

EXHIBIT GG
FORM OF STE DESIGN-BUILD CONTRACT

[SEE ATTACHED]

CONTRACT ID. NO.: C00108315DB90

Form C-6a
Rev. 3-22-05

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
BID PROPOSAL AND CONTRACT**

ROUTE NUMBER: INTERSTATE 95

FHWA NUMBER: STP-000s (321)

PROJECT NUMBER: 0095-969-720, P101, R201, C501

DESCRIPTION: I-95 EXPRESS LANES-SOUTHERN TERMINUS EXTENSION

COUNTY: STAFFORD

DISTRICT: FREDERICKSBURG



DESIGN-BUILDER: BRANCH HIGHWAYS, INC.

DATE BID SUBMITTED: 4:00 P.M. FRIDAY, APRIL 15, 2016

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Part 3

2013 Lump Sum Design-Build Agreement Between Department and Design-Builder

(Date of Standard Lump Sum Design-Build Agreement: July 2013)

Incorporated into this Contract by Reference. This Document
may be found at the below VDOT weblink.

http://www.virginiadot.org/business/resources/2013_Parts_3-4-5_documents-7-3-2013.pdf

Exhibit 1 to Part 3 Project-Specific Terms

(Date of Standard Exhibit 1 to Part 3: May 2014)

Part 3 (2013 Lump Sum Agreement Between Department and Design-Builder), Part 4 (2013 General Conditions of Contract between Department and Design Design-Builder), and Part 5 (2013 Division I Amendments to the Standard Specifications General Provisions for Design-Build Contracts Between Department and Design-Builder) of the RFP are incorporated into this contract by reference. A copy of these documents can be found here: <http://www.virginia.gov/business/design-build.asp>

This Exhibit 1 to Part 3 contains project-specific terms that are hereby incorporated, as identified below, into Parts 3, 4 and 5.

Department and Design-Builder hereby agree any provisions in this Exhibit 1 that modify a specific clause of Parts 3, 4, or 5 shall supersede the clause contained in Parts 3, 4, or 5.

The Agreement Date is [5-20-2016].

The Parties to the Agreement are:

**VIRGINIA DEPARTMENT OF TRANSPORTATION ("Department"),
An agency of the Commonwealth of Virginia:**

Virginia Department of Transportation
Attention: Chief Engineer
1401 East Broad Street
Richmond, VA 23219

DESIGN-BUILDER:

Branch Highways, Inc.
10440 Balls Ford Road
Suite 270
Manassas, Virginia 20109

Mailing Address:
Branch Highways, Inc.
P.O. Box 40004
Roanoke, VA 24022

Project No.: **0095-969-720**
Project: **I-95 Express Lanes – Southern Terminus Extension
Stafford County, Virginia**

PART 3
2013 LUMP SUM DESIGN-BUILD AGREEMENT BETWEEN
DEPARTMENT AND DESIGN-BUILDER

2.1.4 The Department's Request for Proposals (RFP) is dated February 29, 2016.

2.1.7 The list of all final modifications to the Proposal is as follows:

No Modifications

5.2.1 The **Final Completion Date** is August 22, 2018.

5.2.2 The **Early Completion and Interim Milestone Date** is in accordance with Attachment to Part 3 Article 5.

5.3 **Adjustments** shall be in accordance with Attachment to Part 3 Article 5.

5.5.1 Liquidated damages for failing to attain Final Acceptance by the Final Completion Date is in accordance with Attachment to Part 3 Article 5.

6.1 The **Contract Price** is **Thirty One Million Eighty Five Thousand Dollars (\$31,085,000)**.

6.3 The identification of eligible price adjustments for this contract is as follows:

Price Adjustment for Asphalt – used
Price Adjustment for Fuel – used
Price Adjustment for Steel – not used

9.1.1 The Department's Senior Representative is:

Susan N. Shaw, PE, DBIA, CCM
Mega Projects Director
4975 Alliance Drive, Fairfax, Va 22030
703-259-1995

9.1.2 The Department's Representative is:

Paul Nishimoto
Project Manager
4975 Alliance Drive, Fairfax, Va 22030
703-259-2362

9.2.1 The Design-Builder's Senior Representative is:

Patrick Bartorillo

President
442 Rutherford Ave, NE, Roanoke, VA 24016
540-982-1678

9.2.2 The Design-Builder's Representative is:

Pete Kramer
Vice President – NOVA Region
10440 Balls Ford Road, Suite 270, Manassas, VA 20109
571-379-5896

11.1.2 The **Baseline Schedule** shall be submitted within **sixty (60)** days of Design-Builder's receipt of the Department's Notice to Proceed.

**PART 3
LUMP SUM AGREEMENT**

7.1.5 If Design-Builder fails to make payment to the Subcontractor within the time frame and provisions specified in Section 7.1.3 and 7.1.4 above, the Subcontractor shall notify the Department and the Design-Builder's bonding company in writing. The Design-Builder's bonding company shall be responsible for insuring payment to the Subcontractor.

7.1.6 Pursuant to VA. CODE §2.2-4354, Design-Builder agrees to provide the Department, within five (5) days of the Agreement Date, its federal employer identification number.

**PART 4
2013 GENERAL CONDITIONS OF CONTRACT BETWEEN
DEPARTMENT AND DESIGN-BUILDER**

2.2.1 The duration of the **Scope Validation Period** is one hundred and twenty (120) days.

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 Department 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, Design-Builder shall provide Department 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 Agreement Date; and (c) the specific impact that the alleged Scope Issue has had on Design-Builder's price and time to perform the 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 Department during the Scope Validation Period. The General Notice of Scope Issues and any Supporting Documentation shall be submitted in writing to Department's Alternate Project Delivery Office Point of Contact listed in Part 1, Section 2.4 of the RFP Documents and to Department's Representative included in Exhibit 1 to Part 3, Section 9.1.2 simultaneously.

3.1.2 Department shall provide timely reviews and (where required) approvals of submittals, interim design submissions and Construction Documents consistent with the turnaround times set forth in Design-Builder's schedule, provided, however that, unless stated otherwise in the Contract Documents, Department shall have twenty-one (21) days after receipt of such submissions to act upon such submissions. The Department requires that such design submittal will be complete, are of high quality, and will have been subject to the Design-Builder's QA/QC program for design documents. Additionally, the Department will expect the Design-Builder will sequence submittals in such a manner as to not inundate the Department with numerous submittals to review concurrently. Any submittal requiring Federal Highway Administration (FHWA) or Transurban review will require a fourteen (14) day turn-around time (of which is included in the Department's twenty-one days). This Section 3.1.2 shall not be construed to apply to the acquisition of other Governmental Approvals by either the Design-Builder or the Department.

6.2.1.2 QA/QC shall be an integral part of each activity. As part of each Application for Payment that includes completed activities, Design-Builder's designated quality assurance manager shall: (a) verify that the design included in each activity has been completed in accordance with the Contract Documents; (b) certify that the construction included in each activity has been completed in accordance with the 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 Quality Assurance Manager'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 Work Package shown herein as complete has been completed in accordance with the 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 Work Package have been resolved except for the attached list of open issues.*

The 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 the responsible personnel that completed the work, etc., that the relevant QA or QC reviewer relied on to make its determination the work is complete and conforms to the requirements of the Contract Documents.

PART 5
2013 DIVISION I AMENDMENTS TO THE STANDARD SPECIFICATIONS GENERAL
PROVISIONS FOR DESIGN-BUILD CONTRACTS BETWEEN DEPARTMENT AND
DESIGN-BUILDER

103.06—Documents Required as a Condition to Award

The portion of the executed Contract submitted by the Successful Offeror shall include the following documents, unless the filing of any of them at a later date is specifically permitted by the RFP or Contract Documents, provided, however notwithstanding anything to the contrary in the Contract Documents, that the submission of an executed Agreement and Contract Bonds shall always be a precondition to Award

- (a) **Contract:** The Agreement executed by the Successful Offeror.
- (b) **Contract Bonds:** Contract Bonds shall conform to the requirements of Section 103.05.
- (c) **Affidavits and Documents:** Affidavits and documents set forth in the RFP and executed by the Successful Offeror.
- (d) **Progress Schedule:** (Not Used)
- (e) **Insurance Coverages and Certificates of Insurance:** The Design-Builder shall procure and maintain the insurance coverages required below, in accordance with Paragraph (f) below. Design-Builder shall file certificates of insurance with the Department evidencing the coverages and limits within 15 days after notification of Award of the Contract.

.1. **Workers' Compensation and Employer's Liability Insurance,** with statutory workers' compensation (Coverage A) limits and employer's liability (Coverage B) limits of \$1 million bodily injury by accident or disease, each employee. If necessary, coverage shall be extended to cover any claims under the United States Longshoreman's Act and Harbor Workers Act and Jones' Act as may be appropriate for the Work.

.2 **Commercial General Liability Insurance,** including coverage for premises and operations, independent contractors, personal injury, product and completed operations, explosion, collapse and underground, and broad form contractual liability with limits of at least \$1 million per occurrence and \$2 million aggregate, applicable on a per project basis.

.3 **Automobile Liability Insurance,** with a limit of at least \$1 million combined single limit for bodily injury and property damage covering all owned (if any), non-owned, hired or borrowed vehicles on-site or off.

.4 **Umbrella/Excess Liability Insurance** in excess of the underlying limits noted above for employer's liability, commercial general liability, and automobile liability in the amount of: (a) \$5 million per occurrence and in the annual aggregate for Projects with a Contract

Price less than \$15 million; and (b) \$20 million per occurrence and in the annual aggregate for Projects with a Contract Price greater than \$15 million.

.5 Architects/Engineers Professional Liability Insurance, covering Design-Builder's lead design engineer for acts, errors or omissions arising in connection with the Work for not less than: (a) \$2 million any one claim and in the aggregate for Projects with a Contract Price less than \$50 million; and (b) \$5 million any one claim and in the aggregate for Projects with a Contract Price greater than \$50 million. Such insurance shall be maintained throughout the duration of any warranty period and for at least three years after the expiration of any warranty period.

.6 Contractor's Pollution Liability Insurance, to indemnify for bodily injury or property damage or amounts which Design-Builder or its agents, Subcontractors, or employees are legally obligated to pay for clean-up/remediation arising out of the work undertaken pursuant to the Contract Documents. Such insurance shall have minimum limits of \$5 million any one claim and in the aggregate and shall remain in full force and effect for five years following Final Completion.

.7 Builder's Risk Insurance, to provide coverage for physical loss, destruction or physical damage to the work. Such insurance shall cover Design-Builder, the Department, and all Subcontractors and shall be maintained at a limit of at least 100% of the Contract Price. Such insurance shall include replacement cost coverage for materials, supplies, equipment, machinery, and fixtures that are or will be part of the Project. Coverages shall include but are not limited to the following: right to partial occupancy, earthquake, earth movement, flood, transit, temporary and permanent works, expediting expenses, debris removal, offsite storage, soft costs and commissioning and start-up.

(f) **Insurance Requirements:** Design-Builder shall ensure that all insurances required in Paragraph (e) above contain the following provisions:

.1 With the exception of workers' compensation and architect/engineers' professional liability insurance, the Department shall be named as an additional insured on all policies. Each such policy shall also include the appropriate severability of interest and cross-liability clauses to allow one insured to bring claim against another insured party.

.2 All insurance coverages shall be considered primary and non-contributory with regard to other insurances that might be available to Design-Builder or the Department.

.3 All insurers shall waive rights of subrogation against the Department for any claims covered by insurance required herein.

.4 Any inadvertent errors or omissions by Design-Builder in procuring the insurance required herein shall in no way prejudice the rights of the Department to collect under such policies.

.5 Any deductibles shall be the sole responsibility of Design-Builder.

.6 The insurance shall remain in full force and in effect and will remain in effect for the duration required by the Contract Documents.

.7 No insurance coverage will be canceled, renewal refused, or materially changed unless at least thirty (30) days prior written notice is given to Department.

.8 With the exception of workers' compensation and automobile liability insurance, the insurance policies shall specifically delete any design-build or similar exclusions that could compromise coverages because of the design-build delivery of the Project.

(g) Additional Insurance Requirements:

.1 Design-Builder shall require all Subcontractors to carry the same insurance, and in the same amounts, required by Paragraphs (e)(1), (e)(2) and (e)(3) above.

.2 Design-Builder shall file certificates of insurance with the Department evidencing the coverages and limits described above within the times required by Paragraph (e) above. The certificates shall be executed by approved insurance companies authorized to do business in Virginia with a minimum "Best Rating" of "B +" or greater, and shall cover the Contract.

.3 The insurance coverage limits shall not be construed to relieve Design-Builder or Subcontractor(s) of liability in excess of such coverage, nor shall it preclude the Department from taking such actions as are available to it under any other provision of the Contract Documents or otherwise in law.

109.05 – Contract Price Adjustments

(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 Consultant(s), Subcontractor(s), and/or Sub-Subcontractor(s) the Design-Builder will be paid ten (10) percent 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.

Exhibit 1 to Part 3
Lump Sum Agreement
March 2, 2016

I-95 Express Lanes-Southern Terminus Extension
Stafford County, Virginia
Project No. : 0095-969-720, P101, R201, C501
Contract ID # C00108315DB90

DEPARTMENT:

Virginia Department of Transportation
(Name of Department)

Garrett Moore
(Signature)

Garrett Moore
(Printed Name)

Chief Engineer
(Title)

Date: 5/20/2016

DESIGN-BUILDER:

Branch Highways, Inc.
(Name of Design-Builder)

Patrick K. Bartorillo
(Signature)

Patrick K. Bartorillo
(Printed Name)

President
(Title)

Date: 5/16/16

**END OF EXHIBIT 1 to PART 3
PROJECT-SPECIFIC TERMS**

Attachment 5 “No Excuse” Incentives and Liquidated Damages

1.0 Final Completion Date. The Design-Builder shall complete the Work for all elements of the Project in accordance with the Contract Documents no later than August 22, 2018 (referred to as “Final Completion Date”).

1.1 Incentive for Early Completion of the Entire Project. The Department will pay the Design-Builder a payment in the amount of Seven Hundred and Twenty Thousand Dollars (\$720,000.00) to be known as a “no excuses” incentive payment if the Work under the Contract Documents for all elements of the Project completed on or before June 23, 2018. For every day after June 23, 2018 the Design-Builder takes to complete the Work, the “no excuses” incentive payment will decrease at a daily rate of Twelve Thousand Dollars (\$12,000.00). No incentive payment will be paid for completing all Work after the Final Completion Date of August 22, 2018. The “no excuses” incentive payment will be paid in addition to and separate from the Contract Price. For the purposes of this provision, completion shall be defined as Final Acceptance of all Work completed in accordance with the Contract Documents for all elements of the Project.

1.2 Incentive for Interim Milestone Completion of I-95 Southbound. The Department will pay the Design-Builder a “no excuses” incentive payment of Two Hundred and Forty-nine Thousand Dollars (\$249,000.00) if the Work for the I-95 Southbound extension reaches an Interim Milestone Completion Date on or before November 1, 2017. For every day after November 1, 2017 the Design-Builder takes to complete the Work, the “no excuses” incentive payment will decrease at a daily rate of Eight Thousand Three Hundred Dollars (\$8,300.00). No incentive payment will be paid for completing all Work after December 1, 2017. If not completed by December 1, 2017, the Design-Builder will be assessed liquidated damages in accordance with Section 1.7 below. Specific requirements related to the Interim Milestone Completion Date and “no excuses” incentives are further shown below.

The Interim Milestone Completion of Work for I-95 Southbound is defined such that the travelling public has unrestricted use including, at a minimum, the completion of the following Southbound items in accordance with the Contract Requirements for the Work:

- Drainage structures and systems installed and functional.
- Asphalt pavement (through surface course).
- Permanent line striping, directional arrows, markers and delineators.
- All directional and regulatory signing installed.
- All ITS devices installed including DMS, CCTV, vehicle detectors and control gates (and operational with the exception of the control gates).
- All guardrail and end terminals installed.

- Lighting installed and operational.
- Removal of all existing or temporary signs no longer required for operations.
- Permanent stormwater management systems installed and functional.
- Utilities relocated to their final position with no service interruptions required to impede I-95 Southbound traffic.
- 120 Days minimum before Interim Milestone Completion Date – All TMS Roadside Equipment shall be installed and shall have achieved Commissioning.
- 90 Days minimum before Interim Milestone Completion Date – All TMS Roadside Equipment and the Network shall have successfully completed both Level A and Level B Testing.
- 31-90 Days before Interim Milestone Completion Date – The Design-Builder shall provide MOT support and full on-site access to Transurban representatives, including lane and facility closures as approved by VDOT, to assist Transurban in completing the Level C Testing and Burn Period.
- 1-30 Days before Interim Milestone Completion Date – Final operational readiness and VDOT approval for I-95 Southbound Service Commencement.
- 14 Days before Interim Milestone Completion Date – The Design-Builder shall support necessary customer education, public outreach and Transurban's operational readiness.
- Service Commencement for I-95 Southbound traffic.

The intent of the Interim Milestone Completion Date is to ensure that the travelling public can utilize the new facility by the Interim Milestone Completion Date and that the facility is safe for all modes of transportation for the period between the Interim Milestone Completion Date and the Final Completion Date.

1.3 Acknowledgement of Delays. The parties anticipate that delays may be caused by, or arise from, any number of events during the term of the Contract Documents including, but not limited to: work performed, work deleted, work orders, valid Scope Issues identified during the Scope Validation Period, supplemental agreements, force accounts, delays, disruptions, differing site conditions, utility conflicts, design changes or defects, time extension, extra work, overruns, nearby or adjacent projects, right of way issues, permitting issues, actions of suppliers, subcontractors or other contractors, actions of third parties, shop drawing approval, process delays, expansion of the physical limits of the Project, weather (other than floods in excess of the base flood, hurricane force winds and tornados), weekends, holidays, suspension of contract time, extended or absorbed home office or job site overhead, lump sum maintenance of traffic adjustments, lost profits, prime mark-up impacts, conditions, circumstances, or potential damages on or pertaining to or as arising out of the Contract Documents, or other events, forces, or factors sometimes experienced in highway and bridge construction work. As such, the Design-Builder acknowledges such delays may occur and agrees that such delays will not be the basis for the Department to modify or change Interim Milestone or Early Completion incentive dates or Contract Requirements for the Work. Further, all costs or impacts incurred by the Design-Builder (not previously identified and covered by work order, overrun, or force account) shall be

the sole responsibility of the Design-Builder if the Design-Builder chooses to accept the “no excuses” incentive.

The “no excuses” incentive shall not apply to delays related to Unknown 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.

1.4 Procedure to receive “no excuses” incentives. The Design-Builder shall, in order to receive any “no excuses” incentive payments:

1. Achieve Early Completion and Interim Milestone Completion Work that the Design-Builder is seeking a “no excuses” incentive for as outlined above and in accordance with the Contract Documents, including completing all roadside equipment commissioning, testing and integration.
2. Obtain Department written concurrence of Final Acceptance for Early Completion and Interim Milestone Completion Work, including completing all roadside equipment commissioning, testing and systems integration.
3. After receiving written concurrence of Final Acceptance by the Department for the Interim Milestone and/or Early Completion the Design-Builder is seeking a “no excuses” incentive payment for, the Design-Builder shall sign a “Release of ALL Claims” form supplied by the Department. The “Release of ALL Claims” form certifies that all Work has been completed and has attained the Departments Final Acceptance and includes a full and complete release and acknowledgement of satisfaction by the Design-Builder of any and all claims, causes, actions, issues, demands, disputes, and matters of controversy of any nature or kind whatsoever for all Work performed from the Agreement Date until the Department’s Final Acceptance of all Interim Milestone Completion Work the Design-Builder is seeking an incentive for and/or Early Completion of Final Project. This release and acknowledgement of satisfaction shall be all-inclusive and absolute.

1.5 Failure to Receive a “no excuses” incentive. Should the Design-Builder either fail to complete the Early Completion and Interim Milestone Completion Work the Design-Builder is seeking a “no excuses” incentive payment for on or before the associated Interim Milestone and/or Early Completion Dates, or having satisfactorily completed the Work fail to request the “no excuses” incentive payment for any reason, including but not limited to the Design-Builder choosing not to fully release and acknowledge satisfaction of any and all claims, etc. as set forth in the “Release of ALL Claims” form, the Design-Builder shall have no rights to any “no excuses” incentive payment(s) whatsoever.

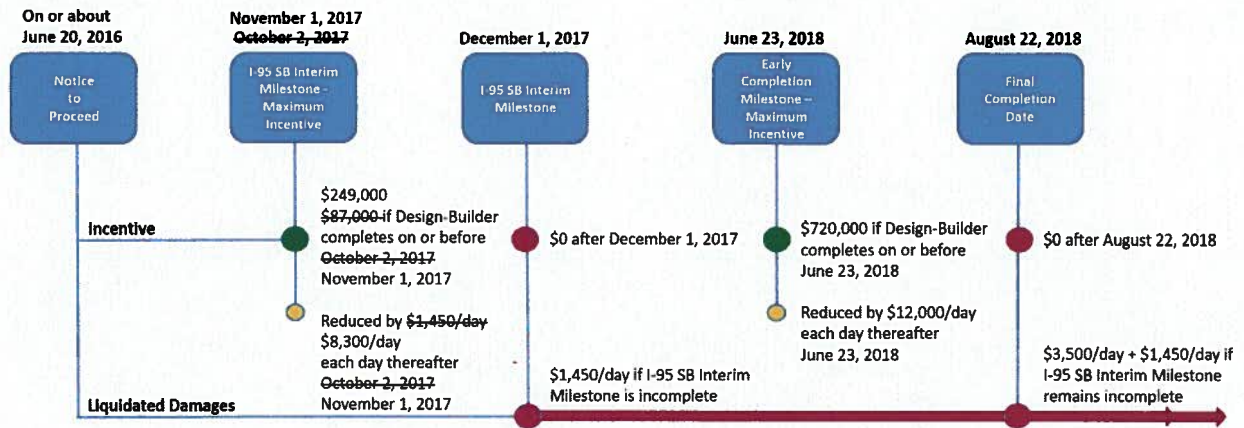
1.6 Adjustments. The Final Completion Date for the entire Project, Early Completion Date and Interim Milestone Date, in the Department’s sole discretion, shall be subject to adjustment in accordance with the provisions described herein.

The Department in its sole discretion will determine Final Acceptance and the Final Completion Date. The Early Completion Date and Interim Milestone Completion Date will not be adjusted for any reason, cause or circumstances whatsoever, unless determined otherwise by the Department in accordance with the requirement and procedures outlined in the Contract Documents. In which case, the Department, in its sole discretion will determine if the Completion Dates will be adjusted for any reason. In the event that the Department approves adjustments to the Final Completion Date for the Entire Project, Early Completion date and/or Interim Milestone Completion Dates, a work order will be generated to clearly identify the date changes and the application, if any, of any incentive/disincentive (or liquidated damages) with regard to any revised Final Completion Date for the Entire Project and/or Interim Milestone Completion Dates.

1.7 Liquidated Damages. Design-Builder understands that if the Final Completion Date or Interim Milestone Completion Date are not attained, the travelling public and the Department will suffer damages which are difficult to determine and accurately specify. The liquidated damages specified herein shall act as an agreed and reasonable estimate of those damages and not as a penalty. To compensate the Department for such damages, Design-Builder hereby agrees as follows:

- **Liquidated Damages for Failing to Meet Final Completion Date for Entire Project.** Liquidated damages for failing to attain Final Acceptance for all elements of the Project by the Final Completion date of August 22, 2018 is Three Thousand Five Hundred Dollars (\$3,500.00) per day.
- **Liquidated Damages for Failing to Meet Completion Date for Interim Milestone I-95 Southbound.** The liquidated damages for failing to attain Final Acceptance for all Work items associated with Interim Milestone I-95 Southbound by December 1, 2017 is One Thousand Four Hundred and Fifty Dollars (\$1,450.00) per day.

1.8 Summary of Incentives and Liquidated Damages. The following figure summarizes the Department's intent for incentives and liquidated damages:



**EXHIBIT 6.3(a)
ADJUSTMENT FOR ASPHALT**

**SPECIAL PROVISION FOR
ASPHALT MATERIAL PRICE ADJUSTMENT
DESIGN-BUILD PROJECTS**

August 9, 2013

All asphalt material listed in the attached "Master Listing of Asphalt Material Items Eligible for Price Adjustment" will be adjusted in accordance with the provisions as set forth herein. Other items will not be adjusted, except as otherwise specified in the contract. Any item added through a Work Order which contains Asphalt Material will not be subject to Price Adjustment unless specifically designated in the Work Order to be subject to Price Adjustment.

Each month, the Department will publish an average state-wide PG 64-22 f.o.b. price per ton developed from the average terminal prices provided to the Department from suppliers of asphalt cement to contractors doing work in Virginia. The Department will collect terminal prices from approximately 12 terminals each month. These prices will be received once each month from suppliers on or about the last weekday of the month. The high and low prices will be eliminated and the remaining values averaged to establish the average statewide price for the following month. That monthly state-wide average price will be posted on the Construction Division website on or about the first weekday of the following month.

