issue associated with any of the Fred Ex Contract Documents, including but not limited to the RFP Documents.

**2.2.6 Waiver of Rights.** The failure of Design-Builder to meet the submission requirements required under Section 2.2.3 above for a Scope Issue, including but not limited to the times for providing notice and documentation of the Scope Issue, shall conclusively constitute a waiver of Design-Builder's rights to seek relief for such Scope Issue.

**2.2.7 Failure of Technical Proposal to Meet Requirements of the Fred Ex Contract Documents.** Notwithstanding anything to the contrary in this Section 2.2 or elsewhere in the Fred Ex Contract Documents, Concessionaire shall have no responsibility in the event Design-Builder's Proposal fails to meet the requirements of the Fred Ex Contract Documents, regardless of whether: (a) Concessionaire modified the RFP Documents to permit Design-Builder to implement a technical approach; (b) Concessionaire accepted Design-Builder's Proposal; or (c) any other action or inaction of Concessionaire is alleged by Design-Builder.

**2.3 Design Professional Services**

**2.3.1** Design-Builder shall, consistent with applicable state licensing laws, provide through qualified, licensed design professionals employed by Design-Builder, or procured from qualified, independent licensed Design Consultants, the necessary design services, including architectural, engineering, surveying, and other design professional services, for the preparation of the required drawings, specifications and other design submittals to permit Design-Builder to complete the Fred Ex Work consistent with the Fred Ex Contract Documents. All design professional services shall be performed by professionals properly licensed in the Commonwealth of Virginia and who are well-versed in the Concessionaire's design standards and practices.

**2.3.2** No Design Consultant is intended to be, nor shall any Design Consultant be deemed to be, a third-party beneficiary of this Fred Ex Design-Build Contract. Concessionaire is intended to be and shall be deemed a third-party beneficiary of all contracts between Design-Builder and any Design Consultant. In the event that this Fred Ex Design-Build Contract is terminated, Design-Builder shall, upon the written demand of Concessionaire, assign such contracts to Concessionaire.

**2.3.3** Design-Builder shall incorporate all obligations and understandings of the Fred Ex Contract Documents applicable to design services in its respective contracts with any Design

**Execution Version**

---

Consultant, and require that such obligations be flowed down to lower-tiered Design Consultants, including the obligations relative to ownership of the Fred Ex Work Product set forth in Article 4 of the Fred Ex Design-Build Contract.

**2.4 Design Development Services**

**2.4.1** Design-Builder shall be responsible for the professional quality, technical accuracy, timely completion and coordination of all drawings, specifications and other design submissions required to be developed by Design-Builder under the Fred Ex Contract Documents and shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in such design submissions.

**2.4.2** Design-Builder shall, consistent with any applicable provision of the Fred Ex Contract Documents, provide Concessionaire interim design submissions in accordance with the Part 2 (Fred Ex Technical Requirements). On or about the time of the scheduled submissions, Design-Builder and Concessionaire shall meet and confer about the submissions, with Design-Builder identifying during such meetings, among other things, the evolution of the design and any significant changes or deviations from the Fred Ex Contract Documents, or, if applicable, previous design submissions. Minutes of the meetings will be maintained by Design-Builder and provided to all attendees for review. Following the design review meeting, Concessionaire shall review and provide comments on the interim design submissions within twenty-eight (28) days after receipt of the required submissions. Design-Builder shall promptly revise and modify all such submittals so as to fully reflect all comments and shall deliver to Concessionaire revised submittals for review and comment (and approval as the case may be).

**2.4.3** Design-Builder shall submit to Concessionaire Construction Documentation in accordance with Part 2 (Fred Ex Technical Requirements).

**2.4.4** Concessionaire's review, comment and/or approval of interim design submissions and the Construction Documentation are for the purpose of establishing Design-Builder's compliance with the requirements of the Contract Documentation and mutually establishing a conformed set of Fred Ex Contract Documents compatible with the requirements of the Fred Ex Work. Concessionaire's review, comment and/or approval of any interim or final design submission (including but not limited to the Construction Documentation) shall not be deemed to transfer any liability from Design-Builder to Concessionaire.

**2.4.5** To the extent not prohibited by the Fred Ex Contract Documents or Legal Requirements, Design-Builder may, with the prior agreement of Concessionaire, prepare design submittals and Construction Documentation for a portion of the Fred Ex Work to permit procurement and construction to proceed on that portion of the Fred Ex Work prior to completion of the Construction Documentation for the entire Fred Ex Work.



## **2.5 Legal Requirements**

**2.5.1** Design-Builder shall keep fully informed of and perform the Fred Ex Work in accordance with all Legal Requirements. Design-Builder shall provide all notices, and execute and file the documents, statements and/or affidavits applicable to the Fred Ex Work as required by the Legal Requirements. Design-Builder shall permit Concessionaire's examination of any records made subject to such examination by any applicable Legal Requirements.

**2.5.2** Design-Builder may request, by submission of a Fred Ex Work Order request, that the Fred Ex Contract Price and/or Fred Ex Contract Time(s) shall be adjusted to compensate Design-Builder for the effects of any changes in the Legal Requirements enacted after the Fred Ex Design-Build Contract Date, affecting the performance of the Fred Ex Work. Such effects may include, without limitation, revisions Design-Builder is required to make to the Construction Documentation because of changes in Legal Requirements. Notwithstanding anything to the contrary, the relief afforded by this Section 2.5 shall not apply to changes in any tax laws, with Design-Builder bearing the risk of such changes.

## **2.6 Governmental Approvals**

**2.6.1** Except as identified in Section 3.5.1, Design-Builder shall obtain and pay for all necessary Governmental Approvals required for the prosecution of the Fred Ex Work by any Governmental Unit. If any such Governmental Approval is required to be formally issued in the name of Concessionaire, Design-Builder shall undertake all efforts to obtain such Governmental Approvals subject to Concessionaire's reasonable cooperation with Design-Builder, including execution and delivery of appropriate applications and other documentation in forms approved by Concessionaire. Design-Builder shall deliver to Concessionaire, promptly after Design-Builder's receipt, a copy of each such Governmental Approval, with a listing of the status of all such Governmental Approvals included in the monthly reports required by Section 1.4 of the Part 2 (Fred Ex Technical Requirements).

**2.6.2** Design-Builder shall provide reasonable assistance to Concessionaire in obtaining those Governmental Approvals that are Concessionaire's responsibility, and no construction activity will commence until: (i) all Governmental Approvals required for the relevant construction activity (including any activity that may disturb the Site) have been obtained; (ii) Concessionaire has been notified that such Governmental Approvals have been obtained; and (iii) Concessionaire has, after reviewing the validity and scope of the Governmental Approval, authorized Design-Builder to proceed.

**2.6.3** Design-Builder shall ensure that the Fred Ex Work conforms to the requirements and stipulations of all Governmental Approvals. Any violations of or noncompliance with any Governmental Approval, including but not limited to suspensions caused by Design-Builder violating or not being in compliance with a Governmental Approval, shall be at the sole risk of Design-Builder, and shall not be a basis for adjusting the Fred Ex Contract Price and/or Fred Ex Contract Time(s).

**Execution Version**

---

**2.6.4** Design-Builder shall provide reasonable assistance to Concessionaire in obtaining all other Governmental Approvals that are Concessionaire's responsibility, which assistance may include providing information, documents, design, schedules, and plans associated with such Governmental Approvals.

**2.7 Design-Builder's Construction Phase Services**

**2.7.1** Unless otherwise stated in the Fred Ex Contract Documents to be the responsibility of Concessionaire, TTMS Contractor, or a Separate Contractor, Design-Builder shall provide through itself or Subcontractors the necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities and other temporary facilities to permit Design-Builder to complete construction of the Fred Ex Project consistent with the Fred Ex Contract Documents.

**2.7.2** Design-Builder (or in the case where the Design-Builder is a Joint Venture, the equity members of the Joint Venture) shall self-perform Work having a value in the amount of no less than thirty percent (30%) of the Contract Price.

**2.7.3** Design-Builder shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Fred Ex Contract Documents, and shall maintain or cause to be maintained all licenses required of the Design-Builder or its employees in connection with the Fred Ex Work. Design-Builder shall at all times exercise complete and exclusive control over the means, methods, sequences and techniques of construction.

**2.7.4** Design-Builder shall employ only Subcontractors who are duly licensed and qualified to perform the Fred Ex Work lawfully in the Commonwealth of Virginia and consistent with the Fred Ex Contract Documents. Design-Builder shall not use any Subcontractor to whom Concessionaire has a reasonable objection, and shall obtain Concessionaire's written consent before making any substitutions or additions to Subcontractors previously identified to Concessionaire as being members of Design-Builder's Fred Ex Project team, including those who may have been identified in the Proposal.

**2.7.5** Design-Builder assumes responsibility to Concessionaire for the proper performance of the Fred Ex Work of Subcontractors and any acts and omissions in connection with such performance. Design-Builder shall provide Concessionaire prompt notice of any breach of its obligations related to the Fred Ex Work by any Subcontractor, which shall notice shall in any event be no later than seven (7) days after Design-Builder discovers such breach. Nothing in the Fred Ex Contract Documents is intended or deemed to create any legal or contractual relationship between Concessionaire and any Subcontractor or Sub-Subcontractor, including but not limited to any third-party beneficiary rights.

**2.7.6** Design-Builder shall coordinate the activities of all Subcontractors. If Concessionaire performs other work on the Fred Ex Project or at the Site with the TTMS Contractor and Separate Contractors under Concessionaire's control, Design-Builder agrees to reasonably cooperate and coordinate its activities with those of such contractors so that the Fred Ex Project can be completed in an orderly and coordinated manner without unreasonable disruption.

**Execution Version**

---

**2.7.7** Design-Builder shall keep the Site reasonably free from debris, trash and construction wastes to permit Design-Builder to perform its construction services efficiently, safely and without interfering with the use of adjacent land areas. Upon Final Completion of the Fred Ex Work, or a portion of the Fred Ex Work, Design-Builder shall remove all debris, trash, construction wastes, materials, equipment, machinery and tools arising from the Fred Ex Work or applicable portions thereof to permit Concessionaire to occupy the Fred Ex Project or a portion of the Fred Ex Project for its intended use.

**2.7.8** Design-Builder shall be responsible for the safety and security of the Site, including any and all materials, equipment, and machinery on the Site, until Final Completion of the Fred Ex Work.

**2.8 Design-Builder’s Responsibility for Project Safety**

**2.8.1** Design-Builder recognizes the importance of performing the Fred Ex Work in a safe manner so as to prevent damage, injury or loss to: (i) any individuals at the Site, whether working or visiting; (ii) the Fred Ex Work, including materials and equipment incorporated into the Fred Ex Work or stored on-Site or off-Site; and (iii) all other property at the Site or adjacent thereto. Design-Builder assumes responsibility for implementing and monitoring all safety precautions and programs related to the performance of the Fred Ex Work. Design-Builder shall, prior to commencing construction, designate a Safety Representative(s) with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Fred Ex Work. Unless otherwise required by the Fred Ex Contract Documents, Design-Builder shall during each work shift have an individual, who may have responsibilities on the Fred Ex Project in addition to safety, designated as Safety Representative and stationed at the Site. The Safety Representative shall make routine safety inspections of the Site during each shift. When the Safety Manager is on-Site, the Safety Manager may satisfy the role of Safety Representative. The Safety Manager shall hold weekly safety meetings with Design-Builder’s personnel, Subcontractors and others as applicable. Design-Builder shall provide minutes of each safety meeting to Concessionaire within five (5) days of such meeting.

**2.8.2** Design-Builder shall provide a Health, Safety and Security (HS&S) Plan for Concessionaire’s review in accordance with Part 2 (Fred Ex Technical Requirements).

**2.8.3** Design-Builder and Subcontractors shall comply with: (i) all Legal Requirements relating to safety; (ii) Design-Builder’s HS&S Plan; and (iii) any Concessionaire-specific safety requirements set forth in the Fred Ex Contract Documents, provided that such Concessionaire-specific requirements do not violate any applicable Legal Requirement. Design-Builder will immediately report in writing any safety-related injury, loss, damage or accident arising from the Fred Ex Work to Concessionaire’s Representative and, to the extent mandated by Legal Requirements, to all Governmental Units having jurisdiction over safety-related matters involving the Fred Ex Project or the Fred Ex Work.

**2.8.4** Concessionaire shall have the right to immediately suspend any or all Fred Ex Work if Design-Builder fails to comply with its obligations hereunder.

Execution Version

---

**2.8.5** Design-Builder’s responsibility for safety under this Section 2.8 is not intended in any way to relieve Subcontractors and Sub-Subcontractors of their own contractual and legal obligations and responsibility for: (i) complying with all Legal Requirements, including those related to health and safety matters; and (ii) taking all necessary measures to implement and monitor all safety precautions and programs to guard against injury, losses, damages or accidents resulting from their performance of the Fred Ex Work.

## **2.9 Design-Builder’s Warranty**

**2.9.1** Design-Builder warrants to Concessionaire, VDOT, and the Fred Ex Financing Parties that the construction, including all materials and equipment furnished as part of the construction, shall be new unless otherwise specified in the Fred Ex Contract Documents, of good quality, in conformance with the Fred Ex Contract Documents and free of defects in materials and workmanship. Design-Builder’s warranty obligation excludes defects caused by abuse, damage, alterations, or failure to maintain the Fred Ex Work by persons other than Design-Builder or anyone for whose acts Design-Builder may be liable. All warranties received by the Design-Builder from Subcontractors shall be passed through to Concessionaire in full. Nothing in this warranty is intended to limit any manufacturer’s warranty which provides Concessionaire with greater warranty rights than set forth in this Section 2.9 or the Fred Ex Contract Documents. Design-Builder will provide Concessionaire with all manufacturers’ warranties prior to the Final Completion Date(s) for all Work.

## **2.10 Correction of Defective Fred Ex Work**

**2.10.1** Design-Builder agrees to correct any Fred Ex Work that is found not to be in conformance with the Fred Ex Contract Documents, including that part of the Fred Ex Work subject to Section 2.9 hereof, within a period of two (2) years from the date of Final Completion of the Fred Ex Work or the Route 17 General Purpose Lane Exit Ramp Final Completion Date (for the Route 17 General Purpose Lane Exit Ramp Work completed prior to the Final Completion Date), as applicable, or within such longer period to the extent required by the Fred Ex Contract Documents or applicable Legal Requirements or Government Approvals (the “**Warranty Period**”).

**2.10.2** Design-Builder shall, within seven (7) days of receipt of written notice from Concessionaire or the QA Manager that the Fred Ex Work is not in conformance with the Fred Ex Contract Documents, take meaningful steps to commence correction of such nonconforming Fred Ex Work, including the correction, removal or replacement of the nonconforming Fred Ex Work and any damage caused to other parts of the Fred Ex Work affected by the nonconforming Fred Ex Work. If Design-Builder fails to commence the necessary steps within such seven (7) day period, Concessionaire, in addition to any other remedies provided under the Fred Ex Contract Documents, may provide Design-Builder with written notice that Concessionaire will commence correction of such nonconforming Fred Ex Work with its own forces. If Concessionaire does perform such corrective Fred Ex Work, Design-Builder shall be responsible for all reasonable costs incurred by Concessionaire in performing such correction. If the nonconforming Fred Ex Work creates an emergency requiring an immediate response, the seven (7) day period identified herein shall be deemed inapplicable.

**2.10.3** The Warranty Period referenced in Section 2.10.1 above applies only to Design-Builder's obligation to correct nonconforming Fred Ex Work and is not intended to constitute a period of limitations for any other rights or remedies Concessionaire may have regarding Design-Builder's other obligations under the Fred Ex Contract Documents.

### **2.11 Concessionaire's Rights to Direct Design-Builder**

**2.11.1** When any act, omission, or other action of Design-Builder occurs that violates the requirements, conditions, or terms of the Fred Ex Contract Documents; or affects the health, safety, or welfare of the public or natural resources, Concessionaire will have the right, but not the obligation, to direct Design-Builder to take prompt action to repair, replace, or restore the damage or injury within a time frame established by Concessionaire. If Design-Builder fails to make such repair, replacement, or restoration within the established time frame, Concessionaire will have the damage or injury repaired, replaced, or restored and will deduct the cost of such repair, replacement, or restoration (plus 25% for supervisory and administrative personnel costs) from monies due Design-Builder.

## **Article 3**

### **Concessionaire's Services and Responsibilities**

#### **3.1 Duty to Cooperate**

**3.1.1** Concessionaire shall, throughout the performance of the Fred Ex Work, cooperate with Design-Builder and perform its responsibilities, obligations and services in a timely manner to facilitate Design-Builder's timely and efficient performance of the Fred Ex Work and so as not to delay or interfere with Design-Builder's performance of its obligations under the Fred Ex Contract Documents.

**3.1.2** Concessionaire shall provide timely reviews and (where required) approvals of submittals, interim design submissions and Construction Documentation consistent with the turnaround times set forth in Design-Builder's schedule, provided, however, that, unless stated otherwise in the Fred Ex Contract Documents, Concessionaire shall have twenty-eight (28) days after receipt of such submissions to act upon such submissions. This Section 3.1.2 shall not be construed to apply to the acquisition of Governmental Approvals by either the Design-Builder or the Concessionaire.

**3.1.3** Concessionaire's Representative will participate in monthly progress meetings for the duration of the Fred Ex Project.

#### **3.2 Furnishing of Services and Information**

**3.2.1** Concessionaire has provided the RFP Documents for Design-Builder to consider in developing the Proposal and for executing the Fred Ex Work. Design-Builder shall thoroughly review and compare all such documents during the Scope Validation Period and, to the extent that

Execution Version

---

any Scope Issues arise, Concessionaire shall consider such issues in accordance with Section 2.2 above.

**3.3 Financial Information****3.3.1 (Not Used)**

**3.3.2** Design-Builder shall cooperate with the reasonable requirements of Concessionaire's lenders or other financial sources. Notwithstanding the preceding sentence, after the Notice to Proceed Date, Design-Builder shall have no obligation to execute for Concessionaire or Concessionaire's lenders or other financial sources any documents or agreement that require Design-Builder to assume obligations or responsibilities greater than those existing obligations Design-Builder has under the Fred Ex Contract Documents and the Fred Ex Direct Agreement.

**3.4 Concessionaire's Representative**

**3.4.1** Concessionaire's Representative shall be responsible for providing Concessionaire-supplied information and approvals in a timely manner to permit Design-Builder to fulfill its obligations under the Fred Ex Contract Documents. Concessionaire's Representative shall also provide Design-Builder with prompt notice if it observes any failure on the part of Design-Builder to fulfill its contractual obligations, including any errors, omissions or defects in the performance of the Fred Ex Work.

**3.5 Governmental Approvals**

**3.5.1** VDOT has or will obtain and pay for the following Governmental Approvals:

- .1 Fred Ex Project Finding of No Significant Impact (FONSI).
- .2 Fred Ex Project Interchange Justification Report.
- .3 Other FHWA Approvals Necessary for the Initiation of the Fred Ex Project by the Amended and Restated Agreement Date.
- .4 Commonwealth Transportation Board Approvals of the Fred Ex Project by the Amended and Restated Agreement Date.

**3.5.2** If any of the Government Approvals listed in Section 3.5.1 are not provided to the Design-Builder by the dates specified, the Design-Builder shall be entitled to an extension of the Fred Ex Contract Time and adjustment to the Fred Ex Contract Price for any delays in Design-Builder's performance meeting the conditions set forth in Section 8.2.3 that are directly attributable to VDOT's failure to obtain and pay for these Government Approvals on a timely basis.

**3.5.3** Concessionaire shall provide reasonable assistance to Design-Builder in obtaining all other Governmental Approvals that are Design-Builder's responsibility.

### **3.6 Separate Contractors**

**3.6.1** Design-Builder hereby acknowledges that Concessionaire, Concessionaire's Affiliates, and/or VDOT has, or may in the future have, concurrent contracts with Separate Contractors for performance of other work, including but not limited to operations and maintenance work, on, near, or within the same geographical area of the Fred Ex Work. Design-Builder shall not impede or limit access to such work by Separate Contractors.

**3.6.2** When separate contracts are awarded, contractors shall not hinder the work being performed by other contractors. Design-Builder shall cooperate with each Separate Contractor. In case of dispute, the Concessionaire will be the referee and its decision will be binding on all parties.

**3.6.3** When contracts are awarded to Separate Contractor(s), Design-Builder and the Separate Contractor(s), in conference with the Concessionaire, shall establish a written joint schedule of operations and incorporate it into the Baseline Schedule as described in Section 1.4 of the Part 2 (Fred Ex Technical Requirements). The schedule shall be based on the limitations of the individual contracts and the joining of the work of one contract with the others. The schedule shall set forth the approximate dates and sequences for the several items of work to be performed and shall ensure completion within the contract time limit. Concessionaire Representative may allow modifications of the schedule when it determines, in its sole discretion, that there are benefits in doing so.

**3.6.4** Any modification of the schedule shall be in writing, mutually agreed to and signed by the Design-Builder following consultation with the Separate Contractor(s), and shall be binding on the Design-Builder and/or Separate Contractor(s) in the same manner as the original Fred Ex Design-Build Contract.

**3.6.5** If the Design-Builder and/or Separate Contractor(s) fail to agree on a joint schedule of operations, they shall submit their individual schedules to the Concessionaire, who will prepare a schedule that will be binding on the Design-Builder and Separate Contractor(s).

**3.6.6** The joint schedule and any modification thereof shall become a part of each contract involved. The failure of Design-Builder and/or Separate Contractor to abide by the terms of the joint schedule will be justification for declaring, as applicable, the Design-Builder and/or Separate Contractor in default of his contract.

**3.6.7** Design-Builder and/or Separate Contractor shall assume all liability, financial or otherwise, in connection with its contract and shall protect and save harmless Concessionaire from any and all damages and claims that may arise because of any inconvenience, delay, or loss it experiences as a result of the presence and operations of other Separate Contractors working in or near the work covered by its contract. It shall also assume all responsibility for any of his work not completed because of the presence or operation of any Separate Contractor.

**3.6.8** Except for an extension of the Fred Ex Contract Time(s), the Concessionaire will not be responsible for any inconvenience, delay, or loss experienced by the Design-Builder as a result of his failure to gain access to the work at the time contemplated because of the actions or inactions of a Separate Contractor. When the failure to gain access is not due to any fault or negligence of

**Execution Version**

---

the Design-Builder, an extension of the Fred Ex Contract Time(s) will be allowed on the basis of the amount of time delayed meeting the conditions set forth in Section 8.2.3.

**3.6.9** Design-Builder acknowledges that it has made full allowance for complying with its obligations relative to the Separate Contractors in the Fred Ex Contract Price and the Fred Ex Project Schedule.

**3.6.10** The Concessionaire will not assume any responsibility to Design-Builder for acts, failures, or omissions of any Separate Contractor that delays its work or otherwise except as provided herein.

**3.7 TTMS Contractor**

**3.7.1** The Fred Ex Project's TTMS scope of work will be performed by the TTMS Contractor under a direct contract with the Concessionaire. Design-Builder acknowledges that the Fred Ex Project's success is dependent upon the ability of Design-Builder and the TTMS Contractor to perform their respective obligations in a cooperative, collaborative and integrated manner. To help accomplish this, Concessionaire, Design-Builder and TTMS Contractor agree to follow the TTMS Interface Plan set forth in Exhibit 3.7.1 in execution of the Fred Ex Project and will reasonably cooperate with each other to meet the mutual goals of successful and timely completion of their respective work and the Fred Ex Project as a whole.

**3.7.2** Although the TTMS scope of work does not form part of the Fred Ex Work, Design-Builder shall be responsible for: (a) scheduling and coordinating all work and services of the TTMS Contractor; (b) directly obtaining all information it requires from the TTMS Contractor to perform the Fred Ex Work; and (c) providing all information the TTMS Contractor requires to perform its work. In performing its scheduling and coordination services, Design-Builder shall consider the reasonable requirements of the TTMS Contractor, recognizing that each party not only has contractual obligations to complete its work timely, but that the ability of the Concessionaire to use the Fred Ex Project for its intended purpose requires the timely completion of both the Fred Ex Work and the TTMS scope of work. Consequently, both the Design-Builder and the TTMS Contractor shall make reasonable accommodations to their schedules to meet the reasonable needs of the other party.

**3.7.3** Design-Builder acknowledges that it has made full allowance for complying with its obligations relative to the TTMS Contractor in the Fred Ex Contract Price.

**3.7.4** For the avoidance of doubt, Design-Builder shall not have any liability for the acts or omissions of the TTMS Contractor, nor shall the TTMS Contractor have any liability for the acts or omissions of Design-Builder.



**Article 4****Hazardous Environmental Conditions and Differing Site Conditions****4.1 Hazardous Environmental Conditions****4.1.1 General Obligations**

.1 Unless specifically stated to the contrary in the Part 2 (Fred Ex Technical Requirements) of the RFP, Design-Builder will be responsible for the management, treatment, handling, storage, monitoring, remediation, removal, transport and/or disposal of any Hazardous Environmental Conditions that are encountered on, in or under the Site.

.2 Design-Builder shall notify the Concessionaire prior to implementing any Remedial Actions contained in Design-Builder's Environmental Management Plan for Known Pre-Existing Hazardous Materials.

.3 If Design-Builder encounters any Unknown Pre-Existing Hazardous Materials the presence of which constitutes a Hazardous Environmental Condition, then Design-Builder will promptly notify Concessionaire and, in consultation with the Concessionaire, will develop a Remedial Action Plan setting out the scope of the Remedial Actions that Design-Builder proposes to take in relation to the relevant Hazardous Environmental Condition, such actions to include, but not be limited to: (i) conducting such further investigations as may be necessary or appropriate to determine the nature and extent of the Hazardous Materials and submitting copies of such data and reports to Concessionaire for its review and approval, (ii) taking reasonable steps, including in the case of excavation, construction, reconstruction or rehabilitation, modifications and/or construction techniques, to avoid or minimize excavation or dewatering in areas with Hazardous Materials, (iii) preparing and obtaining Governmental Approvals for remedial action plans, including Concessionaire approval and (iv) carrying out the Remedial Action Plan, including, as necessary, disposal of the Hazardous Materials. Design-Builder shall keep Concessionaire regularly apprised of its progress in executing any Remedial Action Plan.

.4 Before any Remedial Actions for Unknown Pre-Existing Hazardous Materials are taken that would inhibit Concessionaire's ability to ascertain the nature and extent of the Hazardous Environmental Condition, Design-Builder will afford Concessionaire the opportunity to inspect areas and locations that require Remedial Actions; *provided*, that in the case of a sudden release of any Unknown Pre-Existing Hazardous Materials, Design-Builder may take all reasonable actions necessary to stabilize and contain the release without prior notice or inspection, but will promptly notify Concessionaire of the sudden release and its location.

.5 Design-Builder will obtain all Governmental Approvals relating to all Remedial Actions. Design-Builder will be solely responsible for compliance with such Governmental Approvals and applicable Legal Requirements concerning or relating to Hazardous Materials. In carrying out Remedial Actions that are compensable by Concessionaire pursuant to Section 4.1.2, Design-Builder will not take any steps or actions which impair Concessionaire's potential claims for indemnity and contribution, statutory or otherwise.

**Execution Version**

---

.6 Unless directed otherwise by Concessionaire, Design-Builder will seek to recover costs from any available reimbursement program or from any third party responsible for generating or otherwise creating or contributing to conditions that led to the need for Remedial Action. Without limiting the preceding sentence, Design-Builder will seek pre-approval and pursue reimbursement from the Virginia Petroleum Storage Tank Fund (VPSTF) for qualifying expenses incurred during the course of investigation, containment, management, mitigation or remediation activities on petroleum storage tank releases. The parties will cooperate with and notify each other with respect to activities undertaken pursuant to this Section 4.1.1.6.

.7 Except as provided in Section 4.1.2 below, Design-Builder will bear all costs and expenses of preparing and complying with any Remedial Action Plan, of complying with Legal Requirements and obtaining and complying with Governmental Approvals pertaining to Hazardous Materials, and otherwise of carrying out Remedial Actions.

**4.1.2 Pre-Existing Hazardous Materials**

.1 Concessionaire will reimburse, to the extent permitted by the Legal Requirements, Design-Builder for Design-Builder's costs for Remedial Actions with respect to any Unknown Pre-Existing Hazardous Materials, the presence of which constitutes a Hazardous Environmental Condition.

.2 Concessionaire will assume, to the extent permitted by the Legal Requirements, responsibility for third-party claims against Design-Builder for personal injury, damages or harm to property or business due to any Pre-Existing Hazardous Materials, the presence of which constitutes a Hazardous Environmental Condition, and all related penalties, fines and administrative or civil sanctions arising out of or related to such Pre-Existing Hazardous Materials; except to the extent Design-Builder is obliged to indemnify Concessionaire pursuant to Section 4.1.3 below.

.3 Design-Builder will provide cost estimates with respect to such Remedial Actions which may be reimbursed by Concessionaire, for Concessionaire's review and approval prior to proceeding with any such Remedial Actions, subject to Section 4.1.1.3 above.

.4 Concessionaire reserves the right to perform Remedial Actions for Unknown Pre-Existing Hazardous Materials in lieu of, and as replacement for, Design-Builder's Remedial Action obligations subject to Section 4.1.1.3 above.