This monthly statewide average price will be the Base Index for all contracts on which Price Proposals are received during the calendar month of its posting and will be the Current Index for all asphalt placed during the calendar month of its posting. In the event an index changes radically from the apparent trend, as determined by the Engineer, the Department may establish an index which is determined to best reflect the trend.

The amount of adjustment applied will be based on the difference between the Price Proposal/Contract Base Index and the Current Index for the applicable calendar month during which the work is performed. Calculations must be done for each type of Asphalt Material put in place each month, whether the Current Index is higher or lower than the Base Index. The calculation for the adjustment shall be shown as follows:

$$A = Q \times \%AC \times IC$$

Where: A = Asphalt Adjustment Dollar Amount
Q = Quantity of Asphalt Material put in place during the month
%AC = % of Asphalt Cement in the Asphalt Material as specified in the Job Mix Formula
IC = Numeric Dollar Difference, either positive or negative, between the Base Index and Current Index

Example Calculation for Negative Price Adjustment (Credit back to VDOT):

7,500 Tons of SM-12.5A put in place during the month (Q), Job Mix is 6.1% Asphalt Cement for SM-12.5A (%AC), Base Index for the Contract is \$515/Ton, Current Index is \$500/Ton, Difference of - \$15.00/Ton (IC)

$$7,500 \text{ Tons SM-12.5A} \times 6.1\% \times -\$15.00/\text{Ton} = -\$6,862.50 \text{ Adjustment Amount}$$

Example Calculation for Positive Price Adjustment (Paid to the Design-Builder):

10,000 Tons of BM-25.0A put in place during the month (Q), Job Mix is 5.2% Asphalt Cement for BM-25.0A (%AC), Base Index for the Contract is \$515/Ton, Current Index is \$560/Ton, Difference of + \$45.00/Ton (IC)

$$10,000 \text{ Tons BM-25.0A} \times 5.2\% \times \$45.00/\text{Ton} = +\$23,400.00 \text{ Adjustment Amount}$$

Adjustment of any asphalt material item designated as a price adjustment item which does not contain PG 64-22, except PG 76-22 or PG 70-28, will be based on the indexes for PG 64-22. The quantity of asphalt cement for asphalt concrete pavement to which adjustment will be applied will be the quantity based on the percent of asphalt cement shown on the appropriate approved job mix formula.

The quantity of asphalt emulsion for surface treatments to which adjustment will be applied will be the quantity based on 65 percent residual asphalt.

Price adjustment will be shown as a separate entry on the monthly application of payment for work packages completed; however, such adjustment will not be included in the total cost of the work for progress determination or for extension of contract time. Items the Design-Builder claims in its application of payment for asphalt adjustments must include supporting calculations certified by the Quality Assurance Manager (QAM). These calculations must be completed relative to the calendar month under which the work was performed and shall be submitted for either positive or negative adjustment.

Any apparent attempt to unbalance bids in favor of items subject to price adjustment or failure to submit required cost and price data as noted hereinbefore may result in rejection of items for asphalt adjustment.

VIRGINIA DEPARTMENT OF TRANSPORTATION
MASTER LISTING OF
ASPHALT MATERIAL ITEMS ELIGIBLE FOR PRICE ADJUSTMENT
(10-27-09)

| ITEM | DESCRIPTION | UNITS | SPECIFICATION |
|-------|---------------------------------------|-------|---------------|
| 10062 | Asphalt-Stab. Open-Graded Material | Ton | 313 |
| 10416 | Liquid Asphalt | Gal | 311 312 |
| 10420 | Blotted Seal Coat Ty. B | Sy | ATTD |
| 10422 | Blotted Seal Coat Ty. C | Sy | ATTD |
| 10423 | Blotted Seal Coat Ty. C-1 | Sy | ATTD |
| 10424 | Blotted Seal Coat Ty. D | Sy | ATTD |
| 10598 | Ns Asphalt Concrete | Ton | 315 |
| 10606 | Asphalt Concrete Ty. SM-9.5 | Ton | 315 |
| 10607 | Asphalt Concrete Ty. SM-12.5A | Ton | 315 |
| 10608 | Asphalt Concrete Ty. SM-12.5D | Ton | 315 |
| 10609 | Asphalt Concrete Ty. SM-12.5E (76-22) | Ton | 315 |
| 10610 | Asphalt Concrete Ty. IM-19.0A | Ton | 315 |
| 10611 | Asphalt Concrete Ty. IM-19.0D | Ton | 315 |
| 10612 | Asphalt Conc. Base Cr. Ty. BM-25.0 | Ton | 315 |
| 10613 | Asphalt Concrete Ty. BM-37.5 | Ton | 315 |
| 10635 | Asphalt Concrete Ty. SM-9.5A | Ton | 315 |
| 10636 | Asphalt Concrete Ty. SM-9.5D | Ton | 315 |
| 10637 | Asphalt Concrete Ty. SM-9.5E (76-22) | Ton | 315 |
| 10639 | Asphalt Concrete Ty. SM-19.0 | Ton | 315 |
| 10642 | Asphalt Concrete Ty. BM-25.0A | Ton | 315 |
| 10643 | Asphalt Concrete Ty. BM-25.0D | Ton | 315 |
| 10650 | Stone Matrix Asphalt SMA-9.5(70-22) | Ton | 317 |
| 10651 | Stone Matrix Asphalt SMA-9.5(76-22) | Ton | 317 |
| 10652 | Stone Matrix Asphalt SMA-12.5(70-22) | Ton | 317 |
| 10653 | Stone Matrix Asphalt SMA-12.5(76-22) | Ton | 317 |
| 10654 | Stone Matrix Asphalt SMA-19.0(70-22) | Ton | 317 |
| 10655 | Stone Matrix Asphalt SMA-19.0(76-22) | Ton | 317 |
| 10701 | Liquid Asphalt Coating | Sy | ATTD |
| 12505 | Asphalt Concrete Curb Backup Material | Ton | 315 |
| 13240 | Asphalt Concrete Sidewalk | Ton | 504 |
| 16110 | Emul. Asph. Slurry Seal Type A | Sy | ATTD |
| 16120 | Emul. Asph. Slurry Seal Type B | Sy | ATTD |
| 16130 | Emul. Asph. Slurry Seal Type C | Sy | ATTD |
| 16144 | Latex Mod. Emul. Treat. Type B | Ton | ATTD |
| 16145 | Latex Mod. Emul. Treat. Type C | Ton | ATTD |
| 16146 | Latex Mod. Emul. Treat. Rutfilling | Ton | ATTD |
| 16161 | Modified Single Seal | Sy | ATTD |
| 16162 | Modified Double Seal | Sy | ATTD |

| | | | |
|-------|---|------|-------|
| 16249 | Nontracking Tack Coat | Gal. | ATTD |
| 16250 | Liquid Asphalt Matl. CMS-2 (Mod) | Gal | ATTD |
| 16251 | Liquid Asphalt Matl. CMS-2 | Gal | ATTD |
| 16252 | Liquid Asphalt Matl. CRS-2 | Gal | ATTD |
| 16253 | Liquid Asphalt Matl. CRS-2H | Gal. | ATTD. |
| 16254 | Liquid Asphalt Matl. RC-250 | Gal | ATTD |
| 16256 | Liquid Asphalt Matl. RC-800 | Gal | ATTD |
| 16257 | Ns Liquid Asphalt Matl. | Gal | ATTD |
| 16260 | Liquid Asphalt Matl. CRS-2L | Gal | ATTD |
| 16325 | NS Asphalt Concrete | Ton | N/A |
| 16330 | Asphalt Concrete Ty. SM-9.0A | Ton | 315 |
| 16335 | Asphalt Concrete Ty. SM-9.5A | Ton | 315 |
| 16337 | Asph. Conc. Ty. SM-9.5ASL (Spot Level) | Ton | 315 |
| 16340 | Asphalt Concrete Ty. SM-9.5D | Ton | 315 |
| 16342 | Asph. Conc. Ty. SM-9.5DSL (Spot Level) | Ton | 315 |
| 16345 | Asphalt Concrete Ty. SM-9.5E (76-22) | Ton | 315 |
| 16350 | Asphalt Concrete Ty. SM-12.5A | Ton | 315 |
| 16352 | Asph. Con. Ty. SM-12.5ASL (Spot Level) | Ton | 315 |
| 16355 | Asphalt Concrete Ty. SM-12.5D | Ton | 315 |
| 16357 | Asph. Con. Ty. SM-12.5DSL (Spot Level) | Ton | 315 |
| 16360 | Asphalt Concrete Ty. SM-12.5E (76-22) | Ton | 315 |
| 16365 | Asphalt Concrete Ty. IM-19.0A | Ton | 315 |
| 16370 | Asphalt Concrete Ty. IM-19.0D | Ton | 315 |
| 16373 | Asphalt Concrete Ty. IM-19.0A (T) | Ton | 315 |
| 16374 | Asphalt Concrete Ty. IM-19.0D (T) | Ton | 315 |
| 16377 | Asphalt Concrete Ty. BM-37.5 | Ton | 315 |
| 16379 | Asphalt Concrete Ty. IM-19.0T | Ton | 315 |
| 16390 | Asphalt Concrete Ty. BM-25.0A | Ton | 315 |
| 16392 | Asphalt Concrete Ty. BM-25.0D | Ton | 315 |
| 16395 | Asphalt Concrete Ty. BM-25.0A (T) | Ton | 315 |
| 16397 | Asphalt Concrete Ty. BM-25.0D (T) | Ton | 315 |
| 16400 | Stone Matrix Asphalt SMA-9.5(70-22) | Ton | ATTD |
| 16401 | Stone Matrix Asphalt SMA-9.5(76-22) | Ton | ATTD |
| 16402 | Stone Matrix Asphalt SMA-12.5(70-22) | Ton | ATTD |
| 16403 | Stone Matrix Asphalt SMA-12.5(76-22) | Ton | ATTD |
| 16404 | Stone Matrix Asphalt SMA-19.0(70-22) | Ton | ATTD |
| 16405 | Stone Matrix Asphalt SMA-19.0(76-22) | Ton | ATTD |
| 16490 | Hot Mix Asphalt Treatment | Ton | ATTD |
| 16500 | Surf.Preparation & Restoration Type I | Ton | ATTD |
| 16502 | Surf.Preparation & Restoration Type Ii | Ton | ATTD |
| 16504 | Surf.Preparation & Restoration Type Iii | Ton | ATTD |
| 67201 | NS Asphalt Concrete Overlay | Ton | 315 |
| 67210 | NS Asphalt Concrete | Ton | 315 |
| 68240 | NS Asphalt Concrete | Ton | 315 |

Exhibit 6.3(b)

Form C-16a
August 9, 2013

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
ASPHALT PRICE ADJUSTMENT (PG76-22 or PG 70-28)
DESIGN-BUILD PROJECTS**

INSTRUCTIONS - This form is to be completed and returned ONLY when asphalt concrete items containing PG 76-22 or PG 70-28 is being utilized on the project.


PROJECT NUMBER: 0095-969-720, P101, R201, C501

DISTRICT: FREDERICKSBURG

Bid Prices in this contract for items containing PG 76-22 or PG 70-28 asphalt cement were developed using an f.o.b. price of \$ 480.00 per IMPERIAL ton for PG 76-22 or PG 70-28. This quote is project specific.

Price quotes signed by each supplier from which the Design-Builder proposes to obtain PG 76-22 or PG 70-28 shall be maintained by the Design-Builder. These quotes shall be retained on site during the life of the Contract for review by the Engineer upon request.

DATE: 4/13/2016

SIGNATURE: 

Branch Highways, Inc.

(Firm or Corporation)

B319

(Vendor No.)

**EXHIBIT 6.3 (c)
ADJUSTMENT FOR FUEL**

**VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
OPTIONAL ADJUSTMENT FOR FUEL
DESIGN-BUILD PROJECTS**

June 30, 2011
(Revised) November 5, 2012

In the event the Design-Builder elects to seek adjustment for fuel items designated in the Price Proposal/Contract as Price Adjustment Items such items will be subject to price adjustment as set forth herein. Other items will not be adjusted, except as otherwise specified in the contract.

The Design-Builder will submit their monthly application for payment associated with eligible work packages with an adjustment up or down as appropriate for cost changes in fuel used on specific items of work identified in this provision. A master listing of standard items eligible for fuel adjustment is provided by the Department on its website at the following link <http://www.virginiadot.org/business/resources/masteroptionalfuelitems.pdf>. The listing on the web site also includes the corresponding fuel factor for each item. The fuel usage factor for each item is considered inclusive of all fuel usage.

The amount of adjustment will be computed from the change in the indexes and the on-site fuel use as shown in the Department's master listing of eligible items.

In order to be eligible for fuel adjustment under this provision, the Design-Builder shall clearly identify in within the Schedule of Values those pay items and the associated quantities it chooses to have fuel adjustment applied to in its work packages. Items the Design-Builder claims in its application of payment for fuel adjustments must be properly designated in order to be considered for adjustment. Items not properly designated or left out of the Design-Builder's Schedule of Values will automatically not be considered for adjustment.

The monthly index price to be used in the administration of this provision will be calculated by the Department from the Diesel fuel prices published by the U. S. Department of Energy, Energy Information Administration on highway diesel prices, for the Lower Atlantic region. The monthly index price will be the price for diesel fuel calculated by averaging each of the weekly posted prices for that particular month.

For the purposes of this provision, the base index price will be calculated using the data from the month preceding the receipt of bids. The base index price will be posted by the Department at the beginning of the month for all bids received during that month.

The current index price will be posted by the Department and will be calculated using the data from the month preceding the particular estimate being vouchered for payment.

The current monthly quantity for eligible items of work selected by the Design-Builder for fuel adjustment in its work packages will be multiplied by the appropriate fuel factor to determine the gallons of fuel to be cost adjusted. The amount of adjustment per gallon will be the net difference between the current index price and the base index price. Computation for adjustment will be made as follows:

$$S = (E - B) QF$$

Where; S = Monetary amount of the adjustment (plus or minus)
B = Base index price

E = Current index price
Q = Quantity of individual units of work
F = Appropriate fuel factor

Adjustments will not be made for work performed beyond the original contract time limit unless the original time limit has been changed by an executed Work Order.

If new pay items are added to this contract by Work Order and they are listed in the Department's master listing of eligible items, the Work Order must indicate which of these individual items will be fuel adjusted; otherwise, those items will not be fuel adjusted. If applicable, designating which new pay items will be added for fuel adjustment must be determined during development of the Work Order and clearly shown on the Work Order form. The Base Index price on any new eligible pay items added by Work Order will be the Base Index price posted for the month in which bids were received for that particular project. The Current Index price for any new eligible pay items added by Work Order will be the Index price posted for the month preceding the estimate on which the Work Order is paid.

When quantities differ between the last monthly application of payment prepared upon final acceptance and the final application of payment, adjustment will be made using the appropriate current index for the period in which that specific item of work was last performed.

In the event any of the base fuel prices in this contract increase more than 100 percent (i.e. fuel prices double), the Department will review each affected item of work and give the Design-Builder written notice if work is to stop on any affected item of work. The Department reserves the right to reduce, eliminate or renegotiate the price for remaining portions of affected items of work.

Any amounts resulting from fuel adjustment will not be included in the total cost of work for determination of progress or for extension of contract time.

I elect to use this provision

I elect not to use this provision

Date: 4/13/2016

Signature: 

Design-builder: Branch Highways, Inc.

Vendor No.: B319

**SPECIAL PROVISION COPIED NOTE FOR
POLYMER MODIFIED (PG 76-22 and PG 70-28)
ASPHALT CEMENT ADJUSTMENT
DESIGN-BUILD PROJECTS**

August 9, 2013

When asphalt concrete mixtures require the use of Performance Graded asphalt cement PG 76-22 or PG 70-28, the Contractor shall show in the space provided on Form C-16A included in the Price Proposal submitted by the Contractor, the f.o.b. cost per ton for asphalt cement PG 76-22 or PG 70-28 upon which bid items containing PG 76-22 or PG 70-28 were developed.

During the life of the Contract, the Contractor shall document to the Department, by invoice signed by the supplier, his cost for PG 76-22 or PG 70-28 used. The Department will then adjust payments for asphalt concrete containing PG 76-22 or PG 70-28 by the difference in the actual f.o.b. price and the f.o.b. quote submitted with the Price Proposal. Adjustments will be made at the time for partial payments for asphalt concrete containing PG 76-22 or PG 70-28 in accordance with the requirements of Section 109.08 in the Division I Amendments (Part 5) of the design-build contract.

In the event the Design-Builder fails to show on Form C-16A of the Price Proposal the f.o.b. cost per ton for asphalt cement PG 76-22 or PG 70-28 upon which material items containing PG 76-22 or PG 70-28 were developed, or during the life of the contract fails to provide the appropriate invoices with the Current Index for asphalt cement PG 76-22 or PG 70-28 for the applicable calendar month during which the work was performed, the Department will base the price adjustment for asphalt concrete containing PG 76-22 or PG 70-28 asphalt cement on the indexes for PG 64-22 in accordance with the Special Provision For Asphalt Material Price Adjustment Design-Build Projects included in the Contract.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
Design-Build Project Schedule

April 15, 2014

Exhibit 11.1

1. General

Design-Builder shall develop and maintain a project schedule, which shall be used by all involved parties to plan and execute all work required to complete the project. The project schedule will be used by the Department to monitor the project, assess progress, and evaluate the effects of time-related issues on the project. The project schedule shall be prepared, maintained, and submitted in accordance with this provision, unless otherwise directed in writing by the VDOT Project Manager.

- A. Scheduling Conference** – At the meeting held after the Date of Commencement, Design-Builder shall attend a Scheduling Conference with the VDOT Project Manager to discuss Design-Builder’s overall plan to accomplish the Work; the detail work plan for the initial one hundred and twenty (120) calendar days; and scheduling information, project specific requirements, and other key issues necessary for the preparation, maintenance and submittal of the project schedule.

- B. Project Scheduler** – For projects with awarded Contract Price of \$35 million or more, Design-Builder shall designate a Project Scheduler for the project and shall submit his/her qualifications for the VDOT Project Manager’s written approval prior to submission of the Preliminary or Baseline Schedule. The Project Scheduler must have at least three (3) years of verifiable experience in successfully preparing and maintaining schedules on large scale projects of similar type and complexity. Design-Builder shall provide current contacts for verification of the Project Scheduler’s qualifications and experience. The Project Scheduler shall be primarily responsible for the development and maintenance of the project schedule and shall be present in all scheduling meetings and discussions on major issues concerning the project schedule.

2. Schedule Submission Requirements

- A. Preliminary Schedule** – Unless otherwise stated in Exhibit 1, within fifteen (15) days of Design-Builder’s receipt of Department’s Notice to Proceed, Design-Builder shall submit to Department, for its review and approval, a Preliminary Schedule. At its discretion, Design-Builder may submit in lieu of the Preliminary Schedule, a Baseline Schedule according to Section 11.1.4 of the Agreement and Section 2.B below. Until such time as a Baseline Schedule has been approved by Department, Design-Builder shall provide an update of the Preliminary Schedule every month. The Preliminary Schedule will be used to monitor and assess progress of the Work until a Baseline Schedule is approved by the

Department. The Preliminary Schedule submission shall consist of:

1. **Preliminary Schedule**: A Preliminary Schedule prepared and submitted in the form of a Baseline Schedule as defined herein, showing at a minimum:
 - i) The detailed activities depicting the sequence and dates for any work planned during the first one-hundred and twenty (120) calendar days, including as applicable project milestones, review by the Department, FHWA, and other regulatory agencies; as well as environmental, permits, scope validation period, design, right-of-way, utility, and construction activities.
 - ii) Summary level activities depicting the sequence and general timing for work planned after the first one-hundred and twenty (120) calendar days. At Design-Builder's discretion, detailed activities may be shown in lieu of summary level activities.
 - iii) Quantities and dollar value of work associated with each activity for which Design-Builder expects to receive payment.
 - iv) The project critical path (based on the longest path).
2. **Preliminary Schedule Narrative**: A Preliminary Schedule Narrative describing the Design-Builder's overall plan to accomplish the entire scope of Work and the detailed plan for work planned during the initial one-hundred and twenty (120) calendar days. The narrative shall describe the sequence of work, means and methods, productivity, and other significant scheduling assumptions on which the Preliminary Schedule is based. The narrative shall also describe the project critical path (longest path), work planned during each construction season, and any known or foreseeable issues that may impact the schedule.
3. **Preliminary Earned Value Schedule**: A Preliminary Earned Value Schedule showing Design-Builder's anticipated monthly earnings for the entire Project. The Preliminary Earned Value Schedule shall be prepared using Department's Form C-13CPM, which shall be based on monthly costs data generated from the Preliminary Schedule. The Preliminary Earned Value Schedule submission shall include:
 - i) An Activity Cost-loading Report (ACR), showing a breakdown of the quantities and costs for each activity. The ACR shall be grouped by pay items and sorted by activity ID showing:
 - a) For each activity the Activity ID, Activity Name, Price/Unit, Budgeted Unit (quantity), Budgeted Cost, Actual Cost, Remaining Cost, and At Completion Cost.

b) Pay item sub-totals of the budgeted units and costs for associated activities.

c) The overall total budgeted cost for the Project.

ii) An Earned Value Schedule using the VDOT Form C-13CPM.

B. Baseline Schedule – Unless otherwise stated in Exhibit 1, within ninety (90) days of Design-Builder's receipt of Department's Notice to Proceed, Design-Builder shall submit to Department, for its review and approval, a Baseline Schedule showing the Design-Builder's initial detailed plan to accomplish the entire scope of the Project according to the Agreement. If the Department does not approve such submission, Design-Builder shall revise and resubmit a Baseline Schedule to Department within seven (7) calendar days of its receipt of Department's comments on such submission. This process shall continue until such time as the Department approves a Baseline Schedule. Upon approval of the Baseline Schedule, it will be established as the Project "**Schedule of Record (SOR)**". The SOR is the official and only schedule with which all parties will plan and execute all work required to complete the Project and against which progress of the Project and the Design-Builder's performance will be assessed. The Baseline Schedule submission shall consist of:

1. **Baseline Schedule:** A Baseline Schedule depicting the detailed activities required to complete the entire scope of the Project, including as applicable, work to be performed by subcontractors, the Department, and other involved parties. The Baseline Schedule shall be prepared according to the following:

i) Design-Builder shall prepare and maintain the Baseline Schedule using scheduling software that is capable of meeting all requirements of this provision. Design-Builder's scheduling software shall be wholly compatible with the Department's scheduling software system and shall have the capability of creating a back-up copy of the working schedule in "XER" format. The Department's scheduling software system is the latest version of Primavera's Project Management software (currently P6 version 7.0). At the Design-Builder's request, secured access via the internet may be granted to allow the Design-Builder to develop and maintain its schedule in the Department's scheduling software system. Submission of data from another software system where data conversion techniques or software is used to import into Primavera's scheduling software is not acceptable and will be cause for rejection of the submitted schedule.

ii) For each schedule submission, the Project ID shall be unique and shall be defined using the Contract ID as a prefix followed by the submission number (i.e. C00012345DB12_B01, C00012345DB12_U01, etc.).

- iii) The project "Must Finish By" date shall be defined with a specified date equal to the "Final Completion" date of the Contract.
- iv) The Baseline Schedule shall be developed using a hierarchical WBS, broken down by major phases of the Project, as applicable (i.e. project milestones, project management, design, public involvement, environmental, right-of-way, utility, and construction, etc.). Each major phase of the Project shall be broken down by phase, stage, or feature, as applicable. Each phase, stage, or feature shall then be further broken down into rational work packages, as applicable.
- v) Each work package shall be broken down into discrete and definable activities, with activity durations generally twenty (20) working days or less. Longer durations may be allowed as approved by the VDOT Project Manager for certain administrative or level of effort activities that are typically performed over longer periods of time. 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:
 - a) Project milestones;
 - b) Administrative activities such as key submittals, notifications, and review by the Department, FHWA, and other regulatory agencies. Activity durations for submissions and approvals or consents required by the Department shall be no less than the Department's minimum review duration identified in Section 3.1 of the General Conditions of Contract;
 - c) Design activities showing all work required to complete each stage of design and deliverable;
 - d) Public involvement activities;
 - e) Scope Validation Period;
 - f) Environmental and permitting activities;
 - g) Right-of-way acquisition activities showing all lots/parcels;
 - h) Utility relocations and adjustments activities broken down by type and specific location;
 - i) Procurement, fabrication, delivery activities of materials;

- j) Construction start-up activities such as mobilization, staging area, surveying, clearing and grubbing, construction access, etc.;
 - k) Maintenance of Traffic activities;
 - l) Construction activities broken down by phase, stage, feature, type of work, and specific location, as applicable;
 - m) Other necessary miscellaneous activities that consume time such as installation and removal of temporary systems or structures such as causeways, shoring, etc.; as well as settlement period, load test, curing, demolition, testing and acceptance period, punch list, clean-up, demobilization, etc.
- vi) Each activity shall be named to identify the phase, stage, feature, type of work, and specific location in which the work occurs, as applicable.
 - vii) Activity calendars shall be assigned using project-level calendars. Use of global calendars is not allowed and shall be cause for rejecting the schedule.
 - viii) 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, Work Orders, DBE, 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 schedule.
 - ix) 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 schedule. If the Contract includes a specified start-no-earlier-than milestone, then the Contract milestone activity shall be constrained with a "Start On or After" constraint, with a date equal to the date specified in the Contract. If the Contract includes a specified Interim Milestone or Substantial Completion Milestone, then the Contract interim completion milestone activity or substantial completion milestone activity shall be constrained with a "Finish On or Before" constraint, with a date equal to the date specified in the Agreement.
 - x) The Baseline Schedule shall be cost-loaded and shall be the basis for the monthly progress payments as well as for assessing progress. Each activity associated with a pay item for which Design-Builder expects to receive payment shall be cost-loaded, using the scheduling software "Material" resource type and according to the following:
 - a) A material resource shall be defined for each pay item shown in the

Schedule of Items submitted in the Proposal, or a subsequently revised Schedule of Items approved by the VDOT Project Manager. Pay item ID codes shall be congruent to the extent possible with the VDOT five-digit standard and non-standard pay item numbers (for example: 00100 – Mobilization).

- b) Each proposed pay item material resource shall indicate the Resource ID, Resource Name, Unit of Measure, and Price/Unit as shown in the Schedule of Items. The pay item material resource ID shall be unique and shall be defined using the Contract ID as a prefix followed by the pay item number (i.e. C00012345DB12.00100).
 - c) The “Auto Compute Actuals” and “Calculate costs from units” boxes for each pay item material resource shall be marked.
 - d) A project-specific 20-80 resource curve shall be defined in the scheduling software using the Contract ID as a prefix and assigned to each assigned pay item resource to allocate costs to each associated activity over its duration based on the 20-80 earned value progress payment rules, according to Part 4, Article 6, and Section 6.2.
 - e) The budgeted units and cost for each assigned pay item resource shall be defined to indicate the quantity and dollar value of work that the activity represents.
 - f) The aggregate budgeted units and costs for all activities associated with a pay item shall equal the total quantity and value of the proposed pay item as shown in the Schedule of Items.
 - g) The aggregate budgeted costs for all activities shall equal the current total Contract Price. Current total Contract Price will be considered to mean the current Contract amount including the original Contract Price and any approved adjustments for authorized changes to the Work. Anticipated payments or payments for adjustments such as asphalt, fuel, steel, retainage, incentives, disincentives, etc., shall not be included.
- xi) For projects with awarded Contract Price of \$35 million or more, the Baseline Schedule shall be resource-loaded to indicate the labor (manpower), material (re-usable materials), and equipment (machinery or equipment) required to accomplish each activity that represents a major operation. The Baseline Schedule shall be resource-loaded according to the following:
- a) Project-specific labor resources using “Labor” resource type as

defined in the scheduling software shall be defined and assigned to indicate labor classification, trade, or crew that will perform the work. The labor Resource ID shall be unique and shall be defined using the Contract ID as a prefix followed by a unique code (e.g. C00012345C01.Pipe – Drainage Pipe Crew). Also, the Max Units/Time shall be defined for each labor resource to establish the daily availability limits. Budgeted Units shall be defined for each assignment to establish the total units of time required to perform the activity.

- b) Project-specific material resources using “Material” resource type as defined in the scheduling software shall be defined and assigned to indicate re-usable material that will be used to perform the work. The material Resource ID shall be unique and shall be defined using the Contract ID as a prefix followed by a unique code (e.g. C00012345C01.CF1 – Column Forms Set #1). Also, the Max Units/Time shall be defined for each material resource to establish the daily availability limits. Budgeted Units shall be defined for each assignment to establish the total units of time required to perform the activity.
 - c) Project-specific equipment resources using “Non-Labor” resource type as defined in the scheduling software shall be defined and assigned to indicate equipment or machinery that will be used to perform the work. The non-labor Resource ID shall be unique and shall be defined using the Contract ID as a prefix followed by a unique code (e.g. C00012345C01.CRN – Crane). Also, the Max Units/Time shall be defined for each non- labor resource to establish the daily availability limits. Budgeted Units shall be defined for each assignment to establish the total units of time required to perform the activity.
 - d) Assigned resource calendars shall be defined using the Contract ID as a prefix.
- xii) The project schedule software settings shall be defined according to the following Primavera P6 settings:
- a) Schedule dates shall be shown in the “Month-Day-Year” date format, with 2-digit numbers for the month, day, and year (e.g. 05-01-13).
 - b) Duration type for all activities shall be specified as “Fixed Duration & Units”.

- c) The “Drive activity dates by default” checkbox in the Project Details Resources tab shall be marked.
- d) The “Link Budget and At Completion Cost for not started activities” checkbox in the Project Details Calculation tab shall be marked.
- e) The “Reset Remaining Cost and Units to Original” in the Project Details Calculation tab shall be specified.
- f) The “Subtract Actual from At Completion” under “When updating actual units or costs” in the Project Details Calculation tab shall be specified.
- g) The “Recalculate Actual Units and Cost when duration % complete changes” checkbox in the Project Details Calculation tab shall be marked.
- h) The “Update units when costs changes on resource assignments” checkbox in the Project Details Calculation tab shall be marked.
- i) The “Link Actual and Actual This Period Units and Cost” checkbox in the Project Details Calculation tab shall be marked.
- j) Specify “Retained Logic” in the Scheduling Options dialog box for scheduling progressed activities.
- k) Specify “Longest Path” in the Scheduling Options dialog box for defining critical activities.
- l) Specify “Finish Float = Late Finish – Early Finish” in the Scheduling Options dialog box as the schedule calculation option to compute total float.

xiii) The project schedule shall be calculated using the precedence diagram network logic method (PDM) and the Critical Path Method (CPM). The use of resource-leveling to determine sequence, order, or timing of the activities is not allowed and shall be cause for rejecting the schedule.

2. **Baseline Schedule Narrative:** A Baseline Schedule narrative describing Design-Builder’s overall plan to accomplish the Work, as reflected on the Baseline Schedule including, as applicable:

- i) Project milestones including, as applicable Contract milestones and other key events such as start/finish dates for each major phase or stage of the project, major traffic switches, etc.

- ii) Work to be performed by the Department and other involved parties, including when the work must be performed.
- iii) The proposed overall sequence of Work, including where the work will begin and how the work will progress.
- iv) A description of the project critical path (based on the longest path).
- v) Scheduling assumptions including, the proposed means and methods, anticipated daily production rates, and general procedures for accomplishing major operations that are expected to drive the schedule.
- vi) A log identifying the schedule constraints used in the Baseline Schedule and reason for using each constraint.
- vii) A description of the project calendar(s) used in the Baseline Schedule, identifying the Calendar ID, standard number of work days per week, number of shifts per day, and number of hours per day as well as the anticipated number of non-working days per month for each calendar with considerations, as applicable, for holidays, normal weather conditions; as well as for seasonal or other known or specified restrictions (i.e. traffic, local events, environmental, permits, utility, etc.).
- viii) The Contractor's resource plan indicating the number of crews, crew make-up, and major equipment needed to accomplish the Work as planned. The resource plan shall also describe how Design-Builder plans on meeting the resource requirements.
- ix) A log of the applicable DBE participation activities in the schedule for which the Design-Builder intends to claim credit for attaining the DBE goal required in the Contract. The list shall indicate the proposed start/finish dates and durations of the DBE participation activities.
- x) Any known or foreseeable issues that may impact the schedule. Also, describe how the issues will impact the schedule and any actions taken or needed to avoid or mitigate the impact.

3. **Baseline Earned Value Schedule:** A Baseline Earned Value Schedule showing Design-Builder's anticipated monthly earnings for the entire Project. The Baseline Earned Value Schedule submission shall include:

- i) An Activity Cost-loading Report (ACR) generated from the Baseline Schedule, showing a breakdown of quantities and costs for each activity. The ACR shall be grouped by pay item and sorted by activity ID showing:
 - a) For each activity the Activity ID, Activity Name, Price/Unit,

Budgeted Unit (quantity), Budgeted Cost, Actual Cost, Remaining Cost, and At Completion Cost.

- b) Pay item sub-totals of the budgeted units and costs for associated activities.
 - c) The overall total budgeted cost for the Project.
- ii) An Earned Value Schedule using the VDOT Form C-13CPM, which shall be based on monthly costs data generated from the Baseline Schedule.
- C. **Schedule Updates** – On or before the tenth (10th) day of each month and as part of the monthly reports required by Section 11.1.9 of Part 3 of the Agreement, Design-Builder shall submit to Department, for its review and approval, an update of the Baseline Schedule (“**Schedule Update**”). The Schedule Update shall reflect the current status of the Project and the plan to complete the remaining work as of the first (1st) day of the month (data date). If Department does not approve such submission, Design-Builder shall revise and resubmit a Schedule Update to Department within seven (7) calendar days of its receipt of Department’s comments on such submission. The Schedule Update submission shall consist of:

1. **Schedule Update:** A Schedule Update showing the as-built status of completed and ongoing activities; as well as the sequence and dates during which the remaining activities are scheduled to be completed as of the data date. The Schedule Update shall be based on the most recent approved Schedule and shall be prepared according to the following:

- i) All activities that are completed prior to the current data date shall show actual start and finish dates. All on-going activities shall show actual start dates and remaining duration to indicate the amount of time required to complete the remaining work as of the current data date.
- ii) Activity percent complete for on-going activities shall be based on amount of work completed as of the current data date relative to the total amount of work planned.
- iii) Actual units and cost for each assigned work item resource shall be updated based on the 20-80 earned value progress rules (i.e. 20% at initiation and 100% at completion), in accordance with Part 4, Article 6, and Section 6.2.
- iv) Activity logic shall be modified as necessary to correct out-of-sequence progress for on-going and remaining activities to reflect the Design- Builder’s current plan for completing the remaining work.

v) The project schedule shall be calculated using the current data date.

2. **Schedule Update Narrative**: A Schedule Update Narrative describing the current status of the project, any deviations from scheduled performance, and any changes in Design-Builder's work plan, and the current work plan for accomplishing the remaining work as of the data date. The Schedule Update Narrative shall include a description of:

- i) The current status of project milestones including a description of any deviations from the date(s) specified in the Contract. If a milestone activity is scheduled to occur later than the date specified in the Contract, provide an explanation stating why the milestone date is forecasted to occur late and any actions taken or proposed to correct the delay.
- ii) The current status of the Project in terms of progress earnings percent complete based on the actual total earnings to date relative to the current approved Contract value; as well as any progress deficiencies relative to planned progress as indicated on the SOR. If progress is falling behind, describe reasons for the deficiency and any actions taken or proposed to correct the progress deficiency.
- iii) The project critical path and any deviations from the SOR.
- iv) The work performed since the previous Schedule Update and any deviations from the work scheduled.
- v) Any major changes in the Contractor's work plan in terms of sequence of construction, shifts, means and methods, manpower, equipment, or materials.
- vi) Any changes made to the SOR since the previous submission. A Claim Digger report (or equivalent) may be used to identify the changes.
- vii) Number of days lost due to adverse weather or other factors during the current update period. Provide a list of the lost days, including a description and start/finish times of the weather event or factor; activities affected and how the activities were affected, and any impacts on the critical path or project milestones. Also, describe any actions taken or proposed to mitigate any resulting delays.
- viii) The status of pending issues such as access, permits, conflicts with other related or adjacent work, Work Orders, time extension requests, etc.
- ix) Any problems encountered or anticipated since the previous submission, including an explanation of any corrective actions taken or required to mitigate or avoid the effects.

- x) Work planned for the next update period and any actions needed to be taken by the Department or other involved parties.
2. **Schedule Update Earned Value:** A Schedule Update Earned Value showing the actual progress earnings to date and the projected earnings for each remaining month, as of the data date. The Schedule Update Earned Value submission shall include:
- i) An Activity Cost-loading Report (ACR) showing the updated cost data in the current Schedule Update as of the data date.
 - ii) An updated Form C-13CPM showing the actual earnings to date and projected monthly earnings for the remaining periods as of the data date based on cost data generated from the current Schedule Update.
- D. Revised Baseline Schedule** – If Department believes that the Work is being performed significantly different from the SOR, or major modifications in logic, activity duration, manpower, or cost are necessary, or are required to incorporate approved changes in the Work, it will submit a written request to Design-Builder. Design-Builder shall respond in writing within seven (7) days, either agreeing with Department’s proposed revision, and henceforth providing a “**Revised Baseline Schedule**”, as required by the VDOT Project Manager, or providing justification why the requested revisions should not be accomplished. If revisions cannot be agreed upon either through written correspondence or subsequent meetings, Department and Design-Builder shall agree to attempt to resolve the issues through the dispute resolution process of Article 10 in the General Conditions of Contract. If the Department and the Design-Builder cannot agree on the proposed revisions, the Design-Builder shall proceed under the previously approved Baseline Schedule. At no time shall Design-Builder continue to reflect items of non-concurrence from Department in the Schedule Updates. The Revised Baseline Schedule shall be prepared and submitted in the form of a Baseline Schedule, according to Section 2.B above, except it shall reflect the current status of the completed and on-going activities and actual earnings to date as of the current data date. Upon approval by the Department, the Revised Baseline Schedule shall replace any previously approved Baseline Schedule as the SOR for the remainder of the Project.
- E. Final As-built Schedule** – As part of its submission of Final Application for Payment, Design-Builder shall submit the final Schedule Update (**Final As-built Schedule**). The Final As-built Schedule shall show the actual start and finish dates for all activities in the schedule. Design-Builder shall certify in writing that the Final As-built Schedule accurately reflects the dates on which all activities contained in the schedule were actually performed. The Final As-built Schedule shall be submitted in the form of a Schedule Update according to Section 11.1.5 above.

3. Schedule Submittal Format and Reports

Unless otherwise approved in writing by the VDOT Project Manager, Design-Builder shall submit for each Preliminary Schedule, Baseline Schedule, Schedule Update, or Baseline Revision Schedule submission, the following submittal items and reports, in the formats specified below. Each electronic file submittal shall have a unique file name prefixed by the Contract ID to identify the Contract and type, number, item, and data date of the submission (e.g. C00012345DB01_B01_01-01-13.xer, C00012345DB01_B01_Narrative_01-01-13.pdf, C00012345DB01_B01_FormC-13CPM_01-01-13.xlsx, etc.). The submittals shall include.

1. A transmittal letter to the VDOT Project Manager, identifying the date of submittal and which Schedule is being submitted for review.
2. Two (2) sets of data compact disks ("CD") containing a backup copy of the working schedule in the Primavera proprietary exchange format ("XER") file format; as well as other required electronic file submittals as defined in Section 11.1.8.4 below. Each CD shall be labeled to indicate the Contract ID, type of submission, filename, and data date.
3. Two (2) sets of paper copies of the following schedule reports:
 - i) Schedule calculation log.
 - ii) A legible time-scaled bar-chart plot of the Schedule, organized by WBS, to show for each activity the Activity ID, Activity Name, Original Duration, Remaining Duration, Start and Finish dates, Activity Percent Complete, and Total Float. The bar-chart plot shall identify the project critical path (longest path).
4. Electronic file copies by email of the following:
 - i) A backup copy of the working schedule in "XER" file format.
 - ii) A copy of the time-scaled bar-chart plot of the project schedule in "PDF" file format.
 - iii) A tabular Predecessor and Successor Report (PSR) in "PDF" file format to show the predecessors and successors for each activity. The PSR shall be sorted by WBS and in ascending order by Activity ID and shall show for each activity:
 - a) Activity ID;
 - b) Activity Name;
 - c) Original Duration;
 - d) Remaining Duration;
 - e) Early Start;

- f) Early Finish;
 - g) Late Start;
 - h) Late Finish;
 - i) Free Float;
 - j) Total Float;
 - k) Critical (“Yes” or “No”);
 - l) For each predecessor/successor activity, show the Activity ID, Activity Name, Relationship Type, Lag, Free Float, Total Float, Driving (“Yes” or “No”), and Critical (“Yes” or “No”).
- iv) A copy of the schedule narrative in “PDF” file format.
 - v) A copy of the Activity Cost-loading Report (“ACR”) in “PDF” file format.
 - vi) A working file copy of the Earned Value Schedule (Form C-13CPM) in “xls” or “xlsx” file format.
 - vii) A copy of the Earned Value Schedule S-Curve in “PDF” file format.

4. Monitoring the Work and Assessing Progress

The VDOT Project Manager will monitor the Work regularly and assess progress of the Work monthly relative to the SOR to identify deviations from Design-Builder’s scheduled performance and to determine if progress is satisfactory according to the following:

- A. Monthly Progress Meetings** – At the monthly progress meeting held in accordance with Part 4 General Conditions, Article 2, Section 2.1.8, Design-Builder shall furnish a detailed 4-week look-ahead schedule based on the current schedule update and shall discuss the current status of the project, on-going work, and work planned for the following four (4) weeks.
- B. Progress Evaluation** – Progress will be evaluated by the VDOT Project Manager at the time of the monthly progress pay application on the basis of the Design-Builder’s latest approved Schedule Update. The Design-Builder’s actual progress will be considered unsatisfactory if any of the following conditions occur:
 - i) The actual total earnings percentage for work completed to date, based on the current Pay Application, falls behind the anticipated cumulative late earnings percentage indicated in the SOR by one (1) percent or more.
 - ii) The current projected completion date of a Contract milestone is more than fourteen (14) days after the milestone completion date specified in the Agreement, as applicable.
 - iii) The current calculated completion date of the project is more than thirty (30) days after the lattermost of the Final Completion date or its extension.

C. Progress Deficiency and Schedule Slippage – When a monthly progress evaluation shows that the actual progress of the Work is unsatisfactory, the VDOT Project Manager will issue a written notice of unsatisfactory performance to the Design- Builder. Within 14 days from the date of receipt of the VDOT Project Manager’s notice, Design-Builder shall respond by submitting a written statement describing any actions taken or proposed by the Design-Builder to correct the progress deficiency. If the Design-Builder’s response includes a proposed recovery plan, the current progress schedule update shall be modified accordingly to show the Design-Builder’s proposed recovery plan. Design-Builder may submit to the VDOT Project Manager a written explanation and supporting documentation to establish that such delinquency is attributable to conditions beyond its control. If the VDOT Project Manager approves the Design-Builder’s recovery plan, the modified progress schedule update showing the recovery plan will be treated as the current update and will not replace the SOR.

If the Design-Builder fails to respond within the time required, or the response is unacceptable, its prequalification status may be changed as provided in Section 102.01 of Part 5, and the Design-Builder may be temporarily disqualified from bidding on contracts with the Department as provided in Section 102.08 of Part 5, if progress remains unsatisfactory at the time of preparation of the next monthly progress estimate. The VDOT Project Manager may postpone taking these actions when a time extension is under consideration.

5. Schedule Impact Analysis (SIA)

In the event of an excusable delay that extends the completion date of the project beyond the Final Completion date, for which Design-Builder is seeking an extension of the contract time limit, it shall submit a request for an adjustment to the Agreement within the time period specified in Article 8 of Part 4 – General Conditions, unless directed otherwise in writing by the VDOT Project Manager. For requests for prospective changes or delays Design-Builder shall prepare and submit a SIA based on the TIA method. For requests for other delays Design-Builder shall prepare and submit a SIA based on the Contemporaneous Impact Analysis method. The Design-Builder shall submit along with its request for an adjustment to the Contract a SIA statement and applicable SIA schedules in accordance with the following:

1. SIA Statement – The SIA statement shall include the following.

- i) A description of the delay event, including time, date, and location of the event, if appropriate.
- ii) An explanation of why the delay constitutes a change to the Agreement, including references to applicable portions of the Contract.
- iii) A description of the activities or work items affected and any impact on the

project critical path, milestones, or completion date of the project, as applicable.

- iv) A description and reasons for any shifts in the project critical path relative to the preceding schedule update for each schedule update contemporaneous with the delay event, as applicable.
- v) A description and reasons for any revisions made to the SIA schedules since the previous submission, including added or deleted activities, and changes in logic, activity durations, calendars, and constraints.
- vi) A SIA summary showing for each SIA schedule as described herein, the data date and calculated completion dates for all applicable milestones and the project completion date. The SIA summary shall also show any differences in the calculated finish dates for each successive SIA schedule relative to the previous SIA schedule. Any schedule slippages shall be categorized appropriately as excusable compensable, excusable non-compensable, or non-excusable.
- vii) Any actions taken or needed to avoid or mitigate the delay impacts.
- viii) Any additional information needed to justify the request or facilitate timely resolution of the issue.

2. SIA Schedules – The SIA submission shall include as applicable:

- i) The SOR in place prior to the date the delay event started, showing the project critical path, affected activities, and any applicable milestones.
- ii) The most recently accepted project schedule update in place prior to the date the delay event started, showing the affected activities, project critical path, and any applicable milestones, including any variances in the durations and completion dates relative to the SOR.
- iii) A pre-delay schedule update showing the current status of the affected activities, project critical path, and any applicable milestones, including any variances in the durations and completion dates relative to the most recently accepted project schedule update in place prior to the date the delay event started.
- iv) Any contemporaneous project schedule updates submitted during the delay event showing the current status of the delay event, affected activities, project critical path, and any applicable milestones, including any variances in the durations and completion dates relative to the previous submission.
- v) A post-delay impacted schedule, showing the current status of the delay event, affected activities, project critical path, and any applicable milestones, including any variances in the durations and completion dates relative to the previous submission.

I-95 Express Lanes – Southern Terminus Extension

Clarification Exhibit

Consistent with the RFP Part 1 Section 8.1 Negotiations and Award of Contract, VDOT held a meeting with Branch Highways Inc. on May 10, 2016 to establish clarification regarding the scope of work and pricing of their proposal.

Attendees at May 10, 2016 meeting

| | |
|-----------------|----------------------|
| Brent herring | VDOT NoVa District |
| Gil Falasco | VDOT Construction |
| Jason Hoyle | Branch Highways Inc. |
| Jeffrey Roby | VDOT APD |
| Michael Colbert | Branch Highways Inc. |
| Paul Nishimoto | VDOT NoVa District |
| Pete Kramer | Branch Highways Inc. |
| Suril Shah | VDOT APD |

Clarification of the Scope of Work

Branch Highways Inc. confirmed that the following items have been included in their Price Proposal:

- Mitigation of poor subgrade soils in order to compensate for low CBR values as identified in the GDR.
- ITS Northern communications hub cabinet.
- Utility easements that may be required.

Exhibit 11.1.10
Correspondence Tracking Log for Project Records

VDOT Project: XYZ Project
Project:
CONTRACT ID #:

| ID Number | Process | Description / Issue | Pay Package Reference | Date Received or Sent | From | To | Status (Open/Closed) | Record File Location Or Insert Hyperlink (ctrl + k) |
|-----------------|---------|---|-----------------------|-----------------------|----------------|----------------|----------------------|---|
| | CORR | Correspondence | | | | | | |
| | EMAIL | Email | | | | | | |
| | MEET | Meeting Minutes | | | | | | |
| | MEMO | Memo (Internal) | | | | | | |
| | MISC | Miscellaneous Files | | | | | | |
| C0001111DB00-1 | CORR | VDOT to Design-Builder - Notice of Intent Letter | n/a | 5/9/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-2 | CORR | Performance and Payment Bonds | n/a | 5/11/2007 | Design-Builder | AAA | Closed | |
| C0001111DB00-3 | CORR | Certificate of Insurance | n/a | 5/15/2007 | Design-Builder | CCC | Closed | |
| C0001111DB00-4 | CORR | SWPP Certification Permit | n/a | 5/15/2007 | Design-Builder | Design-Builder | Closed | |
| C0001111DB00-5 | CORR | C112 - Bonding Agreements | n/a | 5/17/2007 | Design-Builder | BBB | Closed | |
| C0001111DB00-6 | CORR | VDOT Request for Design-Builder Preconstruction Meeting | n/a | 6/9/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-7 | CORR | Design-Builder to VDOT - Escrow Document Review Meeting | n/a | 6/15/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-8 | CORR | VDOT to Design-Builder - CTB Award | n/a | 6/21/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-9 | MISC | Design-Builder Questions Regarding Final Contract Document Timeline | n/a | 6/22/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-10 | CORR | Design-Builder to VDOT - Preconstruction Meeting | n/a | 7/17/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-11 | CORR | VDOT to Design-Builder - Final Contract Documents | n/a | 7/18/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-12 | MEET | Preconstruction Meeting Minutes | n/a | 7/23/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-13 | CORR | VDOT to Design-Builder - Notice to Proceed | n/a | 8/2/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-14 | CORR | Design-Builder to VDOT Permit Application Request | 1 | 8/2/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-15 | EMAIL | Geotechnical Investigations - Preliminary Data | 2 | 8/8/2007 | Design-Builder | Design-Builder | Closed | |
| C0001111DB00-16 | CORR | Design-Builder to VDOT - Flood Plain Study Inquiry | 3 | 8/9/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-17 | CORR | Payment Requisition # 1 - First submission | 1,2,3 | 8/10/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-18 | CORR | Payment Requisition # 1 - Second submission | 1,2,3 | 8/13/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-19 | MEMO | VDOT Acknowledgement of Receipt of Preliminary Roadway Plans | 4 | 8/14/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-20 | MEMO | VDOT to Design-Builder - ROW Plan Submittal 1 Comments | 5 | 8/22/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-21 | CORR | VDOT ID Outstanding Issues to Design-Builder | 5 | 8/24/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-22 | CORR | VDOT to Design-Builder - Comments Regarding Preliminary Roadway Plans | 4 | 9/5/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-23 | CORR | Payment Requisition # 2 | 4,5 | 9/10/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-24 | MEMO | NVRPA Comments - Bridge Details | 6 | 9/16/2007 | NVRPA | Design-Builder | Closed | |
| C0001111DB00-25 | CORR | Design-Builder to VDOT - Outstanding Issues | n/a | 9/18/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-26 | CORR | FWD: FOIA Request Mrs. Smith | n/a | 9/20/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-27 | CORR | FOIA Response to Mrs. Smith | n/a | 9/23/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-28 | MEMO | Memo to File - Reporting Requirements | n/a | 9/25/2007 | DDD | File | Closed | |
| C0001111DB00-29 | CORR | Conflict of Interest Request for Determination | n/a | 9/27/2007 | OAG | VDOT | Closed | |
| C0001111DB00-30 | CORR | VDOT Acknowledgement of Receipt of Final Roadway Plans | 7 | 10/4/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-31 | CORR | Payment Requisition # 3 | 6,7 | 10/10/2007 | Design-Builder | VDOT | Closed | |
| C0001111DB00-32 | CORR | VDOT to Design-Builder - Comments Regarding Final Roadway Plans | 7 | 10/17/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-33 | MEET | Permit Coordination Meeting Minutes | 8 | 10/26/2007 | VDOT | Design-Builder | Closed | |
| C0001111DB00-34 | CORR | Town of Leesburg Comment - Utility Relocation Plans | 9 | 10/27/2007 | Design-Builder | VDOT | Open | |

Instructions for Use of the Log

General:

This tracking log is intended to track project-specific documents.