.5 Design-Builder will be entitled to submit a request for a Fred Ex Work Order in accordance with these General Conditions of Contract, to an adjustment in its Fred Ex Contract Price and/or Fred Ex Contract Time(s) to the extent Design-Builder's cost and/or time of performance meeting the conditions set forth in Section 8.2.3 have been adversely impacted by the presence, removal or remediation of Unknown Pre-Existing Hazardous Materials that constitute a Hazardous Environmental Condition.

**4.1.3 Design-Builder's Indemnification Obligations Regarding Hazardous Materials**

.1 Design-Builder will indemnify, protect, defend and hold harmless and release each Fred Ex Project Indemnatee from and against any and all claims against the Fred Ex Project Indemnitees by a person not party to the Fred Ex Design-Build Contract, including reasonable attorney's fees, expert witness fees and court costs suffered or incurred by such Fred Ex Project Indemnatee, to the extent caused by:

(A) Hazardous Materials introduced to or brought onto the Site by Design-Builder or its Subcontractors;

(B) failure of Design-Builder or any of its Subcontractors to comply with any requirement of the Fred Ex Contract Documents relating to Hazardous Materials (including any failure to perform any Remedial Action required in accordance with Section 4.1.1 above) or to otherwise comply with applicable Legal Requirements and Governmental Approvals; or

(C) the exacerbation, release, spreading, migration, or toxicity of Hazardous Materials due to the negligence, omission, recklessness, or willful misconduct of Design-Builder or any of its Subcontractors.

.2 Design-Builder shall defend such claims in accordance with Section 7 below.

.3 Design-Builder's indemnification under this Section 4.1.3 will not apply to claims to the extent caused by the negligence, recklessness, or willful misconduct of any Fred Ex Project Indemnatee.

**4.2 Inspection of Site Conditions**

4.2.1 Design-Builder represents and warrants that it has, as of the Fred Ex Design-Build Contract Date, ascertained the nature and location of the Fred Ex Work, the character and accessibility of the Site, the existence of obstacles to construction, the availability of facilities and utilities, the location and character of existing or adjacent work or structures, the surface and subsurface conditions, and other general and local conditions (including labor) which might affect its performance of the Fred Ex Work or the cost thereof.

4.2.2 Design-Builder will, after its receipt of LNTP, undertake such testing, inspections and investigations as may be necessary to perform its obligations under the Fred Ex Contract Documents, including but not limited to: additional geotechnical evaluations, utility investigations or Hazardous Materials studies. If Design-Builder intends to conduct additional testing, inspections, investigations or geotechnical evaluations to supplement or corroborate the information contained in the RFP Documents, it shall do so during the Scope Validation Period. Any Scope Issues that arise from such evaluations shall be treated in the manner set forth in Section 2.2 above. All reports or analyses generated by Design-Builder's testing, inspections and investigations, including but not limited to additional geotechnical testing, shall be furnished to Concessionaire promptly after such reports or analyses are generated.

### **4.3 Differing Site Conditions**

**4.3.1** Concealed or latent physical conditions or subsurface conditions at the Site that: (i) materially differ from the conditions indicated in the RFP Documents (as such conditions may be further described through reports or analyses undertaken during the Scope Validation Period); or (ii) are of an unusual nature, differing materially from the conditions ordinarily encountered and generally recognized as inherent in the Fred Ex Work are collectively referred to herein as “**Differing Site Conditions.**” If Design-Builder encounters a Differing Site Condition, Design-Builder will be entitled to submit a request for a Fred Ex Work Order for an adjustment in the Fred Ex Contract Price and/or Fred Ex Contract Time(s) to the extent Design-Builder’s cost and/or time of performance are adversely impacted by the Differing Site Condition as allowed for herein.

**4.3.2** Upon encountering a Differing Site Condition, Design-Builder shall provide prompt written notice to Concessionaire of such condition, which notice shall not be later than fourteen (14) days after such condition has been encountered. Design-Builder shall, to the extent reasonably possible, provide such notice before the Differing Site Condition has been substantially disturbed or altered.

**4.3.3** Design-Builder shall not be entitled to any adjustment in the Fred Ex Contract Price and/or Fred Ex Contract Time(s) due to impacts of Differing Site Conditions not identified during the Scope Validation Period.

## **Article 5** **Insurance and Bonds**

### **5.1 Design-Builder’s Insurance Requirements**

**5.1.1** Design-Builder shall procure and maintain the insurance coverages required by Exhibit 5.1.1.

### **5.2 Bonds and Other Performance Security**

**5.2.1** Design-Builder shall procure performance and payment bonds executed by a surety acceptable to Concessionaire, each in the amount of one hundred percent (100%) of the Fred Ex Contract Price, and in accordance with all other requirements of the Fred Ex Contract Documents, including the Division I Amendments.

**5.2.2** If the Design-Builder is structured as a limited liability company, partnership or joint venture, the bonding approach used will ensure that the members of such organizations will have joint and several liability for the performance of the Fred Ex Work required for the Fred Ex Project. A single 100% performance bond and a single 100% payment bond shall be provided regardless of any co-surety relationship.

## **Article 6** **Payment**

### **6.1 Schedule of Payments**

**6.1.1** Design-Builder shall submit to Concessionaire, for its review and approval, and as part of its submission of the Baseline Schedule, the Earned Value Schedule indicating the Design-Builder's anticipated monthly earnings schedule in accordance with Section 1.4 of the Part 2 (Fred Ex Technical Requirements). Concessionaire reserves the right to withhold approval for all or part of Design-Builder's Applications for Payment, except for approved Early Works payments, until such time Design-Builder furnishes an approved Baseline Schedule.

**6.1.2** The parties agree that progress payments for Fred Ex Work performed prior to Concessionaire's approval of the Baseline Schedule is based on the Early Works Earned Value Schedule agreed by the parties.

**6.1.3** Neither the Earned Value Schedule included in the Design-Builder's Baseline Schedule nor payments made under Section 6.1.2 above shall exceed the monthly payment schedule unless Concessionaire specifically approves this in writing.

### **6.2 Monthly Progress Payments**

**6.2.1** Prior to the eighth (8th) day of each month, Design-Builder shall submit a draft Application for Payment for Concessionaire's concurrence for all Fred Ex Work performed as of the first day of such month and coinciding with the progress reflected in the monthly Baseline Schedule update. The mutually agreed upon Application for Payment details shall then be submitted formally on or before the fifteenth (15th) day of the month. The Application for Payment shall be accompanied by all supporting documentation, including the full and complete Monthly Progress Report, required by the Fred Ex Contract Documents and/or established at the meeting required by Section 2.1.2 hereof. Payment shall be made in accordance with the following earned value calculation:

**.1** Design-Builder shall identify each activity, and the value in dollars of such activity, in accordance with Section 6.1.1 above. Applications for Payment shall be made based on either a mutually agreeable earned value calculation or, if the parties are unable to reach mutual agreement, the following earned values:

**.1** Design-Builder shall earn twenty percent (20%) of the value of an activity upon initiation of the respective activity.

**.2** Design-Builder shall earn eighty percent (80%) of the value of an activity upon completion of the respective activity.

**.2** QA/QC shall be an integral part of each activity. As part of each Application for Payment that includes completed activities, Design-Builder shall submit with the Application for Payment evidence of the QA/QC reviews, including any checklists, summary data, high-level/outline calculations or design checks, and evaluations of the work and the qualifications of

**Execution Version**

---

the responsible personnel that completed the work, and the basis on which the relevant QA or QC reviewer relied on to make its determination the Work is complete and conforms to the requirements of the Fred Ex Contract Documents. Furthermore, the QAM shall: (a) verify that the design included in each activity has been completed in accordance with the Fred Ex Contract Documents; (b) certify that the construction included in each activity has been completed in accordance with the Fred Ex Contract Documents; and (c) certify that all required QA/QC tests, measurements, permits or other requirements have been completed and all non-conformance reports relative to the respective activity have been resolved. The QAM's certification for monthly Application of Payment for construction activities shall include the following statement: *As the Quality Assurance Manager, I certify, to the best of my knowledge, information and belief based upon and to the extent of: (i) current on-site observations and field testing required to be performed; and (ii) material certifications and test reports, that each Fred Ex Work Package shown herein as complete has been completed in accordance with the Fred Ex Contract Documents, and that all required QA/QC tests, measurements, permits or other requirements have been completed and all non-conformance reports relative to a respective Fred Ex Work Package have been resolved except for the attached list of open issues.*

**6.2.2** The Application for Payment may request payment for equipment and materials not yet incorporated into the Fred Ex Project, provided that: (i) Concessionaire, in its sole discretion, agrees that it is willing to allow payment for such equipment and materials; (ii) Concessionaire is satisfied that the equipment and materials are suitably stored at either the Site or another acceptable location; (iii) the equipment and materials are protected by suitable insurance; and (iv) upon payment, Concessionaire will receive the equipment and materials free and clear of all liens and encumbrances.

**6.2.3** The Application for Payment shall constitute Design-Builder's representation that the Fred Ex Work has been performed consistent with the Fred Ex Contract Documents, has progressed to the point indicated in the Application for Payment, and that title to all Fred Ex Work will pass to Concessionaire free and clear of all claims, liens, encumbrances, and security interests upon the earlier of (i) incorporation of the Fred Ex Work into the Fred Ex Project and (ii) Design-Builder's receipt of payment.

**6.2.4** (Not Used)

**6.2.5** In each Application for Payment, Design-Builder shall (a) certify to Concessionaire that the Fred Ex Project, the Fred Ex Project Right of Way and any and all interests and estates therein, and all improvements and materials placed on the Fred Ex Project Site, are, to the extent of the most recent payment received by Design-Builder, free from any and all claims, liens, security interests or encumbrances in the nature of mechanics', labor or materialmen's liens or otherwise, arising out of or in connection with performance by Design-Builder, or any Subcontractor in excess of \$50,000, of the Fred Ex Work, and (b) provide an interim lien waiver, in the form of Exhibit 6.2.5(a) hereto, of Design-Builder's lien claims, to the extent of the most recent payment received by Design-Builder, and interim lien waivers, in the form of Exhibit 6.2.5(b) hereto, from each Subcontractor with a Subcontract in excess of \$50,000, to the extent of the most recent payment received by Design-Builder, as are necessary to support Design-Builder's certificate. If any claim, lien, security interest or encumbrance is filed or notification of withholding money for labor or

**Execution Version**

---

material furnished under the Fred Ex Contract Documents is served on Concessionaire, VDOT or any Fred Ex Financing Party, Concessionaire may withhold from any payment or other amount payable to Design-Builder under the Fred Ex Contract Documents or otherwise, an amount sufficient to discharge any or all such liens or claims, unless Design-Builder shall furnish a bond in form, substance and amount reasonably satisfactory to Concessionaire, VDOT and the Fred Ex Financing Parties to protect Concessionaire, the Fred Ex Project, Fred Ex Project Right of Way, and the Fred Ex Project Site against such liens or claims, and, after thirty (30) days from the time such lien or claim is made, unless Design-Builder shall have furnished a bond as described above, Concessionaire may discharge such lien or claim with the moneys withheld, whereupon for purposes of the Fred Ex Contract Documents such moneys shall be deemed to have been paid to Design-Builder hereunder. In addition, Design-Builder shall deliver to Concessionaire a final release and waiver of liens, in the form of Exhibit 6.2.5(c) hereto, from each Subcontractor with a Subcontract in excess of \$50,000 on the payment date next following the date on which final payment to such Subcontractor is made.

**6.3 Withholding of Payments**

**6.3.1** On or before the date established in the Fred Ex Design-Build Contract, Concessionaire shall pay Design-Builder all amounts properly due. If Concessionaire determines that Design-Builder is not entitled to all or part of an Application for Payment, it will notify Design-Builder in writing at least seven (7) days prior to the date payment is due. The notice shall indicate the specific amounts Concessionaire intends to withhold, the reasons and contractual basis for the withholding, and the specific measures Design-Builder must take to rectify Concessionaire's concerns. Design-Builder and Concessionaire will attempt to resolve Concessionaire's concerns prior to the date payment is due. If the parties cannot resolve such concerns, Design-Builder may pursue its rights under the Fred Ex Contract Documents, including those under Article 10 hereof.

**6.3.2** Notwithstanding anything to the contrary in the Fred Ex Contract Documents, Concessionaire shall pay Design-Builder all undisputed amounts in an Application for Payment within the times required by the Fred Ex Design-Build Contract.

**6.4 Right to Stop Fred Ex Work and Interest**

If Concessionaire wrongfully fails to pay Design-Builder any amount that becomes due, Design-Builder, in addition to all other remedies provided in the Fred Ex Contract Documents, may stop Fred Ex Work pursuant to Section 11.3 hereof. All payments due and unpaid shall bear interest at the rate set forth in the Fred Ex Design-Build Contract.

**6.5 Design-Builder's Payment Obligations**

**6.5.1** Design-Builder will pay Design Consultants and Subcontractors, in accordance with its contractual obligations to such parties, all the amounts Design-Builder has received from Concessionaire on account of their work. Design-Builder will impose similar requirements on Design Consultants and Subcontractors to pay those parties with whom they have contracted. Design-Builder will indemnify and defend Concessionaire against any claims for payment and mechanic's liens as set forth in Section 7.2.1 hereof.

## **6.6 Completion**

**6.6.1** The Design-Builder shall have charge and care thereof and shall take every precaution against damage to any part of the Fred Ex Work thereof by action of the elements or from any other cause. The Design-Builder shall rebuild, repair, restore, and make good on damage to any portion of the Fred Ex Work occasioned by any of the foregoing causes and shall bear the expense thereof. The Design-Builder's obligations under this Section 6.6.1 shall cease as of the date Concessionaire has provided a signed Service Commencement Certificate to Design-Builder.

**6.6.2** (Not Used)

**6.6.3** Upon obtaining Final Completion, Design-Builder will provide Concessionaire with a Final Application for Payment. Concessionaire shall make final payment by the time required in the Fred Ex Design-Build Contract. At the time of submission of its Final Application for Payment, Design-Builder shall provide the following information:

.1 a final lien waiver, in the form of Exhibit 6.6.3, of all liens that Design-Builder may have against Concessionaire, the Fred Ex Project and the Fred Ex Project Right of Way, and an affidavit that there are no claims, or obligations or liens outstanding or unsatisfied for labor, services, material, equipment, taxes or other items performed, furnished or incurred for or in connection with the Fred Ex Work which will in any way affect Concessionaire's interests;

.2 a general release executed by Design-Builder waiving, upon receipt of final payment by Design-Builder, all claims, except those claims previously made in writing to Concessionaire and remaining unsettled at the time of final payment, which claims shall be specifically listed in an attachment to the general release;

.3 consent of Design-Builder's surety to final payment;

.4 all operating manuals, warranties and other deliverables required by the Fred Ex Contract Documents, including the project records required by Section 11.1.10 of the Fred Ex Design-Build Contract; and

.5 certificates of insurance confirming that required coverages will remain in effect consistent with the requirements of the Fred Ex Contract Documents.

**6.6.4** Upon making final payment, Concessionaire waives all claims against Design-Builder except claims relating to: (i) Design-Builder's failure to satisfy its payment obligations; (ii) Design-Builder's failure to complete the Fred Ex Work consistent with the Fred Ex Contract Documents, including defects appearing after final payment; and (iii) warranties and indemnifications as set forth in the Fred Ex Contract Documents.



## **Article 7** **Indemnification**

### **7.1 Patent and Copyright Infringement**

**7.1.1** Design-Builder shall defend any action or proceeding brought against any Fred Ex Project Indemnitee based on any claim that the Fred Ex Work, or any part thereof, or the operation or use of the Fred Ex Work or any part thereof, constitutes infringement of any United States patent or copyright, now or hereafter issued. The Fred Ex Project Indemnitee shall give prompt written notice to Design-Builder of any such action or proceeding and will reasonably provide authority, information and assistance in the defense of same. Design-Builder shall indemnify and hold harmless Fred Ex Project Indemnitees from and against all damages and costs, including but not limited to attorneys' fees and expenses awarded against Fred Ex Project Indemnitees or Design-Builder in any such action or proceeding. Design-Builder agrees to keep the Fred Ex Project Indemnitees informed of all developments in the defense of such actions.

**7.1.2** If a Fred Ex Project Indemnitee is enjoined from the operation or use of the Fred Ex Work, or any part thereof, as the result of any patent or copyright suit, claim, or proceeding, Design-Builder shall at its sole expense take reasonable steps to procure the right to operate or use the Fred Ex Work. If Design-Builder cannot so procure such right within a reasonable time, Design-Builder shall promptly, at Design-Builder's option and at Design-Builder's expense: (i) modify the Fred Ex Work so as to avoid infringement of any such patent or copyright; or (ii) replace said Fred Ex Work with Fred Ex Work that does not infringe or violate any such patent or copyright.

**7.1.3** Sections 7.1.1 and 7.1.2 above shall not be applicable to any suit, claim or proceeding based on infringement or violation of a patent or copyright: (i) relating solely to a particular process or product of a particular manufacturer specified by Concessionaire and not offered or recommended by Design-Builder to Concessionaire; or (ii) arising from modifications to the Fred Ex Work by Concessionaire after acceptance of the Fred Ex Work.

### **7.2 Payment Claim Indemnification**

**7.2.1** Providing that Concessionaire is not in breach of its contractual obligation to make payments to Design-Builder for the Fred Ex Work, Design-Builder shall indemnify, defend and hold harmless Fred Ex Project Indemnitees from any claims or mechanic's liens brought against any Fred Ex Project Indemnitees or against the Fred Ex Project as a result of the failure of Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable, to pay for any services, materials, labor, equipment, taxes or other items or obligations furnished or incurred for or in connection with the Fred Ex Work. Within three (3) days of receiving written notice from a Fred Ex Project Indemnitees that such a claim or mechanic's lien has been made and/or filed, Design-Builder shall commence to take the steps necessary to resolve and/or discharge said claim or lien, including, if necessary, the furnishing of a mechanic's lien bond. If Design-Builder fails to do so, the Fred Ex Project Indemnitees will have the right to resolve and/or discharge the claim or lien and hold Design-Builder liable for costs and expenses incurred, including attorneys' fees.

### **7.3 Design-Builder's General Indemnification**

**7.3.1** Design-Builder, to the fullest extent permitted by law, shall indemnify, hold harmless and defend Fred Ex Project Indemnitees from and against claims, losses, damages, liabilities, including attorneys' fees and expenses, for: (i) for any liabilities or damages to the extent resulting from the acts or omissions of Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable; and (ii) any violation of Sections 2.5, 2.6, or 2.8 hereof by Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable, (iii) any actual or alleged inverse condemnation, trespass, nuisance or similar taking of or harm to real property committed or caused by a Design-Builder Party in connection with the Fred Ex Project arising from any actual or alleged (A) failure by Design-Builder to comply with, observe or perform any of the covenants, obligations, agreements, terms or conditions in this Agreement; (B) breach by Design-Builder of its representations or warranties set forth in this Agreement or (C) misconduct, negligence or other culpable act, error or omission of a Design-Builder Party; provided, however, that the Design-Builder will not be required to indemnify, defend or hold harmless a Fred Ex Project Indemnitee from and against any Losses actually suffered or incurred by such Fred Ex Project Indemnitee due to third party claims that are based upon any actual inverse condemnation arising from the establishment of the Fred Ex Project Right of Way as defined in the Fred Ex Contract Documents and any real estate right outside the Fred Ex Project Right of Way acquired pursuant to this Agreement.

**7.3.2** If an employee of Design-Builder, Design Consultants, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable, has a claim against a Fred Ex Project Indemnitee, Design-Builder's indemnity obligation set forth in Section 7.3.1 above shall not be limited by any limitation on the amount of damages, compensation or benefits payable by or for Design-Builder, Design Consultants, Subcontractors, or other entity under any employee benefit acts, including workers' compensation or disability acts.

### **7.4 Defense and Indemnification Procedures**

**7.4.1** If Concessionaire receives notice of or otherwise has actual knowledge of a claim which it believes is within the scope of Design-Builder's indemnification under the Fred Ex Contract Documents, it shall by writing as soon as practicable: (i) inform Design-Builder of such claim; (ii) send to Design-Builder a copy of all written materials Concessionaire has received asserting such claim; and (iii) notify Design-Builder that either: (a) the defense of such claim is being tendered to Design-Builder; or (b) Concessionaire has elected to conduct its own defense for a reason set forth below.

**7.4.2** If the insurer under any applicable insurance policy accepts tender of defense, Design-Builder and Concessionaire shall cooperate in the defense as required by the insurance policy. If no defense is provided by insurers under potentially applicable insurance policies, then the following provisions shall apply.

**Execution Version**

---

**7.4.3** If the defense is tendered to Design-Builder, it shall within forty-five (45) days of said tender deliver to Concessionaire a written notice stating that Design-Builder: (i) accepts the tender of defense and confirms that the claim is subject to full indemnification hereunder without any “reservation of rights” to deny or disclaim full indemnification thereafter; (ii) accepts the tender of defense but with a “reservation of rights” in whole or in part; or (iii) rejects the tender of defense if it reasonably determines it is not required to indemnify against the claim under the Fred Ex Contract Documents. If such notice is not delivered within such forty-five (45) days, the tender of defense shall be deemed rejected.

**7.4.4** If Design-Builder accepts the tender of defense, Design-Builder shall have the right to select legal counsel for the Fred Ex Project Indemnitees, subject to reasonable approval of the Concessionaire, and Design-Builder shall otherwise control the defense of such claim, including settlement, and bear the fees and costs of defending and settling such claim. During such defense: (i) Design-Builder shall, at Design-Builder’s expense, fully and regularly inform Concessionaire of the progress of the defense and of any settlement discussions; and (ii) Concessionaire shall, at Design-Builder’s expense for all of Concessionaire’s reasonable out-of-pocket third party expenses, fully cooperate in said defense, provide to Design-Builder all materials and access to personnel it requests as necessary for defense, preparation and trial and which or who are under the control of or reasonably available to Concessionaire and maintain the confidentiality of all communications between it and Design-Builder concerning such defense to the extent allowed by law.

**7.4.5** Concessionaire shall be entitled to select its own legal counsel and otherwise control the defense of such claim if: (i) the defense is tendered to Design-Builder and it refuses the tender of defense, or fails to accept such tender within forty-five (45) days, or reserves any right to deny or disclaim such full indemnification thereafter; or (ii) Concessionaire, at the time it gives notice of the claim or at any time thereafter, reasonably determines that: (a) a conflict exists between it and the Design-Builder which prevents or potentially prevents Design-Builder from presenting a full and effective defense; or (b) Design-Builder is otherwise not providing an effective defense in connection with the claim and Design-Builder lacks the financial capability to satisfy potential liability or to provide an effective defense. Concessionaire may assume its own defense pursuant to the above by delivering to Design-Builder written notice of such election and the reasons therefore.

**7.4.6** If Concessionaire is entitled and elects to conduct its own defense pursuant hereto, all reasonable costs and expenses it incurs in investigating and defending and claim for which it is entitled to indemnification hereunder (and any settlements or judgments resulting therefrom) shall be reimbursed by Design-Builder after completion of the proceeding.

**7.4.7** If Concessionaire is entitled to and elects to conduct its own defense, then it shall have the right to settle or compromise the claim with the Design-Builder’s prior written consent, which shall not be unreasonably withheld or delayed, or with approval of the court, and with the full benefit of the Design-Builder’s indemnity. Notwithstanding the foregoing, if the Concessionaire elects to conduct its own defense and it is later determined that no indemnification obligation existed as to the particular claim, the Concessionaire shall pay its own costs and expenses relating thereto. In addition, if the Concessionaire elects to conduct its own defense because it perceives a

conflict of interest, the Concessionaire shall pay its own costs and expenses relating thereto.

## Article 8 Time

### **8.1 Obligation to Achieve the Fred Ex Contract Times**

**8.1.1** Design-Builder agrees that it will commence performance of the Fred Ex Work and achieve the Fred Ex Contract Time(s) in accordance with Article 5 of Part 3 (Fred Ex Design-Build Contract).

### **8.2 Delays to the Fred Ex Work**

**8.2.1** If Design-Builder is delayed in the performance of the Fred Ex Work due to acts, omissions, conditions, events, or circumstances beyond its control and due to no fault of its own, Subcontractors, Design Consultants, or those for whom Design-Builder, Subcontractors, or Design Consultants are responsible, Design-Builder may submit a request for a Fred Ex Work Order that the Fred Ex Contract Time(s) for performance be reasonably extended by Fred Ex Work Order. By way of example, events that Concessionaire may consider for an extension of the Fred Ex Contract Time(s) include acts or omissions of Concessionaire or anyone under Concessionaire's control (including separate contractors), changes in the Fred Ex Work, Differing Site Conditions, Hazardous Materials, wars, floods in excess of the base flood (as defined in the Division 1 Amendment), hurricane force winds, tornados, labor disputes, and earthquakes that cause ground accelerations in excess of AASHTO bridge design standards for the Site. It is specifically understood that other than floods in excess of the base flood (as defined in the Division 1 Amendment), hurricane force winds and tornados, Design-Builder assumes the risk, and will not be entitled a time extension for any delays caused by weather or conditions resulting from weather.

**8.2.2** In addition to Design-Builder's right to a time extension for those events set forth in Section 8.2.1 above, Design-Builder shall also be entitled to submit a request of a Fred Ex Work Order for an appropriate adjustment of the Fred Ex Contract Price provided, however, that the Fred Ex Contract Price shall not be adjusted for those events set forth in Section 8.2.1 above that are beyond the control of both Design-Builder and Concessionaire, including the events of wars, floods in excess of the base flood (as defined in the Division 1 Amendment), hurricane force wind, tornados, labor disputes, and earthquakes that cause ground accelerations in excess of AASHTO bridge design standards for the Site.

**8.2.3** As a condition precedent to Design-Builder receiving an extension of the Fred Ex Contract Time(s), Design-Builder shall demonstrate that: (i) notice has been given by Design-Builder as provided in these General Conditions; (ii) the delay impacts the critical path (as reflected on the most recent approved monthly Baseline Schedule update) and is outside the reasonable control of Design-Builder; (iii) Design-Builder's performance would not have been concurrently delayed or interrupted by any event other than those identified in Section 8.2.1 above; (iv) Design-Builder, in view of all the circumstances, has exercised reasonable efforts to avoid the delay and did not

**Execution Version**

---

cause the delay; and (v) Design-Builder has complied with the requirements of Section 8.3 below. Delays of Subcontractors shall be deemed to be within the reasonable control of Design-Builder, unless such delays are themselves excusable in accordance with the provisions of Section 8.2.1.

**8.2.4** Should Concessionaire have a reasonable belief that the Fred Ex Contract Time(s) will not be met for causes that do not constitute an excusable delay under Section 8.2.1 above, Concessionaire has the right, but not the obligation, to so notify Design-Builder, and Design-Builder shall then work additional overtime, engage additional personnel and take such other measures as necessary to complete the Fred Ex Work within the Fred Ex Contract Time(s). Design-Builder shall bear all costs related to such overtime, additional personnel and other measures.

**8.2.5** Notwithstanding the right of Design-Builder to receive a time extension pursuant to Section 8.2.1, Design-Builder agrees that if it encounters an excusable delay, it will, if directed by Concessionaire, develop and implement a recovery schedule and plan to improve progress and take such measures to overcome such delay.

### **8.3 Schedule Impact Analysis for Proposed Time Extensions**

**8.3.1** If Design-Builder claims that any event, including but not limited to a change in the Fred Ex Work, justifies an extension to the Fred Ex Contract Time(s), Design-Builder shall submit to Concessionaire a written Schedule Impact Analysis (SIA) in accordance with Section 1.4 of the Part 2 (Fred Ex Technical Requirements). Upon approval by Concessionaire, the event shall be included in the next Baseline Schedule update.

**8.3.2** Activity delays shall not automatically mean that an extension of the Fred Ex Contract Time(s) is warranted or due Design-Builder. Design-Builder recognizes that certain events will not affect existing critical activities or cause non-critical activities to become critical, and that such events may result in only absorbing a part of the available total float that may exist within an activity chain of the net Fred Ex Work, thereby not causing any effect on the Fred Ex Contract Time.

**8.3.3** Float is not for the exclusive use or benefit of either Concessionaire or Design-Builder, but rather shall be used for the benefit of the overall Fred Ex Project. Activity splitting or float suppression techniques will not be permitted. Extension of the Fred Ex Contract Time(s) will be granted only to the extent the equitable time adjustments to the activity or activities affected by the event exceeds the total float of a critical activity or path and extends the Fred Ex Contract Time(s).

**8.3.4** Two (2) copies of each SIA shall be submitted in accordance with the following along with a written proposal for any requested time extension:

**.1** Within seven (7) days after receipt of a Contract Change Directive issued pursuant to Section 9.2 of these General Conditions.

**Execution Version**

---

.2 Within ten (10) days from the beginning of any other event claimed to give rise to a delay.

.3 Within the time period required for the filing of a written notice of claim pursuant to Article 10 Contract Adjustments and Disputes.

**8.3.5** In cases where Design-Builder does not submit a SIA within the time requirements stated above, it shall be considered a waiver of any request for an extension of the Fred Ex Contract Time(s).

**8.3.6** Approval or rejection of each SIA by Concessionaire shall be made within twenty-eight (28) days after receipt of each SIA, unless subsequent meetings and negotiations are necessary. Upon approval, a copy of the SIA signed by Concessionaire shall be returned to Design-Builder, and incorporated into the next Baseline Schedule update.