Filling Out the Form:

To add an item, use the next available ID Number,

Date Received' - Use date received by IPD. For outgoing correspondence, use correspondence date. If no date, electronic file, or fax use date stored in file name, top of fax, etc. Processes initiated on the last business day of the week shall be acknowledged before 5:00 PM on the next VDOT business day.

Insert Hyperlink:

Hold down the "Control" key and press "k", then browse for the file.

Contract ID #C00108315DB90

Order No.:

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
CONTRACT PERFORMANCE BOND**

Know all men by these presents. That we Branch Highways, Inc.

Hereinafter called the ("principal") and Hartford Fire Insurance Company

(hereinafter called the "Surety"), are held and firmly bound unto the Commonwealth of Virginia (hereinafter called the "Owner"), in full and just sum of Thirty One Million Eighty Five Thousand and 00/100

Dollars (\$ 31,085,000.00) lawful money of the United States of America to be paid to said

"Owner." Its successors, and assigns, to which payment well and truly to be made we bind ourselves, executors, administrators, successors, and assigns jointly and severally and firmly by these presents:

Whereas, The above bounden: "Principal" has entered into a contract with the said "Owner" by and through the Commonwealth Transportation Commissioner of the Department of Transportation, said contract being attached hereto, for constructing or otherwise improving

Project: I-95 Express Lanes-Southern Terminus Extension, Stafford County, Virginia

Located Project No.: 0095-969-720,P101,R201,C501

Contract ID Number: Contract ID #C00108315DB90

upon certain terms and conditions in said contract more particularly mentioned: and

Whereas. It was one of the conditions of the award of the "Owner" pursuant to which said contract was entered into, that these presents shall be executed:

Now: Therefore. The conditions of this obligation is such that if the above burden "Principal" shall in all respects comply with the terms and conditions of said contract and his obligations thereunder, including the "Specifications", with amendments thereto, "Special Provisions," "Proposal," and plans therein referred to and made a part thereof, and such alterations as may be made in said plans and specifications as therein provided for, and shall indemnify and save harmless the said "Owner" against or from all cost, expenses, damages, injury or as loss to which the said "Owner" may be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence or default, including patent infringements, delay or failure to comply with contract provisions, on the part of said "Principal," his agents or employees, in the execution or performance of said contract, including errors in the plans furnished by the "Principal," and shall pay all just claims for damages and injury to property then this obligation to be void; otherwise, to be and remain in full force and virtue in law.

Witness, The signature of the "Principal" and the signature of the "Surety" by its Attorney-in-fact and its corporate seal duly attached by their Attorney-in-fact,

hereunto affixed this 2nd day of May in the year 2016

Branch Highways, Inc.

Hartford Fire Insurance Company

(Principal)

(Surety Company)

By: [Signature]
(Officer, Partner or Owner) (SEAL)

By: [Signature]
Attorney-in-fact (SEAL)

P. O. Box 40004, Roanoke, VA 24022

Theresa S. Stump, Attorney-In-Fact

(Address)

One Hartford Plaza, Hartford, CT 06155-0001
(Address)

(Continued)

Contract ID #C00108315DB90

ORDER NO.:

CONTRACT PAYMENT BOND

Know all men by these presents. That we Branch Highways, Inc.

Hereinafter called the "Principal" and Hartford Fire Insurance Company

(hereinafter called the "Surety"), are held and firmly bound unto the Commonwealth of Virginia (hereinafter called the "Owner"), in full and the just sum of Thirty One Million Eighty Five Thousand and 00/100

Dollars (\$ 31,085,000.00) lawful money of the United States of America to be paid to said

"Owner." Its successors, and assigns, to which payment well and truly to be made we bind ourselves, executors, administrators, successors, and assigns jointly and severally and firmly by these presents:

Whereas, The above bounden "Principal" has entered into a contract with the said "Owner" by and through the Commonwealth Transportation Commissioner of the Department of Transportation, said contract being attached hereto, for constructing or otherwise improving

Project: I-95 Express Lanes-Southern Terminus Extension, Stafford County, Virginia
Project No.: 0095-969-720,P101,R201,C501
Located: Contract ID #C00108315DB90

upon certain terms and conditions in said contract more particularly mentioned: and

Whereas, it was one of the conditions of the award of the "Owner" pursuant to which said contract was entered into, that these presents shall be executed:

Now: Therefore. The conditions of this obligation is such that if the above burden "Principal" shall promptly pay all just claims for labor and material (including public utility services and reasonable rental of equipment when such equipment is actually used at the site) performed for or supplied to said "Principal" or any subcontractor in the prosecution of the work contracted for then this obligation is to be void; otherwise; to be and remain in full force and virtue in law.

Witness, the signature of the "Principal" and the signature of the "Surety" by its Attorney-in-fact and its corporate seal duly attached by their Attorney-in-fact,

hereunto affixed this 2nd day of May in the year 2016

Branch Highways, Inc.

(Principal)

By: [Signature]
(Officer, Partner or Owner) (SEAL)

P. O. Box 40004, Roanoke, VA 24022

(Address)

Hartford Fire Insurance Company

(Surety Company)

By: [Signature]
Attorney-in-fact (SEAL)

Theresa S. Stump, Attorney-In-Fact

One Hartford Plaza, Hartford, CT 06155-0001
(Address)

POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD

Bond T-4

One Hartford Plaza

Hartford, Connecticut 06185

call: 888-266-3488 or fax: 860-757-5635

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 14-730214 (MC), 14-730836, 14-731812

- Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of unlimited:

Tracy L. Carillo, Chris James, Christi Horn of Franklin TN, Robert M. Coon, Susan F. Westbrook, Linda P. Greenway of Greensboro NC, Windy Lovelady of Raleigh NC, Lalimar Williams, Tambri Doby of Charlotte NC, E. Bruce Wilsie, Theresa S. Stump, Deanna W. Sparks, Sherie B. Denison, Matthew D. Kerr III, Vickie H. Bibee, Bethany Murphy of Roanoke VA, R. Hutcheson Meuck Jr., Mike Philhower, Stacey W. Hall, Nancy L. Adams, James J. Roberts III of Richmond VA, William B. San Soucie, Joanna M. Carson, Lindsey M. DeJarnette, Stephen B. Dolin, Cary A. McFadden, Cara Brown of Lynchburg VA

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on 10/1/86, 9/19/00, 7/21/03, 1/22/04, 3/1/07, 8/1/09 or 8/1/12 the Companies have caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney



John Gray
John Gray, Assistant Secretary

Gary W. Stumper
Gary W. Stumper, Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss. Hartford

On this fifteenth day of March, 2013, before me personally came Gary W. Stumper, to me known, who being by me duly sworn, did depose and say: that (s)he resides in the County of Hartford, State of Connecticut; that (s)he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that (s)he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that (s)he signed his/her name thereto by like authority.



Kathleen T. Maynard
Kathleen T. Maynard
Notary Public
My Commission Expires July 31, 2016

CERTIFICATE

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of **May 2, 2016**
Signed and sealed at the City of Hartford.



Kevin Heckman
Kevin Heckman, Assistant Vice President



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
5/2/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | |
|--|---|--|
| PRODUCER Scott Insurance (Rke) 10 Franklin Road SE Ste. 550 Roanoke VA 24011 | CONTACT NAME: Melanie Hackworth PHONE (A/C, No, Ext): 434-832-2285 FAX (A/C, No): 434-455-8851 E-MAIL ADDRESS: mhackworth@scottins.com | |
| | INSURER(S) AFFORDING COVERAGE | |
| INSURED BRANC-1 Branch Highways, Inc. P.O. Box 40004 Roanoke, VA 24022 | INSURER A: Starr Indemnity & Liability Co(A) NAIC # 38318 | |
| | INSURER B: American Guarantee & Liability Insu 26247 | |
| | INSURER C: Allied World National Assurance Com 10690 | |
| | INSURER D: | |
| | INSURER E: | |
| | INSURER F: | |

COVERAGES **CERTIFICATE NUMBER: 87845504** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDC | ISDR | INSD | WYD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|--|------|------|-------------|-------------|------------------------|-------------------------|-------------------------|--|
| | COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER: | | | | | | | | EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPIOP AGG \$ \$ |
| | AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS | | | | | | | | COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| A | UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$ | | | Y | Y | 100002603 | 4/1/2016 | 4/1/2017 | EACH OCCURRENCE \$5,000,000 AGGREGATE \$ \$ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below | | | Y/N | N/A | | | | PER STATUTE OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$ |
| B C | Excess Liability Professional Liability Pollution Liability | | | Y Y Y | Y Y Y | AEC3808423 03084207 | 4/1/2016 6/10/2015 | 4/1/2017 6/10/2016 | Excess Liability 20,000,000 Professional Liability 3,000,000 Pollution Liability 5,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

UPC: 108315
Project No. 0095-969-720
I-95 Express Lane - Southern Terminus Extension
Fredericksburg District
Contract No.: C00108315DB90
See Attached...

CERTIFICATE HOLDER

CANCELLATION

Commonwealth of Virginia
Department of Transportation
1401 East Broad Street
Richmond VA 23218-2000

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Kristina McGee

AGENCY CUSTOMER ID: BRANC-1

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

| | | | |
|---------------------------------|-----------|---|--|
| AGENCY Scott Insurance (Rke) | | NAMED INSURED Branch Highways, Inc. P.O. Box 40004 Roanoke, VA 24022 | |
| POLICY NUMBER | | EFFECTIVE DATE: | |
| CARRIER | NAIC CODE | | |

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

The holder is additional insured with waiver of subrogation as respects pollution liability and as respects excess liability only as follows form with the underlying general and auto liability policies for work performed on the above referenced project if required by written contract.

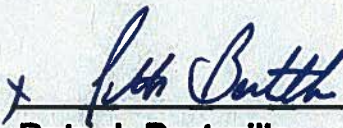
VIRGINIA DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES) GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER FROM CONSTRUCTION ACTIVITIES

CONTRACTOR CERTIFICATION STATEMENT

Order No.: 108315 Project Number: 0095-969-720
Route: I-95 Contract ID. #: C00108315DB90

I certify under penalty of law that I understand the terms and conditions of the project contract, plans, permits, specifications and standards related to the erosion and sediment control, stormwater management and stormwater pollution prevention plan requirements for the affected activities associated with this project, and the requirements of the VPDES General Permit for the Discharge of Stormwater from Construction Activities (the VPDES Construction Permit), if applicable to this project, issued by the Virginia Department of Environmental Quality. The VPDES Construction Permit authorizes the storm water discharges associated with the construction activities from the project site identified and described in the bid documents and subsequent contract including any onsite or off-site support facility areas located within VDOT right of way or easement and required for the complete fulfillment of the work therein.

Signature: 
Name: Patrick Bartorillo
Title: President
Contracting Firm: Branch Highways Inc.
Address: PO Box 40004, Roanoke, VA 24022
Phone Number: 540-982-1678

* Project Address/Location: I-95 Express Lanes - Southern Terminus Extension
Stafford County, Virginia

Certified on this date: May 6, 2016

* Include any off-site support facility areas located within VDOT right of way or easement.

(Note: This form must be returned with performance and payment bonds)

ATTACHMENT 3.6

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**


RFP NO. 0095-969-720
PROJECT NO.: C00108315DB90

ACKNOWLEDGEMENT OF RFP, REVISION AND/OR ADDENDA

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

By signing this Attachment 3.6, the Offeror acknowledges receipt of the RFP and/or following revisions and/or addenda to the RFP for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFP – March 2, 2016
(Date)
2. Cover letter of RFP Addendum No. 1 – March 21, 2016
(Date)
3. Cover letter of RFP Addendum No. 2 – March 29, 2016
(Date)
4. Cover letter of RFP Addendum No. 3 – April 2, 2016
(Date)
5. Cover letter of RFP Addendum No. 4 – April 6, 2016
(Date)
6. Cover letter of RFP Addendum No. 5 – April 12, 2016
(Date)

| | |
|--|--------------------|
|  SIGNATURE | 4/12/2016 DATE |
| Patrick K. Bartorillo PRINTED NAME | President TITLE |

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0095-969-720

1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.


b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; and have not been convicted of any violations of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1) b) of this certification; and

d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

| | | |
|--|----------------|------------------|
| <u></u> | <u>3/24/16</u> | <u>President</u> |
| Signature | Date | Title |

Branch Highways, Inc.
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-969-720

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 3/31/16
Signature Date

Senior Vice President
Title

Whitman, Requardt & Associates, LLP
Name of Firm


ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-969-720

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

 _____
Signature Date 3/17/16 Title President

_____ Chesapeake Electrical Systems, Inc. _____
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-969-720

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.



Signature

March 18, 2016

Date

Vice President

Title

H&B Surveying and Mapping, LLC

Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-969-720

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.


Signature

3/18/2016
Date

President
Title

Froehling & Robertson, Inc.
Name of Firm

ATTACHMENT 11.8.6(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0095-969-720

- 1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

The undersigned makes the foregoing statements to be filed with the proposal submitted on behalf of the Offeror for contracts to be let by the Commonwealth Transportation Board.

| | | |
|-----------|----------------|---------------------------|
| <u>mm</u> | <u>3.16.16</u> | <u>Principal Engineer</u> |
| Signature | Date | Title |

Engineering & Materials Technologies, Inc. (E.M. Tech)
Name of Firm

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

PROJECT: 0095-969-720, P101, R201, C501

FHWA: STP-000S (321)

This form must be completed, signed and returned with bid; and failure to do so may result in the rejection of your bid. **THE CONTRACTOR SHALL AFFIRM THE FOLLOWING STATEMENT EITHER BY SIGNING THE AFFIDAVIT AND HAVING IT NOTARIZED OR BY SIGNING THE UNSWORN DECLARATION UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES. A SEPARATE FORM MUST BE SUBMITTED BY EACH PRINCIPAL OF A JOINT VENTURE BID.**

STATEMENT. In preparation and submission of this bid, I, the firm, corporation or officers, agents or employees thereof did not, either directly or indirectly, enter into any combination or arrangement with any persons, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Article 1.1 or Chapter 12 of Title 18.2 (Virginia Governmental Frauds Act), Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

AFFIDAVIT

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at Roanoke City, VIRGINIA, this 11th day of April, 20 16
County (City), STATE
Branch Highways, Inc. By: *Patrick K. Bartorillo* PRESIDENT
(Name of Firm) (Signature) Title (print)
STATE of VIRGINIA COUNTY (CITY) of CITY OF ROANOKE

To-wit: I Pamela Simmons, a Notary Public in and for the State and County(City) aforesaid, hereby certify that this day Patrick K. Bartorillo, President

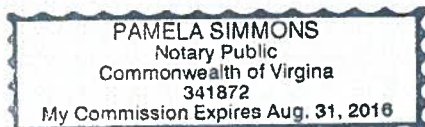
personally appeared before me and made oath that he is duly authorized to make the above statements and that such statements are true and correct.

Subscribed and sworn to before me this 11th day of April, 20 16
Pamela Simmons My Commission expires 8/31/2016
Notary Public

**OR
UNSWORN DECLARATION**

The undersigned is duly authorized by the bidder to make the foregoing statement to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

Signed at _____, this _____ day of _____, 20 _____
County (City), STATE
By: _____
(Name of Firm) (Signature) Title (print)



**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
AFFIDAVIT**

PROJECT: 0095-969-720, P101, R201, C501

FHWA: STP-000S (321)

This form must be completed, signed, notarized and returned with bid; and failure to do so, may result in the rejection of your bid. A separate form must be submitted by each principal of a joint venture bid.

1. I, the firm, corporation or officers, agents or employees thereof have neither directly nor indirectly entered into any combination or arrangement with any person, firm or corporation or entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract, the effect of which is to prevent competition or increase the cost of construction or maintenance of roads or bridges.

During the preceding twelve months, I (we) have been a member of the following Highway Contractor's Associations, as defined in Section 33.1-336 of the Code of Virginia (1970). (If none, so state).

| NAME | Location of Principal Office |
|-----------------------------|------------------------------|
| <u>VTCA</u> | <u>Richmond, VA</u> |
| <u>HCCA</u> | <u>Manassas, VA</u> |
| <u>Carolinas AGC (CAGC)</u> | <u>Charlotte, NC</u> |

2. I (we) have , have not , participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that I/We have , have not , filed with the joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7(b)(1)], and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contract or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contract and subcontract unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

(Continued)

ORDER NO.:
CONTRACT ID. NO.:

Form C-105
page 2

3. The bidder certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated above; and
 - (d) Where the bidders is unable to certify to any of the statements in this certification, the bidder shall show an explanation below.

Explanations will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any explanation noted, indicate below to whom it applies, initiating agency, and dates of action. Providing false information may result in federal criminal prosecution or administration sanctions. The bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of change circumstances.

The undersigned is duly authorized by the bidder to make the foregoing statements to be filed with bids submitted on behalf of the bidder for contracts to be let by the Commonwealth Transportation Board.

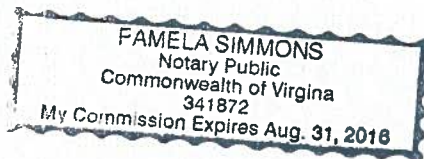
Signed at Roanoke City, VIRGINIA, this 11th day of April, 20 16
County (City), STATE

Branch Highways, Inc. By: [Signature] PRESIDENT
(Name of Firm) (Signature) Title (print)

STATE of VIRGINIA COUNTY (CITY) of CITY OF ROANOKE

To-wit: I Pamela Simmons, a Notary Public in and for the State and County(City) aforesaid, hereby certify that this day Patrick K. Bartorillo, President personally appeared before me and made oath that he is duly authorized to make the above statements and that such statements are true and correct.

Subscribed and sworn to before me this 11th day of April, 20 16
Pamela Simmons My Commission expires 8/31/2016
Notary Public



SECTION 4.2.4.2: SCHEDULE NARRATIVE

Per Part 1, Section 4.2.4.1 of the RFP, our Team has prepared a CPM proposal schedule that depicts the overall sequencing of the project. Major work items for design, permitting, and construction activities have been identified and included by our Team in the attached schedule, and the Critical Path has been identified based on the milestone dates outlined in the RFP. A summarized version of this schedule has also been included that has been filtered to show only critical items in an effort to illustrate the Critical Path as described herein. We have provided the schedules in Volume 2 located on Pages 52-57 and have also provided electronic copies in both PDF and .XER formats on the CDs included in our Proposal Package. The Branch Team is confident that the schedule we have prepared is both attainable and responsive to the Department's and other Shareholders' requirements.

Overall Plan

We have employed several strategies with regard to up-front design, permitting, and approval tasks to help expedite the start of construction activities onsite. First, we will submit an Advance Work Package in conjunction with 90% plans to expedite commencement of grading and deep drainage installation prior to final plan approval. Project plans will be submitted in packages to accommodate multiple review cycles, if necessary, for certain items of work such as soundwalls and ITS, without affecting grading and surface drainage operations. Twenty-one day turnaround times for concurrent VDOT, FHWA, and Transurban reviews per Exhibit 1 to Part 3, Sections 3.1.2 are included in this schedule. We have anticipated 2 rounds of review for all plan packages submitted, **with the exception of the Advanced Work**. Our schedule reflects that this package will be approved upon initial review. Following Notice to Proceed, a revised VPDES Permit will be obtained based on drainage variations from the RFP drawings, which primarily consists of minor modifications to the BMPs and storm drainage shown on RFP plans.

For both schedule and construction purposes, the site has been divided into 5 main "Areas." Area 1 is from Sta. 2193+00 to Sta. 2244+00, including the Southbound Ramp onto the GP lanes. Area 2 is from Sta. 2244+00 to Sta. 2310+00. Area 3 is milling and overlay of the northernmost portion of the project, Sta. 83+00 to 121+00. Area 4 will be the Northbound on-ramp onto the Express Lanes, Sta. ~3140+00 to 3234+00. Area 5 is the area to the west of I-95 SB GP lanes, which includes Soundwall CNE NN.

We have conservatively assumed that Water Quality Permits will not be obtained until September 30, 2016, and have scheduled subsequent grading activities accordingly. In general, after clearing and Phase 1 E&S Controls are established, work in Areas 1 and 2 will be executed simultaneously. Appropriate resources will be assigned to each Area as needed to meet the Interim Milestone Completion date of December 1, 2017. Earthwork and roadway construction activities in Area 4 will be critical to attaining the Final Completion milestone date of August 22, 2018. Execution of productive earthwork, stone, and asphalt paving activities is typically challenging throughout the winter months. We have addressed this in our schedule by utilizing a winter weather calendar for these activities for the months of December through mid-March. Should actual conditions encountered allow for earthwork and/or asphalt paving operations to take place during this time frame, the progress schedule will be adjusted accordingly.

Critical Path

The schedule we have developed calculates Critical Path based on the Longest Path method, which does not specifically identify activities critical in meeting the Interim Milestone. To more clearly depict the items that are on the Critical Path for the Interim Milestone, we have included a separate schedule layout that depicts only these items. In general, critical items for the Interim Milestone include plan approvals and generator installations for ITS. We have anticipated that energizing the generators will take 14 weeks after installation and inspection.

Up-front critical path activities on this project include revised VPDES permitting and approval of revised drainage/SWM plans from that shown on the RFP drawings. Once these are obtained, the construction critical

path lies in Area 2. Critical activities will be performed in the following order, generally in a Finish-to-Start fashion:

- 1.) MOT/Construction Entrance
- 2.) Clearing
- 3.) Stormwater Management Basin
- 4.) Cut to Fill
- 5.) Surface Drainage
- 6.) Box & Balance (i.e., subgrade preparation)
- 7.) Underdrain Installation
- 8.) Stone Base
- 9.) Permanent Signage
- 10.) Final Dress-Up

The last area of the project that contains critical activities is Area 4, which includes the Northbound ramp onto the proposed Express Lane, as well as significant ITS and Lighting work. In this case as well, the Winter Weather Calendar we have applied to earthwork and stone/asphalt activities has forced these operations onto the critical path. Because ITS Level C testing cannot be performed prior to Intermediate Asphalt placement, Level C testing also falls on the Critical Path. Other ITS/Lighting activities must be coordinated with Cut to Fill as well; therefore, ITS activities are also sensitive to falling on the critical path for this area.

Means and Methods

In general, typical mass excavation and heavy highway construction means and methods will be utilized to execute the work on this project. Mass clearing activities will include tree removal, chipping, and hauling offsite. Mass earthwork will be performed utilizing excavators, off-road trucks, and rollers, with dozer/loader support. Deep drainage pipe will be installed prior to proposed fills to avoid unnecessary excavation/backfill efforts, and surface drainage in areas of proposed cut will not be installed until those cuts have been completed. In order to minimize the effects of traffic on GP lanes on activities involving trucking (including asphalt paving), night work may be performed. Stone base & asphalt placement activities will be performed in compliance with VDOT standards.

Throughout the duration of the project, ITS installation, particularly with regard to conduit, will be coordinated with grading operations to maximize efficiency/minimize overall duration. Conduit installation has Finish-to-Finish ties with Cut to Fill operations to reflect this coordination. Conduit installation will occur at the same time as foundation and sign installation for lighting, signage, and gates.