**8.3.7** The SIA related to a change order shall be incorporated into and attached to the applicable change order.

### **Article 9**

#### **Changes to the Fred Ex Contract Price and Time**

##### **9.1 Fred Ex Work Orders**

**9.1.1** A **Fred Ex Work Order** (change order), is a written instrument, issued after the Fred Ex Design-Build Contract Date signed by Concessionaire and Design-Builder, stating their agreement upon all of the following:

- .1 The scope of the change in the Fred Ex Work;
- .2 The amount of the adjustment to the Fred Ex Contract Price; and
- .3 The extent of the adjustment to the Fred Ex Contract Time(s).

**9.1.2** All changes in the Fred Ex Work authorized by applicable Fred Ex Work Order shall be performed under the applicable conditions of the Fred Ex Contract Documents. Concessionaire and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for such changes.

**9.1.3** If Concessionaire requests a proposal for a change in the Fred Ex Work from Design-Builder and subsequently elects not to proceed with the change, a Fred Ex Work Order shall be issued to reimburse Design-Builder for reasonable costs incurred for estimating services, design services and services involved in the preparation of proposed revisions to the Fred Ex Contract Documents.

## **9.2 Contract Change Directive**

**9.2.1** A **Contract Change Directive** (CCD) is a written order prepared and signed by Concessionaire, directing a change in the Fred Ex Work prior to agreement on an adjustment in the Fred Ex Contract Price and/or the Fred Ex Contract Time(s).

**9.2.2** Concessionaire and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for the Contract Change Directive. Upon reaching an agreement, the parties shall prepare and execute an appropriate Fred Ex Work Order reflecting the terms of the agreement.

**9.2.3** The Concessionaire may issue a CCD by unilateral Fred Ex Work Order, subject further to the terms of Section 9.4.1.4.

## **9.3 Minor Changes in the Fred Ex Work**

**9.3.1** Minor changes in the Fred Ex Work do not involve an adjustment in the Fred Ex Contract Price and/or Fred Ex Contract Time(s) and do not materially and adversely affect the Fred Ex Work, including the design, quality, performance and workmanship required by the Fred Ex Contract Documents. The Concessionaire or Design-Builder may make minor changes in the Fred Ex Work consistent with the intent of the Fred Ex Contract Documents, provided, however that each party shall promptly inform the other party, in writing, of any such changes and record such changes on the documents maintained by the Concessionaire and the Design-Builder. If either party disputes that such changes are minor changes, the disputing party shall promptly notify the other party in writing.

## **9.4 Fred Ex Contract Price Adjustments**

**9.4.1** The increase or decrease in Fred Ex Contract Price resulting from a change in the Fred Ex Work shall be determined by one or more of the following methods:

.1 Unit prices set forth in the Fred Ex Design-Build Contract or as subsequently agreed to between the parties;

.2 A mutually accepted, lump sum, properly itemized and supported by sufficient substantiating data to permit evaluation by Concessionaire;

.3 Costs, fees and any other markups set forth in accordance with Section 109.05 of the Division 1 Amendments; and

.4 If an increase or decrease cannot be agreed to as set forth in items .1 through .3 above and Concessionaire issues a Contract Change Directive, the cost of the change of the Fred Ex Work shall be determined by the reasonable expense and savings in the performance of the Fred Ex Work resulting from the change, including a reasonable overhead and profit, as may be set forth in the Fred Ex Design-Build Contract. If the net result of both additions and deletions to the Fred Ex Work is an increase in the Fred Ex Contract Price, overhead and profit shall be

**Execution Version**

---

calculated on the basis of the net increase to the Fred Ex Contract Price. If the net result of both additions and deletions to the Fred Ex Work is a decrease in the Fred Ex Contract Price, there shall be no overhead or profit adjustment to the Fred Ex Contract Price. Design-Builder shall maintain a documented, itemized accounting evidencing the expenses and savings associated with such changes.

**9.4.2** If unit prices are set forth in the Fred Ex Contract Documents or are subsequently agreed to by the parties, but application of such unit prices will cause substantial inequity to Concessionaire or Design-Builder because of differences in the character or quantity of such unit items as originally contemplated, such unit prices shall be equitably adjusted. Design-Builder shall bear the burden of proving that there is a substantial inequity in the unit rates.

**9.5 Emergencies**

**9.5.1** In any emergency affecting the safety of persons and/or property, Design-Builder shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in the Fred Ex Contract Price and/or Fred Ex Contract Time(s) on account of emergency work shall be determined as provided in this Article 9.

**Article 10****Contract Adjustments and Disputes****10.1 Requests for Contract Adjustments and Relief**

**10.1.1** If Design-Builder believes that it is entitled to an adjustment to the Fred Ex Contract Price or Fred Ex Contract Times or other relief for any occurrence arising out of or related to the Fred Ex Work or Fred Ex Project, including the acts or omissions of Concessionaire, it shall submit a written request to Concessionaire stating the basis for such Fred Ex Contract Price or Fred Ex Contract Time adjustment or relief.

**10.1.2** Such request shall be submitted: (a) prior to Design-Builder incurring any cost or expense, or performing any work on which the request is based; and (b) in accordance with any specific requirements contained in applicable sections of these General Conditions of Contract or, absent any specific requirement, then within a reasonable time, not to exceed twenty-one (21) days, after the time of the occurrence giving rise to the request for Fred Ex Contract Price or Fred Ex Contract Time adjustment or relief or after Design-Builder reasonably should have recognized the occurrence giving rise to the request for Fred Ex Contract Price or Fred Ex Contract Time adjustment or relief, whichever is later.

**10.1.3** Such request shall include sufficient information to advise Concessionaire of the facts and circumstances giving rise to the request for Fred Ex Contract Price or Fred Ex Contract Time



Execution Version

---

adjustment or relief, the specific contractual adjustment or relief requested and the basis for Design-Builder's entitlement to the adjustment or relief.

**10.1.4** If Design-Builder in good faith is unable to provide final price or schedule information at the time of its written request, the Design-Builder shall provide final price and schedule information no later than thirty (30) days from the date of submitting its request for contractual adjustment or relief.

**10.1.5** In cases where Design-Builder does not submit final price and schedule information within thirty (30) days of submitting its request, it shall be considered a waiver of any request for contract adjustment or relief for Fred Ex Contract Price or Fred Ex Contract Time, unless otherwise agreed in writing by the Concessionaire.

## **10.2 Dispute Resolution**

**10.2.1 Good Faith Efforts to Resolve Disputes.** The parties shall make good faith efforts to resolve any claim, dispute or controversy arising out of or relating to this Agreement, including but not limited to those arising out of or related to the breach, termination or invalidity of this Agreement, and those arising in tort or contract (collectively "**Disputes**").

**10.2.2 Negotiations between Representatives.** Design-Builder and Concessionaire will attempt to resolve all Disputes through best efforts and good faith negotiations between Design-Builder's Representative and Concessionaire's Representative ("**Project Representatives**"). Prior to any meetings between the Fred Ex Project Representatives, the parties will exchange relevant information that will assist the Fred Ex Project Representatives in resolving the Dispute. All negotiations and discussions pursuant to this Section 10.2.2 shall be deemed compromise and settlement negotiations, subject to all evidentiary rules under applicable law.

## **10.3 Arbitration**

**10.3.1** Except as set forth in Section 10.5 below, all Disputes that have not been resolved through the process set forth in Section 10.2 shall be resolved by arbitration conducted in accordance with the then-prevailing American Arbitration Association's Construction Industry Rules ("**AAA Rules**") for arbitration and the procedures set forth in this Section 10.3. To the extent there is a conflict between the AAA Rules and this Section 10.3, this Section 10.3 shall govern.

**10.3.2** The arbitration shall be held in the Commonwealth of Virginia or such other location if the parties mutually agree. If the aggregate amount of a Party's claims or counterclaims, exclusive of interest, costs and attorney's fees, does not exceed Five Hundred Thousand Dollars (\$500,000), the arbitration shall be conducted before a single arbitrator in accordance with the applicable procedures of the AAA Rules. Otherwise, the arbitration shall be conducted in accordance with the Large Case Construction Rules of the AAA, before a panel of three (3) arbitrators, with each Party selecting one arbitrator and the third arbitrator, who shall be the Chair of the panel, being selected by the two Party-appointed arbitrators. The AAA shall be empowered to appoint any arbitrator not named in accordance with the procedure herein or to appoint a Chair pursuant to the AAA Rules should the Party-appointed arbitrators not be able to agree upon a Chair within a

**Execution Version**

---

reasonable time. The award of the arbitrators will be final and binding on both parties and may be enforced in any court having jurisdiction over the party against which enforcement is sought.

**10.3.3** If aggregate amount of a Party's claims or counterclaims exceeds \$2,000,000, exclusive of interest, costs and attorney's fees), or if the claim or counterclaim seeks any equitable remedy, including injunctive relief or specific performance, then such claims shall not be subject to arbitration, but rather shall be subject to judicial resolution in accordance with Section 10.5 below.

**10.4 Consequential Damages**

**10.4.1** Notwithstanding anything herein to the contrary (except as set forth in Section 10.4.2 below), neither Design-Builder nor Concessionaire shall be liable to the other for any consequential losses or damages, whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, including but not limited to losses of use, profits, business, reputation or financing.

**10.4.2** The consequential damages limitation set forth in Section 10.4.1 above will not affect the payment of liquidated damages set forth in Article 5 of Part 3 (Fred Ex Design-Build Contract), which both parties recognize has been established, in part, to reimburse Concessionaire for some damages that might otherwise be deemed to be consequential.

**10.5 Judicial Resolution**

**10.5.1** Each Party hereby agrees that any action referred to judicial process in accordance with the provisions of Section 10.3.3 shall be instituted in a court of competent jurisdiction in the Commonwealth of Virginia, which shall be the sole and exclusive jurisdiction and venue for any legal action between the parties arising out of or relating to this Contract.

**10.5.2** Each of the parties hereby irrevocably consents to such jurisdiction and irrevocably waives any objections, including, without limitation, any objection to the laying of venue or based on the grounds of forum non conveniens, which it may now or hereafter have to the bringing of any such action or proceeding in such jurisdiction. The foregoing is without prejudice to the right of any prevailing party to seek enforcement of any judgment rendered in a court in any jurisdiction where the losing party or its property may be located. Each of the parties also consents to the exclusive jurisdiction of such Virginia courts for purposes of aid in support of arbitration and the enforcement of any arbitral award made under the provisions of Section 10.3.2.

**10.5.3** THE PARTIES HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHTS THEY MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT.

**10.6 Voluntary Mediation.** If the Dispute has not been resolved by the Fred Ex Project Representatives within a reasonable time, then either Design-Builder or Concessionaire may suggest to the other that the Dispute be referred to mediation. If the other Party is interested in pursuing mediation, then it shall consult with the other to determine the processes and conditions associated with the mediation, including but not limited to the exchange of reasonable information

**Execution Version**

---

and documents relating to the Dispute and the names of potential mediators. The costs of the mediator will be shared equally by both parties. For the avoidance of doubt, mediation is voluntary and will not be a condition precedent to arbitration or the institution of judicial proceedings.

**10.7 Attorneys’ Fees and Costs.** Each party shall bear its own expenses of any arbitration or judicial process, including but not limited to attorney’s fees, provided, however, that if the arbitrator(s) or court determines that the claim or defense of a Party was frivolous (i.e. without justifiable merit), then it shall have the right to award such attorney’s fees and other costs as it may deem appropriate.

**10.8 Common Issue in Dispute under the Comprehensive Agreement.** Notwithstanding any other provision in the Fred Ex Contract Documents to the contrary, if any issue that materializes into a Dispute is also the subject of a concurrent dispute under the Comprehensive Agreement, the parties shall cause the Dispute arising hereunder to be consolidated with the dispute resolution process occurring pursuant to the Comprehensive Agreement, the terms of which are set forth in Exhibit 10.8. If Design-Builder elects not to consolidate the applicable Dispute as set forth in the preceding sentence, or for any other reason the applicable Dispute is not consolidated with the concurrent dispute under the Comprehensive Agreement, then any ongoing proceeding regarding such Dispute shall be stayed pending final resolution of the dispute under the Comprehensive Agreement, which resolution, to the extent it resolves the issues related to the Dispute hereunder, shall be binding on the parties for all purposes of the Fred Ex Contract Documents. Whether or not a Dispute arising hereunder has been consolidated with a concurrent dispute under the Comprehensive Agreement, until the expiration of the Warranty Period, Design-Builder shall be permitted to attend meetings of the “**Steering Committee**” established under Section 21.01 of the Comprehensive Agreement with respect to any dispute under the Comprehensive Agreement. In addition, for so long as any Dispute related to the Fred Ex Work exists, Design-Builder shall be permitted to attend meetings of the Steering Committee.

**10.9 Survival.** The provisions of this Article 10 shall survive the termination of this Fred Ex Design-Build Contract. All provisions of the Fred Ex Contract Documents which are expressly or by implication to come into or continue in force and effect after the expiration or termination of this Agreement shall remain in effect and be enforceable following such expiration or termination.

### **Article 11**

#### **Stop Fred Ex Work and Termination for Cause**

##### **11.1 Concessionaire’s Right to Stop Fred Ex Work**

**11.1.1** Concessionaire may, without cause and for its convenience, order Design-Builder in writing to stop and suspend the Fred Ex Work. Any suspension in excess of one hundred and eighty (180) days (whether consecutive or in aggregate) shall entitle the Design-Builder to terminate the Fred Ex Contract Documents pursuant to Section 11.4.1.1.

**Execution Version**

---

**11.1.2** Design-Builder is entitled to seek an adjustment of the Fred Ex Contract Price and/or Fred Ex Contract Time(s) if its cost or time to perform the Fred Ex Work has been adversely impacted by any suspension or stoppage of work by Concessionaire, by requesting a Fred Ex Work Order.

**11.1.3** In case of suspension of work, Concessionaire shall issue instructions and directions to Design-Builder as to the implementation of the suspension, which may include directing Design-Builder to develop a maintenance and transition plan. Unless specifically directed otherwise by Concessionaire, Design-Builder shall, during the suspension period, continue to have full responsibility for the Fred Ex Project, including but not limited to its obligations to take such precautions as may be necessary to prevent damage to the Fred Ex Work, comply with Governmental Approvals, and ensure public safety. Such obligations include, but are not limited to, erosion control and drainage and erection of any necessary temporary structures, signs, or other facilities.

**11.2 Concessionaire’s Right to Perform and Terminate for Cause**

**11.2.1** If Design-Builder fails to do any of the following:

- .1 begin the Fred Ex Work upon receipt of Concessionaire’s LNTP or NTP;
- .2 provide a sufficient number of skilled workers, equipment, or supply the materials required by the Fred Ex Contract Documents;
- .3 comply with applicable Legal Requirements;
- .4 timely pay, without cause, Design Consultants or Subcontractors;
- .5 prosecute the Fred Ex Work with promptness and diligence to ensure that the Fred Ex Work is completed by the Fred Ex Contract Time(s), as such times may be adjusted; or
- .6 perform material obligations under the Fred Ex Contract Documents;
- .7 failure to complete the Fred Ex Work by the Fred Ex Long Stop Date; or
- .8 failure to make timely payments of any amount due to the Concessionaire under the Fred Ex Design-Build Contract.

then Design-Builder may be declared in default and Concessionaire, in addition to any other rights and remedies provided in the Fred Ex Contract Documents or by law, shall have the rights set forth in Section 11.2.2 below.

**11.2.2** If any of the conditions set forth in Section 11.2.1 above exists, Concessionaire will give written notice to Design-Builder and its surety of the condition. If, subject to the terms of the Fred Ex Direct Agreement, within ten (10) days after such notice, Design-Builder or its surety fails to cure, or reasonably commence to cure, such condition to the satisfaction of Concessionaire, then Concessionaire may then, or at any time thereafter, send a second written notice to Design-Builder declaring Design-Builder in default. To the extent that an event set forth in Section 11.2.1 is

**Execution Version**

---

reasonably capable of cure, the period for any such cure shall not extend beyond the reasonable period required to implement such cure, which shall in no event longer be than 90 days from the date of the original Concessionaire's notice. Upon declaring Design-Builder in default, Concessionaire shall have the right, among other things, to terminate this Fred Ex Design-Build Contract for default.

**11.2.3** Upon terminating this Fred Ex Design-Build Contract for default, Concessionaire will have the right to, in addition to any other right available at law, take possession, for the purpose of completing the Fred Ex Work, of all materials, equipment, scaffolds, tools, appliances and other items thereon, which have been purchased or provided for the performance of the Fred Ex Work, all of which Design-Builder hereby transfers, assigns and sets over to Concessionaire for such purpose, and to employ any person or persons to complete the Fred Ex Work and provide all of the required labor, services, materials, equipment and other items. Design-Builder specifically agrees that it will assign all subcontracts and any other agreements with Design Consultants to Concessionaire, upon Concessionaire's written demand that it do so. In the event of such termination, Design-Builder shall not be entitled to receive any further payments under the Fred Ex Contract Documents until Final Completion. At such time, if the unpaid balance of the Fred Ex Contract Price exceeds the cost and expense incurred by Concessionaire in completing the Fred Ex Work, such excess shall be paid by Concessionaire to Design-Builder, subject to the terms of the Fred Ex Direct Agreement. If Concessionaire's cost and expense of completing the Fred Ex Work exceeds the unpaid balance of the Fred Ex Contract Price, then Design-Builder shall be obligated to pay the difference to Concessionaire. Such costs and expense shall include not only the cost of completing the Fred Ex Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by Concessionaire in connection with the re-procurement and defense of claims arising from Design-Builder's default.

**11.2.4** If Concessionaire improperly terminates the Fred Ex Design-Build Contract for cause, the termination for cause will be converted to a termination for convenience in accordance with the provisions of Article 8 of the Fred Ex Design-Build Contract.

**11.2.5** Concessionaire shall have the right, upon the occurrence of any of the conditions set forth in Section 11.2.1 above, and regardless of whether or not Design-Builder is declared in default and/or terminated, to communicate with Design-Builder's surety and compel such surety to cure such conditions.

**11.3 Design-Builder's Right to Stop Fred Ex Work**

**11.3.1** Design-Builder may, in addition to any other rights afforded under the Fred Ex Contract Documents or at law, stop work for Concessionaire's failure to pay amounts properly due under Design-Builder's Application for Payment.

**11.3.2** Should any of the events set forth in Section 11.3.1 above occur, before exercising its rights under this section, Design-Builder shall provide Concessionaire with written notice that Design-Builder will stop work unless said event is cured within fifteen (15) days from Concessionaire's receipt of Design-Builder's notice. If Concessionaire does not cure the problem within such fifteen (15) day period, Design-Builder may stop work. In such case, Design-Builder shall be entitled to

**Execution Version**

---

make a claim for adjustment to the Fred Ex Contract Price and Fred Ex Contract Time(s) to the extent it has been adversely impacted by such stoppage.

**11.4 Design-Builder’s Right to Terminate for Cause**

**11.4.1** Design-Builder, in addition to any other rights and remedies provided in the Fred Ex Contract Documents or by law, may terminate the Fred Ex Design-Build Contract for cause for the following reasons:

.1 The Fred Ex Work has been stopped for one hundred eighty (180) consecutive days, or more than one hundred eighty (180) days during the duration of the Fred Ex Project, because of court order, any Governmental Unit having jurisdiction over the Fred Ex Work, or orders by Concessionaire under Section 11.1.1 hereof, provided that such stoppages are not due to the acts or omissions of Design-Builder or anyone for whose acts Design-Builder may be responsible.

.2 Concessionaire’s failure to provide Design-Builder with any information, permits or approvals that are Concessionaire’s or Department’s responsibility under the Fred Ex Contract Documents which result in the Fred Ex Work being stopped for one hundred eighty (180) consecutive days, or more than one hundred eighty (180) days during the duration of the Fred Ex Project, even though Concessionaire has not ordered Design-Builder in writing to stop and suspend the Fred Ex Work pursuant to Section 11.1.1 hereof.

.3 Concessionaire’s failure to cure the problems set forth in Section 11.3.1 above after Design-Builder has stopped the Fred Ex Work.

**11.4.2** Upon the occurrence of an event set forth in Section 11.4.1 above, Design-Builder may provide written notice to Concessionaire that it intends to terminate the Fred Ex Design-Build Contract unless the problem cited is cured, or commenced to be cured, within ten (10) days of Concessionaire’s receipt of such notice. If Concessionaire fails to cure, or reasonably commence to cure, such problem, then Design-Builder may give a second written notice to Concessionaire of its intent to terminate within an additional ten (10) day period. If Concessionaire, within such second ten (10) day period, fails to cure, or reasonably commence to cure, such problem, then Design-Builder may declare, subject to the terms of the Fred Ex Direct Agreement, the Fred Ex Design-Build Contract terminated for default by providing written notice to Concessionaire of such declaration. In such case, Design-Builder shall be entitled to recover in the same manner as if Concessionaire had terminated the Fred Ex Design-Build Contract for its convenience under Article 8 of the Fred Ex Design-Build Contract.

**11.5 Bankruptcy of Design-Builder**

**11.5.1** If Design-Builder institutes or has instituted against it a case under the United States Bankruptcy Code, such event may impair or frustrate Concessionaire’s ability to perform its obligations under the Fred Ex Contract Documents. Accordingly, should such event occur:

.1 Design-Builder, its trustee or other successor, shall furnish, upon request of Concessionaire, adequate assurance of the ability of Design-Builder to perform all future material

**Execution Version**

---

obligations under the Fred Ex Contract Documents, which assurances shall be provided within ten (10) days after receiving notice of the request; and

.2 Concessionaire shall have the right to terminate the Fred Ex Design-Build Contract if the applicable case under the United States Bankruptcy Court has not been dismissed within thirty (30) days of its filing.

**11.5.2** The rights and remedies under Section 11.5.1 above shall not be deemed to limit the ability of Concessionaire to seek any other rights and remedies provided by the Fred Ex Contract Documents or by law, including its ability to seek relief from any automatic stays under the United States Bankruptcy Code. It shall also not limit the ability of Concessionaire to seek recourse against Design-Builder's surety, who shall be obligated to perform notwithstanding the bankruptcy proceedings against Design-Builder.

**Article 12**  
**Miscellaneous**

**12.1 Assignment**

**12.1.1** Neither party shall have the right, power or authority to assign or delegate the Fred Ex Design-Build Contract or any portion thereof, either voluntarily or involuntarily, or by operation of law, without prior written consent, which may be granted or withheld in the sole discretion of such other party; provided that Concessionaire may assign all of its rights and interests in and under this Agreement to the Fred Ex Financing Parties as collateral security for its obligations. Upon request by Concessionaire, on or before the Fred Ex Financial Close Date, Design-Builder shall enter into a direct agreement substantially in the form of Exhibit 12.1.1 with Concessionaire and the Financing Parties or their agent (the "**Fred Ex Direct Agreement**"), which will provide for Contractor's consent to Concessionaire's assignment of all its right, title, and interest in, to and under the Fred Ex Design-Build Contract to the Fred Ex Financing Parties as collateral security for Concessionaire's obligations under agreements with the Fred Ex Financing Parties; the Fred Ex Financing Parties may further assign such rights without Design-Builder's consent thereto in connection with the exercise of remedies against Concessionaire. Concessionaire also may assign to a State Party or a non-profit special purpose entity established by the Commonwealth to deliver the Fred Ex Project any or all of its rights under this Fred Ex Design-Build Contract and the other Fred Ex Contract Documents without Design-Builder's consent. Nothing in this Section 12.1.1 shall be deemed to preclude Design-Builder from subcontracting portions of the Fred Ex Work in accordance with the terms of the Fred Ex Design-Build Contract and these General Conditions.

**12.2 Successorship**

**12.2.1** Design-Builder and Concessionaire intend that the provisions of the Fred Ex Contract Documents are binding upon the parties, their employees, agents, heirs, successors and assigns.

**12.3 Governing Law**

**12.3.1** The Fred Ex Design-Build Contract and all Fred Ex Contract Documents shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

**12.4 Severability**

**12.4.1** If any provision or any part of a provision of the Fred Ex Contract Documents shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable Legal Requirements, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Fred Ex Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

**12.5 No Waiver**

**12.5.1** The failure of either Design-Builder or Concessionaire to insist, in any one or more instances, on the performance of any of the obligations required by the other under the Fred Ex Contract Documents shall not be construed as a waiver or relinquishment of such obligation or right with respect to future performance.

**12.6 No Third-Party Beneficiary Status**

**12.6.1** The Fred Ex Contract Documents and all rights thereunder are intended for the benefit of the Concessionaire and Design-Builder, the Fred Ex Financing Parties, VDOT and the Fred Ex Project Indemnites, and shall not imply or create any rights on the part of, or obligations to, another person, including members of the public, third-party beneficiary status hereunder.

**12.7 Headings**

**12.7.1** The headings used in these General Conditions of Contract, or any other Contract Document, are for ease of reference only and shall not in any way be construed to limit or alter the meaning of any provision.

**12.8 Notice**

**12.8.1** Whenever the Fred Ex Contract Documents require that notice be provided to the other party, notice will be deemed to have been validly given: (i) if delivered in person to the individual intended to receive such notice; (ii) four (4) days after being sent by registered or certified mail, postage prepaid to the address indicated in the Fred Ex Design-Build Contract; or (iii) if transmitted by facsimile, by the time stated in a machine generated confirmation that notice was received at the facsimile number of the intended recipient, provided, however, that the intended recipient is present to receive the facsimile and the transmittal is immediately followed by a hard copy delivered in accordance with (i) or (ii) above.



**Execution Version**

---

Unless otherwise permitted by the Fred Ex Design-Build Contract, any notices provided in accordance with this Section 12.8.1 shall be sent to the following addresses:

From Design-Builder to Concessionaire:

95 Express Lanes LLC  
6440 General Green Way  
Alexandria, VA 22312  
Attention: Richard Prezioso, Jr.  
Telephone: 571-419-6100  
Fax: 571-419-6101

With a copy to:

Transurban (USA) Inc.  
6440 General Green Way  
Alexandria, VA 22312  
Attention: Mr. Karl Rohrer  
Telephone: 571-419-6100  
Fax: 571-419-6101

From Concessionaire to Design-Builder:

Branch-Flatiron, Joint Venture  
c/o Branch Civil, Inc.  
442 Rutherford Avenue, NE  
Roanoke, VA 24016  
Attention: Jason Hoyle  
Telephone: (540) 982-1678  
Fax: (540) 982-4217

With a copy to:

Flatiron Construction  
860 Aviation Parkway, Suite 1000  
Morrisville, NC 27560  
Attention: Ted Kirk  
Telephone: (919) 460-5393  
Fax: (919) 460-5708

**12.9 Amendments**

**12.9.1** The Fred Ex Contract Documents may not be changed, altered, or amended in any way except in writing signed by a duly authorized representative of each party, and in the event any change, alteration, or amendment deviates from, or conflicts with, the Comprehensive Agreement

**Execution Version**

---

or the Technical Requirements set forth therein, VDOT must approve such change, alteration, or amendment.

**12.9.2** Design-Builder agrees to cooperate with the Concessionaire in the negotiation and execution of reasonable amendments or additions to the Fred Ex Design-Build Contract required by any of the Fred Ex Financing Parties providing debt financing for the construction of the Fred Ex Project. Any proposed amendment or addition which would materially increase Design-Builder's costs or risk exposure without appropriate compensation will not be considered reasonable.

**12.10 Coordination and Cooperation with VDOT and Fred Ex Financing Parties.** Design-Builder acknowledges that VDOT and the Fred Ex Financing Parties shall have the right to review and approve this Agreement and that they may require as a condition to such approval certain rights for their benefit, including the rights to: (a) receive notices of default by Design-Builder and notices of inspections and tests, (b) review schedules, progress reports and payments, (c) approve Service Commencement and/or Final Completion, and (d) have the Financing Parties' Technical Advisers inspect the progress of the Fred Ex Project and the Design-Builder's Fred Ex Work. Design-Builder agrees cooperate with each of VDOT and the Financing Parties to the extent reasonably required in order for Concessionaire to obtain any necessary Department approvals and to obtain financing for the Fred Ex Project.

**12.11 Confidentiality.** Each Party shall hold in confidence for a period ending five (5) years after the earlier of (i) Final Completion of the entire Fred Ex Project or (ii) the earlier termination hereof, any confidential information (marked as such) supplied to it by the other party or otherwise related to the Fred Ex Contract Documents or the Fred Ex Project. Design-Builder shall inform its Subcontractors, suppliers, vendors and employees of its obligations under this Section 12.12 and shall require each of its Subcontractors, suppliers, vendors and employees to execute confidentiality arrangements substantially in the form of this Section 12.11.

Notwithstanding the foregoing, each Party may disclose the following categories of information or any combination thereof:

- (i) information which was in the public domain prior to receipt thereof by such party or which subsequently becomes part of the public domain by publication or otherwise except by a wrongful act of such Party or, in the case of Design-Builder, any Subcontractor;
- (ii) information that such party can show was lawfully in its possession prior to receipt thereof from the other party through no breach of any confidentiality obligation;
- (iii) information received by such party from a third party having no obligation of confidentiality with respect thereto;
- (iv) information at any time developed independently by such party provided it is not developed from otherwise confidential information;

**Execution Version**

---

- (v) information disclosed pursuant to and in conformity with the Law or a judicial order or in connection with any legal proceedings or arbitration procedures; and
- (vi) information required to be disclosed under securities laws applicable to publicly traded companies and their subsidiaries or reporting required by a Governmental Authority if such party informs the other party of the need for such disclosure and, if reasonably requested by the other party, seeks, through a protective order or other appropriate mechanism, to maintain the confidentiality of such information.

**12.11.1 [Not Used]**

**12.12 Recourse Limited to Certain Concessionaire's Assets.** Concessionaire and Design-Builder acknowledge that Concessionaire has entered into the Fred Ex Design-Build Contract entirely on its own behalf, and that, except with regard to claims of fraud substantiated in a final, non-appealable adjudication, Design-Builder shall have no recourse against any parent, subsidiary or affiliate company of Concessionaire, or against any partners, shareholders, members, owners, joint venturers, officers, directors, employees, agents, successors or assigns of any thereof for any reason. In addition, Design-Builder shall have no recourse against Concessionaire assets existing prior to the execution of the Fred Ex Design-Build Contract, and specifically, Design-Builder shall have no recourse against any assets or revenues of Concessionaire relating to the Concessionaire's operation of the 95 Express Lanes as set forth in the Comprehensive Agreement.

**12.13 Exhibits**

**12.13.1** The following exhibits, are made part of, and incorporated into these General Conditions of Contract.

EXHIBIT 1.2.1 – FRED EX PROJECT DEFINITIONS

EXHIBIT 2.1.5 – KEY PERSONNEL REQUIREMENTS

EXHIBIT 3.7.1 – TTMS INTERFACE PLAN [Dated July 18, 2018]

EXHIBIT 5.1.1 – INSURANCE REQUIRMENTS

EXHIBIT 6.2.5(a) – FORM OF DESIGN-BUILDER INTERIM LIEN WAIVER

EXHIBIT 6.2.5(b) – FORM OF SUBCONTRACTOR INTERIM LIEN WAIVER

EXHIBIT 6.2.5(c) – FORM OF SUBCONTRACTOR FINAL LIEN WAIVER

EXHIBIT 6.6.3 – FORM OF DESIGN-BUILDER FINAL LIEN WAIVER

EXHIBIT 10.8 – COMPREHENSIVE AGREEMENT DISPUTE RESOLUTION  
PROVISION

EXHIBIT 12.1.1 – FORM OF FRED EX DIRECT AGREEMENT

**END OF PART 4  
GENERAL CONDITIONS OF CONTRACT**

# PART 5

## Division I Amendments to the Standard Specifications

---

These Division I Amendments supersede Division I of the Standard Specifications

### SECTION 101—DEFINITIONS OF ABBREVIATIONS, ACRONYMS, AND TERMS

#### 101.01—Abbreviations and Acronyms

Abbreviations and Acronyms shall be as stated in Section 101.01 of the Standard Specifications.

#### 101.02—Terms

In these Division I Amendments to the Standard Specifications and other Fred Ex Contract Documents, the following terms and pronouns used in place of them shall be interpreted as follows, except that if such terms and pronouns are defined in Part 3 (Fred Ex Design-Build Contract), Part 4 (Fred Ex General Conditions), or Part 2 (Fred Ex Technical Requirements), such definitions shall govern:

-A-

**Alkali Soil.** Soil in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent based on total solids.

-B-

**Backfill.** Material used to replace, or the act of replacing, Material removed during construction; may also denote Material placed, or the act of placing, Material adjacent to structures.

**Balance Point.** The approximate point, based on estimated shrinkage or swell, where the quantity of Earthwork Excavation and borrow, if required, is equal to the quantity of Embankment Material plus any surplus Excavation material.

**Base Course.** A layer of material of specified thickness on which the intermediate or surface course is placed.

**Base Flood.** The flood or tide having a one percent chance of being exceeded in any given year.

**Board.** Commonwealth Transportation Board of Virginia.

**Borrow.** Suitable material from sources outside the Roadway that is used primarily for Embankments.

**Brackish Water.** Water in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent based on total solids.

**Execution Version**

---

**Bridge.** A structure, including supports, that is erected over a depression or an obstruction, such as water, a Highway, or a railway, that has a track or passageway for carrying traffic.

**Bridge Lift.** A layer of fill material placed in excess of standard depth over an area that does not support the weight of hauling Equipment and for which compaction effort is not required.

-C-

**Camber.** A vertical curvature induced or fabricated into beams or girders and a deck slab or slab span formwork; a vertical curvature set in the grade line of a pipe culvert to accommodate differential settlement.

**Change Order.** As defined in Article 9 of the Part 4 (Fred Ex General Conditions).

**Channel.** A watercourse or drainage way.

**Commissioner.** The Chief Executive Officer of the Virginia Department of Transportation, whose title is Commissioner of Highways or as otherwise designated by the Code of Virginia.

**Commonwealth.** Commonwealth of Virginia.

**Composite Hydrograph.** A graph showing the mean daily discharge versus the day, indicating trends in high and low flow for a one-year period.

**Construction Area.** The area where authorized construction on this Fred Ex Project occurs.

**Construction Limits (On-Site).** The disturbed area utilized for the construction of a Fred Ex Project including the intersection of side slopes with the original ground plus slope rounding and slopes for Drainage Ditches, Bridges, Culverts, Channels, temporary or incidental construction, and identified by the surface planes as shown or described within the Fred Ex Contract Documents.

**Contract.** The Part 3 (Fred Ex Design-Build Contract) between the Concessionaire and Design-Builder for the Fred Ex Project, inclusive of all Fred Ex Contract Documents as defined in Article 2 of the Part 3 (Fred Ex Design-Build Contract). Oral agreements, representations or promises shall not be considered a part of the Contract.

**Corporation.** A business entity organized and existing under the laws of the Commonwealth or other jurisdiction, by virtue of articles of incorporation, amendment or merger.

**Cul-de-sac.** An area at the terminus of a dead-end Street or Road that is constructed for the purpose of allowing vehicles to turn around.

**Culvert.** A structure that is not classified as a bridge which provides an opening under any Roadway.

**Cut.** When used as a noun with reference to Earthwork, that portion of a Roadway formed by excavating below the existing surface of the earth and limited by design.

**Cut Slope.** See also Fill Slope. A surface plane generally designated by design, which is formed during Excavation below existing ground elevations that intersects with existing ground at its termini.

-D-

**Deflection.** The vertical or horizontal movement occurring between the supports of a Bridge superstructure, guardrail, other structure, or the components (beams, girders, and slabs) thereof that results from their own weight and from dead and live loads. Although all parts of a structure are subject to deflections, usually only those deflections that occur in the superstructure are of significance during construction.

**Execution Version**

---

**Design Flood.** The magnitude of flood that a given structure can convey without exceeding a designated flood level.

**Disposable Material.** Material generally found to be unsuitable for roadway construction or surplus material that is to be placed in a disposal area, unless specified otherwise.

**Disposal Areas.** Areas generally located outside of the Construction Limits identified in the Fred Ex Contract Documents where Disposable Material is deposited.

**Disqualification.** The suspension or revocation of a bidder's prequalification privileges.

**Drainage Ditch.** An artificial depression constructed to carry off surface water.

-E-

**Earthwork.** The work consisting of constructing Roadway earthwork in conformity with the specified tolerances for the lines, grades, typical sections, and cross sections shown on the Fred Ex Contract Documents. Earthwork shall include regular, borrow, undercut, and minor structure Excavation; constructing Embankments; disposing of surplus and Unsuitable Material; shaping; grading, compaction; sloping; dressing; and temporary erosion control work.

**Easement.** A grant of the right to use property for a specific use.

**Embankment.** A structure of soil, soil aggregate, soil-like materials, or broken rock between the existing ground and Subgrade.

**Employee.** Any individual working on the Fred Ex Project who is under the direction or control of or receives compensation from the Design-Builder or a Subcontractor at any tier.

**Equipment.** Machinery, tools, and other apparatus, together with the necessary supplies for upkeep and maintenance that are necessary for acceptable completion of the work.

**Excavation (Excavate).** The act of creating a man-made cavity in the existing soil for the removal of material necessary to obtain a specific elevation or to install a structure, material, component, or item necessary to complete a specific task or form a final surface or subsurface.

**Extra Work.** Any work that was not provided for or included in the Contract as awarded but the Concessionaire determines is essential to the satisfactory fulfillment of the Contract within its intended scope and authorized pursuant to Article 9 of Part 4 (Fred Ex General Conditions).

-F-

**Falsework.** A temporary framework used to support work while in the process of constructing permanent structural units.

**Federal Agencies or Officers.** An agency or officer of the federal government and any agency or officer succeeding, in accordance with the law to the powers, duties, jurisdictions, and authority of the agency or officer mentioned.

**Fill Slope (See also Cut Slope).** A surface plane formed during the construction of an Embankment above existing ground elevations that intersects with existing ground at its termini.

**Flood Frequency.** A statistical average recurrence interval of floods of a given magnitude.

**Formwork.** A temporary structure or mold used to retain the plastic or fluid concrete in its designated shape until it hardens. Formwork shall be designed to resist the fluid pressure exerted by plastic concrete and additional fluid pressure generated by vibration and temporary construction loads.

**Execution Version**

---

**Frontage Street or Road.** A local Street or Road auxiliary to and located on the side of a Highway for service to abutting property and adjacent areas and control of access.

-G-

**Gage.** U.S. Standard Gage.

**Grade Separation.** Any structure that provides a Traveled Way over or under another Traveled Way or over a body of water.

-H-

**Highway.** The entire Right of Way reserved for use in constructing or maintaining the roadway and its appurtenances.

**Historical Flood Level.** The highest flood level that is known to have occurred at a given location.

**Hydrologic Data Sheet.** A tabulation of hydrologic data for facilities conveying a 100-year discharge equal to or greater than 500 cubic feet per second.

-I-

**Inspector.** The Concessionaire's authorized representative who is assigned to make detailed inspections of the quality and quantity of the Fred Ex Work and its conformance to the requirements and provisions of the Contract.

**Invert.** The lowest point in the internal cross-section of a pipe or other drainage structure.

-J-K-L-

**Laboratory.** The testing laboratory of VDOT or any other testing laboratory that may be designated by the Contract or by the Design-Builder.

-M-N-

**Material.** Any substance that is used in the Fred Ex Work specified in the Contract.

**Median.** The portion of a divided Highway that separates the Traveled Ways.

-O-

**Ordinary High Water.** A water elevation based on analysis of all daily high waters that will be exceeded approximately 25 percent of the time during any 12-month period.

-P-Q-

**Pavement Structure.** The combination of Select or stabilized materials, Subbase, Base, and surface courses, described in the typical pavement section in the Fred Ex Contract Documents that is placed on a Subgrade to support the traffic load and distribute it to the Roadbed.

**Plans.** The approved Fred Ex Project plans and profiles, which may include but are not limited to survey data, typical sections, summaries, general notes, details, plan and profile views, cross-sections, special design drawings, computer output listings, supplemental drawings, or exact reproductions thereof, and all subsequently approved revisions thereto which show the location, character, dimensions, and details of the Fred Ex Work specified in the Contract.

**Execution Version**

---

**Prequalification.** The procedure for qualifying a Design-Builder to bid or work on Department contracts specified in VDOT's Rules Governing Prequalification Privileges which are available on VDOT's website at: [www.viriniadot.org/business/const/prequal.asp](http://www.viriniadot.org/business/const/prequal.asp).

**Professional Engineer (PE).** An engineer holding a valid license to practice engineering in the State of Virginia.

**Profile Grade.** The line of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the Roadbed.

**-R-**

**Ramp.** A connecting Roadway between two Highways or Traveled Ways or between two intersecting Highways at a Grade Separation.

**Road.** A general term denoting a public way for purposes of vehicular travel including the entire area within the Right of Way; the entire area reserved for use in constructing or maintaining the Roadway and its appurtenances.

**Roadbed.** The graded portion of a Highway within the top and side slopes that is prepared as a foundation for the Pavement Structure and Shoulders.

**Roadbed Material.** The material below the Subgrade in cuts, Embankments, and Embankment foundations that extends to a depth and width that affects the support of the pavement structure.

**Roadside.** A general term that denotes the area within the Right of Way that adjoins the outer edges of the Roadway; extensive areas between the Roadways of a divided Highway.

**Roadside Development.** Items that are necessary to complete a Highway that provide for the preservation of landscape materials and features; rehabilitation and protection against erosion of areas disturbed by construction through placing seed, sod, mulch, and other ground covers; and such suitable plantings and other improvements as may increase the effectiveness, service life and enhance the appearance of the Highway.

**Roadway.** The portion of a Highway within the limits of construction and all structures, ditches, channels, and waterways which are necessary for the correct drainage thereof.

**Rootmat.** Any material that by volume, contains approximately 60 percent or more roots.

**-S-**

**Schedule of Record (SOR).** The latest accepted Baseline Schedule in accordance with Part 3, Article 11 of the Contract by which all schedule references will be made and progress evaluated.

**Seawater.** Water in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent of total solids.

**Select Borrow.** Borrow material that has specified physical characteristics.

**Select Material.** Material obtained from Roadway Cuts, Borrow areas, or commercial sources that is designated or reserved for use as a foundation for the Subbase, Subbase material, Shoulder surfacing, or other specified purposes designated in the Fred Ex Contract Documents.

**Shoulder.** The portion of the Roadway contiguous with the Traveled Way that is for the accommodation of stopped vehicles, emergency use, and lateral support of the Base and Surface courses.

**Sidewalk.** The portion of the Roadway constructed primarily for the use of pedestrians.



**Execution Version**

---

**Skew.** The acute angle formed by the intersection of a line normal to the centerline of the Roadway with a line parallel to the face of the abutments or, in the case of Culverts, with the centerline of the Culverts.

**Special Provision (SP).** See Section 1.5a of Part 2 (Fred Ex Technical Requirements).

**Special Provision Copied Note (SPCN).** See Section 1.5a of Part 2 (Fred Ex Technical Requirements).

**Specifications.** A general term that includes all directions, provisions, and requirements which are necessary for the proper fulfillment of the Contract. Specifications are found in the Fred Ex Contract Documents.

**Supplemental Specifications (SS).** See Section 1.5a of Part 2 (Fred Ex Technical Requirements).

**Station.** When used as a definition or term of measurement, 100 linear feet.

**Storm Sewer System.** A drainage system consisting of a series of at least two interconnecting pipes and structures (minimum of two drop inlets, manholes, junction boxes, etc.) designed to intercept and convey stormwater runoff from a specific storm event without surcharge.

**Street.** A general term denoting a public way for purposes of vehicular travel including the entire area within the Right of Way; the entire Right of Way reserved for use in constructing or maintaining the Roadway and its appurtenances.

**Structures.** Bridges, Culverts, catch basins, inlets, retaining walls, cribs, manholes, end walls, buildings, steps, fences, sewers, service pipes, underdrains, foundation drains, and other features that may be encountered in the Fred Ex Work and are not otherwise classed herein.

**Subbase.** A layer(s) of specified or selected material of designed thickness that is placed on a Subgrade to support a Base Course.

**Subgrade.** The top Earthwork surface of a Roadbed, prior to application of Select (or stabilized) Material courses, shaped to conform to the typical section on which the Pavement Structure and Shoulders are constructed, or surface that must receive an additional material layer, such as topsoil, stone or other Select Material.

**Subgrade Stabilization.** The modification of Roadbed soils by admixing with stabilizing or chemical agents that will increase the load bearing capacity, firmness, and resistance to weathering or displacement.

**Supplier.** Any business who manufactures, fabricates, distributes, supplies or furnishes materials or equipment, but not on-site labor, for use in performing the Fred Ex Work on or for the Fred Ex Project according to the requirements of the Fred Ex Contract Documents.

**Surface Course (See Wearing Course).** One or more top layers of a Pavement Structure designed to accommodate the traffic load, which is designed to resist skidding, traffic abrasion, and disintegrating effects of weather.

**Surplus Material.** Material that is present on the Fred Ex Project as a result of unbalanced Earthwork quantities, excessive swell, slides, undercutting, or other conditions beyond the control of the Design-Builder, or is designated as surplus material in the Fred Ex Contract Documents.

**Suspension.** A written notice issued by the Concessionaire to the Design-Builder that orders the Fred Ex Work on the Fred Ex Project to be stopped wholly or in part as specified. The notice will include the reason for the suspension.

-T-

**Temporary Structure.** Any structure that is required to maintain traffic while permanent structures or parts of structures specified in the Contract are constructed or reconstructed. The Temporary Structure shall include earth approaches.

**Execution Version**

---

**Theoretical Maximum Density.** The maximum compaction of materials that can be obtained in accordance with the values established VTM-1.

**Tidewater, Virginia.** Areas within the State as defined in the Department of Conservation and Recreation Erosion and Sediment Control Manual.

**Ton.** A short ton; 2,000 pounds avoirdupois.

**Top of earthwork.** The uppermost surface of the regular or embankment excavation, not including select material that is shaped to conform to the typical section shown in the plans or directed by the Concessionaire.

**Topsoil:** The uppermost original layer of material that will support plant life and contains more than 5 percent organic material and is reasonably free from roots exceeding 1 inch in diameter, brush, stones larger than 3 inches in the largest dimension, and toxic contaminants.

**Traveled Way.** The portion of the Roadway for the movement of vehicles, not including Shoulders.

~~-U-V-~~

**Unsuitable Material.** As defined in Part 2 of the Fred Ex Contract Documents (“Fred Ex Technical Requirements”).

~~-W-X-Y-Z-~~

**Wearing Course (See Surface course).** The top and final layer of any pavement

**Working Drawings.** Stress sheets, shop drawings, erection plans, Falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data the Design-Builder is required to submit to the Concessionaire’s Representative for record purposes.

**SECTION 102—BIDDING REQUIREMENTS AND CONDITIONS (Not Used)** Refer to RFQ and Part 1 (RFP).

**SECTION 103—AWARD AND EXECUTION OF DESIGN-BUILD CONTRACTS (Not Used)** Refer to Part 1 (RFP).

**SECTION 104—SCOPE OF WORK****104.01—Intent of Contract**

The intent of the Contract is to provide for completion of the Fred Ex Work specified therein in accordance with the Contract for the Fred Ex Contract Price and within the Fred Ex Contract Times. Further, it is understood that the Design-Builder shall perform the Fred Ex Work under the Contract as an independent contractor and not as an agent of the Concessionaire, Department, the Commissioner, or the Board.

**104.02—Changes in Quantities or Alterations in the Work****(a) General**

The Concessionaire reserves the right to make, in writing, at any time during the Fred Ex Work, such changes in quantities and such alterations in the Fred Ex Work as are necessary to complete the Fred Ex Project satisfactorily. Such changes shall be administered under Article 9 of Part 4 (Fred Ex General Conditions), and shall not invalidate the Contract or release the Surety, and the Design-Builder shall agree to perform the Fred Ex Work as altered. No change, alteration, or modification in or deviations from the Fred Ex Contract Documents, or the giving by the Concessionaire of any extension of time for the performance of the Fred Ex Work, or the forbearance

**Execution Version**

---

on the part of the Concessionaire shall release or exonerate in whole or in part either the Design-Builder or any Surety on the obligations of any bond given in connection with the Contract. Neither the Concessionaire nor the Design-Builder shall be under any obligation to notify the Surety or sureties of any such alteration, change, extension, or forbearance notice thereof being expressly waived. Any increase in the Fred Ex Contract Price shall automatically result in a corresponding increase in the penal amount of the bonds without notice to or consent from the Surety, such notice and consent being hereby waived. Decreases in the Fred Ex Contract Price shall not, however, reduce the penal amount of the bonds unless specifically provided in any Change Order decreasing the scope of the Fred Ex Work.

**(b) Value Engineering Proposals**

The Design-Builder may submit to the Concessionaire written Value Engineering Contractor Proposals (VECP) for modifying the requirements of Fred Ex Contract Documents for the purpose of reducing the total Fred Ex Contract Price or Fred Ex Contract Times without reducing the design capacity or quality of the finished product. If the Concessionaire accepts VECP, the Concessionaire and the Design-Builder will equally divide the net savings or Fred Ex Contract Time, or both.

Each VECP shall result in a net savings over the Fred Ex Contract Price or Fred Ex Contract Times, or both without impairing essential functions and characteristics of the item(s) or of any other part of the Fred Ex Project, including, but not limited to, service life, reliability, economy of operation, ease of maintenance, aesthetics, and safety. At least the following information shall be submitted with each VECP:

- Statement that the proposal is submitted as a VECP
- Statement concerning the basis for the VECP benefits to the Concessionaire and an itemization of the pay items and requirements affected by the VECP
- Detailed estimate of the cost under the existing Contract and under the VECP
- Proposed specifications and recommendations as to the manner in which the VECP changes are to be accomplished
- Statement as to the time by which a contract Change Order adopting the VECP must be issued so as to obtain the maximum cost-effectiveness

The Concessionaire will process the VECP in the same manner as prescribed for any other proposal that would necessitate issuance of a Change Order. The Concessionaire may accept a VECP in whole or part by issuing a Change Order that will identify the VECP on which it is based. The Concessionaire will not be liable to the Design-Builder for failure to accept or act on any VECP submitted pursuant to these requirements or for delays in the work attributable to any VECP. Until a VECP is put into effect by a Change Order, the Design-Builder shall remain obligated to the terms and conditions of the existing Contract. If an executed Change Order has not been issued by the date on which the Design-Builder's proposal specifies that a decision should be made or such other date as the Design-Builder may subsequently have specified in writing, the VECP shall be deemed rejected.

The Change Order effecting the necessary modification of the Contract will establish the net savings agreed on, and provide for adjustment of the Fred Ex Contract Price, or Fred Ex Contract Time, or both. The Design-Builder shall absorb all costs incurred in preparing a VECP. Costs for reviewing and administering a VECP will be borne by the Concessionaire. The Concessionaire may include in the agreement any conditions it deems appropriate for consideration, approval, and implementation of the VECP. The Design-Builder's 50 percent share of the net savings or Fred Ex Contract Time or both shall constitute full compensation to him for effecting all changes pursuant to the VECP Change Order.

Unless specifically provided for in the Change Order authorizing the VECP, acceptance of the VECP and performance of the work thereunder will not change the Fred Ex Contract Time.

**Execution Version**

---

The Concessionaire may adopt a VECP for general use in contracts the Concessionaire administers if it determines that the VECP is suitable for application to other contracts. VECPs identical with or similar to previously submitted VECPs will be eligible for consideration and compensation under these provisions if the Concessionaire has not previously adopted the VECPs for general application to other contracts administered by the Concessionaire. When a VECP is adopted for general use, compensation pursuant to these requirements will be applied only to those awarded contracts for which the VECP was submitted prior to the date of adoption of the VECP.

Proposed changes in the basic design of a Bridge or pavement type or those changes that require different right of way limits will not normally be considered an acceptable VECP. If a VECP is based on or is similar to a change in the Fred Ex Contract Documents prior to submission of the VECP, the Concessionaire will not accept the VECP.

The Concessionaire will be the sole judge of the acceptability of a VECP. The requirements herein apply to each VECP initiated, developed, and identified as such by the Design-Builder at the time of its submission to the Concessionaire. However, nothing herein shall be construed as requiring the Concessionaire to approve a VECP.

Subject to the provisions herein, the Concessionaire or any other public agency shall have the right to use all or part of an accepted VECP without obligation or compensation of any kind to the Design-Builder.

**104.03—Differing Site Conditions (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Section 4.3 (Differing Site Conditions)

**SECTION 105—CONTROL OF WORK**

**105.01—Notice to Proceed (Not Used)** Refer to Part 3 (Fred Ex Design-Build Contract)

**105.02—Pre-Construction Conference (Not Used)**

**105.03—Authorities of Project Personnel, Communication and Decision Making (Not Used)**

**105.04—Gratuities**

Gifts, gratuities, or favors shall not be given or offered by the Design-Builder to personnel of the Concessionaire or VDOT. A gift, gratuity, or favor of any nature whatsoever or offer of such by the Design-Builder to personnel of the Concessionaire or VDOT shall be a violation of this provision.

The Design-Builder shall not employ any personnel of the Concessionaire or VDOT for any services without the prior written consent.

If the Concessionaire or VDOT determines after investigation that the Design-Builder or the Design-Builder's Employees, representatives, or agents of any Person acting in his behalf have violated this Section, the Concessionaire or VDOT may, at its discretion, disqualify the Design-Builder from bidding on future contracts with the Concessionaire or VDOT for a period of six months from the date of the determination of such a violation. Any implicated Employees, agents, or representatives of the Design-Builder may be prohibited from working on any contract the Concessionaire or VDOT awards for the period of the Design-Builder's disqualification.

**105.05—Character of Workers, Work Methods, and Equipment**

**(a) Workers**

Workers shall have sufficient skill and experience to perform properly the Fred Ex Work assigned to them. Workers engaged in special or skilled work shall have sufficient experience in such work and in the operation of Equipment required to perform it properly and satisfactorily. The term "Workers" means the Design-Builder's employees, its Subcontractors at any tier, or any of their respective employees.

**Execution Version**

---

The Design-Builder shall immediately remove from the Fred Ex Project any Workers who, in the Concessionaire's opinion, do not perform their work in a proper, skillful and satisfactory manner or are intemperate or disorderly. The Concessionaire shall direct the Design-Builder to do so in writing and such Workers shall not be employed again on any portion of the Fred Ex Work without the Concessionaire's written approval. If the Design-Builder fails to immediately remove the Workers, or furnish suitable and sufficient Workers for satisfactory prosecution of the Fred Ex Work, the Concessionaire may withhold all monies that are or may become due the Design-Builder and may suspend the Fred Ex Work until the Design-Builder has complied with the Concessionaire's directive.

**(b) Equipment**

Equipment shall be of sufficient size and quantity, and in such good mechanical condition as to comply with the Contract requirements and to produce a satisfactory quality of work. Equipment shall be such that no damage to the Roadway, adjacent property, or other Highways, or no danger to the public will result from its use. The Concessionaire may order the removal and require replacement of unsatisfactory Equipment.

**(c) Work Methods**

When methods and Equipment to be used by the Design-Builder are not prescribed in the Contract, the Design-Builder is free to use whatever methods or Equipment he feels will accomplish the Fred Ex Work in conformity with the Contract requirements.

When the Contract specifies that construction be performed by the use of particular methods and Equipment, they shall be used unless others are authorized by the Concessionaire. If the Design-Builder desires to use a different method or type of Equipment, he may request permission from the Concessionaire to do so. The request shall be in writing and shall include a full description of the methods and Equipment he proposes to use and an explanation of the reasons for desiring to make the change. If permission is not given, the Design-Builder shall use the specified methods and Equipment. If permission is given, it will be on the condition that the Design-Builder shall be fully responsible for producing construction work in conformity with contract requirements. If, after trial use of the substituted methods or Equipment, the Concessionaire determines that the work produced does not conform to the Contract requirements, the Design-Builder shall discontinue the use of the substitute method or Equipment and shall complete the remaining construction with the specified methods and Equipment. The Design-Builder shall remove any deficient work and replace it with work of the specified quality or take such other corrective action as the Concessionaire may direct. No change will be made in the basis of payment for the construction items involved or the Fred Ex Contract Times as the result of authorizing or denying a change in methods or Equipment under these provisions.

**105.06—Subcontracting**

- (a) The Design-Builder shall notify the Concessionaire of the name of the firm to whom the work will be subcontracted, and the amount and items of work involved. Such notification shall be made and verbal approval given by the Concessionaire prior to the Subcontractor beginning work.
- (b) The Design-Builder shall perform with his own organization work amounting to not less than 30 percent of the total original Fred Ex Contract Price unless otherwise indicated in the Contract.

The term “perform work with its own organization” refers to Workers employed or leased by the Design-Builder, and equipment owned or rented by the Design-Builder, with or without operators. Such term does not include employees or equipment of a Subcontractor or lower tier Subcontractor, agents of the Design-Builder, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the Design-Builder meets all of the following conditions:

1. The Design-Builder maintains control over the supervision of the day-to-day activities of the leased employees;

**Execution Version**

---

2. The Design-Builder remains responsible for the quality of the work of the leased employees;
  3. The Design-Builder retains all power to accept or exclude individual employees from work on the Fred Ex Project; and
  4. The Design-Builder remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
- (c) The Design-Builder shall not subcontract any part of the work to a contractor who is not prequalified with VDOT, unless otherwise indicated in the Contract. This restriction does not apply to service providers, Design Consultants, consultants, manufacturers, suppliers, or haulers. Consent to subcontract or otherwise dispose of any portion of the work shall not relieve the Design-Builder of any responsibility for the satisfactory fulfillment of the entire Contract. All subcontracts shall be evidenced by written binding agreements that shall be available to the Concessionaire upon request, before, during, and after their approval.

**105.07—Cooperation of Design-Builder**

The Design-Builder shall give the Fred Ex Work the constant attention necessary to facilitate quality and progress and shall fully cooperate with the Concessionaire, and other contractors involved in the prosecution of the work. If any portion of the Fred Ex Project is located within the limits of a municipality, military installation, or other federally owned property, the Design-Builder shall cooperate with the appropriate officials and their agents in the prosecution of the Fred Ex Work to the same extent as with the Concessionaire.