Generator sites will be graded and installed as early as possible to allow as much time as possible for Dominion Virginia Power to inspect and energize. It has been assumed that once graded and equipment installed, the energizing process will take approximately 16 weeks. While this item does not show as critical on our current schedule, it is close to being so, and the fact that the 16-week assumed duration is ostensibly out of the Design-Builder's control, poses a potential schedule risk.

Within 15 days of Notice to Proceed, our Team will prepare and submit a cost-loaded Preliminary Schedule for all work planned during the first 120 calendar days that identifies work activities, milestones, and critical path. Along with this schedule, a narrative and a preliminary Earned Value Schedule will be prepared and submitted for review. Within 90 days of Notice to Proceed, a Baseline Schedule that conforms to Contract requirements, with accompanying Baseline Schedule Narrative and Baseline Earned Value Schedule. The baseline schedule, narrative, and value schedule will be updated monthly throughout the project.

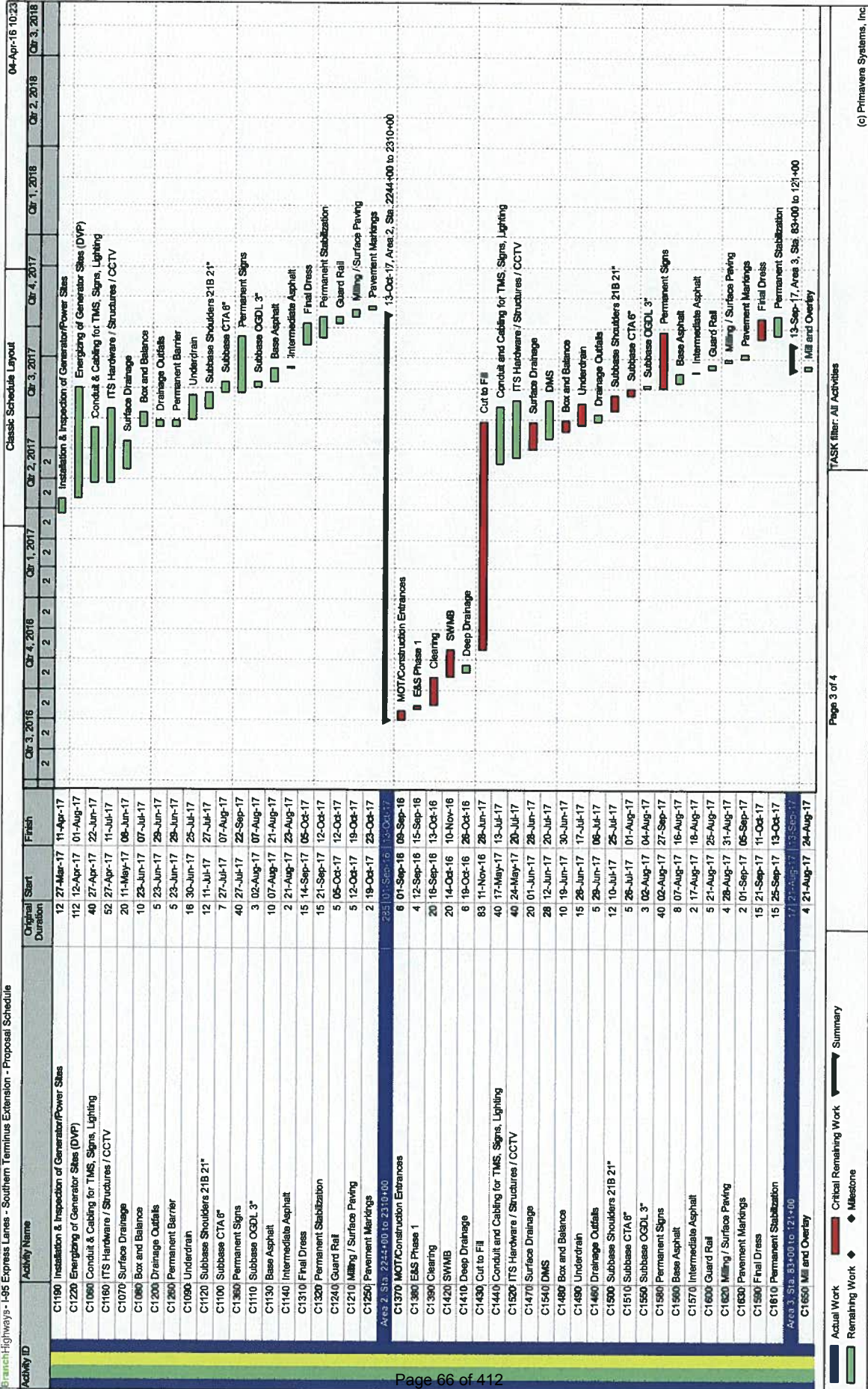
The CPM schedule is the driving force behind all long-term and short-term planning. Design work and other preconstruction activities will be closely monitored with the schedule. A formal CPM schedule update will be submitted to VDOT monthly and distributed to project stakeholders.

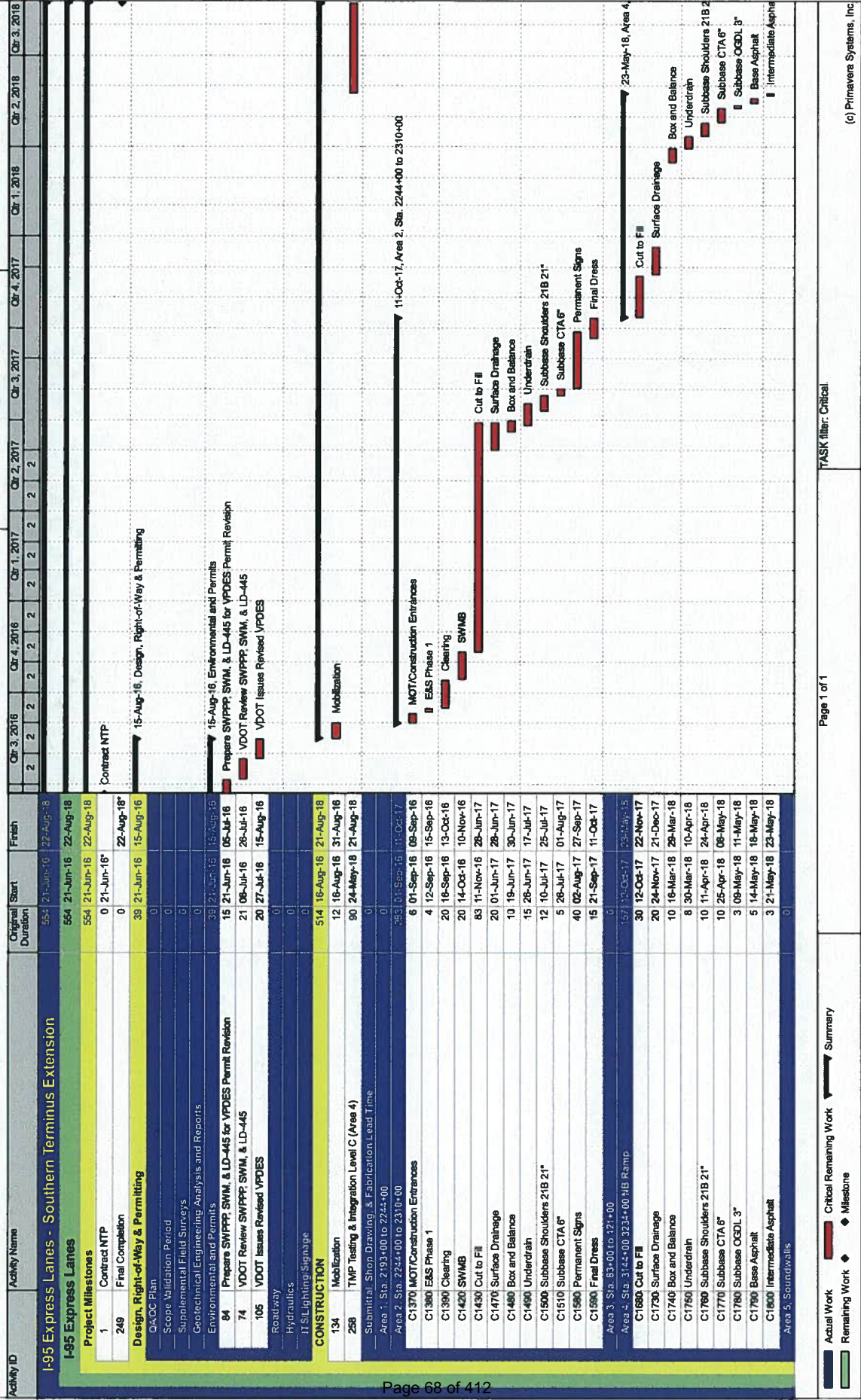
| Activity ID | Activity Name | Original Start Duration | Finish | Classic Schedule Layout | | | | | | | | | | | |
|---|---|-------------------------|-----------|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| | | | | Oct-3, 2016 | Oct-4, 2016 | Oct-1, 2017 | Oct-2, 2017 | Oct-3, 2017 | Oct-4, 2017 | Oct-1, 2018 | Oct-2, 2018 | Oct-3, 2018 | Oct-4, 2018 | | |
| Hydraulics | | | | | | | | | | | | | | | |
| C1800 | Prepare Revised Drainage/SWMEAS Ph. 2 Plans | 01-Oct-16 | 17-Nov-16 | | | | | | | | | | | | |
| C1801 | VDOT Review Revised Drainage/SWMEAS Ph. 2 Plans | 01-Oct-16 | 22-Oct-16 | | | | | | | | | | | | |
| C1800 | Address VDOT Comments Revised Drainage/SWMEAS Ph. 2 Plans | 22-Oct-16 | 27-Oct-16 | | | | | | | | | | | | |
| C1800 | VDOT Review and Approve Revised Drainage/SWMEAS Ph. 2 Plans | 27-Oct-16 | 17-Nov-16 | | | | | | | | | | | | |
| C1800 | Prepare ITS Lighting/Signage | 05-Jul-16 | 25-Sep-16 | | | | | | | | | | | | |
| C1800 | Prepare ITS Lighting/Signage | 05-Jul-16 | 03-Sep-16 | | | | | | | | | | | | |
| C1800 | VDOT Review ITS Lighting/Signage | 01-Oct-16 | 22-Oct-16 | | | | | | | | | | | | |
| C1800 | Address VDOT Comments ITS Lighting/Signage | 22-Oct-16 | 05-Nov-16 | | | | | | | | | | | | |
| C1800 | VDOT Review and Approve ITS Lighting/Signage | 05-Nov-16 | 26-Nov-16 | | | | | | | | | | | | |
| CONSTRUCTION | | | | | | | | | | | | | | | |
| 250 | Project Management & QA/QC | 21-Jun-16 | 22-Aug-16 | | | | | | | | | | | | |
| 134 | Mobilization | 12-Aug-16 | 31-Aug-16 | | | | | | | | | | | | |
| C1230 | TMS Testing & Integration Level A & B (Areas 1 & 2) | 02-Aug-17 | 31-Aug-17 | | | | | | | | | | | | |
| C1800 | TMS Testing & Integration Level C (Areas 1 & 2) | 01-Sep-17 | 29-Nov-17 | | | | | | | | | | | | |
| C1870 | TMS Testing & Integration Level A & B (Area 4) | 07-Feb-18 | 08-Mar-18 | | | | | | | | | | | | |
| 258 | TMP Testing & Integration Level C (Area 4) | 24-May-18 | 21-Aug-18 | | | | | | | | | | | | |
| 248 | Punch List | 11-Jul-18 | 04-Aug-18 | | | | | | | | | | | | |
| Submittal Shop Drawing & Fabrication Lead Time | | | | | | | | | | | | | | | |
| C2040 | Generator Submittal Prep | 26-Nov-16 | 03-Dec-16 | | | | | | | | | | | | |
| C2050 | ITS Hardware / Structures / CCTV Submittal Prep | 26-Nov-16 | 10-Dec-16 | | | | | | | | | | | | |
| C2060 | Lighting Submittal Prep | 26-Nov-16 | 03-Dec-16 | | | | | | | | | | | | |
| C2070 | DMS Submittal Prep | 26-Nov-16 | 03-Dec-16 | | | | | | | | | | | | |
| C2080 | Bore Samples for ITS Poles | 26-Nov-16 | 18-Dec-16 | | | | | | | | | | | | |
| C2000 | Generator Submittal Approval | 03-Dec-16 | 24-Dec-16 | | | | | | | | | | | | |
| C2020 | Lighting Submittal Approval | 03-Dec-16 | 24-Dec-16 | | | | | | | | | | | | |
| C2030 | DMS Submittal Approval | 03-Dec-16 | 24-Dec-16 | | | | | | | | | | | | |
| C1900 | Prepare and Submit ITS Pole Foundation Designs | 18-Dec-16 | 01-Jan-17 | | | | | | | | | | | | |
| C2000 | Generator Fabrication | 24-Dec-16 | 25-Mar-17 | | | | | | | | | | | | |
| C2100 | DMS Fabrication | 24-Dec-16 | 23-Apr-17 | | | | | | | | | | | | |
| C2110 | Lighting Poles & Fixtures Fabrication | 24-Dec-16 | 04-Mar-17 | | | | | | | | | | | | |
| C2140 | Lighting Control Cabinet Fabrication | 24-Dec-16 | 24-Mar-17 | | | | | | | | | | | | |
| C1910 | VDOT Approve ITS Pole Foundation Design | 01-Jan-17 | 22-Jan-17 | | | | | | | | | | | | |
| C1340 | Soundwall Shop Drawing Design | 03-Jan-17 | 14-Feb-17 | | | | | | | | | | | | |
| C2010 | ITS Hardware / Structures / CCTV Submittal Approval | 22-Jan-17 | 12-Feb-17 | | | | | | | | | | | | |
| C2120 | Gate Fabrication | 12-Feb-17 | 23-Apr-17 | | | | | | | | | | | | |
| C2130 | ITS Cabinets/UPS/Structures/Cameras Fabrication | 14-Feb-17 | 13-Feb-17 | | | | | | | | | | | | |
| C1350 | VDOT Soundwall Shop Drawing Review and Approval | 14-Feb-17 | 07-Mar-17 | | | | | | | | | | | | |
| C1330 | Soundwall Fabrication | 07-Mar-17 | 13-Jul-17 | | | | | | | | | | | | |
| Areas 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 | | | | | | | | | | | | | | | |
| C1000 | MOT/Construction Entrances | 01-Sep-16 | 09-Sep-16 | | | | | | | | | | | | |
| C1010 | EAS Phase 1 | 12-Sep-16 | 15-Sep-16 | | | | | | | | | | | | |
| C1020 | Clearing | 16-Sep-16 | 13-Oct-16 | | | | | | | | | | | | |
| C1150 | Grade Generator Sites | 14-Oct-16 | 20-Oct-16 | | | | | | | | | | | | |
| C1040 | Deep Drainage | 19-Oct-16 | 26-Oct-16 | | | | | | | | | | | | |
| C1050 | Cut to Fill | 27-Oct-16 | 22-Jun-17 | | | | | | | | | | | | |
| C1170 | Lighting | 24-Mar-17 | 10-May-17 | | | | | | | | | | | | |

Legend:
 Actual Work
 Remaining Work
◆ Critical Remaining Work
◆ Milestone
▶ Summary

Page 2 of 4 TASK filter: All Activities

(c) Primevera Systems, Inc





VDOT

Virginia Department of Transportation

REQUEST FOR PROPOSALS

A DESIGN-BUILD PROJECT

I-95 Express Lanes-Southern Terminus Extension

From: Mile marker 142.5 (South of Garrisonville Road)

To: Mile marker 145.0 (North of Garrisonville Road)

Stafford County, Virginia

State Project No.: 0095-969-720, P101, R201, C501

Federal Project No.: STP-000S (321)

Contract ID Number: C00108315DB90

DATE: March 2, 2016

Addendum No. 1 — March 21, 2016

Addendum No. 2 - March 29, 2016

Addendum No. 3 - April 2, 2016

Addendum No. 4 - April 6, 2016

Addendum No. 5 - April 12, 2016

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PART 1

INSTRUCTIONS FOR OFFERORS

1.0 INTRODUCTION

The Virginia Department of Transportation (VDOT) hereby requests submittals of Design-Build proposals (Proposals) for the I-95 Express Lanes-Southern Terminus Extension in Stafford County, Virginia (Project). This Request for Proposals (RFP) is issued to those entities which submitted Statements of Qualifications (SOQs) pursuant to VDOT's January 4, 2016 Request for Qualifications (RFQ) and were invited to submit proposals in response to this RFP. The purpose of this RFP is to determine which short-listed Offeror (the Successful Offeror) will be awarded the design-build contract (Design-Build Contract) for the Project.

The Project priorities are:

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

1.1 Project Overview

The Project is located in Stafford County, Virginia, and involves extending the existing 95 Express Lanes in a southerly direction. . The general limits of the Express Lanes extension are from approximate mile marker 142.5 (south of Garrisonville Road) to the existing Express Lanes terminus at approximate mile marker 145.0 (north of Garrisonville Road). New pavement limits are from approximately 0.9 miles south of Garrisonville Road overpass to approximately 1.3 miles north of Garrisonville Road overpass, for a total new pavement limit length of approximately 2.2 miles. Additionally, approximately 0.7 miles on the north end of the Project will require pavement resurfacing and re-striping. This additional roadway, including associated northbound and southbound slip ramps, shall serve as reversible 95 Express Lanes. The Design-Builder shall also provide advisory signage preceding the new 95 Express Lanes entry and exit ramps. The Project lengths are approximations based on the RFP Conceptual Plans shown in the RFP Information Package.

The Project includes, among other things the Design and Construction of: (a) roadway; (b) survey; (c) environmental (d) geotechnical; (e) hydraulics; (f) traffic control devices; (g) utilities; (h) soundwalls; (i) sign structures; (j) lighting; (k) quality assurance and quality control; (l) Intelligent Transportation Systems (ITS); (m) construction engineering and inspection; and (n) overall Project management. Furthermore, coordination will be required with the I-95 Express Lanes Concessionaire and the Department, in order to fully integrate the proposed ITS devices. Refer to Part 2 of the RFP (Technical Requirements) for the scope of work, technical information and requirements.

1.2 Procurement Overview

VDOT will use a two-phase selection process on the Project. In accordance with the requirements of this RFP, short-listed Offerors will submit a Proposal consisting of a Letter of Submittal, Attachments to the Letter of Submittal, and Price Proposal consistent with Part 1, Section 4.0.

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

The Offeror whose Proposal is deemed responsive, who submitted the lowest Price Proposal, and whose Price Proposal is within VDOT's budget for design and construction services will be recommended to the Chief Engineer for an award of a fixed price Design-Build Contract by the Commonwealth Transportation Board (CTB). The award of a contract will be made to the Successful Offeror in accordance with Part 1, Section 8.0 of this RFP.

2.0 BACKGROUND INFORMATION

2.1 Legislative Authority

§33.2-209(B) of the Code of Virginia authorizes VDOT and the Commonwealth Transportation Board (CTB) to develop and award contracts using the Design-Build contracting method. In accordance with the law, VDOT completed the Finding of Public Interest (FOPI) dated January 4, 2016. The FOPI is available for inspection upon request.

2.2 Budget

VDOT's current estimated contract value for this Project is approximately \$40,000,000.

2.3 Procurement Schedule and Project Milestones

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

| | | |
|----|---|--|
| .1 | Advertise RFP | 02/29/16 |
| .2 | Mandatory Pre-Proposal/ Utility Meeting | 03/08/16 (1.30 PM prevailing local time) |
| .3 | RFP Questions Due to VDOT | 03/14/16 (4:00 PM prevailing local time) |
| .5 | VDOT responses to Questions or Clarifications | 03/21/16 |
| .6 | Letter of Submittal and Attachments Due Date | 04/05/16 (4:00 PM prevailing local time) |
| .7 | Price Proposal Submission Date | 04/15/16 (4:00 PM prevailing local time) |

| | | |
|-----|---------------------------------|---|
| .8 | Open Price Proposals | 04/19/16 (10:00 AM prevailing local time) |
| .9 | Notice of Intent to Award | 04/25/16 |
| .10 | CTB Approval/Notice to Award | 05/18/16 |
| .11 | Design-Build Contract Execution | 06/17/16 |
| .12 | Notice to Proceed | 06/21/16 |
| .13 | Interim Milestone | 12/01/17 |
| .14 | Final Completion | 08/22/18 |

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

- .1 Interim Milestone and Final Completion shall be no later than the date(s) set forth in Part 1, Section 2.3.1.

2.4 VDOT's Point of Contact

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

| | |
|----------|--|
| Name: | Suril R. Shah |
| Address: | Alternate Project Delivery Office Virginia Department of Transportation 1401 East Broad Street Richmond, VA 23219 |
| Phone: | (804) 225-3799 |
| Fax: | (804) 786-7221 |
| E-Mail: | Suri.Shah@vdot.virginia.gov |

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

All written communications to VDOT from Offerors shall specifically reference the correspondence as being associated with "I-95 Express Lanes - Southern Terminus Extension, Project No. : 0095-969-720, P101, R201, C501 RFP No.: C00108315DB90."

2.5 RFP Information Package

An RFP Information Package is available on CD-ROM and will be mailed to the Offeror's Point Of Contact for each of the short-listed firms immediately following the RFP Release Date and the Addendum RFP release date (if applicable). The contents of the RFP Information Package are listed in Part 2 of the RFP.

2.6 RFP Documents

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

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

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

2.6.2 Each Offeror shall review the RFP Documents and provide questions or requests for clarification, including but not limited to terms that it considers to be ambiguous or to which it takes exception. Such questions or requests for clarifications will be submitted to VDOT’s POC within the time specified in Part 1, Section 2.3.1 of this RFP. VDOT will review all questions and/ or requests for 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.

2.6.3 Offeror’s POC shall be notified via email and provided an electronic copy of any Addenda to the RFP Documents. Hard copies of the Addenda will be available upon request. If there is any conflict between the electronic format and hard copy of any RFP Document or Addenda, the hard copy on file shall control.

2.7 Deviations from the RFP Documents

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

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

If awarded the Design-Build Contract, the Design-Builder will be obligated to meet all of the requirements of the RFP Documents for the Contract Price and within the Contract Time(s). Offerors are on notice that VDOT’s review of the Offeror’s Proposal, with respect to the RFP and any Addendum relative to a proposed deviation under Part 1, Section 2.7, shall not be construed as relieving the Design-Builder of this obligation. Offerors are on further notice

that VDOT will review, comment and/or approve the Design-Builder's final design after the award of the Design-Build Contract, in accordance with Part 4, Article 2.

3.0 GENERAL PROCEDURES AND REQUIREMENTS

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

3.1 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 Project, including but not limited to:

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

- .7 Notifying VDOT in writing, in accordance with the processes set forth in Part 1, Section 7.0, of all conflicts, errors, ambiguities, or discrepancies that Offeror discovers in the RFP Documents.

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

3.3 Pre-Proposal/ Utility Meeting

VDOT will hold a **mandatory** Pre-Proposal Meeting of all Offerors on the date and time set forth in Part 1, Section 2.3.1 at the

VDOT's Northern Virginia District Office
4975 Alliance Drive, Fairfax, VA 22030.

A representative from each Offeror is required to attend the Pre-Proposal meeting in order for the Offeror's Proposal to be considered. No more than five (5) representatives from each Offeror (inclusive of any other member of Offeror's team) will be allowed to participate in the Pre-Proposal meeting.

3.4 Utility Meeting

NOT USED

3.5 Proprietary Meetings

NOT USED

3.6 Acknowledgment of Receipt of RFP, Revisions, and/or Addenda

Offeror shall provide to VDOT the Acknowledgement of Receipt of RFP, Revisions and/or Addenda (Form C-78-RFP), set forth as Attachment 3.6, signed by the Offeror's Point of Contact or Principal Officer, with submission of the Letter of Submittal and Attachments, which will serve as acknowledgement that the Offeror has received this RFP.

4.0 CONTENTS OF PROPOSALS

Part 1, Section 4.0 describes specific information that must be included in the Offeror's Proposal. The format of such information is described in Part 1, Section 6.

4.0.1 Offerors will submit a two-part Proposal:

.1 The Letter of Submittal and Attachments will consist of all information required under Part 1, Sections 4.1 and 4.2, and will be submitted in a sealed package by the date and time set forth in Part 1, Section 2.3.1, and separate from that submitted for the Price Proposal.

Offerors shall complete the Letter of Submittal and Attachments Checklist, Attachment 4.0.1.1, and include it with their Letter of Submittal and Attachments. The purpose of the Letter of Submittal and Attachments Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the Offeror's Letter of Submittal and Attachments and to provide a page reference indicating the location in the Letter of Submittal and Attachments of each submittal requirement. It shall also include an original signed copy of Acknowledgement of Receipt of RFP, Revisions and/or Addenda (Form C-78-RFP), Attachment 3.6.