The Design-Builder shall have on the Fred Ex Project at all times during prosecution of the Fred Ex Work a competent Design-Builder Representative who is capable of reading and understanding the Fred Ex Contract Documents, experienced in the type of work being performed, and who shall receive instructions from the Design-Builder or the Concessionaire or the Concessionaire's authorized representatives. The Design-Builder Representative shall have full authority to execute the orders and directions of the Concessionaire without delay and supply promptly such Materials, Equipment, tools, labor, and incidentals as may be required.

**105.08—Cooperation with Regard to Utilities (Not Used)** Refer to Section 1.7 of Part 2 (Fred Ex Technical Requirements)

**105.09—Cooperation among Contractors (Not Used)** Refer to Sections 3.6 and 3.7 of Part 4 (Fred Ex General Conditions)

**105.10—Plans and Working Drawings****(a) General**

Refer to Article 2 of the Part 4 (Fred Ex General Conditions) for Required Submittals and Section 1.2.6 of Part 2 (Fred Ex Technical Requirements) for further details.

**(b) Plans**

Design-Builder shall furnish all plans consisting of general drawings and showing such details as are necessary to give a comprehensive understanding of the work specified. Except as otherwise shown on the plans, dimensions shown on the plans are measured in the respective horizontal or vertical planes. Dimensions that are affected by gradients or vertical curvatures shall be adjusted as necessary to accommodate actual field conditions and shall be specifically denoted on the Working Drawings.

**(c) Working Drawings**

The Design-Builder shall furnish Working Drawings and maintain a set for the Concessionaire as may be required. Working Drawings shall not incorporate any changes from the requirements of the Contract unless the changes

**Execution Version**

---

are specifically denoted, together with justification, and are approved in writing by the Concessionaire. The Design-Builder shall identify Working Drawings and submittals by the complete Fred Ex Project and job designation numbers. Items or component materials shall be identified by the specific Contract Item number and Specification reference in the Contract.

The Design-Builder shall provide five sets of any submittal. If a railroad, municipality, or other entity as specified in the Fred Ex Contract Documents is required to review the Working Drawings, the reviewed Working Drawings will be returned within 28 days from the date of receipt by the Concessionaire. If the Working Drawings are not returned by the time specified, no additional compensation will be allowed, but Design-Builder may submit, in accordance with the applicable requirements of the Fred Ex Contract Documents, a request for a time extension. Upon completion of the Fred Ex Work, the original tracings, if required, shall be supplied to the Concessionaire.

Deviations from the Contract requirements initiated by the Design-Builder shall be requested in writing and clearly identified on the Working Drawings. Explicit supporting justification shall be furnished specifically describing the reason for the requested deviations as well as any impact such deviations shall have on the schedule of Fred Ex Work. Failure to address time or other impacts associated with the Design-Builder's request will be cause for rejection of the Design-Builder's request. Deviations from the Contract requirements shall not be made unless authorized by the Concessionaire. If authorized by the Concessionaire, such authorization shall not relieve the Design-Builder from the responsibility for complying with the requirements of the Contract for a fully functional finished work item as specified or designed.

The Design-Builder shall submit as-built Working Drawings upon completion of the Fred Ex Work, if required, by the Contract.

The Design-Builder may authorize the fabricator in writing to act for him in matters relating to Fred Ex Working Drawings. Such authorization shall have the force and effect of any other representative of the Design-Builder's organization.

**1. Steel Structures**

Working Drawings for steel structures, including metal handrails, shall consist of shop detail, erection, and other Working Drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work. Such drawings shall be signed and sealed by a PE.

**2. Falsework**

Working Drawings for Falsework supporting a Bridge Superstructure shall be signed and sealed by a PE.

**3. Concrete Structures and Prestressed Concrete Members**

Working Drawings for concrete structures and prestressed concrete members shall provide such details as required for the successful prosecution of the Fred Ex Work and which are not included in the RFP Documents furnished by the Concessionaire. Drawings shall include plans for items such as prestressing strand details and elongation calculations, location of lift points, Falsework, bracing, centering, formwork, masonry, layout diagrams, camber management plan for prestressed members, and bending diagrams for reinforcing steel when necessary or when requested. Such drawings shall be signed and sealed by a PE.

**4. Lighting, signal and pedestal poles, overhead and Bridge mounted sign structures, breakaway support systems, anchor bolts, framing units, panels, and foundations.**

Prior to fabrication or construction, the Design-Builder shall submit for review one original and six copies of each Working Drawing and design calculation for lighting, signal and pedestal poles, overhead and Bridge mounted sign structures, breakaway support systems, anchor bolts, framing units, panels, and foundations. All sheets of these submittals shall include the PE's signature and seal. Certification for foundations will be required only when the designs are furnished by the Design-Builder. The designs shall be in accordance with

**Execution Version**

---

the specific editions of the AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* as required in Section 700. Such designs shall be signed and sealed by a PE.

**5. Reinforced Concrete Pipe**

When specified, and prior to manufacture of reinforced concrete pipe, the Design-Builder shall furnish to the Concessionaire a certification of the acceptability of the design of such pipe, as determined from a review that has been signed and sealed by a PE. Such certification shall cover all design data, supporting calculations, and materials. Pipe designs previously certified or approved by VDOT will not require recertification.

**105.11—Conformity with Fred Ex Contract Documents**

All Materials to be used in the Fred Ex Work shall conform to the qualities, Part 2 (Fred Ex Technical Requirements), values or range of values specified in the Contract. Less than complete conformity may be tolerated if obtaining exact or complete conformity would not be feasible and if authorized in writing by the Concessionaire.

Permissible tolerances for the elevation of Subgrade and finished grade and for the thickness of the various courses of Pavement Structure are specified in the Fred Ex Contract Documents. If permissive tolerances are exceeded or if consistent deviations from the Fred Ex Contract Documents or abrupt changes in grade occur, even though within the tolerances, the affected areas shall be reconstructed to conform to the specified tolerance and provide a smooth riding surface.

When the Fred Ex Contract Documents require the finished surface to tie into any structural item whose elevation is fixed, the elevation of the finished surface must coincide with the elevation of the structural item.

**105.12—Coordination of Fred Ex Contract Documents**

The Design-Builder shall be responsible for the coordination of the Fred Ex Contract Documents. In the event of any inconsistency, conflict, or ambiguity between or among the Fred Ex Contract Documents, such inconsistency, conflict or ambiguity shall be interpreted as set forth in Section 3.1 of the Part 3 (Fred Ex Design-Build Contract).

The Design-Builder shall not take advantage of any obvious or apparent ambiguity, conflict, error, or omission in the Fred Ex Contract Documents. If after beginning work the Design-Builder discovers an ambiguity, conflict, error, or omission in the Fred Ex Contract Documents, he shall immediately notify the Concessionaire of the corrections in accordance with the Fred Ex Contract Documents and make such corrections as necessary for fulfilling the intent of the Fred Ex Contract Documents before proceeding further with the effected work.

**105.13—Construction Stakes, Lines, and Grades**

The Design-Builder shall perform all construction and other surveying that the Design-Builder deems necessary to construct this Fred Ex Project in accordance with the Fred Ex Contract Documents. The cost for all surveying performed by the Design-Builder is included in the Fred Ex Contract Price. All construction surveys shall be performed under the direct supervision of a land surveyor duly registered and licensed in the State.

**105.14—Maintenance During Construction****(a) Traffic Control**

1. The Design-Builder shall have at least one person on the Fred Ex Project site during all work operations who is currently verified either by VDOT's Intermediate Work Zone Traffic Control training or by the American Traffic Safety Services Association (ATSSA) Virginia Intermediate Traffic Control Supervisor (TCS) training by a Department approved training provider. This person must have their verification card with them while on the Fred Ex Project site. This person shall be responsible for the oversight of Work zone traffic control within the Fred Ex Project limits in compliance with the Contract requirements, the VWAPM, and the MUTCD. This person's duties shall include the supervision of the installation, adjustment (if necessary),



**Execution Version**

---

inspection, maintenance, and removal when no longer required, of all Fred Ex Work zone traffic control devices on the Fred Ex Project.

If none of the Design-Builder's on-site personnel responsible for the supervision of such work have the required verification with them or if they have an outdated verification card showing they are not currently verified as a Traffic Control Supervisor (TCS) either by VDOT in Intermediate Fred Ex Work Zone Traffic Control, or by the ATSSA, the Concessionaire will suspend all work on the Fred Ex Project until the Fred Ex Work is appropriately supervised in accordance with the requirements herein.

2. The Design-Builder shall have at least one person on site who is, at a minimum, verified in Basic Work Zone Traffic Control by VDOT for each construction and/or maintenance operation that involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of work zone traffic control devices.

In the event none of the Design-Builder's on-site personnel for any construction and/or maintenance operation have, at a minimum, the required verification in Basic Work Zone Traffic Control, the Concessionaire will suspend that construction/maintenance operation until that operation is appropriately staffed in accordance with the requirements herein.

3. **Flagging Traffic:** Certified flaggers shall be provided in sufficient number and locations as necessary for control and protection of vehicular and pedestrian traffic in accordance with the VWAPM. Flaggers shall be able to communicate to the traveling public in English while performing the job duty as a flagger at the flagger station. Flaggers shall use sign paddles to regulate traffic in accordance with the VWAPM.

Certification for flaggers will be awarded upon a candidate's satisfactory completion of an examination. Certification cards shall be carried by flaggers while performing flagging duties. Flaggers found not to be in possession of their certification card shall be removed from the flagging site and operations requiring flagging will be suspended by the Concessionaire until a certified flagger is on-site to perform flagging duties in accordance with the requirements herein. Further, flaggers performing duties improperly will have their certifications revoked.

**(b) Maintenance of Traffic**

1. The Design-Builder shall prosecute the Fred Ex Work so as to avoid obstructions to traffic to the greatest extent practicable. The Design-Builder shall provide for the safety and convenience of the general public and residents along the roadway, and for the protection of persons and property.

Highways closed to traffic shall be protected by barricades and other warning devices as required by the Contract, the VWAPM, and the MUTCD. Barricades and warning devices shall be illuminated where required during periods of darkness and low visibility. The Design-Builder shall erect warning devices in advance of a location on the Fred Ex Project where operations or obstructions may interfere with the use of the road by traffic and at all intermediate points where the new work crosses or coincides with an existing roadway. The Design-Builder shall maintain sign faces and reflective surfaces of warning devices in a clean and visible condition. The Design-Builder shall cover or remove signs when the messages thereon are not applicable. Barricades, warning signs, lights, temporary signals, and other protective devices shall conform to Section 512.

2. The road shall be kept open to all traffic while undergoing improvements, unless otherwise permitted in the Contract. The Design-Builder shall keep the portion of the Fred Ex Project being used by public, pedestrian, and vehicular traffic in such condition that all such traffic will be safely and adequately accommodated. However, removal of snow and control of ice on roads open to public travel will be performed by VDOT.

The Design-Builder shall keep the portions of the road being used by the public free from irregularities and obstructions that could present a hazard or annoyance to traffic. When directed by the Concessionaire,

**Execution Version**

---

allaying of dust shall be performed in accordance with Section 511. Holes in hard surface pavements shall be filled with approved asphalt patching material.

If any damage is sustained by an accepted unit or portion of the Fred Ex Project attributable to causes beyond the control of the Design-Builder, the Concessionaire may authorize the Design-Builder to make the necessary repairs. These repairs will be paid for at the Fred Ex Contract Price for the items requiring repair. In the absence of Contract prices covering the items of repair, the repair work will be paid for in accordance with Section 109.05.

3. **Detours:** Detours may be indicated on the plans or in the special provisions or may be used with the Concessionaire's approval. Unless otherwise designated in the Contract, the Design-Builder shall furnish, install and maintain all directional markings, for through-traffic on off-project detours authorized or requested by the Concessionaire with the exception of municipalities. Municipalities shall be responsible for off-project roadway maintenance within their own corporate limits. Detours over existing state roads shall be designated, marked, and maintained by the Design-Builder. Directional markings for detours shall include signs. Responsibility for installation and maintenance of the signs shall be in accordance with Section 512.03(a). If any Fred Ex Project is located wholly or in part within a municipality's corporate limits and through traffic is to be detoured at the municipality's request, the municipality will provide and maintain the detours within the corporate limits and will furnish, install and maintain all directional markings. The provision of detours and marking of alternate routes will not relieve the Design-Builder of the responsibility for ensuring the safety of the public or from complying with any Contract requirements affecting the rights of the public within his Contract area of operations, including those concerning lights and barricades. Maintenance of all other detours shall be the Design-Builder's responsibility.
4. **Maintenance of Traffic During Suspension of Work:** During any suspension of work, the Design-Builder shall temporarily open to traffic such portions of the Fred Ex Project and temporary roadways as may be agreed upon by the Design-Builder and the Concessionaire.
5. **Minimizing Traffic Delays:** Two-way traffic shall be maintained at all times unless the Contract or the Concessionaire permits one-way traffic. The Design-Builder shall not stop traffic without the Concessionaire's permission.

If one-way traffic is permitted, the Design-Builder shall provide certified flaggers to direct the traffic. When specified in the Contract, pilot vehicles shall be furnished in accordance with Section 512. Upon the Design-Builder's request and where deemed appropriate by the Concessionaire, the Design-Builder will install traffic signals that may be used for the control of one-way traffic. The Design-Builder shall pay the costs of installation, electrical service, maintenance or repair work.

6. **Connections and Entrances:** Connections with other roads and public and private entrances shall be kept in a reasonably smooth condition at all times.

Stabilization or surfacing material shall be applied to connections and entrances.

The Design-Builder shall schedule construction operations so that approved continuous access is provided for all property adjacent to the construction when the property is shown on the plans to require access. When frontage roads are shown on the plans, they shall be constructed prior to the closing of any access routes unless other approved access is provided and is acceptable to the property owner.

The Design-Builder shall not disturb connections or entrances until necessary. Once disturbed, the Design-Builder shall maintain and complete connections or entrances as follows:

- a. **Connections:** Connections that had an original paved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using temporary pavement as soon as practicable after connections are disturbed. Connections that had an original unpaved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the

**Execution Version**

---

intersection, using either the required material or a temporary aggregate stabilization course that shall be placed as soon as practicable after connections are disturbed.

If there are delays in prosecution of work for connections, connections that were originally paved shall have at least two lanes maintained with a temporary paved surface. Those that were not originally paved shall be maintained with a temporary aggregate stabilization course.

- b. **Entrances:** Entrances shall be graded concurrently with the roadway with which they intersect. Once an entrance has been disturbed, it shall be completed as soon as is practicable, including placing the required base and surface course or stabilization. If the entrance must be constructed in stages, such as when there is a substantial change in the elevation of the roadway with which it intersects, the surface shall be covered with a temporary aggregate stabilization course or other suitable salvaged material until the entrance can be completed and the required base and surface or stabilization course can be placed.
7. **Obstruction Crossing Roadways:** Where the Design-Builder places obstructions such as suction or discharge pipes, pump hoses, steel plates, or any other obstruction that must be crossed by vehicular traffic, they shall be bridged as directed by the Concessionaire at the Design-Builder's expense. Traffic shall be protected by the display of warning devices both day and night. If operations or obstructions placed by the Design-Builder damage an existing traveled roadway, the Design-Builder shall cease operations and repair damages to the roadway at no additional cost to the Concessionaire.
8. **Patching Operations:** Where existing hydraulic cement concrete pavement is to be patched, the operation of breaking and excavating old pavement shall extend for a distance of not more than two miles. Patching shall be coordinated with excavating so that an area of not more than one-half mile in which excavated patches are located shall be left at the end of any day's work. Necessary precautions shall be taken to protect traffic during patching operations.
9. **Temporary Structures:** The Design-Builder shall construct, maintain, and remove temporary structures and approaches necessary for use by traffic. After new structures have been opened to traffic, temporary structures and approaches shall be removed. The materials contained therein shall remain the property of the Design-Builder.
- The proposed design of temporary structures shall be submitted to the Concessionaire prior to the beginning of construction in accordance with Section 105.10.
10. **Haul Route:** The Design-Builder shall select haul routes between the Fred Ex Project and material source(s) that will minimize disturbance to the community. The Design-Builder shall furnish to the Concessionaire, for review, his plan for the haul route and for minimizing the adverse effects of hauling operations on persons who reside adjacent to the haul route or persons who otherwise use a portion of the haul route for ingress or egress to their residential or work area. The Concessionaire may select alternate haul routes, divide the hauling traffic over several routes, and impose other restrictions deemed necessary to minimize the impact of the hauling operation on local residents.

11. **Opening Sections of Fred Ex Project to Traffic**

Certain sections of the Fred Ex Work may be opened to traffic when specified in the Contract or when directed by the Concessionaire. Such opening shall not constitute acceptance of the Fred Ex Work or any part thereof or a waiver of any provision of the Contract.

If the Design-Builder is not continuously prosecuting the Fred Ex Work to the Concessionaire's satisfaction as determined by the Schedule of Record, the Design-Builder shall not be relieved of the responsibility for maintenance of the completed work during the period that the section of the Fred Ex Work is opened to traffic prior to Final Completion. The Design-Builder shall be responsible for any expense resulting from the opening of such portions of the Fred Ex Work under these circumstances, except for slides. The Design-

**Execution Version**

---

Builder shall conduct the remainder of the construction operations so as to cause the least obstruction to traffic.

**(c) Maintenance of Work**

1. The Design-Builder shall maintain the Fred Ex Work, the Fred Ex Project site, construction area and roadway from the beginning of construction operations until Final Completion with adequate equipment and forces to keep the roadway and structures in a safe and satisfactory condition at all times and to ensure the continuous and effective day by day prosecution of the Fred Ex Work.

If any damage is sustained by an accepted unit or portion of the Fred Ex Project attributable to causes beyond the control of the Design-Builder, the Concessionaire may authorize the Design-Builder to make the necessary repairs. In the absence of Contract prices covering the items of repair, the repair work will be paid for in accordance with Section 109.05.

2. Where the Contract specifies placing a course on another course or subgrade of embankment, base, subgrade, concrete, asphalt pavement, or other courses previously constructed, the Design-Builder shall maintain the courses or subgrades previously constructed in accordance with the Contract requirements when placing such course. This maintenance includes, but is not limited to draining, re-compacting, re-grading, or, if unacceptable or destroyed, the removal of work the Concessionaire previously accepted.
3. **Grading Operations:** When the Design-Builder elects to complete the rough grading operations that exceed the length of one full day's surfacing operations, the rough grade shall be machined to a uniform slope from the top edge of the existing pavement to the ditch line.

When the surface is to be widened on both sides of the existing pavement, construction operations involving grading or paving shall not be conducted simultaneously on sections directly opposite each other.

The surface of pavement shall be kept free from soil and other materials that might be hazardous to traffic. Prior to opening of new pavement to traffic, shoulders shall be roughly dressed for a distance of 3 feet from the edge of the paved surface.

**(d) Maintenance Cost**

The Design-Builder shall bear all costs of performing maintenance work before Final Completion, and of constructing and maintaining necessary approaches, crossings, intersections, and other features without direct compensation except as provided for herein. When the Design-Builder confines his operation to the surface of the roadway and reasonable width of the shoulder and the surface is disturbed or damaged by his operations or equipment, he shall be responsible for the restoration and maintenance of the surface that is disturbed or damaged.

- (e) Failure to Maintain Roadway or Structures:** If the Design-Builder fails to remedy unsatisfactory maintenance immediately after receipt of a notice by the Concessionaire, the Concessionaire may proceed with adequate forces, equipment, and material to maintain the Fred Ex Project. The cost of the maintenance, plus 25 percent for supervisory and administrative personnel, will be deducted from monies due the Design-Builder for the Fred Ex Project.

**105.15—Removing and Disposing of Structures and Obstructions**

The Design-Builder shall remove and dispose of or store, as directed by the Concessionaire, fences, buildings, structures, or encumbrances within the construction limits. Materials so removed, including existing drains or pipe culverts, shall become the property of the Design-Builder, with the exception of those materials to be stored or delivered to the Concessionaire or others as designated in the Contract.

**Execution Version**

---

- (a) **Signs:** The Design-Builder shall relocate all signs within the construction limits that conflict with construction work as approved by the Concessionaire. Signs that are not needed for the safe and orderly control of traffic during construction as determined by the Concessionaire shall be removed and stored at a designated location within the Fred Ex Project limits. The removed signs shall be stored above ground in a manner that will preclude damage and shall be reinstalled in their permanent locations prior to Final Completion. If any of the removed signs are not to be reinstalled, the Design-Builder shall notify the Concessionaire at the time the signs have been properly stored. Such signs will be removed from the storage area by the Concessionaire. Any sign that is damaged or lost because of the fault of the Design-Builder shall be repaired or replaced at his expense. Costs for removing, storing, protecting, and reinstalling such signs shall be included in the Fred Ex Contract Price and no additional compensation will be made.
- (b) **Mailboxes and Newspaper Boxes:** When removal of existing mailboxes and newspaper boxes is made necessary by construction operations, the Design-Builder shall place them in temporary locations so that access to them will not be impaired. Prior to Final Completion, boxes shall be placed in their permanent locations as designated by the Concessionaire and left in the same condition as when found. Boxes or their supports that are damaged through negligence on the part of the Design-Builder shall be replaced at his expense. The cost of removing and resetting existing boxes shall be included in other pay Contract items. New mailboxes designated in the plans shall be paid for in accordance with Section 521 of the Specifications.

**105.16—Cleanup**

Removal from the Fred Ex Project of rubbish, scrap material, and debris caused by the Design-Builder's personnel or construction operations shall be a continuing process throughout the course of the Fred Ex Work. The work site shall be kept in a neat, safe and orderly condition at all times.

Before Final Completion, the Highway, Borrow pits, quarries, Disposal Areas, storage areas, and all ground occupied by the Design-Builder in connection with the Fred Ex Work shall be cleaned of rubbish, surplus materials, and Temporary Structures, except where the Design-Builder owns or controls the property. All parts of the Fred Ex Work and the Construction Area shall be left in a neat, safe, and orderly condition.

Within 30 days after Final Completion, the Design-Builder shall remove his Equipment, Materials and debris from the Right of Way and from property adjacent to the Fred Ex Project that he does not own or control.

**105.17—Inspection of Work (Not Used)** Refer to Section 3.2 of Part 2 (Fred Ex Technical Requirements)

**105.18—Removal of Unacceptable Work**

Work will be considered as unacceptable if it: (a) does not conform to the requirements of the Fred Ex Contract Documents; (b) is performed contrary to the instructions of the Concessionaire; or (c) is performed without the authorization of the Concessionaire. Unacceptable work shall be remedied or removed immediately unless otherwise determined by the Concessionaire, and replaced in an acceptable manner at the Design-Builder's expense. The Concessionaire may elect, in its sole discretion, to accept otherwise unacceptable work at a reduced price and a warranty extended to five (5) years for the subject portion of the work when acceptance is considered to be in the best interest of the public.

The Design-Builder shall not perform destructive sampling or testing of the Fred Ex Work without written authorization of the Concessionaire. Unauthorized destructive sampling or testing will cause the Fred Ex Work to be considered unacceptable.

In the event the Design-Builder is granted authorization to perform destructive sampling or testing, the Design-Builder shall obtain the approval of the Concessionaire for the method and location of each test prior to beginning such sampling or testing. In addition, destructive sampling and testing shall be performed in the presence of the Concessionaire.

**Execution Version**

---

If the Design-Builder fails to comply immediately with any order of the Concessionaire made under this Section, the Concessionaire will have the authority to cause unacceptable or unauthorized work to be removed and replaced and to deduct the cost from any monies due or to become due the Design-Builder.

**105.19—Submission and Disposition of Claims (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 10 Contract Adjustments and Disputes

**SECTION 106—CONTROL OF MATERIAL****106.01—Source of Supply and Quality Requirements**

The Materials used throughout the Fred Ex Work shall conform to the requirements of the Contract. The Design-Builder shall regulate his supplies so that there will be a sufficient quantity of tested Material on hand at all times to prevent any delay of work. Except as otherwise specified, Materials, Equipment, and components that are to be incorporated into the finished work shall be new and fit for their intended purpose.

At the option of the Concessionaire, Materials may be approved at the source of supply. If it is found during the life of the Contract that previously approved sources of supply do not supply Materials or Equipment conforming to the Contract requirements, do not furnish the valid test data required to document the quality of the Material or Equipment, or do not furnish documentation to validate quantities to document payment, the Design-Builder shall change the source of supply and furnish Material or Equipment from other approved sources. The Design-Builder shall notify the Concessionaire of this change, and provide the same identifying information noted in this Section, at least 60 days prior to their use on the Fred Ex Project, but not less than two weeks prior to delivery.

Materials shall not contain toxic, hazardous, or regulated solid wastes or be furnished from a source containing toxic, hazardous or regulated solid wastes.

When optional Materials are included in the Contract, the Design-Builder shall advise the Concessionaire in writing of the specific Materials selected. Thereafter, the Design-Builder shall use the selected Materials throughout the Fred Ex Project unless a change is authorized in writing by the Concessionaire. However, when the Design-Builder has an option as to the type of pipe that may be used, he may use any of the approved types for each size of pipe, but he shall use the same type for a particular line. The Concessionaire may authorize other types and sources in an emergency that will not unreasonably delay delivery of the selected Material.

Equipment and Material guaranties or warranties that are normally given by a manufacturer or supplier, or are otherwise required in the Contract, shall be obtained by the Design-Builder and assigned to the Concessionaire in writing. The Design-Builder shall also provide an in-service operation guaranty on all mechanical and electrical Equipment and related components for a period of at least six months beginning on the date of partial acceptance of that specific item(s) or Final Completion of the Fred Ex Project.

**106.02—Material Delivery**

The Design-Builder shall advise the Quality Assurance Manager and the Concessionaire at least 2 weeks prior to the delivery of any Material from a commercial source. Upon delivery of any such Material to the Fred Ex Project, the Design-Builder shall provide the Concessionaire with one copy of all invoices (prices are not required). The following Materials shall also comply with Section 109.01: asphalt concrete; dense graded aggregate, to include aggregate base, Subbase, and Select Material; fine aggregate; open graded coarse aggregate; crusher run aggregate; and Road stabilization aggregate. The printed weights of each load of these Materials, as specified in Section 109.01, shall accompany the delivery, and such information shall be furnished to the Lead QA Inspector at the Fred Ex Project.

**106.03—Local Material Sources (Pits and Quarries)**

The requirements set forth herein apply exclusively to non-commercial pits and quarries from which Materials are obtained for use on contracts awarded by the Concessionaire.

**Execution Version**

---

- (a) Local Material sources shall be concealed from view from the completed Roadway and any existing public Roadway. Concealment shall be accomplished by selectively locating the pit or quarry and spoil pile, providing environmentally compatible screening between the pit or quarry site and the Roadway, or using the site for another purpose after removal of the Material, or restoration equivalent to the original use (such as farm land, pasture, turf, etc.). The foregoing requirements shall also apply to any pit or quarry opened or reopened by a Subcontractor. However, the requirements will not apply to commercial sand and gravel and quarry operations actively processing Material at the site prior to the date of the execution of the Contract.
- (b) The Design-Builder shall furnish the Concessionaire a statement signed by the property owner in which the property owner agrees to the use of his property as a source of Material for the Fred Ex Project. Upon completion of the use of the property as a Material source, the Design-Builder shall furnish the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored. The requirements for a signed statement and release will not apply to commercial sources, sources owned by the Design-Builder, and sources furnished by the Concessionaire.
- (c) Local Material pits and quarries that are not operated under a local or State permit shall not be opened or reopened without authorization by the Concessionaire. The Design-Builder shall submit for approval a site plan, including, but not limited to, the following:
1. The location and approximate boundaries of the Excavation; with a slope gradient of 3:1 or greater;
  2. Procedures to minimize erosion and siltation;
  3. Provision of environmentally compatible screening;
  4. Restoration;
  5. Cover vegetation;
  6. Other use of the pit or quarry after removal of Material, including the spoil pile;
  7. The drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving Channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations;
  8. Location of haul Roads and stabilized construction entrances if construction Equipment will enter a paved Roadway;
  9. Constructed or natural waterways used for discharge;
  10. A sequence and schedule to achieve the approved plan;
  11. The total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Design-Builder shall certify that the sediment trap or basin design is in compliance with the Fred Ex Contract Documents and all Legal Requirements. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.

The Design-Builder's design and restoration shall be in accordance with the Fred Ex Contract Documents and all Legal Requirements.

If the approved plan provides for the continued use or other use of the pit or quarry beyond the date of Final Completion, the Design-Builder shall furnish the Concessionaire a bond made payable to the Concessionaire in an amount equal to the Concessionaire's estimate of the cost of performing the restoration work. If the pit or quarry is

**Execution Version**

---

not used in accordance with the approved plan within eight months after Final Completion, the Design-Builder shall perform restoration work as directed by the Concessionaire, forfeit his bond, or furnish the Concessionaire with evidence that he has complied with the applicable requirements of the State Mining Law.

- (d) Topsoil on Department owned or furnished Borrow sites shall be stripped and stockpiled as directed by the Concessionaire for use as needed within the construction limits of the Fred Ex Project or in the reclamation of Borrow and Disposal Areas.
- (e) If payment is to be made for Material measured in its original position, Material shall not be removed until Digital Terrain Model (DTM) or cross-sections have been taken. The Material shall be reserved exclusively for use on the Fred Ex Project until completion of the Fred Ex Project or until final DTM or cross-sections have been taken.
- (f) If the Design-Builder fails to provide necessary controls to prevent erosion and siltation, if such efforts are not made in accordance with the approved sequence, or if the efforts are found to be inadequate the Concessionaire will withdraw approval for the use of the site and may cause the Design-Builder to cease all contributing operations and direct his efforts toward corrective action or may perform the Fred Ex Work with State forces or other means as determined by the Concessionaire. If the Design-Builder does not perform such work, the cost of performing the Fred Ex Work plus 25 percent for supervisory and administrative personnel will be deducted from monies due the Design-Builder.
- (g) Costs for applying seed, fertilizer, lime, mulch, and for restoration, drainage, erosion and siltation control, regrading, haul Roads, and screening shall be included in the Fred Ex Contract Price for the type of Excavation or other appropriate Contract items.
- (h) If the Design-Builder fails to fulfill the provisions of the approved plan for screening or restoring Material sources, the Concessionaire may withhold and use for the purpose of performing such work any monies due the Design-Builder. The Design-Builder shall be held liable for penalties, fines, or damages incurred by the Concessionaire as a result of his failure to prevent erosion or siltation and take restorative action.
- (i) After removing all the Material from the local material sources, the Design-Builder shall remove metal, lumber, and other debris resulting from his operations and shall shape and landscape the area in accordance with the approved plan for such work.
- (j) **Sources Furnished by VDOT:** Sources furnished by VDOT will be made available to the Design-Builder together with the right to use such property as may be required for a plant site, stockpiles, and haul roads. The Design-Builder shall confine his Excavation operations to those areas of the property specified in the Contract. The Design-Builder shall be responsible for Excavation that shall be performed in order to furnish the specified Material.
- (k) **Sources Furnished by the Design-Builder:** When the Design-Builder desires to use local Material from sources other than those furnished by VDOT, he shall first secure the approval of the Concessionaire. The use of Material from such sources will not be permitted until test results have been approved by the Concessionaire and written authority for its use has been issued by the appropriate agency, organization or individual.

The Design-Builder shall acquire the necessary rights to take Material from sources he locates and shall pay all related costs, including costs that may result from an increase in the length of the haul. Costs of exploring, sampling, testing, and developing such sources shall be borne by the Design-Builder. The Design-Builder shall obtain representative samples from at least two borings in parcels of 10 acres or less and at least three additional borings per increment of 5 acres or portion thereof to ensure that lateral changes in Material are recorded. Drill logs for each test shall include a soil description and the moisture content at intervals where a soil change is observed or at least every 5 feet of depth for consistent Material. Samples obtained from the boring shall be tested by an approved Laboratory for grading, Atterberg limits, CBR, maximum density, and optimum moisture. The Concessionaire will review and evaluate the Material based on test results provided by the Design-Builder. The Concessionaire will reject any Material from a previously approved source that fails a visual examination or whose test results show that it does not conform to the Fred Ex Contract Documents.



**Execution Version**

---

**106.04—Disposal Areas**

The Design-Builder shall dispose of unsuitable or Surplus Material shown in the Fred Ex Contract Documents according to Contract requirements as specified herein. Material not used on the Fred Ex Project shall be disposed of by the Design-Builder off the Right of Way. The Design-Builder shall obtain the necessary rights to property to be used as an approved Disposal Area. For the purpose of these Division I Amendments to the Standard Specifications an approved Disposal Area is defined as that which is owned privately, not operated under a local or State permit, and has been approved by the Concessionaire for use in disposing of Material not used on the Fred Ex Project.

The Design-Builder shall furnish the Concessionaire a statement signed by the property owner in which the owner agrees to the use of his property for the deposit of Material from the Fred Ex Project. Upon completion of the use of the property as an approved Disposal Area, the Design-Builder shall furnish the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored. This requirement will be waived for commercial sources, sources owned by the Design-Builder, and sources furnished by VDOT.

If an approved Disposal Area is not designated in the Contract, the Design-Builder shall obtain the necessary rights to property to be used as an approved Disposal Area.

Prior to the Concessionaire approving the Design-Builder's Disposal Area, the Design-Builder shall submit a site plan that shall show:

1. The location and approximate boundaries of the Disposal Area.
2. Procedures to minimize erosion and siltation.
3. Provision of environmentally compatible screening.
4. Restoration.
5. Cover vegetation.
6. Other use of the Disposal Area.
7. The drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving Channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations.
8. Location of haul roads and stabilized construction entrances if construction Equipment will enter a paved Roadway.
9. Constructed or natural waterways used for discharge.
10. A sequence and schedule to achieve the approved plan.
11. The total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Design-Builder shall certify that the sediment trap or basin design is in compliance with the Fred Ex Contract Documents and all Legal Requirements. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized. Costs for the work described herein shall be included in the Contract Price. The Design-Builder shall certify that the sediment basin design is in compliance with the Virginia Erosion and Sediment Control Regulations, all local, state, and federal ordinances, and Section 107.16.

**Execution Version**

---

Disposal Areas shall be cleared but need not be grubbed. The clearing work shall not damage grass, shrubs, or vegetation outside the limits of the approved area and haul roads thereto. After the Material has been deposited, the area shall be shaped to minimize erosion and siltation of nearby streams and landscaped in accordance with the approved plan for such work or shall be used as approved by the Concessionaire. The Design-Builder's design and restoration shall conform to the Contract requirements and federal, state, and local laws and regulations.

Excavated rock in excess of that used in Embankments in accordance with the requirements of Section 303 shall be deposited off the Right of Way in an approved Disposal Area. Deposits whose surface is composed largely of rock shall be leveled by special arrangement of the Material or reduction of the irregularity of the surface by crushing projections to create a reasonably uniform and neat appearance.

The Design-Builder's design and restoration shall be in accordance with the requirements of the Fred Ex Contract Documents and Legal Requirements.

If the Design-Builder fails to provide and maintain necessary controls to prevent erosion and siltation, if such efforts are not made in accordance with the approved sequence, or if the efforts are found to be inadequate, the Concessionaire will withdraw approval for the use of the site and may cause the Design-Builder to cease all contributing operations and direct his efforts toward corrective action or may perform the Fred Ex Work with State forces or other means as determined by the Concessionaire, and deduct the cost of performing the Fred Ex Work plus 25 percent for supervisory and administrative personnel from monies due or to become due the Design-Builder.

Costs for applying seed, lime, fertilizer, and mulch; reforestation; drainage; erosion and siltation control; regrading; haul roads; and screening shall be included in the Fred Ex Contract Price.

**Materials encountered by the Design-Builder** shall be handled and disposed of as follows:

1. **Unsuitable Material** -. The Design-Builder's geotechnical engineer shall confirm that slopes, earthwork, pavement, and foundation subgrades satisfy the design and Fred Ex Contract Document requirements. The Design-Builder's geotechnical engineer shall perform an inspection of all embankment and pavement subgrades and minor structure excavations immediately prior to placement of embankment fill, aggregate base, subbase or bedding materials to identify excessively soft, loose, dry or saturated soils that exhibit excessive pumping, weaving or rutting under the weight of the construction equipment. Materials unsuitable for use in the Fred Ex Work, as defined in Attachment 3.4a (Fred Ex Geotechnical Data Report) of Part 2 (Fred Ex Technical Requirements), shall be disposed of at an approved Disposal Area or landfill licensed to receive such Material unless the materials can be adequately treated in place through chemical and/or mechanically stabilized method that shall be approved by the Concessionaire. Such method shall be approved prior to use in the Fred Ex Work. All Unsuitable Materials shall be disposed of off-site and/or treated in place at no cost to the Concessionaire unless specifically stated otherwise in the Fred Ex Contract Documents. Design-Builder shall identify unsuitable Materials and methods of treatment on the plans and cross sections.
2. **Surplus Material** as shown in the Fred Ex Contract Documents that is not classified as unsuitable may be used to flatten slopes, to fill in ramp gores and medians provided the material is placed in accordance with the earthwork specifications. Surplus Material that is not needed shall be disposed of at an approved Disposal Area, a landfill licensed to receive such Material, or as directed by the Concessionaire in writing.

Surplus Material stockpile areas on the right-of-way shall be cleared but need not be grubbed. The clearing work shall not damage grass, shrubs, or vegetation outside the limits of the approved area and the haul Roads thereto. Placement of fill material shall not adversely affect existing drainage structures. Within 7 days after the material has been deposited, the area shall be shaped and stabilized to minimize erosion and siltation.

3. **Organic materials** such as, but not limited to, tree stumps and limbs (not considered merchantable timber), roots, rootmat, leaves, grass cuttings, or other similar materials shall be chipped or shredded and used on the Fred Ex Project as mulch, given away, sold as firewood or mulch, burned at the Design-Builder's option if permitted by local ordinance, or disposed of at a facility licensed to receive such materials. Organic material shall not be buried in State Rights of Way or in an approved Disposal Area.

**Execution Version**

---

4. **Inorganic materials** such as brick, cinder block, broken concrete without exposed reinforcing steel, or other such material shall be disposed of at an approved Disposal Area or landfill licensed to receive such materials. If disposed of in an approved Disposal Area, the material shall have enough cover to promote soil stabilization in accordance with Section 303 and shall be restored in accordance with other provisions of this Section.

Concrete without exposed reinforcing steel, may be crushed and used as rock in accordance with Section 303. If approved by the Concessionaire, these materials may be blended with soils that meet AASHTO M57 requirements and deposited in fill areas within the right-of-way in accordance with the requirements of Section 303 as applicable.

5. **Excavated rock** in excess of that used within the Fred Ex Project site in accordance with Section 303 shall be treated as surplus material.
6. **Other materials** such as, but not limited to, antifreeze, asphalt (liquid), building forms, concrete with reinforcing steel exposed, curing compound, fuel, Hazardous Materials, lubricants, metal, metal pipe, oil, paint, wood or metal from building demolition, or similar materials shall not be disposed of at an approved Disposal Area but shall be disposed of at a landfill licensed to receive such material.
7. Coal or other valuable materials uncovered during prosecution of the Fred Ex Work that are not specifically addressed by the Contract shall be disposed of as the Concessionaire directs in writing.

If the Design-Builder fails to fulfill the provisions of the approved plan for screening or restoring Disposal Areas, the Concessionaire may withhold and use for the purpose of performing such work any moneys due the Design-Builder. The Design-Builder shall be held liable for all penalties, fines, or damages incurred by the Concessionaire as a result of his failure to prevent erosion or siltation.

**106.05—Rights for and Use of Materials Found on Fred Ex Project**

With the approval of the Concessionaire, the Design-Builder may use in the Fred Ex Project any materials found in the Excavation that comply with the requirements of the Fred Ex Contract Documents. The Design-Builder shall replace at his own expense with other acceptable material the Excavation material removed and used that is needed for use in Embankments, Backfills, approaches, or otherwise. The Design-Builder shall not excavate or remove any material from within the construction limits that is not within the grading limits, as indicated by the slope and grade lines. The Design-Builder shall not own and shall not have the right to sell, trade or exchange, any coal or other valuable materials uncovered during the prosecution of the work without the Concessionaire's specific written authorization.

**106.06—Samples, Tests, and Cited Specifications**

The Design-Builder shall inspect and test materials in accordance with the QA/QC Plan. Unless reference is made to a specific dated specification or special provision, references in the Fred Ex Contract Documents to AASHTO, ASTM, VTM, and other standard test methods and materials requirements shall refer to either the test specifications that have been formally adopted or the latest interim or tentative specifications that have been published by the appropriate committee of such organizations as of the date of the RFP.

Where permitted by the Special Provision for Use of Domestic Material, the inspection cost of structural steel items, precast concrete items, and prestressed concrete items fabricated in a country other than the continental United States shall be borne by the Design-Builder. Inspection of structural fabrication shall be performed in accordance with the requirements of the appropriate VTM by a commercial Laboratory approved by VDOT. Additional cleaning or repair necessary because of environmental conditions in transit shall be at the Design-Builder's expense. Materials requiring an MSDS will not be accepted at the Fred Ex Project site for sampling without the document.

**Execution Version**

---

**106.07—Plant Inspection**

If the Concessionaire inspects materials at the source, the following conditions shall be met:

- (a) The Concessionaire shall have the cooperation and assistance of the Design-Builder and producer of the Materials.
- (b) The Concessionaire shall have full access to parts of the plant that concern the manufacture or production of the Materials being furnished.
- (c) For Materials accepted under a quality assurance plan, the Design-Builder or producer shall furnish equipment and maintain a plant laboratory at locations approved for plant processing of Materials. The Design-Builder or producer shall use the laboratory and equipment to perform quality control testing.

The laboratory shall be of weatherproof construction, tightly floored and roofed, and shall have adequate lighting, heating, running water, ventilation, and electrical service. The ambient temperature shall be maintained between 68 degrees F and 86 degrees F and thermostatically controlled. The laboratory shall be equipped with a telephone, intercom, or other electronic communication system connecting the laboratory and scale house if the facilities are not in close proximity to each other. The laboratory shall be constructed in accordance with the requirements of local building codes.

The Design-Builder or producer shall furnish, install, maintain, and replace, as conditions necessitate, testing equipment specified by the appropriate ASTM, AASHTO method, or VTM being used and provide necessary office equipment and supplies to facilitate keeping records and generating test reports. The Design-Builder or producer's technician shall maintain current copies of test procedures performed in the laboratory. The Design-Builder shall calibrate or verify all balances, scales, and weights associated with testing performed as specified in AASHTO R18. The Design-Builder or producer shall also provide and maintain an approved test stand for accessing truck beds for the purpose of sampling and inspection. The Concessionaire may approve a single laboratory to service more than one plant belonging to the same Design-Builder or producer.

For crushed glass, the plant equipment requirements are waived in lieu of an independent third-party evaluation and certification of crushed glass properties by an AASHTO Materials Reference Laboratory (AMRL)-accredited commercial soil testing Laboratory demonstrating that the supplied Material conforms to Section 203 requirements. Random triplicate samples will be evaluated and analyzed for every 1,000 tons of Material supplied to the Fred Ex Project. The averaged results will be used for evaluation purposes. Suppliers of crushed glass shall maintain third party certification records for a period of three years.

- (d) Adequate safety measures shall be provided and maintained.
- (e) Design-Builder shall inspect all Materials upon delivery to the site for compliance with Contract requirements. All non-conforming Materials shall be rejected and removed from the site.

**106.08—Storing Materials**

Materials shall be stored in a manner so as to ensure the preservation of their quality and fitness for the work. When considered necessary by the Concessionaire, Materials shall be stored in weatherproof buildings on wooden platforms or other hard, clean surfaces that will keep the Material off the ground. Materials shall be covered when directed by the Concessionaire. Stored Material shall be located so as to facilitate their prompt inspection. Approved portions of the Right of Way may be used for storage of Material and Equipment and for plant operations. However, Equipment and Materials shall not be stored within the clear zone of the travel lanes open to traffic.

The Design-Builder shall provide additional required storage space at his expense. Private property shall not be used for storage purposes without the written permission of the owner or lessee. The Design-Builder shall furnish copies of the owner's written permission to the Concessionaire. Upon completion of the use of the property, the Design-Builder shall furnish the Concessionaire a release signed by the property owner indicating that the property has been satisfactorily restored.

**Execution Version**

---

Chemicals, fuels, lubricants, bitumens, paints, raw sewage, and other harmful materials as determined by the Concessionaire and the VPDES *General Permit for Discharge of Stormwater from Construction Activities* shall not be stored within any floodplain unless no other location is available and only then shall the material be stored in a secondary containment structure(s) with an impervious liner. Also, any storage of these materials in proximity to natural or man-made drainage conveyances or otherwise where the materials could potentially reach a waterway if released under adverse weather conditions, must be stored in a bermed or diked area or inside a container capable of preventing a release. Double-walled storage tanks shall meet the berm/dike containment requirement except for storage within flood plains. Any spills, leaks, or releases of such materials shall be addressed in accordance with Section 107.16(b) and (e). Accumulated rain water may also be pumped out of the impoundment area into approved dewatering devices. All proposed pollution prevention measures and practices must be identified by the Design-Builder in his Pollution Prevention Plan as required by the Specifications, other Fred Ex Contract Documents and/or the VPDES *General Permit for Discharge of Stormwater from Construction Activities*.

**106.09—Handling Materials**

Materials shall be handled in a manner that will preserve their quality, integrity, and fitness for the Fred Ex Work. Aggregates shall be transported in vehicles constructed to prevent loss or segregation of materials.

**106.10—Unacceptable Materials**

Materials that do not conform to the requirements of the Fred Ex Contract Documents shall be considered unacceptable. Such Materials, whether in place or not, will be rejected and shall be removed from the site of the Fred Ex Work and replaced at no additional cost to the Concessionaire. If it is not practical for the Design-Builder to remove rejected Material immediately, the Concessionaire will mark the rejected Material for identification. Rejected Material whose defects have been corrected shall not be used until the Concessionaire gives written approval for its use. Upon the Design-Builder's failure to comply promptly with any order of the Concessionaire made under this Section, the Concessionaire may, in addition to other rights and remedies, have the unacceptable material removed and replaced, and deduct the cost of such removal and replacement from monies due or to become due the Design-Builder. The Concessionaire shall file documentation of the correction with resolution of the Non-conformance report (NCR).

**106.11—Material Furnished by the Concessionaire**

The Design-Builder shall furnish all Materials required to complete the Fred Ex Work except those specified to be furnished by the Concessionaire.

Material furnished by the Concessionaire will be delivered or made available to the Design-Builder at the points specified in the Contract. The cost of handling and placing Materials after delivery to the Design-Builder shall be included in the Contract Price

After receipt of the Materials, the Design-Builder shall be responsible for Material delivered to him, including shortages, deficiencies, and damages that occur after delivery, and any demurrage charges.

**106.12—Critical Materials (Not Used)****SECTION 107—LEGAL RESPONSIBILITIES**

**107.01—Legal Requirements to Be Observed (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Section 2.5, Legal Requirements

**107.02—Permits, Certificates, and Licenses. (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Section 2.6, Governmental Approvals, and Section 3.5, Governmental Approvals

**Execution Version**

---

**107.03—Federal-Aid Provisions (Not Used)** Refer to Part 3 (Fred Ex Design-Build Contract) Exhibit 11.3 Federal Requirements

**107.04—Furnishing Right of Way (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Section 2.1.6, Right-of-Way

**107.05—Patented Devices, Materials, and Processes (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 7, Indemnification

**107.06—Personal Liability of Public Officials (Not Used)**

**107.07—No Waiver of Legal Rights**

The Concessionaire shall not be precluded or estopped by any measurement, estimate, approval, acceptance, or certificate made either before or after the Final Completion of the Work, or payment therefore from showing (1) the true amount and character of the work performed and Materials furnished by the Design-Builder, (2) that any such measurement, estimate, acceptance, certificate, or payment is untrue or incorrectly made, or (3) that the Work or materials do not comply with the Contract requirements. The Concessionaire shall not be precluded or estopped, notwithstanding any such measurement, estimate, approval, acceptance, certificate, or payment in accordance therewith, from recovering from the Design-Builder or his Surety, or both, such cost or damage as the Concessionaire may sustain by reason of the Design-Builder's failure to comply with the Contract requirements.

**107.08—Protecting and Restoring Property and Landscape**

The Design-Builder shall preserve property and improvements along the boundary lines of and adjacent to the Fred Ex Work unless their removal or destruction is specified in the Fred Ex Contract Documents. The Design-Builder shall use suitable precautions to prevent damage to such property.

When the Design-Builder finds it necessary to enter on private property, beyond the limits of the construction Easement shown in the Fred Ex Contract Documents, he shall secure from the owner or lessee a written permit for such entry prior to moving thereon. An executed copy of this permit shall be furnished to the Concessionaire.

The Design-Builder shall be responsible for any damage or injury to property during the prosecution of the Fred Ex Work resulting from any act, omission, neglect, or misconduct in the Design-Builder's method of executing the Fred Ex Work or attributable to defective work or Materials. This responsibility shall not be released until Final Completion of the Fred Ex Project and a written release from the owner or lessee of the property is obtained. The term "property" includes motor vehicles.

When direct or indirect damage is done to property by or on account of any act, omission, neglect, or misconduct in the Design-Builder's method of executing the Fred Ex Work or in consequence of the non-execution thereof on the part of the Design-Builder, the Design-Builder shall restore such property to a condition similar or equal to that existing before such damage was done by repairing, rebuilding, or restoring, as may be directed by the Concessionaire, or shall make a settlement with the property owner for such property damage. The Design-Builder shall secure from the owner a written release from any claim against the Concessionaire without additional compensation therefore. A copy of this release shall be furnished to the Concessionaire.

**107.09—Design-Builder's Responsibility for Utility Property and Services**

At points where the Design-Builder's operations are on or adjacent to the properties of any utility, including railroads, and damage to which might result in expense, loss, or inconvenience, work shall not commence until arrangements necessary for the protection thereof have been completed.

The Design-Builder shall cooperate with owners of utilities so that removal and adjustment operations may progress in a timely, responsible, and reasonable manner, duplication of adjustment work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted.

**Execution Version**

---

If any utility service is interrupted as a result of accidental breakage or of being exposed or unsupported, the Design-Builder shall promptly notify the proper authority and shall cooperate fully with the authority in the restoration of service. If utility service is interrupted, repair work shall be continuous until service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority. When the Design-Builder's work operations require the disconnection of "in service" fire hydrants, the Design-Builder shall notify the locality's fire department or communication center at least 24 hours prior to disconnection. In addition, the Design-Builder shall notify the locality's fire department or communications center no later than 24 hours after reconnection of such hydrants. The Design-Builder shall be responsible for any damage to utilities that, in the investigation and determination of the Concessionaire, is found to be attributable to the Design-Builder's neglect, means, or methods of performing the Fred Ex Work.

Nothing in this Section shall be construed to be in conflict with Section 107.08.

The Design-Builder shall comply with all requirements of the *Virginia Underground Utility Damage Prevention Act* (the Miss Utility law). The Design-Builder shall not make or begin any Excavation or demolition without first notifying the Miss Utility notification center for the area where the Fred Ex Project is located. The Design-Builder shall wait to begin its Excavation or demolition until 7:00 a.m. on the third working day following the Design-Builder's notice to the notification center, unless the underground utilities cannot be marked within that time due to extraordinary circumstances. The Design-Builder may commence Excavation or demolition work only if confirmed through the Ticket Information Exchange (TIE) System, or the Design-Builder is notified directly, that all applicable utilities have either marked their underground line locations or reported that no lines are present in the Fred Ex Work zone.

**107.10—Restoration of Work Performed by Others (Not Used)** Refer to Section 1.7.3 of Part 2 (Fred Ex Technical Requirements)

**107.11—Use of Explosives (Not Used)** Refer to Section 1.8.10 of Part 2 (Fred Ex Technical Requirements)

**107.12—Responsibility for Damage Claims (Not Used)** Refer to Part 4 (Fred Ex General Conditions), Article 7 Indemnification

**107.13—Labor and Wages**

The Design-Builder shall comply with the provisions and requirements of the workers' compensation law and public statutes that regulate hours of employment on public work.

- (a) **Predetermined Minimum Wages:** The provisions of laws requiring the payment of a minimum wage of a predetermined minimum wage scale for the various classes of laborers and mechanics, when such a scale is incorporated in the Contract, shall be expressly made a part of any Contract hereunder. The Design-Builder and his agents shall promptly comply with all such applicable provisions.

Any classification not listed and subsequently required shall be classified or reclassified in accordance with the wage determination. If other classifications are used, omission of classifications shall not be cause for additional compensation. The Design-Builder shall be responsible for determining local practices with regard to the application of the various labor classifications. For additional details of predetermined minimum wage rates, refer to Part 3 (Fred Ex Design-Build Contract) Exhibit 11.3 Federal Requirements.

- (b) **Labor Rate Forms:** The Design-Builder shall complete Form C-28, indicating by classification the total number of Employees, excluding executive and administrative Employees, employed on the Project. The Design-Builder shall also indicate on the form the compensation rate per hour for each classification. The Design-Builder shall submit an original and two copies of the form prior to the due date of the second estimate for payment and for each 90-day period thereafter until the Work specified in the Contract has been completed.

**Execution Version**

---

If at the time of Final Completion, the period since the last labor report is 30 days or more, the Design- Builder shall furnish an additional labor report as outlined herein prior to payment of the final estimate.

- (c) **Job Service Offices:** In advance of the Contract starting date, the Design-Builder may contact the Job Service Office of the Virginia Employment Commission at the nearest location to secure referral of available qualified workers in all occupational categories. The closest office may be obtained by accessing the VEC website at <http://www.vec.virginia.gov> and “clicking” on “VECLocalOffices” to access “**VEC Workforce Centers**”.

**107.14—Equal Employment Opportunity**

- (a) The Design-Builder shall comply with the applicable provisions of presidential executive orders and the rules, regulations, and orders of the President’s Committee on Equal Employment Opportunity (EEO).
- (b) The Design-Builder shall maintain the following records and reports as required by the contract EEO provisions:
1. Record of all applicants for employment
  2. New hires by race, work classification, hourly rate, and date employed
  3. Minority and non-minority Employees employed in each work classification
  4. Changes in work classifications
  5. Employees enrolled in approved training programs and the status of each
  6. Minority Subcontractor or Subcontractors with meaningful minority group representation
  7. Copies of Form C-57 submitted by Subcontractors
- (c) If the Contract has a stipulation or requirement for trainees, the Design-Builder shall submit semiannual training reports in accordance with the instructions shown on the forms furnished by the Department. If the Design-Builder fails to submit such reports in accordance with the instructions, his monthly progress estimate for payment may be delayed.
- (d) The Design-Builder shall cooperate with the Department in carrying out EEO obligations and in the Department’s review of activities under the Contract. The Design-Builder shall comply with the specific EEO requirements specified herein and shall include these requirements in every subcontract of \$10,000 or more with such modification of language as may be necessary to make them binding on the Subcontractor.
- (e) **EEO Policy:** The Design-Builder shall accept as operating policy the following statement:
- It is the policy of this Company to assure that applicants are employed and that Employees are treated during employment without regard to their race, religion, sex, color, or national origin. Such action shall include employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship or on-the-job training.
- (f) **EEO Officer:** The Design-Builder shall designate and make known to the Department an EEO Officer who can effectively administer and promote an active contractor EEO program and who shall be assigned adequate authority and responsibility to do so.



**Execution Version**

---

**(g) Dissemination of Policy:**

1. Members of the Design-Builder's staff who are authorized to hire, supervise, promote, and discharge Employees or recommend such action or are substantially involved in such action shall be made fully aware of and shall implement the Design-Builder's EEO policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. The following actions shall be taken as a minimum:
  - a. Periodic meetings of supervisory and personnel office Employees shall be conducted before the start of work and at least once every six (6) months thereafter, at which time the Design-Builder's EEO policy and its implementation shall be reviewed and explained. The meetings shall be conducted by the EEO Officer or another knowledgeable company official.
  - b. New supervisory or personnel office Employees shall be given a thorough indoctrination by the EEO Officer or another knowledgeable company official covering all major aspects of the Design-Builder's EEO obligations within thirty (30) days following their reporting for duty with the Design-Builder.
  - c. The EEO Officer or appropriate company official shall instruct Employees engaged in the direct recruitment of Employees for the Project relative to the methods followed by the Design-Builder in locating and hiring minority group Employees.
2. In order to make the Design-Builder's EEO policy known to all Employees, prospective Employees, and potential sources of Employees such as, but not limited to, schools, employment agencies, labor unions where appropriate, and college placement officers, the Design-Builder shall take the following actions:
  - a. Notices and posters setting forth the Design-Builder's EEO policy shall be placed in areas readily accessible to Employees, applicants for employment, and potential employees.

The Design-Builder shall furnish, erect, and maintain at least two (2) bulletin boards having dimensions of at least forty-eight (48) inches in width and thirty-six (36) inches in height at locations readily accessible to all personnel concerned with the Project. The boards shall be erected immediately upon initiation of the Work and shall be maintained until the completion of such Work, at which time they shall be removed from the Project. Each bulletin board shall be equipped with a removable glass or plastic cover that, when in place, will protect posters from weather or damage. The Design-Builder shall promptly post official notices on the bulletin boards.

- b. The Design-Builder's EEO policy and the procedures to implement such policy shall be brought to the attention of Employees by means of meetings, employee handbooks, or other appropriate means.

**(h) Recruitment:**

1. When advertising for employees, the Design-Builder shall include in all advertisements for employees the notation "An Equal Opportunity Employer" and shall insert all such advertisements in newspapers or other publications having a large circulation among minority groups in the area from which the Project work force would normally be derived.
2. Unless precluded by a valid bargaining agreement, the Design-Builder shall conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. The Design-Builder shall identify sources of potential minority group employees and shall establish procedures with such sources whereby minority group applicants may be referred to him for employment consideration.
3. The Design-Builder shall encourage his Employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all Employees. In addition, information and

**Execution Version**

---

procedures with regard to referring minority group applicants shall be discussed with Employees.