.2 The Price Proposal will consist of the information required by Part 1, Section 4.3 and will be submitted in a sealed package by the date and time set forth in Part 1, Section 2.3.1, and separate from that submitted for the Letter of Submittal and Attachments. The Price Proposal will not be opened until the Letter of Submittal and Attachments has been reviewed and evaluated for responsiveness. Offerors shall complete the Price Proposal Checklist, Attachment 4.0.1.2, and include it with their Price Proposal. The purpose of the Price Proposal Checklist is to aid the Offeror in ensuring all submittal requirements have been included in the submittal. By submitting its Price Proposal, the Offeror certifies that the Project presented in its Letter of Submittal and Attachments is in conformance with all technical requirements indicated in the RFP and any Addenda.

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

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

4.1 Letter of Submittal

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

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

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

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

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

4.1.6 Provide Interim Milestone and Final Completion Dates. The proposed dates herein shall be no later than the date(s) set forth in Section 2.3.1.

4.1.7 Include either an executed Proposal Payment Agreement, in the form set forth in Attachment 9.3.1, or an executed Waiver of Proposal Payment, in the form set forth in Attachment 9.3.2.

4.1.8 Provide the Certification Regarding Debarment Forms as set forth in Part 1, Section 11.8.6.

4.1.9 Provide a written statement that Offeror is committed to achieving a fifteen percent (15%) DBE participation goal for the entire value of the contract.

4.2 Attachments to the Letter of Submittal

4.2.1 Confirm the organizational chart and Key Personnel contained in the Offeror's SOQ, remains true and accurate. If any changes have been made to the Offeror's organizational structure, Lead Contractor, Lead Designer, Key Personnel or other individuals identified in the Offeror's SOQ, then those changes require prior written approval in accordance with Part 1, Section 11.4. Furnish an organizational chart, showing the "chain of command" and identifying major functions to be performed and their reporting relationships in managing, designing and constructing the Project, including quality control/quality assurance. Additionally, furnish a revised narrative describing the functional relationships among participants for the organizational chart. The organizational chart and narrative shall be updated for the SOQ submittal as necessary and clearly identify where any changes are proposed from the SOQ and previously approved by VDOT. Unauthorized changes may render an Offeror's Proposal nonresponsive.

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

- .1 Project limits
- .2 Lane widths
- .3 Shoulder widths

- .4 Minimum pavement sections
- .5 Cross slopes
- .6 Noise walls
- .7 Traffic structures
- .8 ITS devices (DMS's, cameras, gates)
- .9 Lighting
- .10 Guardrail /Barrier
- .11 Drainage/Stormwater management facilities
- .12 Location of milling/overlay limits

4.2.3 Section not applicable to this Project.

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

- .1 **Proposal Schedule:** The Proposal Schedule should depict the Offeror's proposed overall sequence of work, and times during each work task and deliverable required to complete the Project will be accomplished. This shall include all Work necessary to achieve the required Interim Milestone Completion by December 1, 2017 and final completion by August 22, 2018. The Proposal Schedules should be organized using a hierarchical Work Breakdown Structure (WBS), broken down into major phases of the Project (i.e. project milestones, project management, Scope Validation Period, design, public involvement, environmental, right-of-way, utility, and construction, etc.) The Proposal Schedules should depict the anticipated project critical path (based on the longest path), reviews by Department, FHWA, other regulatory agencies; and work by suppliers, subcontractors, and other involved parties, as applicable.
- .2 **Proposal Schedule Narrative:** A Proposal Schedule Narrative shall be provided for the Proposal Schedule submitted that describes the Offeror's proposed overall plan to accomplish the Work and, if applicable, to attain incentive(s) including, but not limited to the overall sequencing, a description and explanation of the Critical Path, proposed means and methods, and other key assumptions on which the Proposal Schedule is based.

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

4.3 Price Proposal

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

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

4.3.2 Provide a Schedule of Items for the Price Proposal utilizing the Schedule of Items Form attached hereto as Attachment 4.3.2. The Proposal Price shall be based upon the Proposal Schedule submitted in Part 1, Section 4.2.4. This Schedule of Items shall identify the material quantities and costs of each proposed pay item that make up the total Contract Price. The material quantities and costs listed for each proposed pay item shall, to the extent possible, correspond to VDOT's list of standard and non-standard pay items. Any items considered for price adjustments shall be identified. The value associated with each pay item shall be inclusive of all direct and indirect costs, overhead, profit and any other expenses of any kind. The values and quantities shall be clearly supported by the escrowed pricing documents.

Payment for mobilization shall not be scheduled prior to the initiation of construction work. The pay item for mobilization shall be distributed between two separate installments. The first installment of fifty percent (50%) of the Design-Builder's total mobilization cost may be scheduled following partial mobilization and initiation of construction work. The second installment may be scheduled following completion of substantial mobilization, including erection of the Design-Builder's offices and buildings, if any. Preliminary engineering items including, but not limited to, surveying, geotechnical investigations and utility coordination shall not be considered as construction work for the purpose of mobilization. Bonds and insurance premiums, and field office expenses at project start-up will not be considered part of mobilization activities.

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

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

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

4.3.6 Provide the Sworn Statement Forms (C-104, C-105), as set forth in Attachments 4.3.6(a) and 4.3.6(b) respectively.

5.0 EVALUATION AND RESPONSIVENESS REVIEW OF PROPOSALS

5.0.1 VDOT will review each Offeror's Letter of Submittal and Attachments.

5.0.2 Prior to determining the responsiveness of the Letter of Submittal and Attachments, VDOT in its sole discretion, may seek clarification on the contents of the Letter of Submittal and Attachments through any means VDOT desires, including but not limited to, holding interviews, asking written questions of the Offeror(s), seeking written clarifications, conducting discussions on the documents, and soliciting updated documents during the responsiveness review process.

5.0.3 If VDOT determines that a Letter of Submittal and Attachments do not comply with or satisfy requirements of the RFP Documents, VDOT may find such Letter of Submittal and Attachments to be non-responsive. In such event, the Offeror whose Letter of Submittal and Attachments was found to be non-responsive will be notified in writing of VDOT's determination and the Price Proposal corresponding to the non-responsive Letter of Submittal and Attachments will not be opened, but will be returned unopened, along with the non-responsive Letter of Submittal and Attachments, to the Offeror.

5.0.4 VDOT will open the Price Proposals submitted by Offerors with responsive Letter of Submittal and Attachments. The Offeror who submitted the lowest Price Proposal, and whose Proposal is responsive shall be considered the Successful Offeror.

6.0 PROPOSAL SUBMITTAL REQUIREMENTS

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

6.1 Due Date, Time and Location

6.1.1 All Letter of Submittal and Attachments and Price Proposals must be received by the respective due dates and times set forth in Part 1, Section 2.3.1. All submissions, including hand-delivered packages, US Postal Service regular mail, US Postal Service express mail, or private delivery service (FEDEX, UPS, courier, etc.), must be delivered to the following individual at the following address:

Commonwealth of Virginia
Department of Transportation (VDOT)
Central Office Mail Center
Loading Dock Entrance
1401 E. Broad Street
Richmond, Virginia 23219
Attention: Brenda L. Williams

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

6.2 Format

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

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

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

The Letter of Submittal and Attachments shall be securely bound, with an identity on its front cover. **Three ring binders are not permissible.**

The Letter of Submittal and Attachments shall be:

- Divided into two volumes:
 - Volume I shall:
 - Include all requirements of the Letter of Submittal, including appendices, with the exception of the Offeror’s Conceptual plans and Proposal Schedule.
 - Be prepared on 8.5” x 11” white paper (Charts, exhibits and other illustrative information included in the Letter of Submittal Volume 1 may be submitted on 11” x 17” paper, but must be folded to 8.5” x 11”).)
 - Animated videos/ motion pictures are prohibited.

- Volume II shall:
 - Include Conceptual Plans and Proposal Schedule
 - Be prepared on 11" x 17" paper unfolded
- Typed on one (1) side only
- Separated by numbered tabs with sections corresponding to the order set forth in Part 1, Section 4.0, except for that required by Part 1, Section 4.3.
- Include page number references in the right hand corner

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

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

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

7.0 QUESTIONS AND CLARIFICATIONS

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

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

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

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

8.0 AWARD OF CONTRACT, PROPOSAL VALIDITY AND CONTRACT EXECUTION

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

8.1 Negotiations and Award of Contract

8.1.1 The Director of the Alternate Project Delivery Office will recommend the Successful Offeror whose Proposal Price is within VDOT's budget for design and construction services, to the Chief Engineer for approval of an award of a fixed price Design-Build Contract by the CTB and issue a Notice of Intent to Award to such Offeror.

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

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

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

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

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

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

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

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

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

8.2 Proposal Validity

The offer represented by the Proposal will remain in full force and effect for one hundred twenty (120) days after the Letter of Submittal and Attachments Submission Date set forth in Part 1, Section 2.3.1.. If Award of Contract has not been made by the Commonwealth Transportation Board within one hundred twenty (120) days after the Letter of Submittal and Attachments 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 Submittals after Notice of Intent to Award

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

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

8.4 Contract Execution and Notice to Proceed

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

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

8.4.3 Upon Award of Contract, the Successful Offeror may submit an invoice for an advanced payment of twenty five thousand dollars (\$25,000) 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 Award of Contract designed to defray some of those expenses by the Successful Offeror. VDOT will not make any other payment toward design and preconstruction services performed prior to Award of Contract to the Successful Offeror. Such invoice shall be processed and paid in accordance with the payment provisions of the Design-Build Contract.

9.0 RIGHTS AND OBLIGATIONS OF VDOT

9.1 Reservation of Rights

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

- .1 The right to cancel, withdraw, postpone or extend this RFP in whole or in part at any time prior to the execution by VDOT of the Design-Build Contract, without incurring any obligations or liabilities.
- .2 The right to issue a new RFP.
- .3 The right to reject any and all submittals, responses and Proposals received at any time.
- .4 The right to modify all dates set or projected in this RFP.
- .5 The right to terminate evaluations of responses received at any time.
- .6 The right to suspend and terminate the procurement process for the 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 VDOT declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- .9 The right to issue Addenda, supplements, and modifications to this RFP.
- .10 The right to permit submittal of Addenda and supplements to data previously provided with any response to this RFP until such time as VDOT declares in writing that a particular stage or phase of its review of the responses to this RFP has been completed and closed.
- .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 firms and/or key personnel until such time as VDOT declares in writing that a particular stage or phase of its review has been completed and closed.
- .14 The right to add or delete Offeror responsibilities from the information contained in this RFP.
- .15 The right to use assistance of outside technical and legal experts and consultants in the evaluation process.
- .16 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.
- .17 The right to disqualify any Offeror that changes its submittal without VDOT approval.
- .18 The right to change the method of award at any time prior to submission of the Proposals.
- .19 The right to respond to all, some, or none of the inquiries, questions and/or request for clarifications received relative to the RFP.
- .20 The right to use all or part of an unsuccessful short-listed Offeror's Proposal that accepts a Proposal Payment.
- .21 The right to negotiate the allocation of prices identified for specific portions of the work depicted within a Price Proposal.
- .22 The right to disqualify and/or cease negotiations with an Offeror if VDOT, in its sole discretion, determines that the Offeror's Price Proposal contains unbalanced pricing among the specific portions of work identified therein.

9.2 No Assumption of Liability

9.2.1 Except for such amounts as may be paid through the Proposal Payment set forth in Part 1, Section 9.3.1, for those Offerors who submit a responsive Proposal, but are not awarded the Design-Build Contract; or for such amounts set forth in Part 1, Section 8.4.3 for the Successful Offeror who may submit an invoice for an advanced payment of twenty five thousand dollars (\$25,000) of the Contract Price; VDOT assumes no obligations, responsibilities, and liabilities, fiscal or otherwise, to reimburse all or part of the costs incurred or alleged to have been incurred

by parties considering a response to and/or responding to this RFP. All such costs shall be borne solely by each Offeror and its team members.

9.2.2 Except as stated in Part 1, Section 9.3.1, in no event shall VDOT be bound by, or liable for, any obligations with respect to the Project until such time (if at all) a contract, in form and substance satisfactory to VDOT, has been executed and authorized by VDOT and, then, only to the extent set forth therein.

9.3 Proposal Payment

9.3.1 Notwithstanding Part 1, Section 9.2, VDOT is willing to pay those Offerors who submit a responsive Proposal, but are not awarded the Design-Build Contract, a Proposal Payment in the amount of twenty five thousand dollars (\$25,000).

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

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

Payment to an Offeror of the Proposal Payment is expressly conditioned upon such Offeror providing, pursuant to Part 1, Section 4.1.7, an executed Proposal Payment Agreement in the form set forth in Attachment 9.3.1, and being fully compliant with the conditions established in such agreement for payment of the Proposal Payment.

Under no circumstances will the Commonwealth, the Commissioner, CTB, or VDOT 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.

9.3.2 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 9.3.2 and submitting such Waiver of Proposal Payment as part of its Proposal, pursuant to Part 1, Section 4.1.7.

10.0 PROTESTS

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

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

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

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

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

11.0 MISCELLANEOUS

11.1 Virginia Freedom of Information Act

11.1.1 All Proposals submitted to VDOT become the property of VDOT and are subject to the disclosure requirements of Section 2.2-4342 of the Virginia Public Procurement Act and the Virginia Freedom of Information Act (FOIA) (Section 2.2—3700 et seq.). Offerors are advised to familiarize themselves with the provisions of each Act referenced herein to ensure that documents identified as confidential will not be subject to disclosure under FOIA. In no event

shall the Commonwealth, the Commissioner of Highways, or VDOT be liable to an Offeror for the disclosure of all or a portion of a Proposal submitted pursuant to this request.

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

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

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

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

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

11.2 Conflict of Interest

11.2.1 Implementation guidelines for VDOT's policy on organizational conflicts of interest relating to Design-Build procurement are documented in the Alternate Project Delivery Office Memorandum IIM-APD-2 dated December 27, 2012.

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

Each Offeror shall require its proposed team members to identify potential conflicts of interest 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 Project or VDOT's Design-Build program may present a conflict of interest or a competitive advantage. If a potential conflict of interest or competitive advantage is identified, the Offeror shall submit in writing the pertinent information to VDOT's POC.

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

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

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

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

11.2.4 VDOT may, in its sole discretion, determine that a conflict of interest or a real or perceived competitive advantage may be mitigated by disclosing all or a portion of the work product produced by the organization or individual subject to review under this section. If documents have been designated as proprietary by Virginia law, the Offeror will be given the opportunity to waive this protection from 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:

- RS&H, Inc.
- HDR Inc.
- ECS Mid-Atlantic LLC
- Johnson, Mirmiran & Thompson (JMT)
- Ballard Spahr LLP
- Consultants and Sub consultants who are members of the Northern Virginia Mega Projects General Engineering Consultant Services (Solicitation # SB022007, State Project #0095-029-738, P101) as of the SOQ Submission Date of January 4, 2016..
The Consultants and Sub consultants include but not limited to the following firms:
 - ATCS PLC.
 - CH2M Hill, Inc.
 - Alpha
 - A. Morton Thomas
 - Michael Baker
 - Chi Associates
 - Continental Field Services
 - Jenkins Engineering
 - Redmon Group, Inc.
 - Telvent Farradyne, Inc. (Schneider Electric)
 - Travesky & Associates
 - Critigen
 - Synoptek

In addition, the I-95 Express Lanes Concessionaire as well as its affiliates, including without limitation, 95 Express Lanes LLC, Capital Beltway Express LLC, Transurban (USA) Inc. and Transurban (USA) Operations Inc., will not be allowed to participate as a Design-Build team member and may not be contacted by any Offeror in connection with the Project.

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

11.3 Ethics in Public Contracting Act

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

11.4 Requirement to Keep Team Intact

The team proposed by Offeror, including but not limited to the Offeror's organizational structure, lead contractor, the lead designer, Key Personnel, and other individuals identified pursuant to Part 1, Section 4.2, shall remain on Offeror's team for the duration of the procurement process and, if the Offeror is awarded the Design-Build Contract, the duration of the Design-Build Contract. If extraordinary circumstances require a proposed change, it must be submitted in writing to VDOT's POC, who, in his sole discretion, will determine whether to authorize a change. Unauthorized changes to the Offeror's team at any time during the procurement process may result in the elimination of the Offeror from further consideration.

11.5 Disadvantaged Business Enterprises

11.5.1 Any Design-Builder, subcontractor, supplier, DBE firm, and contract surety involved in the performance of work on a federal-aid contract shall comply with the terms and conditions of the United States Department of Transportation (USDOT) DBE Program as the terms appear in Part 26 of the Code of Federal Regulations (49 CFR as amended), the USDOT DBE Program regulations; VDOT's DBE Program rules and regulations, VDOT's Road and Bridge Specifications and Part 5 Exhibit 107.15 (Special Provision for Use of Disadvantaged Business Enterprise for Design-Build Projects).

11.5.2 It is the policy of VDOT that DBEs, as defined in 49 CFR Part 26, shall have every opportunity to participate in the performance of construction/consultant contracts. The DBE contract goal for this procurement is identified in Part 1, Section 4.6. Offerors are encouraged to take all necessary and reasonable steps to ensure that DBEs have every opportunity to compete for and perform services on contracts, including participation in any subsequent supplemental contracts. If a portion of the work on the Project is to be subcontracted out, Offerors must seek out and consider DBEs as potential subcontractors. DBEs must be contacted to solicit their interest, capability and qualifications. Any agreement between an Offeror and a DBE whereby the DBE promises not to provide services to any other Offeror or other contractors/consultants is prohibited.

11.5.3 After Award of the Contract the Design-Builder shall submit documentation related to the use of DBEs for the Project in accordance with the procedures set for in Part 5 Exhibit 107.15 (Special Provision for Use of Disadvantaged Business Enterprise for Design-Build Projects). The DBE must become certified with the Virginia Department of Small Business and Supplier Diversity (SBSD) prior to the performance of any work for the Project. In the case where the DBE is to be utilized to achieve the DBE participation goal, the DBE must be certified prior to the submission to VDOT of Forms C-111 (Minimum DBE Requirements), C-112 (Certification of Binding Agreement with DBE Firms) and Form C-48 (Subcontractor/Supplier Solicitation and

Utilization). If the DBE is a prime, the firm will receive full credit for the planned involvement of their own workforce, as well as the work they commit to be performed by DBE subcontractors. DBE primes are encouraged to make the same outreach. DBE credit will be awarded only for work actually performed by DBEs themselves. When a DBE prime or subcontractor subcontracts work to another firm, the work counts toward the DBE goals only if the other firm itself is a DBE. A DBE must perform or exercise responsibility for at least 30% of the total cost of its contract with its own workforce.

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

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

Virginia Department of Small Business and Supplier Diversity
1111 East Main Street, Suite 300
Richmond, VA 23219
Phone: (804) 786-6585
<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

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

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

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

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

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

Culpeper District
1601 Orange Road
Culpeper, VA 22701

Richmond District
2430 Pineforest Drive
Colonial Heights, VA 23834

(540) 829-7523

(804) 524-6091

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

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

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

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

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

The following informational websites may also be of assistance:

www.virginiadot.org/business/bu_bizDev.asp

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

11.6 Trainee and Apprenticeship Participation

VDOT will require trainee and apprenticeship participation for this Project. The on-the-job trainee goal for this Project is eight (8) individuals.

11.7 Escrow Proposal Documents

11.7.1 Scope

Pursuant to Part 1, Section 11.7.5.1 below, the Successful Offeror shall submit to the individual set forth in Part 1, Section 6.1 above, within three (3) 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 VDOT Central Office until immediately prior to award of the Project. The EPDs of the Successful Offeror will be transferred to and then held in escrow at the banking institution specified in Part 1, Section 11.7.6.

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

11.7.2 Ownership

- .1 The EPDs are, and shall always remain, the property of the Successful Offeror, subject to joint review by VDOT and the Successful Offeror, as provided herein.
- .2 VDOT stipulates and expressly acknowledges that the EPDs constitute trade secrets. This acknowledgement is based on VDOT's express understanding that the information contained in the EPDs is not known outside Successful Offeror's business, is known only to a limited extent and only by a limited number of employees of the Successful Offeror, is safeguarded while in Successful Offeror's possession, is extremely valuable to Successful Offeror and could be extremely valuable to Successful Offeror's competitors by virtue of its reflecting Successful Offeror's contemplated techniques of design and construction. VDOT further acknowledges that Successful Offeror expended substantial sums of money in developing the information included in the EPDs and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. VDOT further acknowledges that the EPDs and the information contained therein are made available to VDOT only because such action is an express prerequisite to Award of Contract. VDOT further acknowledges that the EPDs include a compilation of the information used in Successful Offeror's business, intended to give Successful Offeror an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation.

11.7.3 Purpose

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

11.7.4 Format and Contents

- .1 Successful Offerors may submit EPDs in their usual cost estimating format provided that all information is clearly presented and ascertainable. It is not the intention of this section, Part 1, Section 11.7, to cause the Successful Offeror extra work during the preparation of the Proposal, but to ensure that the EPDs will be adequate to enable complete understanding and proper interpretation for their intended use. The EPDs shall be submitted in the language (i.e., English) of the Specifications.
- .2 It is required that the EPDs clearly itemize the estimated costs of performing the work of each item contained in Successful Offeror's schedule of values. 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 VDOT should not be included in the EPDs unless needed to comply with these requirements.

11.7.5 Submittal

- .1 The EPDs shall be submitted in a sealed container to the individual set forth in Section 6.1 above, which container shall be clearly marked on the outside with the Successful Offeror's name, date of submittal, Project name, and the words "Escrow Proposal Documents."
- .2 Prior to Award of Contract, EPDs of the Successful Offeror will be transferred to the banking institution referenced in Part 1, Section 11.7.6 and will be examined, organized, and inventoried by representatives of VDOT, together with members of the Successful Offeror's staff who are knowledgeable in how the Proposal was prepared. This examination is to ensure that the EPDs are legible and complete. It will not include review of, and will not constitute approval of proposed construction methods, estimating assumptions, or interpretations of any RFP Documents or the Design-Build Contract. Examination will not alter any condition or term of the Design-Build Contract.
- .3 If all the documents required by this section, Part 1, Section 11.7, have not been included in the original submittal, additional documentation may be submitted, at VDOT's discretion, prior to Award of Contract.
- .4 If the Design-Build Contract is not awarded to the Successful Offeror, the EPDs of the next Offeror to be considered for award shall be processed as described above.

- .5 Timely submission of the complete EPDs is an essential element of the Successful Offeror's responsibility and a prerequisite to Award of Contract.
- .6 If the Successful Offeror's Proposal is based upon subcontracting any part of the work, each subcontractor whose total subcontract price exceeds ten percent (10%) of the Total Proposal Price proposed by the Successful Offeror, shall provide separate Escrow Documents to be included with those of the Successful Offeror. Such documents shall be opened and examined in the same manner and at the same time as the examination described above for the Successful Offeror.
- .7 If the Design-Builder wishes to subcontract any portion of the work after Award of Contract, VDOT retains the right to require the Design-Builder to submit Escrow Documents from the subcontractor before the subcontract is approved.

11.7.6 Storage

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

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

The cost for storing the EPDs will be paid by the Successful Offeror.

11.7.7 Examination

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

11.7.8 Final Disposition and Return of EPDs

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

11.7.9 Execution of Escrow Agreement

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

11.8 Administrative Requirements

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

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

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

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

11.8.4 VDOT assures compliance with Title VI of the Civil Rights Act of 1964, as amended. The consultant and all subconsultants selected for this Project will be required to submit a Title

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

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

11.8.6 Execute and return the attached Certification Regarding Debarment Form(s) Primary Covered Transactions, set forth as Attachment 11.8.6(a) and Certification Regarding Debarment Form(s) Lower Tier Covered Transactions, set forth as Attachment 11.8.6(b) for the Offeror and any subconsultant, subcontractor, or any other person or entity on the Offeror's organizational chart included in the Statement of Qualification.

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.

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

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

CII/SSI material includes Bridge Safety Inspections Reports (IIM-S&B-27) and as-built plans. Inspection reports and as-built plans are not included in the Information Package and CII/SSI Non-Disclosure Agreements are not required to respond to the RFP. To obtain copies of Bridge Safety Inspection Reports and As-built drawings, Developer must complete a CII/SSI Non-Disclosure Agreement Form (Attachment 11.8.8).

11.9 Compliance with the Law in Virginia

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

11.10 Attachments

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

| | | |
|----------------------|----|--|
| ATTACHMENT 3.6 | -- | FORM C-78-RFP (ACKNOWLEDGEMENT OF RECEIPT OF RFP, REVISIONS, AND/OR ADDENDA) |
| ATTACHMENT 4.0.1.1 | -- | LETTER OF SUBMITTAL AND ATTACHMENTS CHECKLIST |
| ATTACHMENT 4.0.1.2 | -- | PRICE PROPOSAL SUBMITTAL CHECKLIST |
| ATTACHMENT 4.3.1 | -- | PRICE PROPOSAL FORM |
| ATTACHMENT 4.3.2 | -- | SCHEDULE OF ITEMS FORM |
| ATTACHMENT 4.3.6(a) | -- | FORM C-104 (BIDDER'S STATEMENT) |
| ATTACHMENT 4.3.6(b) | -- | FORM C-105 (BIDDER'S CERTIFICATION) |
| ATTACHMENT 9.3.1 | -- | PROPOSAL PAYMENT AGREEMENT |
| ATTACHMENT 9.3.2 | -- | WAIVER OF PROPOSAL PAYMENT |
| ATTACHMENT 11.7.1 | -- | ESCROW PROPOSAL DOCUMENTS CHECKLIST |
| ATTACHMENT 11.7.9 | -- | ESCROW AGREEMENT |
| ATTACHMENT 11.8.6(a) | -- | CERTIFICATION REGARDING DEBARMENT; PRIMARY COVERED TRANSACTIONS |
| ATTACHMENT 11.8.6(b) | -- | CERTIFICATION REGARDING DEBARMENT; LOWER TIER COVERED TRANSACTIONS |
| ATTACHMENT 11.8.8 | -- | CII/SSI NON-DISCLOSURE AGREEMENT |

END OF PART 1
INSTRUCTIONS FOR OFFERORS

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PART 2

TECHNICAL INFORMATION & REQUIREMENTS

1.0 DESIGN-BUILDER'S SCOPE OF WORK

1.1 Project Description

The Project is located in Stafford County, Virginia, and involves extending the existing 95 Express Lanes in a southerly direction. The general limits of the Express Lanes extension are from approximate mile marker 142.5 (south of Garrisonville Road) to the existing Express Lanes terminus at approximate mile marker 145.0 (north of Garrisonville Road). New pavement limits are from approximately 0.9 miles south of Garrisonville Road overpass to approximately 1.3 miles north of Garrisonville Road overpass, for a total new pavement limit length of approximately 2.2 miles. Additionally, approximately 0.7 miles on the north end of the Project will require pavement resurfacing and re-striping. This additional roadway, including associated northbound and southbound slip ramps, shall serve as reversible 95 Express Lanes. The Design-Builder shall also provide advisory signage preceding the new 95 Express Lanes entry and exit ramps. The Project lengths are approximations based on the RFP Conceptual Plans shown in the RFP Information Package. The Design-Builder shall not reduce the length of the project limits, reduce the gore lengths, or reduce the widths of the proposed pavement types from the design shown on the RFP Conceptual Plans.

A conceptual design has been developed and made available for public review via a Public Information Meeting held on February 17, 2016. The conceptual design contained in the RFP Information Package reflects a basic line, grade, typical sections, minimum pavement structures, major cross drainage pipes, potential locations of stormwater management ponds, signs, ITS, lighting, and general length and location of sound barrier. These elements are considered to be the basic Project configuration. The Design-Builder is responsible for final design in accordance with the Contract Documents. The PDF copy of the RFP Conceptual Plans shall supersede the electronic drawing files (DGN) contained in the RFP Information Package.

1.2 Anticipated Scope of Work

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

- Survey
- Developing and completing the design
- Acquiring the necessary environmental permits
- Coordinating and performing, required utility relocations, additions, and adjustments
- Roadway construction
- Paving
- Guardrail/barrier

- Retaining walls
- Sound barrier walls
- Signs, sign structures, and foundations
- Overhead signs structure and other traffic control measures
- Intelligent Transportation System (ITS) components including Closed Circuit Television (CCTV) and Automated Incident Detection (AID) Cameras, Dynamic Message Signs (DMS), Fiber Optic Communications (COMM) Infrastructure
- Gate and gate integration
- Vehicle detectors
- Generator sites
- Power, including service panels
- Coordination with the system integration, and testing and maintenance until final acceptance, and related documentation
- Lighting
- Traffic maintenance and management during all phases of construction
- Pavement markers and markings
- Storm drainage
- Storm water management facilities
- Quality Assurance and Quality Control for design and construction
- Stakeholder coordination
- Overall Project management and coordination with other active construction projects in the vicinity.

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

1.3 Anticipated Design Services

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

VDOT has prepared an I-95 Express Lanes Southern Terminus Extension Traffic Operations and Safety Report, dated February 16, 2016. The Design-Builder will be required to fulfill all commitments included in the Operations and Safety report.

1.4 Anticipated Environmental Services

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

The Design-Builder shall acquire all water quality permits for the Project in the Design-Builder's name (i.e. the Design-Builder will be the "Permitee"). Further details are provided in Part 2, Subsection 2.4.4.

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

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

1.5 Anticipated Right of Way and Utilities

It is currently anticipated that all work will be within the existing VDOT right-of-way limits. The Offeror's conceptual design included in its Proposal shall be wholly contained within the existing right of way limits shown on the RFP Conceptual Plans, with the exception of temporary or permanent easements (including utility easements). Utility easements have not yet been identified or shown on the RFP Conceptual Plans.

The Design-Builder's final design shall also be contained within the right of way limits shown on the RFP Conceptual Plans, with the exception of temporary or permanent easements (including utility easements) and where minor adjustments are required during the final design process, and only after approval by VDOT. Should the Design-Builder vary the final design so as to require additional right-of-way and/or easement acquisitions, then the Design-Builder's Right-of-Way team member shall be a VDOT prequalified right-of-way contracting consultant, and must include a VDOT prequalified Fee Appraiser and a VDOT prequalified Review Appraiser. All Right-of-Way acquisitions and relocations shall be performed in accordance with Part 2, Section 2.12 of this RFP.

The Design-Builder shall be responsible for all utility costs related to relocations, adjustments and coordination of utilities. Any required utility easements shall be the responsibility of the Design-Builder. Utility work shall be in accordance with Part 2, Section 2.13 of this RFP. All costs for utility relocations, excluding betterments, shall be included in the Offeror's Price Proposal. Utility betterments shall not be included in the Offeror's Price Proposal but shall be reimbursed to the Design-Builder through agreement with the requesting utility owner. Betterments must be requested by and/or approved by the affected utility owner and must meet Buy America requirements as described in Part 5, Exhibit 102.05(g.1) Use of Domestic Material.

1.6 Anticipated Construction Services

The construction services to be undertaken by the Design-Builder for this Project are anticipated to include, but are not limited to: earthwork, roadway, retaining walls, sound barriers, the demolition and removal of existing structures and appurtenances, paving, sign structures, intelligent transportation systems, roadway lighting, drainage, utility relocations/adjustments and coordination, transportation management plan, traffic control devices, erosion and sediment control, storm water management facilities, guardrail/barrier, and compliance with all environmental requirements, commitments and permit conditions, as described in Part 2, Section 2.0 of this RFP. The Design-Builder shall provide construction engineering inspection and management, quality assurance and quality control, including plant quality assurance inspection and testing, but excluding items listed under Part 2, Section 2.14.2.

1.7 Coordination with Active Construction Projects

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

I-95/Route 630 Reconstruction and Widening with Bid Option for 4th Lane Southbound

Location: approximately 1.0 miles south of Route 630 to approximately 0.8 miles south of Garrisonville Road overpass

Project Number: 0095-089-F09 (UPC #13558 and #4632)

Status: Design-Build contract RFQ was issued on October 27, 2015 with an anticipated final completion of April 2020

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

Route 610 Left Turn Lanes To and From Onville Road

Location: approximately 0.2 miles west of Route 641 (Onville Road) to approximately 0.1 miles east of Route 641 (Onville Road)
Project Number: 0610-089-590 (UPC #93225)
Status: Design-Bid-Build contract was awarded in November 2015

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

I-95 Six Bridges Rehabilitation

Location: I-95 NB GP Lanes and I-95 SB GP Lanes over Aquia Creek
Project Number: 0095-966-687 (UPC #108326)
Status: Design-Bid-Build is to be anticipated to be advertised in June 2016

VDOT Contact:
Sharif Ramsis, P.E.
Fredericksburg District Structure and Bridge
Phone: 540-899-4293
Email: Sharif.Ramsis@vdot.virginia.gov

I-95 CCTV Cameras Installation

Location: I-95 MM 140.8 to MM 140.6 near Courthouse Road
Project Number: [RCW1]
Status: Design-Bid-Build [RCW2]

VDOT Contact:
Dustin Alwood
Northern Region Operations
Phone: 571-350-2010
Email: Dustin.Alwood@vdot.virginia.gov

Asphalt Plant Mix (PM) Contracts associated with work on or adjacent to I-95

Location: Stafford County - Various
Project No.: Various
Status: PM Contracts to be awarded winter 2016 and subsequent years

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

In addition to the VDOT projects listed above, the County of Stafford will be administering the following projects:

Route 610 Garrisonville Road – Widen to 6 Lanes, Phase 2

Location: approximately 0.1 miles east of intersection of Route 1236 (Shenandoah Lane) to approximately 0.08 miles east of Route 1262 (Travis Lane)
Project Number: 0610-089-608 (UPC #98847)
Status: Design-Build contract was awarded in August 2013

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

Turn lane Addition-Route 1 South at Garrisonville Road

Location: Route 610 Garrisonville Road & Route 1 to approximately 0.2 miles north of Route 610
Project Number: 0001-089-R29 (UPC #103082)
Status: Design-Bid-Build contract is anticipated to be advertised in March 2016

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

Intersection Improvement Route 1 & Route 630

Location: approximately 0.1 miles south of Route 630 (Courthouse Road) & approximately 0.1 miles north of Route 630 (Courthouse Road)
Project No.: 0001-089-R32 (UPC #103085)
Status: Design-Bid-Build contract anticipated to be advertised in October 2017

VDOT Contact:
Michael T. Coffey, P.E.
District Construction Engineer
Phone: 540-642-8212
Email: MichaelT.Coffey@vdot.virginia.gov

Additionally, Northern Regions Operations (NRO) Contracts or Interstate Maintenance Contracts (TAMS) may be taking place in the project vicinity.

2.0 PROJECT TECHNICAL INFORMATION & REQUIREMENTS

The Offeror's proposed conceptual design shall meet all requirements of the RFP. Proposed deviations from the requirements of the RFP Documents shall not be permitted.

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

2.1 References and Information

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

2.1.1 Standards and Reference Documents

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

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

The standards and references for the Project are listed below in the following order: (a) Standards and Specifications; (b) Reference Manuals; (c) Special Provisions List including Special Provisions, Special Provision Copied Notes and Supplemental Specifications. Items (a) and (b) are published references that are available publicly, for which copies are not provided to

the Offerors in the RFP Information Package, but these items are to be used as manuals for design and construction. Items listed in (c) are included in the RFP Information Package.

(a) Standards and Specifications

- 2009 Manual of Uniform Traffic Control Devices (MUTCD), Revisions 1 and 2 and 2011 Virginia Supplement to MUTCD, Revision 1 (2013)
- AASHTO A Policy on Design Standards Interstate System, 5th Edition, January 2005
- AASHTO A Policy on Geometric Design of Highways and Streets, 2011
- AASHTO/AWS D1.5M/D1.5: 2010 Bridge Welding Code, 6th Edition, with 2011 and 2012 AASHTO Interim Revisions
- AASHTO Guide for Design of Pavement Structures (Rigid Pavement and Flexible Pavement), 1993 Edition
- AASHTO – Guide for High-Occupancy Vehicle (HOV) Facilities, 3rd Edition
- AASHTO Guide for Roadway Lighting Design, 6th Edition, 2005
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- AASHTO Guide Specifications for Highway Construction, 9th Edition
- AASHTO Guide Specifications for Structural Design of Sound Barriers
- AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014; and VDOT Modifications
- AASHTO Manual for Assessing Safety Hardware, First Edition, 2009
- AASHTO/FHWA Joint Implementation Plan for the AASHTO Manual for Assessing Safety Hardware, 2009
- AASHTO Manual on Subsurface Investigations, 1988
- AASHTO Roadside Design Guide, 4th Edition, 2011
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals, 1994 Edition
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals, 4th Edition, 2001 (to be used for the design of anchor bolts and dynamic message sign supports only)
- AASHTO Guide Specifications for Structural Design of Sound Barriers – current edition
- ANSI/AWS D1.2/D1.2M: Structural Welding Code - Aluminum, current edition
- ANSI/AWS D1.1/D1.1M: Structural Welding Code - Steel, current edition
- Corps of Engineers EM-1110-2-1906, Laboratory Soils Testing, 1986
- DEQ Virginia Erosion and Sediment Control Handbook, Third Edition, 1992
- DEQ Virginia Stormwater Management Handbook, Vol. 1 and Vol. 2, First Edition, 1999
- DEQ Virginia Stormwater Management Program Technical Bulletin 1
- Engineering Properties of Clay Shales, Report 1 by W. Heley and B. N. McIver
- FHWA 23CFR625 - Design Standards for Highways
- FHWA 23CFR630 Subpart B – Plans, Specifications, and Estimates
- FHWA 23CFR650 - Subpart C – National Bridge Inspection Standards (“NBIS”)

- FHWA 23CFR626 - Part 626 Pavement Policy
- FHWA 23CFR752 Landscaping and Roadside Development
- FHWA 23CFR940—Intelligent Transportation System Architecture and Standards – January 8, 2001
- FHWA 49CFR24 – The Uniform Relocation Assistance and Real Properties Acquisitions Act of 1970
- FHWA Hydraulic Design Series Number 5 (HDS-5), Hydraulic Design of Highway Culverts, 2012
- FHWA Hydraulic Engineering Circular Number 9 (HEC-9), Debris Control Structures – Evaluation and Counter Measures, 2005
- FHWA Hydraulic Engineering Circular Number 15 (HEC-15), Design of Roadside Channels with Flexible linings, Third Edition, 2005
- FHWA Guidelines for the Installation, Inspection, Maintenance and Repair of Structural Supports for Highway Signs, Luminaires, and Traffic Signals (March 2005), FHWA NHI 05-036
- FHWA Mitigation Strategies for Design Exceptions, July 2007
- FHWA Standard Highway Signs including Pavement Markings and Standard Alphabets, 2004 Edition and 2012 Supplement (For use with the 2009 Manual on Uniform Traffic Control Devices for Streets and Highways), or most current Edition
- Highway Traffic Noise Impact Analysis Guidance Manual, dated September 16, 2011
- IEEE National Electric Safety Code
- IEEE 802.3 Local and Metropolitan Area Networks
- IEEE 1512-2006 - IEEE Standard for Common Incident Management Message Sets for Use by Emergency Management Centers
- IEEE 1512.1-2006 – IEEE Standard for Common Traffic Incident Management Message Sets for Use by Emergency Management Centers
- IES RP-08-00, American National Standard for Roadway Lighting
- IES RP-19-01, Roadway Sign Lighting
- Manual of Uniform Traffic Control Devices (“MUTCD”), 2009 Edition and latest updates as of date of release of RFP or applicable addenda
- National Electric Manufacturers Association (NEMA) TS-4 Hardware Standards for Dynamic Message Signs (DMS) with NTCIP Requirements
- NCHRP Report 350 Recommended Procedures for the Safety Performance Evaluation of Highway Features
- NFPA 25 Standard for the inspection, Test and Maintenance of Water-Based Fire Protection Systems, 2014 Edition
- NFPA 502, Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2011 Edition
- Transportation Research Board Highway Capacity Manual, 2010 Edition
- VDOT Appraisal Guidelines
- VDOT CADD Manual 2012 (Revised June 2015)

- VDOT Construction Inspection Manual, January 2015
- VDOT Construction Manual, 2005 (including July 2008 revisions)
- VDOT Drainage Manual, Revised January 2016 (including current Errata Sheet)
- VDOT Guardrail Installation Training Manual (“GRIT”), May 2011
- VDOT Guidelines for 1993 AASHTO Pavement Design, Revised May 2003
- VDOT BMP Design Manual of Practice, Effective April 2013
- VDOT Instructional & Information Memorandums (“I&IM”), All Divisions
- VDOT Land Use Permit Regulations, 24 VAC 30-151, March 17, 2010
- VDOT Land Use Permit Regulations Guidance Manual, March 17, 2010
- VDOT Manual of Instruction for Material Division, including revisions through July 2011
- VDOT Manual of Structure and Bridge Division, Vol. V Series
- VDOT Materials Division Approved List
- VDOT Materials Division Memorandum Number MD299-07 for Materials Acceptance, October 4, 2007
- VDOT Policy Manual for Public Participation in Transportation Projects (Revised August 29, 2011)
- VDOT Post Construction Manual, August 2014 Edition
- VDOT Right of Way Manual of Instructions, Third Edition – FHWA update approved January 1, 2016
- VDOT Road and Bridge Specifications, 2007 (all except Section 100), including all revisions
- VDOT Road and Bridge Standards, Vol. 1 and Vol. 2, 2008, including all revisions
- VDOT Road Design Manual, Vol. I, including all revisions
- VDOT Soil Design Parameters for Sound Barrier Walls, Retaining Walls and Non-Critical Slopes – April 14, 2011
- VDOT Survey Manual, 2010 Edition, including 2011 revisions
- VDOT Traffic Engineering Design Manual, 2014
- VDOT Traffic Engineering Division Numbered Memoranda (Traffic Engineering (TE) and Mobility Management (MM))
- VDOT Utilities Manual of Instruction (January 2011, including February 2011 revisions)
- VDOT Virginia Standard Highway Signs, Revision 1, January 2015
- VDOT Virginia Work Area Protection Manual, June 2011, Rev. 1.
- VDOT’s Minimum Requirements for Quality Assurance & Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012
- VDOT’s Project Management Policy PMO-Policy-2011-1, July 1, 2011
- Virginia Department of Transportation Asbestos Inspection Procedures, dated May 4, 2004
- Virginia Department of Transportation Asbestos Monitoring Procedures, dated May 4, 2004

(b) Reference Manuals

- AASHTO’s Highway Safety Manual, 1st Edition, Vol. 1-3, 2010
- American National Standards Institute (ANSI)/Insulated Cable Engineers Association (ICEA) S-87-640-2006 requirements
- American Water Works Associations Standards
- American Welding Society Standards
- ANSI/IESNA RP-8-00 Roadway Lighting
- Bellcore/Telcordia Standards
- Duncan, J.M. (April 2000) Factors of Safety and Reliability in Geotechnical Engineering, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Discussions and Closure, August 2001
- Field Partnering Guide for VDOT Projects, November 2005
- FHWA publications HDS-5, HDS-6, HEC-11, HEC-14, HEC-15, HEC-18, HEC-20, HEC-22, and HEC-23
- FHWA Geotechnical Engineering Circular No. 6, Shallow Foundations, September 2002, FHWA-SA-02-054\
- FHWA Hydraulic Design Series No. 4, Introduction to Highway Hydraulics, 2008
- FHWA Manual of Subsurface Investigations, May 2002, FHWA NHI-01-031
- gINT© Manual
- Ground Improvements Reference Manual Volume I, FHWA-NHI-06-019
- Ground Improvements Reference Manual Volume II, FHWA-NHI-06-020
- Institute of Electrical and Electronics Engineer (IEEE) Standards
- International Mechanical Code
- International Telecommunication Union (ITU) Requirements
- ISO 9001 Quality Management Systems 2008
- Orndorff, Z. and W. Lee Daniels, “Final Contract Report: Delineation and Management of Sulfidic Materials in Virginia Highway Corridors,” Department of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, September, 2002.
- National Electric Code (“NEC”)
- National Electric Safety Code (NESC) Standards
- National Electrical Manufacturers Association (NEMA) Standards
- National Transportation Communications for ITS Protocol (NTCIP)
- NFPA 70 National Electrical Code, 2011 Edition
- Society for Protective Coatings (SSPC) Standards
- Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) Standards and Specifications
- U.S. Department of Agriculture Rural Utilities Service (RUS) 7 CFR 1755.900
- Underwriters Laboratories (UL) Standards

- Virginia Calibration Methods, October 2008
- Virginia State Noise Abatement Policy, July 13, 2011
- Virginia, Erosion and Sediment Control Law and Regulations
- Virginia SWM Law dated 2015(as listed in the Code of Virginia)
- Virginia SWM Regulations dated 2015 (as listed in the Virginia Administrative Code)
- Virginia Test Methods Manual, June 2010
- Virginia Uniform Statewide Building Code
- VDOT Land Use Permit Regulations Guidance Manual, Revised November 8, 2011
- VDOT CII/SSI Policy Guide For Employees, Vendors, Contractor or other Persons Accessing VDOT’s CII/SSI – March, 2006 (Interim Revision November, 2009)
- VDOT Clearance Chart (08-18-03)
- VDOT Conductor Cable and Conduit Sizes (08-18-03)
- VDOT DBE Program, March 15, 2007
- VDOT ITS Projects – Systems Engineering and Architecture Compliance (Rule 940) Checklist
- VDOT Northern Region Operations ITS Architecture
- VDOT Public Involvement Manual, revised November 26, 2012
- VDOT NRO Vehicle Detector Master Plan, June 13, 2008
- VDOT NRO CCTV Master Plan, May 2008
- VDOT NRO CCTV Concept of Operations, May 2008
- VDOT NRO Vehicle Detector Concept of Operations, May 14, 2008
- VDOT Virginia Megaprojects Program Lane Closure Policy and Procedures, April 23, 2012

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

Federal:

- c100ai03 General Project Requirements, Supplemental Specifications (SSs), Special Provisions (SPs) and Special Provision Copied Notes (SPCNs), 12-1-2011 (SPCN)
- S100B00 Project Communication and Decision Making for Design-Build Projects, January 3, 2005c, Reissued August 2009
- SS51202 Supplemental Section 512—Maintaining Traffic Design-Build Projects, December 2, 2009

Environmental:

- S107E02-0910 Volatile Organic Compounds (“VOC”) Emissions Control Areas, August 12, 2010

Geotechnical/Materials:

- S302B00-0708 Restoring Existing Pavement, January 14, 2008c

- S404B00-0708 Special Provision for Concrete Surface Color Coating
- SPCN c109g02-1209 Polymer Modified (PG 76-22 and PG 70-28) Asphalt Cement Adjustment, November 1, 2009
- SPCN c211gg0-0609 Section 211 Warm Mix Asphalt Pavement
- SPCN c248fg0-0708 Surface and Intermediate Mixes using Rap, January 14, 2008
- SPCN c315gg0-0609 Section 315 Warm Mix Asphalt Pavement
- Special Provision for Use of Domestic Material – February 26, 2009 (S102CF1)
- Special Provision for Design-Build Tracking (“DBT”) Numbers, June 4, 2015
- Special Provision for Hydraulic Cement, January 28, 2008
- Special Provision for Hydraulic Cement Concrete Admixtures, January 28, 2008
- SS21706 Hydraulic Cement Concrete, July 29, 2013
- SS40402 Hydraulic Cement Concrete Operations, December 17, 2010
- Special Provision for Jack and Bore for DB Projects, October 13, 2009
- Special Provision for Lime Modification of Soils, revised November 23, 2009
- Special Provision for Low Permeability Concretes For Design-Build Projects, September 6, 2009
- Special Provision for Planing Asphalt Concrete Pavement, December 2010
- Special Provision for Section 315 – Asphalt Concrete Pavement, November 25, 2009
- Special Provision for Section 317 – Stone Matrix Asphalt Concrete Placement, December 2, 2014
- Supplemental Specification – Section 248 — Stone Matrix Asphalt Concrete, April 1, 2012
- Supplemental Section 211—Asphalt Concrete, December 18, 2012
- Supplemental Section 515—Planing Or Milling Pavement, September 27, 2011
- C211hg0-1209 SPCN -Polishing Aggregate In Asphalt Concrete - Section 211—Asphalt Concrete, October 7, 2009
- Special Provision for Cold Planing (Milling) Asphalt Concrete Operations, September 27, 2011
- Supplemental Section 200—General, September 28, 2012
- Supplemental Section 207— Select Material, February 19, 2014
- Supplemental Section 208— Subbase and Aggregate Base Material, February 19, 2014
- Supplemental Section 303 – Earthwork, May 20, 2011c
- Special Provision for Micro Tunneling for Design Build Projects, September 14, 2009
- Special Provision for Crushed Hydraulic Cement Concrete January 14, 2008
- Special provision for Crushed Hydraulic Cement Concrete as Subbase and Aggregate base Material, October 1, 2015
- Special Provision for Elastic Inclusion for Design Build Projects, November 24, 2009
- Special provision for Needle-Punched, Non-Woven Geotextile Stabilization Fabric, October 1, 2015
- SPCN Crushed Glass, January 17, 2008

- Special Provision for Section 02768 - Hydraulic Cement Concrete Stamped, Colored & Reinforced, September 16, 2013
- Supplemental Section 212—Joint Materials, June 28, 2011
- Supplemental Specifications, Sec. 2.1.1 (c) – Soil Design Parameters for Sound Barrier Walls, Retaining Walls and Non-Critical Slopes, April 14, 2011
- Virginia Department of Transportation Special Provision for Sawing and Sealing Joints in Asphalt Overlays Over Jointed Concrete Pavements – October 31, 2008a
- Virginia Department of Transportation Special Provision for Density Control of Embankments and Backfill, Revised – November 26, 2006
- Virginia Department of Transportation Special Provision for Sealing Cracks in Asphalt Concrete Pavement or Hydraulic Cement Concrete Pavements (Prior to Overlay) – October 19, 2014
- Virginia Department of Transportation Special Provision for Undersealing Portland Cement Concrete Pavement – January 3, 1995
- Virginia Department of Transportation Special Provision for Low Density Cementitious Fill – June 24, 2011
- Virginia Department of Transportation Special Provision for Reflection Cracking Retardant Material (English Units) – March 22, 2010
- Special Provision Copied Note Section 515 – Planing Or Milling Pavement – October 8, 2015

Roadway/Drainage:

- SPCN c302h00-0708 Precast Drainage Structures, January 14, 2008
- Special Provision for Flowable Backfill, March 11, 2010
- Special Provision for Right of Way Monumentation and Final Boundary Stakeout, December 2, 2009a
- S107G01-0309 Storm Water Pollution Prevention Plan (“SWPPP”) General Permit for the Discharge of Storm water from Construction Activities Contractor and Subcontractor Certification Statement, February 19, 2009
- Special Provision for SWPPP General Information Sheets, September 3, 2014
- SPCN c107j12-1215 VPDES Construction Permits, October 26, 2015
- Special Provision for VPDES Construction Activities, October 26, 2015
- Special Provision for Section 244 – Roadside Development Materials, August 29, 2008
- Special Provision for Pipe Replacement, February 28, 2013
- Special Provision for Pipe Rehabilitation, July 30, 2015
- SS22101 – Supp. Sec. 221 – Guardrail – January 6, 2012

Structure & Bridge:

- Special Provision for Architectural Finish, Concrete Form Liners And Color Stain Coating, May 2, 2013
- Special Provision for Drilled Shafts Using Self-Consolidating Concrete for Design-Build and PPTA Contracts, April 15, 2013.