- (i) **Personnel Actions:** Wages, working conditions, and Employee benefits shall be established and administered, and personnel action of any type shall be taken without regard to race, color, religion, sex, or national origin.
1. The Design-Builder shall conduct periodic inspections of the Project sites to ensure that working conditions and Employee facilities do not indicate discriminatory treatment of personnel.
  2. The Design-Builder shall periodically evaluate the spread of wages paid within each classification to determine whether there is evidence of discriminatory wage practices.
  3. The Design-Builder shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Design-Builder shall promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, corrective action shall include all affected individuals.
  4. The Design-Builder shall investigate all complaints of alleged discrimination made to him in connection with obligations under the Contract, attempt to resolve such complaints, and take appropriate corrective action. If the investigation indicates that the discrimination may affect Persons other than the complainant, corrective action shall include those individuals. Upon completion of each investigation, the Design-Builder shall inform every complainant of all avenues of appeal.
- (j) **Training:**
1. The Design-Builder shall assist in locating, qualifying, and increasing the skills of minority group and women employees and applicants for employment.
  2. Consistent with work force requirements and as permissible under federal and State regulations, the Design-Builder shall make full use of training programs, i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance. Where feasible, twenty-five percent (25%) of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.
  3. The Design-Builder shall advise Employees and applicants for employment of available training programs and the entrance requirements for each.
  4. The Design-Builder shall periodically review the training and promotion potential of minority group Employees and shall encourage eligible Employees to apply for such training and promotion.
  5. If the Contract does not provide a separate Pay Item for trainees, the cost associated with the training specified herein shall be included in the contract price.
  6. If the Contract requires trainees, training shall be in accordance with Section 518 of the VDOT Road and Bridge Specifications.
- (k) **Unions:** If the Design-Builder relies in whole or in part on unions as a source of employees, best efforts shall be made to obtain the cooperation of such unions to increase opportunities for minority groups and women in the unions and to effect referrals by such unions of minority and women employees. Actions by the Design-Builder, either directly or through his Design-Builder's Association acting as agent, shall include the following procedures:
1. In cooperation with the unions, best efforts shall be used to develop joint training programs aimed toward qualifying more minority group members and women for membership in the unions and to increase the skills of minority group employees and women so that they may qualify for higher-paying employment.

**Execution Version**

---

2. Best efforts shall be used to incorporate an EEO clause into union agreements to the end that unions shall be contractually bound to refer applicants without regard to race, color, religion, sex, or national origin.
  3. Information shall be obtained concerning referral practices and policies of the labor union except that to the extent the information is within the exclusive possession of the union. If the labor union refuses to furnish the information to the Design-Builder, the Design-Builder shall so certify to the Department and shall set forth what efforts he made to obtain the information.
  4. If a union is unable to provide the Design-Builder with a reasonable flow of minority and women referrals within the time limit set forth in the union agreement, the Design-Builder shall, through his recruitment procedures, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified or qualifiable minority group individuals and women. If union referral practice prevents the Design-Builder from complying with the EEO requirements, the Design-Builder shall immediately notify the Department.
- (l) **Subcontracting:** The Design-Builder shall use best efforts to use minority group Subcontractors or Subcontractors with meaningful minority group and female representation among their employees. Design-Builders shall obtain lists of SWaM and DBE construction firms from the Department. If SWaM and DBE goals are established in the RFP Documents, the Design-Builder shall comply with Section 107.15.

The Design-Builder shall use best efforts to ensure Subcontractor compliance with his EEO obligations.

- (m) **Records and Reports:** The Design-Builder shall keep such records as are necessary to determine compliance with his EEO obligations. The records shall be designed to indicate the following:
1. the number of minority and non-minority group members and females employed in each work classification on the Project.
  2. the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and females if unions are used as a source of the work force.
  3. the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female Employees.
  4. the progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority group and female representation among their Employees.

Records shall be retained for a period of three (3) years following Final Acceptance and shall be available at reasonable times and places for inspection by authorized representatives of the Department.

Each month for the first three (3) months after construction begins and every month of July thereafter for the duration of the Project, Form C-57 shall be completed to indicate the number of minority, non-minority, and female Employees currently engaged in each work classification shown on the form. The completed Form C-57 shall be submitted within three (3) weeks after the reporting period. Failure to do so may result in delay of approval of the Design-Builder's monthly progress estimate for payment.

**Execution Version**

---

**107.15—Use of Disadvantaged Business Enterprises (DBEs) and Small, Women-Owned, and Minority-Owned Businesses (SWaMs)**

During performance of the Design-Build Work for the Fred Ex Project, the Design-Builder shall achieve the following goals with respect to small and minority business participation, and on-the-job training:

- .1 Disadvantaged Business Enterprise (DBE) participation equal to ten percent (10%) of the Fred Ex Design-Build Contract value, plus Small, Women, and Minority (SWaM) firm participation equal to nineteen percent (19%) of the Fred Ex Design-Build Contract value. For clarity, the total DBE/SWaM percentage is twenty-nine (29%) and no funds paid to qualified firms shall be double counted toward this goal.
- .2 Providing at least four (4) on-the-job trainee positions in accordance with VDOT's trainee and apprenticeship program.

Design-Builder shall comply with all requirements of Exhibits 107.15.1 and 107.15.2 in meeting these obligations.

**107.16—Environmental Stipulations**

By signing the Proposal, the Offeror shall have stipulated (1) that any facility to be used in the performance of the Contract (unless the Contract is exempt under the Clean Air Act as amended [42 U.S.C. 1857, et seq., as amended by P.L. 91-604], the Federal Water Pollution Control Act as amended [33 U.S.C. 1251 et seq. as amended by P.L. 92-500], and Executive Order 11738 and regulations in implementation thereof [40 C.F.R., Part 15]) is not listed on the EPA's List of Violating Facilities pursuant to 40 C.F.R. 15.20; and (2) that the Concessionaire will be promptly notified prior to the Award of the Contract if the Offeror receives any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be used for the Contract is under consideration to be listed on the EPA's List of Violating Facilities.

No separate payment will be made for the Fred Ex Work or precautions described herein.

Reference is made in various subsections of this section to Tidewater, Virginia. For the purposes of identifying the affected regions assigned to this designation and the requirements therein Tidewater, Virginia is defined as the Counties of Accomack, Arlington, Caroline, Charles City, Chesterfield, Essex, Fairfax, Gloucester, Hanover, Henrico, Isle of Wight, James City, King George, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northampton, Northumberland, Prince George, Prince William, Richmond, Spotsylvania, Stafford, Surry, Westmoreland and York and the Cities of Alexandria, Chesapeake, Colonial Heights, Fairfax, Falls Church, Fredericksburg, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Richmond, Suffolk, Virginia Beach and Williamsburg.

- (a) **Erosion and Siltation:** The Design-Builder shall exercise every reasonable precaution, including temporary and permanent soil stabilization measures, throughout the duration of the Fred Ex Project to control erosion and prevent siltation of adjacent lands, rivers, streams, wetlands, lakes, and impoundments. Soil stabilization or erosion control measures shall be applied to erodible soil or ground materials exposed by any activity associated with construction, including clearing, grubbing, and grading, but not limited to local or on-site sources of materials, stockpiles, Disposal Areas and haul roads.

The Design-Builder shall comply with Sections 301.02 and 303.03 of the Specifications. Should the Design-Builder as a result of negligence or noncompliance fail to provide soil stabilization in accordance with these specifications, the cost of temporary soil stabilization in accordance with the provisions of Section 303 shall be at the Design-Builder's expense.

Temporary measures shall be coordinated with the Fred Ex Work to ensure effective and continuous erosion and sediment control. Permanent erosion control measures and drainage facilities shall be installed as the Fred Ex Work progresses.

**Execution Version**

---

The Design-Builder shall have within the limits of the Fred Ex Project during land disturbance activities, an employee certified by VDOT in Erosion and Sediment control who shall inspect erosion and sediment control and pollution prevention practices, devices and measures for proper installation and operation and promptly report their findings to the Inspector. Failure on the part of the Design-Builder to maintain appropriate erosion and sediment control or pollution prevention devices in a functioning condition may result in the Concessionaire notifying the Design-Builder in writing of specific deficiencies. Deficiencies shall be corrected immediately or as otherwise directed by the Concessionaire. If the Design-Builder fails to correct or take appropriate actions to correct the specified deficiencies within 24 hours (or as otherwise directed) after receipt of such notification, the Concessionaire may do one or more of the following: require the Design-Builder to suspend work in other areas and concentrate efforts towards correcting the specified deficiencies, withhold payment of monthly progress estimates, or proceed to correct the specified deficiencies and deduct the entire cost of such work from monies due the Design-Builder. Failure on the part of the Design-Builder to maintain a Department certified erosion and sediment control employee within the Fred Ex Project limits when land disturbance activities are being performed will result in the Concessionaire suspending work related to any land disturbance activity until such time as the Design-Builder is in compliance with this requirement.

**(b) Pollution:**

1. **Water:** The Design-Builder shall exercise every reasonable precaution throughout the duration of the Fred Ex Project to prevent pollution of rivers, streams, and impoundments. Pollutants such as, but not limited to, chemicals, fuels, lubricants, bitumens, raw sewage, paints, sedimentation, and other harmful material shall not be discharged into or alongside rivers, streams, or impoundments or into Channels leading to them. The Design-Builder shall provide the Concessionaire a contingency plan for reporting and immediate actions to be taken in the event of a dump, discharge, or spill within eight hours after he has mobilized to the Fred Ex Project site.

Construction discharge water shall be filtered to remove deleterious materials prior to discharge into State waters. Filtering shall be accomplished by the use of a standard dewatering basin or a dewatering bag or other measures approved by the Concessionaire. Dewatering bags shall conform to Section 245. During specified spawning seasons, discharges and construction activities in spawning areas of State waters shall be restricted so as not to disturb or inhibit aquatic species that are indigenous to the waters. Neither water nor other effluence shall be discharged onto wetlands or breeding or nesting areas of migratory waterfowl. When used extensively in wetlands, heavy Equipment shall be placed on mats. Temporary construction fills and mats in wetlands and flood plains shall be constructed of approved non-erodible materials and shall be removed by the Design-Builder to natural ground when the Concessionaire so directs.

If the Design-Builder dumps, discharges, or spills any oil or chemical that reaches or has the potential to reach a waterway, he shall immediately notify all appropriate jurisdictional Governmental Units in accordance with the requirements of the Contract and the VPDES *General Permit For Discharge of Stormwater From Construction Activities* and shall take immediate actions to contain, remove, and properly dispose of the oil or chemical.

Solids, sludges, or other pollutants removed in the course of the treatment or management of pollutants shall be disposed of in a manner that prevents any pollutant from such materials from entering surface waters in compliance with all applicable state and federal laws and regulations.

Excavation material shall be disposed of in approved areas above the mean high water mark shown in the Fred Ex Contract Documents in a manner that will prevent the return of solid or suspended materials to State waters. If the mark is not shown on the Plans, the mean high water mark shall be considered the elevation of the top of stream banks.

Constructing new Bridge(s) and dismantling and removing existing Bridge(s) shall be accomplished in a manner that will prevent the dumping or discharge of construction or Disposable Materials into rivers, streams, or impoundments.

**Execution Version**

---

Construction operations in rivers, streams, or impoundments shall be restricted to those areas where identified on the Plans and to those that must be entered for the construction of structures. Rivers, streams, and impoundments shall be cleared of falsework, piling, debris, or other obstructions placed therein or caused by construction operations. Stabilization of the streambed and banks shall occur immediately upon completion of work if work is suspended for more than 14 days.

The Design-Builder shall prevent stream constriction that would reduce stream flows below the minimum, as defined by the State Water Control Board, during construction operations.

If it is necessary to relocate an existing stream or drainage facility temporarily to facilitate construction, the Design-Builder shall design and provide temporary Channels or culverts of adequate size to carry the normal flow of the stream or drainage facility. The Design-Builder shall submit a temporary relocation design to the Concessionaire for review and acceptance in sufficient time to allow for discussion and correction prior to beginning the Fred Ex Work the design covers. Costs for the temporary relocation of the stream or drainage facility shall be included in the Contract. Stabilization of the streambed and banks shall occur immediately upon completion of, or during the Fred Ex Work, if the Fred Ex Work is suspended for more than 14 days.

Temporary Bridges or other minimally invasive structures shall be used wherever the Design-Builder finds it necessary to cross a stream more than twice in a 6-month period unless otherwise authorized by water quality permits issued by the U. S. Army Corps of Engineers, Virginia Marine Resources Commission, or the Virginia Department of Environmental Quality for the Contract.

Conduct all operations near rivers, streams, or impoundments in accordance with applicable water quality permits. Do not conduct clearing or grubbing within 100 feet of the limits of Ordinary High Water or a delineated wetland until authorized by the Concessionaire.

2. **Air:** The Design-Builder shall comply with the provisions of the Contract and the State Air Pollution Control Law and Rules of the State Air Pollution Control Board, including notifications required therein.

Burning shall be performed in accordance with all applicable local laws and ordinances and under the constant surveillance of watchpersons. Care shall be taken so that the burning of materials does not destroy or damage property or cause excessive air pollution. The Design-Builder shall not burn rubber tires, asphalt, used crankcase oil, or other materials that produce dense smoke. Burning shall not be initiated when atmospheric conditions are such that smoke will create a hazard to the motoring public or airport operations. Provisions shall be made for flagging vehicular traffic if visibility is obstructed or impaired by smoke. At no time shall a fire be left unattended.

Asphalt mixing plants shall be designed, equipped, and operated so that the amount and quality of air pollutants emitted will conform to the rules of the State Air Pollution Control Board.

- a. **VOC Emission Control Areas** - The Design-Builder is advised that when the Fred Ex Project is located in a volatile organic compound (VOC) emissions control area identified in the State Air Control Board Regulations (9 VAC 5-20-206) and in the Table I-3 below the following limitations shall apply:
  - (1) Open burning is prohibited during the months of May, June, July, August, and September in VOC Emissions Control areas
  - (2) Cutback asphalt is prohibited April through October except when use or application as a penetrating prime coat or tack is necessary in Virginia Department of Environmental Quality Volatile Organic Compound (VOC) Emissions Control Areas.\* See the 9 VAC 5-40, Article 39 (Emission Standards for Asphalt Paving Operations) and 9 VAC 5-130 (Regulation for Open Burning) for further clarification.

Execution Version

<b>TABLE I-3</b>			
<b>VOC Emissions Control Area</b>	<b>VDOT District</b>	<b>Jurisdiction</b>	
Northern Virginia	NOVA	Alexandria City Arlington County Fairfax County Fairfax City Falls Church City Loudoun County Manassas City Manassas Park City Prince William County	
Northern Virginia	Fredericksburg	Stafford County	
Fredericksburg	Fredericksburg	Spotsylvania County Fredericksburg City	
Hampton Roads	Fredericksburg	Gloucester County	
Hampton Roads	Hampton Roads	Chesapeake City Hampton City Isle of Wight County James City County Newport News City Norfolk City Poquoson City Portsmouth City Suffolk City Virginia Beach City Williamsburg City York County	
Richmond	Richmond	Charles City County Chesterfield County Colonial Heights City Hanover County Henrico County Hopewell City Petersburg City Prince George County Richmond City	
Western Virginia	Staunton	Frederick County Winchester City	
Western Virginia	Salem	Roanoke County Botetourt County Roanoke City Salem City	

\* Regulations for the Control and Abatement of Air Pollution ([9 VAC 5-20-206](#))

- (3) Emission standards for asbestos incorporated in the EPA’s National Emission Standards for Hazardous Air Pollutants apply to the demolition or renovation of any institutional, commercial, or industrial building, structure, facility, installation, or portion thereof that contains friable asbestos or where the Design-Builder’s methods for such actions will produce friable asbestos.

**Execution Version**

---

The Design-Builder shall submit demolition notification the United States Environmental Protection Agency (USEPA) and the Virginia Department of Labor and Industry a minimum of 10 business days prior to starting work on the following bridge activities:

- a) Dismantling and removing existing structures
- b) Moving an entire structure
- c) Reconstruction and repairs involving the replacement of any load-bearing component of a structure

Address notifications to:

Virginia Department of Labor and Industry  
Asbestos Program  
Powers-Taylor Building  
13 South Thirteenth Street  
Richmond, VA 23219

Land and Chemical Division  
EPA Region III  
Mail Code LC62  
1650 Arch St.  
Philadelphia, PA 19103-2029

3. **Noise:** The Design-Builder's operations shall be performed so that exterior noise levels measured during a noise-sensitive activity shall not exceed 80 decibels. Such noise level measurements shall be taken at a point on the perimeter of the construction limit that is closest to the adjoining property on which a noise sensitive activity is occurring. A *noise-sensitive activity* is any activity for which lowered noise levels are essential if the activity is to serve its intended purpose and not present an unreasonable public nuisance. Such activities include, but are not limited to, those associated with residences, hospitals, nursing homes, churches, schools, libraries, parks, and recreational areas.

The Design-Builder shall monitor construction-related noise. If construction noise levels exceed 80 decibels during noise sensitive activities, the Design-Builder shall take corrective action before proceeding with operations. The Design-Builder shall be responsible for costs associated with the abatement of construction noise and the delay of operations attributable to noncompliance with these requirements.

The Concessionaire may prohibit or restrict to certain portions of the Fred Ex Project any work that produces objectionable noise between 10 PM and 6 AM. If other hours are established by local ordinance, the local ordinance shall govern.

Equipment shall in no way be altered so as to result in noise levels that are greater than those produced by the original equipment.

When feasible, the Design-Builder shall establish haul routes that direct his vehicles away from developed areas and ensure that noise from hauling operations is kept to a minimum.

These requirements shall not be applicable if the noise produced by sources other than the Design-Builder's operation at the point of reception is greater than the noise from the Design-Builder's operation at the same point.

- (c) **Forest Fires:** The Design-Builder shall take all reasonable precautions to prevent and suppress forest fires in any area involved in construction operations or occupied by him as a result of such operations. The Design-Builder shall cooperate with the proper authorities of Governmental Units in reporting, preventing, and suppressing forest



**Execution Version**

---

fires. Labor, tools, or equipment furnished by the Design-Builder upon the order of any forest official issued under authority granted the official by law shall not be considered a part of the Contract. The Design-Builder shall negotiate with the proper forest official for compensation for such labor, tools, or equipment

- (d) **Archeological, Paleontological, and Rare Mineralogical Findings:** In the event of the discovery of prehistoric ruins, Indian or early settler sites, burial grounds, relics, fossils, meteorites, or other articles of archeological, paleontological, or rare mineralogical interest during the prosecution of Fred Ex Work, the Design-Builder shall act immediately to suspend work at the site of the discovery and notify the Concessionaire. The Concessionaire will immediately notify the proper State authority charged with the responsibility of investigating and evaluating such finds. The Design-Builder shall cooperate and, upon the request of the Concessionaire, assist in protecting, mapping, and removing the findings. Labor, tools, or Equipment furnished by the Design-Builder for such work will be paid for in accordance with the requirements of Section 104.03. Findings shall become the property of the Commonwealth unless they are located on federal lands, in which event they shall become the property of the U.S. government.

When such findings delay the progress or performance of the Fred Ex Work, the Design-Builder shall notify the Concessionaire in accordance with the Contract.

- (e) **Storm Water Pollution Prevention Plan and VPDES General Permit for the Discharge of Stormwater from Construction Activities**

A Stormwater Pollution Prevention Plan (SWPPP) identifies potential sources of pollutants which may reasonably be expected to affect the stormwater discharges from the construction site and any off-site support facilities located on VDOT rights of way and easements. The SWPPP also describes and ensures implementation of practices which will be used to minimize or prevent pollutants in such discharges.

The SWPPP shall include, but not be limited to, the approved Erosion and Sediment Control (ESC) Plan, the approved Stormwater Management (SWM) Plan (if applicable), the approved Pollution Prevention Plan, and all related Specifications, Standards, and requirements contained within the Fred Ex Contract Documents and shall be required for all land-disturbing activities that disturb 10,000 square feet or greater, or 2,500 square feet or greater in Tidewater, Virginia.”

Land-disturbing activities that disturb one 1 acre or greater require coverage under the Department of Environmental Quality’s VPDES General Permit for the Discharge of Stormwater from Construction Activities (hereafter referred to as the VPDES Construction Permit) According to IIM-LD-242, VDOT will apply for and secure VPDES Construction Permit coverage for all applicable land disturbing activities on VDOT rights of way or easements for which it has contractual control, including off-site (outside the Fred Ex Project limits) support facilities on VDOT rights of way or easements that directly relate to the construction activity.

The Design-Builder shall be responsible for securing VPDES Construction Permit coverage and complying with all permit conditions for all support facilities that are not located on VDOT rights of way or easements.

The required contents of a SWPPP for those land disturbance activities requiring coverage under the VPDES Construction Permit are found in Section II of the permit. While a SWPPP is an important component of the VPDES Construction Permit, it is only one of the many requirements for the land disturbing activity that must be addressed in order to be in full compliance with the conditions of this permit. The requirements of this permit will be satisfied by the Design-Builder’s compliance with the Fred Ex Project’s SWPPP terms and conditions.

The Design-Builder and all other persons that oversee or perform activities covered by the VPDES Construction Permit shall be responsible for reading, understanding, and complying with all of the terms, conditions and requirements of the permit and the Fred Ex Project’s SWPPP including, but not limited to, the following:

**Execution Version**

---

**1. Fred Ex Project Implementation Responsibilities**

The Design-Builder shall be responsible for the installation, maintenance, inspection, and, on a daily basis, ensuring the functionality of all erosion and sediment control measures on a daily basis and all other stormwater runoff control and pollution prevention measures identified within or referenced within the SWPPP, the construction plans, the specifications, all applicable permits, and all other Fred Ex Contract Documents or applicable governmental approvals.

The Design-Builder shall be solely responsible for the temporary erosion and sediment control protection and permanent stabilization of all borrow areas and soil disposal areas located outside of VDOT right of way or easement.

The Design-Builder shall prevent or minimize any storm water or non-storm water discharge that will have a reasonable likelihood of adversely affecting human health or public and/or private properties.

**2. Certification Requirements**

In addition to satisfying the Section 107.16(a) personnel certification requirements, the Design-Builder shall certify his activities by completing, signing, and submitting Form C-45 VDOT SWPPP Design-Builder Certification Statement to the Concessionaire at least 7 days prior to commencing any Fred Ex Project-related land-disturbing activities, both within the Fred Ex Project limits and any support facilities located on VDOT rights of way or easements outside the Fred Ex Project limits.

**3. SWPPP Requirements for Support Facilities**

Support facilities shall include, but not be limited to, off-site Borrow and Disposal Areas, construction and waste materials or Equipment storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels, or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a storm water or non-stormwater discharge directly related to the construction site.

Support Facilities located on VDOT rights of way or easements:

- a. For those support facilities located within the Fred Ex Project limits but not included in the construction plans for the Fred Ex Project, the Design-Builder shall develop a SWPPP in accordance with Chapter 10 of the VDOT Drainage Manual which shall include, where applicable, an erosion and sediment control plan according to IIM-LD-11, a stormwater management plan according to IIM-LD-195, and a pollution prevention plan according to these Specifications and the SWPPP General Information Sheet notes in the construction plans or other such Fred Ex Contract Documents. All plans developed shall be reviewed and approved by appropriate personnel certified through DEQ's ESC and SWM Certification program and shall be developed according to Section 105.10 and shall be submitted to the Concessionaire for review and approval. Once approved, the Concessionaire will notify the Design-Builder in writing that the plans are accepted as a component of the Fred Ex Project's SWPPP and VPDES Construction Permit coverage (where applicable) and shall be subject to all conditions and requirements of the VPDES Construction Permit and all other Fred Ex Contract Documents. No land disturbing activities can occur in the support area(s) until written notice to proceed is provided by the Concessionaire.
- b. For support facilities located outside the Fred Ex Project limits and not included in the construction plans for the Fred Ex Project, the Design-Builder shall develop a SWPPP in accordance with Chapter 10 of the VDOT Drainage Manual which shall include, where applicable, an erosion and sediment control plan according to IIM-LD-11, a stormwater management plan (where applicable) according to IIM-LD-195, a pollution prevention plan according to these specifications and the SWPPP General Information Sheet notes in the construction plans or other such Fred Ex Contract Documents and all necessary documents for obtaining VPDES Construction Permit coverage according to IIM-LD-242. All plans developed shall be reviewed and approved by appropriate personnel certified through DEQ's ESC and SWM Certification program and shall be developed according to Section 105.10 and shall be submitted to the Concessionaire for review and approval. Once approved by the Concessionaire, the Design-Builder will apply for VPDES Construction Permit coverage according to IIM-LD-242. The support facility shall be

**Execution Version**

---

subject to all conditions and requirements of the VPDES Construction Permit and all other Fred Ex Contract Documents. No land disturbing activities can occur in the support area(s) until written notice to proceed is provided by the Concessionaire.

**4. Inspection Procedures****a. Inspection Requirements**

The Design-Builder shall be responsible for conducting site inspections in accordance with the requirements herein. Site inspections shall include erosion and sediment control and pollution prevention practices and facilities. The Design-Builder shall document such inspections by completion of Form C-107, Construction Runoff Control Inspection Form, in strict accordance with the directions contained within the form. Inspections shall include all areas of the site disturbed by construction activity, all on-site support facilities and all off site support facilities within VDOT right of way or easement. Inspections shall be conducted using one of the following schedules:

**Schedule 1** - Inspections shall be conducted at least once every 7 calendar days (equivalent to once every five business days) and within 48 hours following any measureable storm event. In the event a measureable storm event occurs when there are more than 48 hours between business days, the inspection shall occur no later than the next business day. A business day is defined as Monday through Friday excluding State holidays. A measurable storm event is defined as one producing 0.25 inches of rainfall or greater over a 24-hour time period. The Design-Builder shall install rain gauge(s) in accordance with VDOT Drainage Manual on the Fred Ex Project site for the purposes of determining the occurrence of a measureable storm event. Where the project is of such a length that one rain gauge may not provide an accurate representation of the occurrence of a measurable storm event over the entire project site, the Design-Builder shall install as many rain gauges as necessary to accurately reflect the amount of rainfall received over all portions of the project. The rain gauge(s) shall be observed no less than once each business day at the time prescribed in the SWPPP General Information Sheet notes in the construction plans or other Fred Ex Contract Documents to determine if a measureable storm event has occurred. The procedures for determining the occurrence of a measurable storm event are identified in the SWPPP General Information Sheet notes in the construction plans or other Fred Ex Contract Documents.

**Schedule 2** - At least each Monday and Thursday (equivalent to the once every four business days schedule in the VPDES General Permit for Discharge of Stormwater from Construction Activities). Where Monday or Thursday is a non-business day, the inspection may be performed on the next business day afterward. In no case shall the inspections be performed less than once every four business days. A rain gauge will not be required when using Schedule 2.

The Inspection Schedule (1 or 2) is to be selected prior to the beginning of land disturbance. Once an inspection schedule is selected, it shall be defined in the appropriate note in the SWPPP General Information Sheets contained in the construction plan set and shall be used for the duration of the project. A business day is defined as Monday through Friday excluding State holidays. A measurable storm event is defined as one producing 0.25 inches of rainfall or greater over a 24 hour time period.

For those areas of the site that have been temporarily stabilized or where land disturbing activities have been suspended due to continuous frozen ground conditions and stormwater discharges are unlikely, the inspection schedule may be reduced to once per month. If weather conditions (such as above freezing temperatures or rain or snow events) make stormwater discharges likely, the Design-Builder shall immediately resume the regular inspection schedule. Those definable areas where final stabilization has been achieved will not require further inspections provided such areas have been identified in the Fred Ex Project's Stormwater Pollution Prevention Plan.

**b. Corrective Actions**

**Execution Version**

---

If a site inspection identifies an existing control measure that is not being maintained properly or operating effectively; an existing control measure that needs to be modified; locations where an additional control measure is necessary; or any other deficiencies in the erosion and sediment control and pollution prevention plan, corrective action(s) shall be completed as soon as practical and prior to the next anticipated measurable storm event but no later than seven days after the date of the site inspection that identified the deficiency.

**5. Unauthorized Discharges and Reporting Requirements**

The Design-Builder shall not discharge into State waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances nor shall otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational or other public uses.

**a. Notification of non-compliant discharges**

The Design-Builder shall immediately notify the Concessionaire upon the discovery of or the potential of any unauthorized, unusual, extraordinary, or non-compliant discharge from the land construction activity or any of support facilities located on VDOT right of way or easement. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.

**b. Detailed report requirements for non-compliant discharges**

The Design-Builder shall submit to the Concessionaire within 5 days of the discovery of any actual or potential non-compliant discharge a written report describing details of the discharge to include a description of the nature and location of the discharge; the cause of the discharge; the date of occurrence; the length of time that the discharge occurred, the volume of the discharge; the expected duration and total volume if the discharge is continuing; a description of any apparent or potential effects on private and/or public properties and State waters or endangerment to public health; and any steps planned or taken to reduce, eliminate, and prevent a recurrence of the discharge. A completed Form C-107 shall be used for such reports.

**6. Changes and Deficiencies**

The Design-Builder shall report to the Department when: (a) any planned physical alterations or additions are made to the land disturbing activity; or (b) deficiencies in the Project plans or Contract are discovered that could significantly change the nature of or increase potential for pollutants discharged from the land disturbing activity to surface waters and that have not previously been addressed in the SWPPP.

**7. Amendments, Modifications, Revisions and Updates to the SWPPP**

- a. The Design-Builder shall amend the SWPPP whenever site conditions, construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan, the pollution prevention plan, or any other component of the SWPPP for the land disturbing activity or onsite support facilities,
- b. The Design-Builder shall amend the SWPPP to identify any additional or modified erosion and sediment control and pollution prevention measures implemented to correct problems or deficiencies identified through any inspection or investigation process.
- c. The Design-Builder shall amend the SWPPP to identify any new or additional person(s) or contractor(s) not previously identified that will be responsible for implementing and maintaining erosion and sediment control and pollution prevention devices.
- d. The Design-Builder shall update the SWPPP to include:

**Execution Version**

---

- (1) A record of dates when major grading activities occur, construction activities temporarily or permanently cease on a portion of the site, and stabilization measures are initiated.
  - (2) Documentation of replaced or modified erosion and sediment control and pollution prevention controls where periodic inspections or other information have indicated that the controls have been used inappropriately or incorrectly.
  - (3) Identification of areas where final stabilization has occurred and where no further SWPPP or inspection requirements apply.
  - (4) The date of any prohibited discharges, the discharge volume released, and what actions were taken to minimize the impact of the release.
  - (5) A description of any measures taken to prevent the reoccurrence of any prohibited discharge.
  - (6) A description of any measures taken to address any issues identified by the required erosion and sediment control and pollution prevention inspections.
- e. The Design-Builder shall update the SWPPP no later than seven days after the implementation and/or the approval of any amendments, modifications, or revisions to the erosion and sediment control plan, the pollution prevention plan, or any other component of the SWPPP.
- f. Revisions or modifications to the SWPPP shall be approved by the Concessionaire and shall be documented by the Design-Builder on a designated plan set (Record Set) in accordance with Chapter 10 of the VDOT Drainage Manual. All updates to the SWPPP shall be signed by the delegated authority as identified on the SWPPP.
- g. The record set of plans shall be maintained with other SWPPP documents on the Fred Ex Project site or at a location convenient to the Fred Ex Project site where no on site facilities are available.

**107.17—Construction Safety and Health Standards**

- (a) In the performance of this Contract the Design-Builder shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The Design-Builder, Subcontractors at any tier, and their respective employees, agents and invitees, shall at all times while in or around the Fred Ex Project site comply with all applicable laws, regulations, provisions, and policies governing safety and health under the Virginia Occupational Safety and Health (VOSH) Standards adopted under the Code of Virginia, and any laws, regulations, provisions, and policies incorporated by reference including but not limited to the Federal Construction Safety Act (Public Law 91-54), 29 CFR Chapter XVII, Part 1926, Occupational Safety and Health Regulations for Construction, and the Occupation Safety and Health Act (Public Law 91-596), 29 CFR Chapter XVII, Part 1910 Occupational Safety and Health Standards for General Industry, and subsequent publications updating these regulations.
- (b) The Design-Builder shall provide all safeguards, safety devices and protective equipment, and take any other needed actions as it determines, or as the Concessionaire may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the Fred Ex Work. The Design-Builder shall be responsible for maintaining and supervising all safety and health protections and programs to ensure compliance with this Section. The Design-Builder shall routinely inspect the Fred Ex Project site for safety and health violations. The Design-Builder shall immediately abate any violations of the safety and health requirements or duties at no cost to the Concessionaire.
- (c) It is a condition of this Contract, and shall be made a condition of each subcontract, which the Design-Builder enters into pursuant to this Contract, that the Design-Builder and any Subcontractor shall not permit any employees in performance of the Contract, to work in surroundings or under conditions which are unsanitary,

**Execution Version**

---

hazardous, or dangerous to their health or safety as determined by the Virginia Work Area Protection Manual or under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

- (d) VOSH personnel, on all Federal-aid construction contracts and related subcontracts, pursuant to 29 CFR 1926.3, the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out their duties.

**107.18—Sanitary Provisions**

The Design-Builder shall provide and maintain in a neat, sanitary condition such accommodations for the use of Employees as may be necessary to comply with the requirements of the State and local Board of Health or other bodies or tribunals having jurisdiction.

**107.19—Railway-Highway Provisions (Not Used)****107.20— U.S. Coast Guard Coordination of Construction Over or Adjacent to Navigable Waters**

Although a U.S. Coast Guard permit is not required for the sign replacement work over the Potomac River (because the Design-Builder should not need to block the navigation channel to perform this work), formal coordination with the U.S. Coast Guard is required. Prior to starting construction operations, the Design-Builder shall meet with the Concessionaire, Department and the U.S. Coast Guard (U.S. Coast Guard Coordination Meeting) to present its planned operations and the potential impacts those operations may pose to water traffic. As part of this meeting, the parties shall establish in writing the proper protocol for emergency closures and be governed accordingly.

Following the U.S. Coast Guard Coordination meeting, the Design-Builder shall submit its proposed schedule of operations in writing to the Concessionaire. The Concessionaire shall review and provide written comments, if applicable, to the Design-Builder within 7 days following receipt of the Design-Builder's schedule of operations. The Design-Builder shall incorporate the Concessionaire's comments and submit its notice of scheduled operations to the Concessionaire, Department and to the U.S. Coast Guard at least 30 days prior to commencement of any permitted construction or demolition operations. U.S. Coast Guard acceptance of the Design-Builder's written schedule of operations is a condition precedent to the Design-Builder's commencement of those operations.

In addition, the Design-Builder shall request and obtain Concessionaire and U.S. Coast Guard approval in writing before commencing any operations that deviate from the Design-Builder's schedule of operations when these operations interfere or have the potential to interfere with navigation of water traffic outside of timeframes previously approved by the Concessionaire and the U.S. Coast Guard.

Notices shall be sent to the U.S. Coast Guard, Fifth District Bridge Office (OBR), 431 Crawford Street, Portsmouth, VA 23704-5004. Payment of any penalty or fine that may be levied by the U.S. Coast Guard for Design-Builder violations of Bridge regulations found in 33 CFR Parts 114, 115, 116, 117 and 118 shall be the responsibility of the Design-Builder. Further, any delay to the Contract as a result of actions or inaction by the Design-Builder relative to the requirements herein that are determined by the Concessionaire to be the fault of the Design-Builder will be a non-compensable and non-excusable delay.

The cost to comply with the requirements of this provision and to provide and maintain and temporary navigation lights, signals and other temporary work associated with the structure(s) under this Contract required by the U.S. Coast Guard for the protection of navigation during construction or demolition operations shall be included in the Fred Ex Contract Price.

**107.21—Size and Weight Limitations**

**Execution Version**

---

- (a) **Hauling or Moving Material and Equipment on Public Roads Open to Traffic:** The Design-Builder shall comply with legal size and weight limitations in the hauling or moving of Material and Equipment on public Roads open to traffic unless the hauling or moving is covered by a hauling permit.
- (b) **Hauling or Moving Material and Equipment on Public Roads Not Open to Traffic:** The Design-Builder shall comply with legal weight limitations in the hauling or moving of Material and Equipment on public Roads that are not open to traffic unless the hauling or moving is permitted elsewhere herein or is otherwise covered by a hauling permit. The Design-Builder shall be liable for damage that results from the hauling or moving of Material and Equipment. The hauling or moving of Material and Equipment on the Pavement Structure or across any structure during various stages of construction shall be subject to additional restrictions as specified or directed by the Concessionaire.
- (c) **Furnishing Items in Component Parts of Sections:** If the size or weight of fabricated or manufactured items together with that of the hauling or moving vehicle exceeds the limitations covered by hauling permit policies and other means of transportation are not available, permission will be given to furnish the items in component parts of sections with adequately designed splices or connections at appropriate points. Permission for such adjustments shall be requested in writing, and approval in writing shall be secured from the Concessionaire prior to fabrication or manufacture of the items. The request shall state the reasons for adjustment and shall be accompanied by supporting data, including Working Drawings where necessary.
- (d) **Construction Loading of Structures:** In the construction, reconstruction, widening, or repair of bridge, culvert, retaining wall and other similar type structures including approaches, the Design-Builder shall consider construction loads during the planning and prosecution of the work. If the loading capacity of these type structure(s) is not shown in the Contract, the Design-Builder is responsible for contacting the office of the appropriate district bridge engineer to obtain the loading capacity information. Construction loads include but are not limited to the weight of cranes, trucks, other heavy construction or material delivery equipment, as well as the delivery or storage of materials placed on or adjacent to the structure or parts thereof during the various stages (phases) of the work in accordance with the Design-Builder's proposed work plan. The Design-Builder shall consider the effect(s) of construction loads on the loading capacity of these type structure(s) in his sequencing of the work and operations, including phase construction. At the Concessionaire's request the Design-Builder shall be prepared to discuss or review his proposed operations with the Concessionaire with regard to construction loads to demonstrate he has taken such into consideration in the planning and execution of the work.

**SECTION 108—PROSECUTION AND PROGRESS OF WORK**

**108.01—Prosecution of Work (Not Used)** Refer to Part 2 (Fred Ex Technical Requirements)

**108.02—Limitation of Operations (Not Used)** Refer to Part 2 (Fred Ex Technical Requirements)

**108.03—Progress Schedule (Not Used)** Refer to Part 3 (Fred Ex Design-Build Contract) – Article 11 Other Provisions and Section 1.4 of Part 2 (Fred Ex Technical Requirements)

**108.04—Determination and Extension of Completion Date (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 8 Time, Article 9 Changes to the Fred Ex Contract Price and Time, and Article 10 Contract Adjustments and Disputes

**108.05—Suspension of Fred Ex Work Ordered by the Concessionaire (Not Used)** Refer to Part 4 (Fred Ex General Conditions) Article 11 Stop Work and Termination for Cause

**108.06—Failure to Complete on Time (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 8 Time

**108.07—Default of Contract (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 11 Stop Work and Termination for Cause

**Execution Version**

---

**108.08—Termination of Contract (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 11 Stop Work and Termination for Cause

**108.09—Acceptance (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 6 Payment

**108.10—Termination of Design-Builder’s Responsibilities (Not Used)** Refer to Part 4 (Fred Ex General Conditions) – Article 11 Stop Work and Termination for Cause

**SECTION 109—MEASUREMENT AND PAYMENT****109.01—Measurement of Quantities**

- (a) **General:** Unless otherwise specifically stated to the contrary in Article 6 of the Part 3 (Fred Ex Design-Build Contract), this Section 109.01 will only be applicable to Fred Ex Contract Price adjustments made under Article 9 of Part 4 (Fred Ex General Conditions). The methods of measurement and computations to be used to determine quantities of Material furnished and work performed will be those generally recognized as conforming to good engineering practice.

Longitudinal measurements for surface area computations will be made along the surface and transverse measurements will be the surface measure shown in the Fred Ex Contract Documents or ordered in writing by the Concessionaire. Individual areas of obstructions with a surface area of 9 square feet or less will not be deducted from surface areas measured for payment.

Structures will be measured in accordance with the neat lines shown in the Fred Ex Contract Documents

Items that are measured by the linear foot will be measured parallel to the base or foundation upon which they are placed.

Allowance will not be made for surfaces placed over an area greater than that shown in the Fred Ex Contract Documents or for any Material moved from outside the area of the cross-section and lines shown in the Fred Ex Contract Documents.

When standard manufactured items are specified and are identified by weights or dimensions, such identification will be considered nominal. Unless more stringently controlled by tolerances in the Fred Ex Contract Documents, manufacturing tolerances established by the industries involved will be accepted.

- (b) **Measurement by Weight:** Materials that are measured or proportioned by weight shall be weighted on accurate scales as specified in this Section. When material is paid for on a tonnage basis, personnel performing the weighing shall be certified by VDOT and shall be bonded to the Commonwealth of Virginia in the amount of \$10,000 for the faithful observance and performance of the duties of the weighperson required herein. The bond shall be executed on a form having the exact wording as the Weighpersons Surety Bond Form furnished by the Department and shall be submitted to VDOT prior to the furnishing of the tonnage material.

The Design-Builder shall have the weighperson perform the following:

1. Furnish a signed weigh ticket for each load that shows the date, load number, plant name, size and type of material, project number, schedule or purchase order number, and the weights specified herein.
2. Maintain sufficient documentation so that the accumulative tonnage and distribution of each lot of material, by contract, can be readily identified.
3. Submit by the end of the next working day a summary of the number of loads and total weights for each type of material by contract.



**Execution Version**

---

Trucks used to haul Material being paid for by weight shall display the truck uniform identification number and legal gross and legal net weight limits. These markings shall be no less than 2 inches high and permanently stenciled on each side of the truck with contrasting color and located as to be clearly visible when the vehicle is positioned on the scales and observed from normal position of the weigh Person at the scale house.

The truck to be used in the weighing operation shall be the weight of the empty truck determined with full tank(s) of fuel and the operator seated in the cab. The tare weight of trucks shall be recorded to the nearest 20 pounds. At the option of the Design-Builder, a new tare may be determined for each load. When a new tare is obtained for each load, the requirement for full tank(s) of fuel will be waived.

Net rail shipment weights may be used for pay quantities when evidenced by railroad bills of lading. However, such weights will not be accepted for pay quantities of Materials that subsequently pass through a stationary mixing plant.

Scales shall conform to the requirements for accuracy and sensitivity as set forth in the *National Institute of Standards and Technology Handbook No. 44 for Specification Tolerances and Requirements for Commercial and Weighing Devices*. Scales used in the weighing of Materials paid for on a tonnage basis shall be approved and sealed in accordance with the requirements of the policies of the Bureau of Weights and Measures of the Department of Agriculture and Consumer Services, or other approved agencies, at least once every six months and upon being moved. Hopper and truck scales shall be serviced and tested by a scale service representative at least once every six months. Hopper scales shall be checked with a minimum 500 pounds of test weights and truck scales shall be checked with a minimum 20,000 pounds of test weights.

Copies of scale test reports shall be maintained on file at the scale location for at least 18 months, and copies of all scale service representative test reports shall be forwarded to the Concessionaire.

The quantity of Materials paid for on a tonnage basis shall be determined on scales equipped with an automatic printer. Truck scale printers shall print the net weight and either the gross or tare weight of each load. Hopper scale printers shall print the net weight of each load. The weigh ticket shall also show the legal gross weight for Material weighed on truck scales and the legal net weight for Material weighed on hopper scales.

If the automatic printer becomes inoperative, the weighing operation may continue for 48 hours provided satisfactory visual verification of weights can be made. The written permission of the District Materials Engineer shall be required for the operation of scales after 48 hours.

If significant discrepancies are discovered in the printed weight, the ultimate weight for payment will be calculated on volume measurements of the Materials in place and unit weights determined by VDOT.

- (c) **Measurement by Cubic Yard:** Material that is measured by the cubic yard, loose measurement or vehicular measurement, shall be hauled in approved vehicles and measured therein at the point of delivery. Material measured in vehicles, except streambed gravel, silt cleanout, or other self-consolidating material will be allowed at the rate of 2/3 the volume of the vehicle. The full volume of the vehicle will be allowed for streambed gravel. Such vehicles may be of any size or type acceptable to the Concessionaire provided the body is of such shape that the actual contents can be readily and accurately determined. Unless all approved vehicles are of uniform capacity, each vehicle shall bear a plainly legible identification mark indicating the specific approved capacity. Each vehicle shall be loaded to at least its water level capacity.

When approved by the Concessionaire in writing, Material specified to be measured by the cubic yard may be weighed and such weights converted to cubic yards for payment purposes. Factors for conversion from weight to volume measurement will be determined by the Concessionaire and shall be agreed to by the Design-Builder before they are used.

- (d) **Measurement by Lump Sum:** When used as an item of payment, the term *lump sum* will mean full payment for completion of work described in the Contract. When a complete structure or structural unit is specified as a Contract Item, the unit of measurement will be lump sum, and shall include all necessary fittings and accessories.

**Execution Version**

---

The quantities may be shown in the Fred Ex Contract Documents for items for which lump sum is the method of measurement. If shown, the quantities are approximate and are shown for estimating purposes only and no measurement of quantities will be made for payment. Items that are to be measured as complete units will be counted by the Concessionaire in the presence of a representative of the Design-Builder.

**(e) Measurement for Specific Materials:**

1. **Concrete (Measured by Volume Measure):** Concrete will be measured and computed by dividing the work into simple geometrical figures and adding their volumes.
2. **Concrete (Measured by Square or Lineal Measure):** Concrete will be measured and computed by dividing the work into simple geometrical figures and adding their areas or measuring linearly along the item's surface.
3. **Excavation, Embankment, and Borrow:** In computing volumes of Excavation, Embankment, and Borrow, methods having general acceptance in the engineering profession will be used. When the measurement is based on the cross-sectional area, the average end area method will be used.
4. **Asphalt:** Asphalt will be measured by the gallon, volumetric measurement, based on a temperature of 60 degrees F using the following correction factors:
  - a. 0.00035 per degree F for petroleum oils having a specific gravity 60/60 degrees F above 0.966
  - b. 0.00040 per degree F for petroleum oils having a specific gravity 60/60 degrees F between 0.850 and 0.966
  - c. 0.00025 per degree F for emulsified asphalt

Unless volume correction tables are available, the following formula shall be used in computing the volume of asphalt at temperatures other than 60 degrees F:

$$V^1 = V x [1 - K(T - 60)]$$

Where:

$V$  = volume of asphalt to be corrected;

$V^1$  = volume of asphalt at 60 degrees F;

$K$  = correction factor (coefficient of expansion); and

$T$  = temperature in degrees F of asphalt to be corrected.

When asphalt is delivered by weight, the volume at 60 degrees F will be determined by dividing the net weight by the weight per gallon at 60 degrees F.

Asphalt will be measured by weight. Net certified scale weights, or weights based on certified volumes in the case of rail shipments, will be used as a basis of measurement, subject to correction when asphalt has been lost from the car or the distributor, disposed of, or otherwise not incorporated in the work.

When asphalt is shipped by truck or transport, net certified weights or volumes subjected to correction for loss or foaming may be used to compute quantities.

Only the quantity of asphalt actually placed in the work and accepted will be considered in determining the amount due the Design-Builder.

5. **Timber:** Timber will be measured in units of 1,000 foot-board-measure actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

**Execution Version**

---

6. **Equipment rental:** Equipment rental will be measured by time in hours of actual working time and necessary traveling time of the Equipment within the limits of the Fred Ex Project or source of supply and the Fred Ex Project except when another method of measurement is specified.

**109.02—Plan Quantities (Not Used)**

**109.03—Scope of Payment (Not Used)** Refer to Part 4 (Fred Ex General Conditions)

**109.04—Compensation for Altered Quantities (Not Used)** Refer to Part 3 (Fred Ex Design-Build Contract) - Article 6, Contract Price and Part 4 (Fred Ex General Conditions) - Article 9, Changes to Fred Ex Contract Price and Time

**109.05—Fred Ex Contract Price Adjustments**

Fred Ex Contract Price adjustments shall be made in conformance with the requirements of Article 9 of the Part 4 (Fred Ex General Conditions). In the event the Fred Ex Contract Price adjustment is to be made under Subparagraphs .3 or .4 of Section 9.4.1, or in the event of claims by Design-Builder under Article 10, then the rates for labor, Equipment, Materials and otherwise will be compensated in the following manner:

- (a) **Labor:** Unless otherwise approved, the Design-Builder will receive the rate of wage or scale as set forth in his most recent payroll for each classification of laborers, forepersons, and superintendent(s) who are in direct charge of the specific operation. The time allowed for payment will be the number of hours such workers are actually engaged in the work. If overtime work is authorized, payment will be at the normal overtime rate set forth in the Design-Builder's most recent payroll. If workers performing the class of labor needed have not been employed on the Fred Ex Project, mutually agreed on rates will be established. However, the rates shall be not less than those predetermined for the Fred Ex Project, if applicable. An amount equal to 45 percent of the approved payroll will be included in the payment for labor to cover administrative costs, profit, and benefits or deductions normally paid by the Design-Builder.
- (b) **Insurance and Tax:** The Design-Builder will receive an amount equal to 25 percent of the approved payroll exclusive of additives of administrative cost as full compensation for property damage and liability, workers' compensation insurance premiums, unemployment insurance contributions, and social security taxes.
- (c) **Materials:** The Design-Builder will receive the actual cost of Materials accepted by the Concessionaire that are delivered and used for the work including taxes, transportation, and handling charges paid by the Design-Builder, not including labor and Equipment rentals as herein set forth, to which 15 percent of the cost will be added for administration and profit. The Design-Builder shall make every reasonable effort to take advantage of trade discounts offered by Material suppliers. Any discount received shall pass through to the Concessionaire. Salvageable temporary construction Materials will be retained by the Concessionaire or their appropriate salvage value shall be credited, as agreed on by the Concessionaire.
- (d) **Equipment:** The Design-Builder shall provide the Concessionaire a list of all Equipment to be used in the work. For each piece of Equipment, the list shall include the serial number; date of manufacture; location from which Equipment will be transported; and for rental Equipment, the rental rate and name of the company from which it is rented. The Design-Builder will be paid rental rates for pieces of machinery, Equipment, and attachments necessary for prosecution of the work that are approved for use by the Concessionaire. Equipment rental will be measured by time in hours of actual time engaged in the performance of the work and necessary traveling time of the Equipment within the limits of the Fred Ex Project or source of supply and the Fred Ex Project. Hourly rates will not exceed 1/176 of the monthly rates of the schedule shown in the *Rental Rate Blue Book* modified in accordance with the *Rental Rate Blue Book* rate adjustment tables that are current at the time the Extra Work is performed. Equipment rental rates not modified by the adjustment factors or rate modifications indicated in the *Rental Rate Blue Book* will not be considered. Hourly rates for Equipment on standby will be at 50 percent of the rate paid for Equipment performing work. Operating costs shall not be included in the standby rate. For the purposes herein "standby time" is defined as the period of time Equipment ordered to the jobsite by the Concessionaire is available on-site for the work but is idle for reasons not the fault of the Design-Builder or

**Execution Version**

---

normally associated with the efficient and necessary use of that Equipment in the overall operation of the work at hand.

Payment will be made for the total hours the Equipment is performing work. When Equipment is performing work less than 40 hours for any given week and is on standby, payment for standby time will be allowed for up to 40 hours, minus hours performing work. Payment will not be made for the time that Equipment is on the Fred Ex Project in excess of 24 hours prior to its actual performance in the work. An amount equal to the *Rental Rate Blue Book* estimated operating cost per hour will be paid for all hours the Equipment is performing work. This operating cost shall be full compensation for fuel, lubricants, repairs, greasing, fueling, oiling, small tools, and other incidentals. No compensation will be paid for the use of machinery or equipment not authorized by the Concessionaire.

The Design-Builder will be paid freight cost covering the moving of Equipment to and from the specific work operation provided such cost is supported by an invoice showing the actual cost to the Design-Builder. However, such payment will be limited to transportation from the nearest source of available equipment. If Equipment is not returned to the nearest equipment storage lot but is moved to another location, the freight cost paid will not exceed the cost of return to the nearest storage lot.

The rates for Equipment not listed in the *Rental Rate Blue Book* schedule shall not exceed the hourly rate being paid for such Equipment by the Design-Builder at the time of the performance of the Extra Work. In the absence of such rates, prevailing rates being paid in the area where the authorized work is to be performed shall be used.

If the Design-Builder does not possess or have readily available Equipment necessary for performing the Extra Work and such Equipment is rented from a source other than a company that is an Affiliate, payment will be based on actual invoice rates, to which 15 percent of the invoice cost will be added for administrative cost and profit. If the invoice rate does not include the furnishing of fuel, lubricants, repairs, and servicing, the invoice rate will be converted to an hourly rate, and an amount equal to the *Rental Rate Blue Book* estimated operating cost per hour will be added for each hour the Equipment is performing work.

- (e) **Miscellaneous:** No additional allowance will be made for attachments that are common accessories for Equipment as defined in the *Rental Rate Blue Book*, general superintendents, timekeepers, secretaries, the use of small hand-held tools or other costs for which no specific allowance is herein provided. The Design-Builder will receive compensation equal to the cost of the bond, special railroad insurance premiums, and other additional costs necessary for the specific work as determined by the Concessionaire. The Design-Builder shall supply documented evidence of such costs.
- (f) **Compensation:** The compensation as set forth in this Section shall be accepted by the Design-Builder as payment in full for work performed on the basis described in this Section 109.05. At the end of each day, the Design-Builder's Representative and the Inspector shall compare and reconcile records of the hours of work and Equipment, labor, and Materials used in such work. Such accounting may not include actual costs or labor rates where these are not available but shall be used to verify quantities, types of Materials or labor, and number and types of Equipment.

If all or a portion of the work is performed by approved Design Consultants, Subcontractors, or Sub-Subcontractors, Design-Builder will be paid ten percent (10%) of the subcontract net costs to cover the Design-Builder's profit and administrative cost. The amount resulting will not be subject to any further additives. The itemized statements of costs as required below shall be submitted on a form that separates the subcontracted portions of the labor, Materials, and Equipment from the other costs.

- (g) **Statements:** Payments will not be made for work performed on the basis described in this Section 109.05 until the Design-Builder has furnished the Concessionaire duplicate itemized statements of the cost of such work detailed as follows:
  - 1. payroll indicating name, classification, date, daily hours, total hours, rate, and extension of each laborer, foreperson, and Superintendent.

**Execution Version**

---

2. designation, dates, daily hours, total hours, rental rate, and extension for each unit of Equipment.
3. quantities of Materials, prices, and extensions.
4. transportation of Materials.

Statements shall be accompanied and supported by invoices for all Materials used and transportation charges. However, if Materials used are not specifically purchased for such work but are taken from the Design-Builder's stock, then in lieu of the invoices, the Design-Builder shall furnish an affidavit certifying that such Materials were taken from his stock; that the quantity claimed was actually used; and that the price, transportation, and handling claimed represented his actual cost.

**109.06—Common Carrier Rates (Not Used)****109.07—Eliminated Items (Not Used)****109.08—Partial Payments (Not Used)****109.09—Payment for Material on Hand**

When requested in writing by the Design-Builder, payment allowances may be made for materials secured for use on the Fred Ex Project and required to complete the Fred Ex Project. Such material payments will be made for only those actual quantities of materials identified in the Contract, approved change orders, or otherwise authorized and documented by the Concessionaire based on delivery tickets, bills of lading, or paid invoices. All such payments shall be in accordance with the following terms and conditions:

- (a) **(Not Used)**
- (b) **Other Materials:** For steel, precast, aggregate, pipe, guardrail, signs and sign assemblies, and other nonperishable material, an allowance of 100 percent of the cost to the Design-Builder for materials may be made when such material is delivered to the Fred Ex Project and stockpiled or stored in accordance with the requirements specified herein. Prior to the granting of such allowances, the material shall have been tested and found acceptable to the Concessionaire. Allowances will be based on invoices, bills, or the estimated value of the material as approved by the Concessionaire.
- (c) **Excluded Items:** No allowance will be made for fuels, form lumber, False Work, temporary structures, or other work that will not become an integral part of the finished construction. Additionally, no allowance will be made for perishable material such as cement, seed, plants, or fertilizer.
- (d) **Storage:** Material for which payment allowance is requested shall be stored in an approved manner in areas where damage is not likely to occur. If any of the stored materials are lost or become damaged, the Design-Builder shall repair or replace them at no additional cost to the Concessionaire. Repair or replacement of such material will not be considered the basis for any extension of Fred Ex Contract Time. If payment allowance has been made prior to such damage or loss, the amount so allowed or a proportionate part thereof will be deducted from the next progress estimate payment and withheld until satisfactory repairs or replacement has been made.

When it is determined to be impractical to store materials within the limits of the Fred Ex Project, the Concessionaire may approve storage on private property or, for structural units and reinforcing steel, on the manufacturer's or fabricator's yard. Requests for payment allowance for such stored material shall be accompanied by a release from the owner or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the Concessionaire. The Concessionaire must be allowed access to the materials for inspection during normal business hours.

**Execution Version**

---

- (e) **Materials Inventory:** If the Design-Builder requests a payment allowance for properly stored Material, he shall submit a certified and itemized inventory statement to the Concessionaire no earlier than five days and no later than two days prior to the progress estimate date. The statement shall be submitted on forms furnished by the Concessionaire and shall be accompanied by invoices or other documents that will verify the Material's cost. Following the initial submission, the Design-Builder shall submit to the Concessionaire a monthly-certified update of the itemized inventory statement within the same time frame. The updated inventory statement shall show additional Materials received and stored with invoices or other documents and shall list Materials removed from storage since the last certified inventory statement, with appropriate cost data reflecting the change in the inventory. If the Design-Builder fails to submit the monthly-certified update within the specified time frame, the Concessionaire will deduct the full amount of the previous statement from the progress estimate.

At the conclusion of the Fred Ex Project, the cost of Material remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

**109.10—Final Payment (Not Used)** Refer to Part 4 (Fred Ex General Conditions)

**109.11—Exhibits**

The following exhibits are made part of, and incorporated into these Division I Amendments to the Standard Specifications.

EXHIBIT 107.15.1 - USE OF DISADVANTAGED BUSINESS ENTERPRISES FOR DESIGN-BUILD PROJECTS

EXHIBIT 107.15.2 - USE OF SMALL, WOMEN-OWNED, AND MINORITY-OWNED BUSINESSES

**END OF PART 5  
DIVISION I AMENDMENTS TO THE STANDARD SPECIFICATIONS**