- Special Provision for Sound Barrier Walls/Architectural Finishes, February 18, 2016
- Special Provision for Concrete Surface Color Coating, July 2008
- SS40102-0912 Supplemental section 401—Structure Excavation April 17, 2012c
- SS22601-0609 Supplemental Section 226 - Structural Steel
- SS40603-0714 Supplemental Section 406 - Reinforcing Steel
- SS21402-0908 Special Provision - Hydraulic Cement
- SS21501-0908 Special Provision - Hydraulic Cement Concrete Admixtures
- SS21706-0214 Special Provision - Hydraulic Cement Concrete
- SS40404-0714 Special Provision - Hydraulic Cement Concrete Operations
- SS500A00-0708 Special Provision for Removal or Connection of Asbestos Pipe
- Virginia Department of Transportation Special Provision for Soldier Pile Retaining Walls – June 6, 2011
- Virginia Department of Transportation Special Provision for Hydraulic Cement Concrete Operations for Massive Construction – March 3, 2010
- Virginia Department of Transportation Special Provision for Asbestos Removal for Road Construction Demolition Projects – March 18, 2009
- Virginia Department of Transportation Special Provision for Design-Build Tracking (DBT) Numbers – February 8, 2008
- Virginia Department of Transportation Special Provision for Shotcrete and Permanent Concrete Facing – June 6, 2011
- Virginia Department of Transportation Special Provision for Secant Pile or Tangent Pile (Drilled Shaft) Walls – June 8, 2011
- Virginia Department of Transportation Special Provision for Permanent Soil Nails – June 7, 2011
- Virginia Department of Transportation Special Provisions for Mechanically Stabilized Earth Walls With Low Density Cementitious Fill (LDCF) – June 24, 2011
- Virginia Department of Transportation Special Provision for Densified Aggregate Piers for Foundation Reinforcement – June 24, 2011
- Special Provision for Mechanically Stabilized Earth Walls (Segmental Block Facing) for Design Build and PPTA Projects, December 17, 2012
- Special Provision for Mechanically Stabilized Earth Walls (Concrete Panel Facing) for Design Build and PPTA Projects, December 17, 2012
- Special Provision for MSE Walls (Modular Cantilever Facing), December 10, 2009
- Special Provision for Structure Demolition for Design Build and PPTA Projects, January 7, 2010
- Special Provision for T-Wall Retaining Wall System for Design-Build and PPTA Contracts, December 10, 2009
- Special Provision for Asbestos-Containing Soil, February 2, 2000
- Special Provision for Asbestos Removal And Neshap-Related Demolition Requirements For Structures On Design-Build Projects, June 22, 2009

- Special Provision for Corrosion Resistant Reinforcing Steel, January 24, 2012

Traffic Engineering:

- S704E02-1211 Type B, Class VI Pavement Line Marking, October 21, 2011
- S704F01-1209 Transitory Pavement Markers (“TPM”), December 12, 2009
- SPCN Locating, Removing and Disposing of Recessed Pavement Markers and Raised Snow-Plowable Markers, October 17, 2010
- SPCN Uniformed Flaggers, September 29, 2008a
- Special Provision for CG-12 Detectable Warning Surface, July 2008
- Special Provision for Emergency Preemption Equipment, August 10, 2010
- Special Provision for Preformed Thermoplastic Pavement Markings, November 29, 2011b
- Special Provision for Replacement of Pavement Line Markings, Pavement Markers and Loop Detectors, September 27, 2011
- Special Provision for Square Tube Steel Sign Post, March 3, 2008
- Special Provision for Temporary Construction and Permanent Pavement Markings, November 8, 2011
- Supplemental Section 703 – Traffic Signals, January 6, 2009
- Supplemental Section 701 – Traffic Signs, January 22, 2009c
- SPCN for Section 700.04 – Anchor Bolts, February 21, 2013
- SPCN for Section 700.04 – Concrete Foundations, April 2, 2004
- Special Provision For Signal Poles (Mast Arm Poles), August 1, 2012
- SS23401—Supp. Sec. 234 – Glass Beads For Reflect. Traff. Markings – October 16, 2014
- SS23802—Supp. Sec. 238 – Electrical & Signal Components – March 4, 2008
- SS24701—Supp. Sec. 247 – Reflective Sheeting – February 10, 2011
- S704E02 – Type B, Class VI Pavement Line Marking Tape – October 21, 2011
- SS70402—Supp. Sec. 704 – Pavement Markings & Markers 4-15-15
- Preformed Thermoplastic Pavement Markings 11-29-11b

Intelligent Transportation Systems:

- Special Provision for VDOT Intelligent Transportation Systems - Shoulder Lane Monitoring, March 23, 2012
- Special Provision for VDOT Intelligent Transportation Systems - Environmental Sensor Stations, August 26, 2013
- Special Provision for VDOT Intelligent Transportation Systems - Conduit, September 6, 2013
- Special Provision for VDOT Intelligent Transportation Systems - Ethernet Terminal Server, August 26, 2013
- Special Provision for VDOT Intelligent Transportation Systems – Junction Boxes, August 26, 2013

- Special Provision for VDOT Intelligent Transportation Systems – Video Detection, June 23, 2010
- Special Provision for Light Emitting Diode (LED) Roadway Luminaires – July 23, 2015 I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 238 – Electrical and Signal Components, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 510 – Relocating or Modifying Existing Miscellaneous Items, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 700 – General, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 703 – Traffic Signals, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 801 – Wiring and Surge Protection, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 802 – Reversible Roadway Gates, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 803 – Camera System, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 804 – Dynamic Message Signs, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 805 – Ethernet Switches, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 806 – Uninterruptible Power Supply, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 806 – Fiber Optic Communication, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 807 – Generator Assemblies, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 810 – Cabinet Assemblies, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 811 – Communication System Testing, February 17, 2016
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 813 – Dedicated Dynamic Message Signs, February 17, 2016

General Conditions:

- Special Provision for Field Office, November 24, 2009
- Special Provision for Section 105.02 – Plans and Working Drawings (Contract Management Software®), June 13, 2007
- I-95 Express Lanes Southern Terminus Extension Project Special Provision for Section 105 – Control of Work, February 17, 2016 (See I-95 Express Lanes STE Project SP package in ITS section)
- Special Provision for Section 301 – Clearing and Grubbing, November 15, 2006

- Special Provision for Work Zone Traffic Control Management for Design-Build, revised November, 2009
- SS52200 Supplemental Section 522—Partnering Design-Build Projects, revised June 1, 2012
- Special Provision for Construction Noise Control – June 28, 2007

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

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

Special Provisions included in this contract document or other Special Provisions approved by VDOT shall govern over the VDOT specifications, design standards and manuals. Special Provision Copied Notes approved by VDOT and requirements specified within the text of this RFP shall govern over both the Special Provisions and VDOT specifications, design standards and manuals. I-95 Express Lanes Southern Terminus Extension Project Special Provisions shall govern over VDOT Special Provisions and the VDOT specifications, design standards, and manuals.

2.1.2 RFP Information Package

An RFP Information Package will be provided to the point of contact for each short listed firm. The documents in the RFP Information Package are provided for information only. The Design-Builder shall verify information as needed. The RFP Information Package includes the following:

- Special Provisions, Special Provision Copied Notes, and Supplemental Specifications listed in Part 2, Section 2.1.1(c) above.
- ITS and Electrical Special Provisions and Specifications (Additional written requirements obtained from the 95 Express Lanes Concessionaire), dated February 17, 2016.
- RFP Conceptual Roadway and Drainage Plans, Revised, March 21, 2016
- RFP Conceptual ITS and Lighting Plan
- RFP Conceptual Signing and Pavement Marking Plan, Revised, March 21, 2016

- RFP Conceptual Erosion and Sediment Control Plan, Revised, March 21, 2016
- RFP Conceptual Front End Sheets
- Survey information as indicated in Part 2, Section 2.5.
- Sub-surface Utility information, South of the Garrisonville Road overpass, Revised, March 10, 2016
- Design Waivers as listed in Part 2, Section 2.1.3.
- Geotechnical Data Report (for roadway and soundwall), dated January 26, 2016.
- gINT files related to Geotechnical Data Report
- NEPA Document Re-evaluation, dated March 2016.
- Preliminary Environmental Document Re-evaluation for Plans, Specifications, and Estimates (PS&E) Authorization, dated March 2016.
- Preliminary Environmental Certification/Commitments Checklist, dated March 2016.
- Preliminary VDOT Permit Determination, dated March 2016.
- Preliminary Fish, Plant, and Wildlife Resources Clearance, dated March 2016.
- Air Quality Analysis Report, dated September 2011, along with follow-up clearance.
- I-95 HOT Lanes Project Preliminary Noise Analysis Final Report, dated August 2011.
- Southern Extension – I-95 HOT Lanes Acoustic Bat Survey and Habitat Evaluation, dated July 30, 2015.
- I-95 Express Lanes Southern Terminus Extension Traffic Operations and Safety Report, dated February 16, 2016.
- Architecture 940 Conformance Checklist.
- Approved Certification Request Form for use of Proprietary Products, dated February 9, 2016.
- Sample shop drawing for Type 1 DMS sign and walkway.

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

Supplemental information which is not deemed a component of the RFP can be provided to the Offerors upon request. Supplemental information includes previously developed as-built plans and shop drawings. These documents are solely for the information of the Offeror, which each Offeror may use at their own risk and as they deem appropriate. The Department does not represent or warrant that the information contained in the documents is suitable for designing the Project.

Previously developed incomplete plans and studies for this Project, which are not deemed a component of the RFP, can be provided to Offerors upon request. These documents are solely for the information of the Offeror, which each Offeror may use at their own risk and as they

deem appropriate. The Department does not represent or warrant that the information contained in the documents is suitable for designing the Project. Offerors interested in obtaining the previously developed documents should contact the Design-Build POC specified in Part 1, Section 2.4.

2.1.3 Design Exceptions and Design Waivers

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

VDOT has obtained the following design waivers, with respect to the RFP Conceptual Plans:

- Design Waiver Number 1 – Use of alternative shoulder pavement design and revised MC-4 requirements along 95 Express Lanes
- Design Waiver Number 2 – Use of 12-foot ramp lane width, 2-foot paved/4-foot total shoulder width, and revised GS-11 requirements along 95 Express Lanes
- Design Waiver Number 3 – Use of 10-foot paved/12-foot total left shoulder width and revised MC-4 requirements along I-95 GP Lanes

There are no anticipated design exceptions reflected in the RFP Conceptual Plans. However if during further development of the design the Design-Builder identifies the need for design exceptions or additional design waivers, the Design-Builder is required to either eliminate them through design improvements or apply for the appropriate design exceptions and/or waivers. The costs for preparation of design waivers or exceptions and any information needed to support these documents is the responsibility of the Design-Builder. Any schedule delays as a result of the approval process are the responsibility of the Design-Builder.

2.2 Mainline and Other Roadway Improvements

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

The Design-Builder is responsible for making the necessary improvements to the I-95 general purpose lanes and the 95 Express Lanes depicted on the RFP Conceptual Plans (contained in the RFP Information Package). The Design-Builder shall not reduce the length of the project limits or reduce the widths of the proposed pavement types from the design shown on the RFP Conceptual Plans. The Design-Builder shall reconstruct the existing emergency crossover at Station 2261+50. The Design-Builder shall close and demolish the existing emergency crossover at Station 2226+25.

Functional Classification

Interstate 95 and 95 Express Lanes are functionally classified as Rural Freeways. The VDOT geometric design standard that will be utilized for Interstate 95 and 95 Express Lanes will be GS-1 in rolling terrain with a minimum design speed of 70 mph.

The proposed 95 Express Lanes entrance, exit, and reversible lanes as shown on the RFP Conceptual Plans are functionally classified as Interchange Ramps. The VDOT geometric design standard that will be utilized for 95 Express Lanes ramps will be GS-R in rolling terrain. The southbound and reversible ramps shall be designed with a minimum design speed of 70 mph and the northbound ramp shall be designed with a minimum design speed of 50 mph. These lanes shall be constructed as 16-foot minimum width full strength travel lane pavement and 6-foot minimum width reduced strength shoulder pavement as shown in the RFP Conceptual Plans and as defined in Part 2, Section 2.6.1.

2.3 Structures and Bridges

2.3.1 General

Existing bridges on Route 610 over I-95 are located within the project limits. The Bridge Number of the EBL existing bridge is 6057 and Plan Numbers are 260-70, 260-70A, 260-70B and 260-70C. The Bridge Number of the WBL existing bridge is 6070 and Plan Number is 266-73.

Existing bridge class culvert Number 2009 is located within the project limits.

Existing bridge piers shall be evaluated in accordance with the requirements of the Manual of the Structure and Bridge Division Volume V Part 2, Chapter 15, File Number 15.06-1, AASHTO LRFD Bridge Design Specifications 7th Edition, 2014; and VDOT Modifications and the following:

- For the purpose of the Section C3.6.5.1 of AASHTO LRFD, assume that the twin bridges on Rte. 610 over I-95 are critical bridges and that AF_{HBP} is greater than 0.0001.

- Vertical and horizontal clearances under the existing bridge shall be in accordance with the requirements of the Manual of the Structure and Bridge Division Volume V Part 2, Chapter 6.

New bridge title sheets shall be submitted to show the new lane and shoulder configuration under the existing bridge and shall be prepared in accordance with the Structure and Bridge Division Volume V Part 2, Chapter 2.

Sound 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.

Sound wall posts shall not be spliced to soldier piles of retaining wall posts unless connection details are approved by the Department.

The Design-Builder shall provide a minimum of 30 days to VDOT to undertake verification and documentation of final as-built vertical and horizontal clearances under the existing bridges.

No traffic signs shall be attached to the existing bridge.

Details and drawings not specifically included in the Manual of the Structure and Bridge Division Volume V Series may only be included in the structural plans and working drawings after review and approval by The Department. 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 Department.

2.3.2 Superstructure

Section not applicable to this project.

2.3.3 Substructure

Section not applicable to this project.

2.3.4 Miscellaneous

Section not applicable to this project.

2.3.5 Structure Load Ratings

Section not applicable to this project.

2.3.6 Working Drawings

The Design-Builder shall review and approve working/shop drawings and submit three approved sets to VDOT for each structure. Reference should be made to Article 105.10 of Part 5

of the RFP. The working/shop drawings shall be approved by a registered, licensed, Professional Engineer in the Commonwealth of Virginia.

2.3.7 FHWA Bridge Construction Unit Cost Report

Section not applicable to this project.

2.3.8 Safety and Acceptance Inspection for the Proposed Structures

Section not applicable to this project.

2.3.9 Additional Bridge Design Criteria

Section not applicable to this project.

2.3.10 Railroad Crossing

Section not applicable to this project.

2.3.11 Retaining Walls

2.3.11.1 General Requirements

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 Volume V Part 11 Chapter 10 Earth Retaining Structures; and applicable sections of VDOT's Road & Bridge Standards, Vol. I & II and as specified in the Technical Requirements.

Should any standard for retaining walls 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.

Retaining walls at bridge abutments shall be designed for a minimum service life of 100 years.

Except for tie-backs required for the support of retaining walls, all components of the retaining walls shall be contained within the Department's right-of-way. Tie-backs for retaining walls may be located within permanent underground easements provided that such easements are approved by the Department.

MSE walls that require traffic protection at the top shall utilize barriers or railings on moment slabs.

Parapets located on top of MSE walls shall utilize low permeability concrete in accordance with current VDOT Specifications.

For maintenance of the area at the top of a tall wall, a VDOT standard HR-1 shall be required when all the following conditions exist:

- A possible fall will be 4 feet or more.
- Maintenance will be performed on the area at the top.

Existing or new retaining walls shall be analyzed or designed for any additional loads imposed by sign structure supports or other structures.

Mechanically stabilized earth (MSE) walls shall be selected from VDOT's fully approved panel MSE wall systems (for which special provisions are included in the RFP Information Package).

Parapets located on top of MSE walls shall utilize low permeability concrete in accordance with current VDOT Specifications.

2.3.11.2 Plan Submission

The Design-Builder shall submit a preliminary plan for each new or modified retaining wall. The Design-Builder shall not submit any final plans until the preliminary wall submittal has been approved by the Department. Final design efforts prior to the Department's preliminary plan approval shall be at the risk of the Design-Builder.

A retaining wall preliminary plan submittal shall include:

- 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, sound walls, sign structures, landscaping, irrigation systems, barriers, existing and proposed drainage structures, adjacent bridges etc.
- A preliminary geotechnical report completed in accordance with the requirements of Part 2, Section 2.6 Geotechnical.
- Where applicable, approval of the preliminary wall submittal shall be subject to the approval of an H&HA study and scour analysis.

Where retaining walls are located at bridge abutments, retaining wall plans, including preliminary plans shall be included in a bridge plan submittal.

2.3.12 Traffic Structures

In addition to Part 2, Section 2.9, the requirements of the section herein shall apply.

2.3.12.1 Existing Traffic Structures

The Design-Builder may reuse an existing traffic structure for proposed signs and ITS devices upon the submittal of documents which shall include a condition assessment based on field inspection, a listing of repair items required to address existing defects, and certification that the structure meets all current sign structure design criteria and is fully compliant with the Technical Information and Requirements and Special Provisions listed in Part 2, Section 2.1.1. Any existing structure that the Design-Builder proposes to reuse must also be certified for the identified loads, including a statement sealed by a Professional Engineer by the Commonwealth of Virginia that the reused structure is fully compliant with the Technical Information and Requirements and Special Provisions listed in Part 2, Section 2.1, including roadway. The Department Structure ID for any sign and ITS structure to be modified for reuse or to be removed shall be clearly shown on the plans.

The Department Structure ID for any existing sign may be obtained by contacting the Department Fredericksburg District Structure and Bridge Section. The Department Fredericksburg District Structure and Bridge Section shall be notified prior to the removal or relocation of any existing traffic structure.

2.3.12.2 Inspection of Traffic Structures

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.

The initial inspection will be performed by the Department. The Design-Builder shall provide the Department with Approved for Construction drawings and Working Drawings, including all revisions at least two weeks prior to scheduling the inspections.

During the initial inspection, data including but not limited to location, date completed, description, horizontal/vertical clearances, structure element description and condition and traffic safety features will be gathered.

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:

- 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.

Upon completion of the initial inspection, the Department 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 Department in writing, certifying the deficiencies have been corrected. Within 5 days of receipt of such certification, the Department 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.

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 Department.

2.4 Environmental

2.4.1 Environmental Document

FHWA has previously issued a NEPA decision for the Project. A copy of the Finding of No Significant Impact (FONSI)/Revised Environmental Assessment (EA) dated December 5, 2011, is included in the RFP Information Package. VDOT has prepared a re-evaluation of the original EA to verify that the 2011 FONSI decision remains valid. VDOT has also completed preliminary document re-evaluations for Plans, Specifications and Estimates (PS&E) Authorization (EQ-200) dated March 2016, and a preliminary Environmental Certification/Commitments Checklist (EQ-103) dated March 2016, which are included in the RFP Information Package. VDOT will complete a final document re-evaluation for PS&E Authorization (EQ-200) and final Environmental Certification/Commitments Checklist (EQ-103) prior to the VDOT Project Manager releasing the Project for construction. If the Project includes phased work packages, then final versions of these documents shall be completed prior to authorizing construction for each phase.

The Design-Builder shall carry out environmental commitments during design and construction, as applicable, as identified in the EA, the re-evaluation of the original EA, the PS&E Re-evaluation, and the Environmental Certification forms. All commitment compliance shall be supported by appropriate documentation, to be provided by the Design-Builder to VDOT.

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

The Design-Builder is solely responsible for any costs or schedule delays related to the permit acquisition, permit modifications, and NEPA document re-evaluations associated with

Design-Builder's design changes and no time extensions will be granted. All costs associated with complying with these requirements shall be included in the Offeror's Price Proposal.

2.4.2 Cultural Resources

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

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

2.4.3 Section 4(f) Resources

There are no 4(f) resources used by the Project as proposed.

2.4.4 Water Quality Permits and Compensatory Mitigation

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

The Design-Builder will be responsible for verifying permit requirements prior to construction. Regulatory agencies will make the final determination as to which state/federal water quality permits will be required during coordination with the Design-Builder.

It is anticipated that VDOT will acquire the Corps of Engineers (COE), Special Programmatic General Permit (SPGP) prior to July 15, 2016, based on the conceptual plans. The SPGP may be transferred to the Design-Builder upon both the transferee and the permittee supplying the COE and the Virginia Department of Environmental Quality (VDEQ) with a written and signed, by all appropriate parties, request to make the transfer. Such transfer will not be effective until written approval has been granted by the COE or VDEQ. It shall be the Design-Builder's responsibility to initiate and complete the transfer, to ensure that all conditions for a successful transfer are met, and to account for the time to acquire and transfer the permit in the Design-Builder's schedule.

It is also anticipated that VDOT will acquire the Virginia Water Protection (VWP) permit prior to July 15, 2016, based on the conceptual plans. The VWP permit may be transferred to the Design-Builder upon notification to the Board of the transfer, along with a written agreement

between the transferee and the permittee containing a specific date of the transfer. The written agreement shall also specify that the Design-Builder will become the responsible party for coverage and liability, including liability for compliance with the requirements of enforcement activities related to the permitted activity. It may take more than 15 days for the Board to take action. It shall be the Design-Builder's responsibility to initiate and complete the transfer, to ensure that conditions for a successful transfer are met, and to account for the time to acquire and transfer the permit in the Design-Builder's schedule.

Although the Department anticipates acquiring both the SPGP and VWP permits prior to July 15, 2016 as outlined above, the Design-Builder will not be allowed to make any assertions of schedule delays in the impact areas due to the non-acquisition of the permits, unless the permits are not acquired by September 30, 2016.

The SPGP and VWP permits were based off of the conceptual plans. Any deviations that the Design-Builder makes to the project footprint or scope may render the permits invalid, or may require modifications to the permits. The Design-Builder will be fully responsible for any re-permitting or permit modifications that may be required for the project. Should re-permitting or permit modifications be required, then the Design-Builder shall conduct the preliminary field assessment including, but not limited to, wetland delineation, stream assessment, and permit impact sketches. The Design-Builder shall also determine the required sequencing methodology to limit Project impacts to wetland systems. The Design-Builder shall utilize this information to obtain required permits.

It is anticipated that VDOT would have obtained any wetland and stream credits necessary for the SPGP and VWP permits prior to NTP. The previously obtained credits were sufficient compensatory mitigation for the wetland and stream impacts as shown on the conceptual plans. If the Design-Builder makes any deviation to the project footprint or scope as shown on the conceptual plans, then the Design-Builder shall determine any additional wetland or stream mitigations that may be required. In this case, the Design-Builder shall provide the required additional compensatory mitigation. The Offeror shall account for all costs associated with water quality permit acquisition, as well as compensatory mitigation, in its Price Proposal.

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

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

The Design-Builder shall ensure that Project schedules accommodate any Special Provisions, Time of Year Restrictions (TOYR), and the duration of permit acquisition from the regulatory agencies. The Design-Builder shall be responsible for adhering to permit conditions and Special Provisions, as identified in the permit authorizations including but not limited to

TOYR, avoidance and minimization recommendations, restoration of temporary impact areas, and countersinking culverts.

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

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

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

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

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

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

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

2.4.5 Threatened and Endangered Species

A search of the U.S. Fish and Wildlife Service (USFWS) database for Information, Planning, and Conservation System (IPaC) was conducted and found potential habitat for Harperella (*Ptilimnium nodosum*), Bald Eagle (*Haliaeetus leucocephalus*), and Northern Long-

ear Bat (*Myotis septentrionalis*). A field assessment for Harperella concluded no potential habitat within the project limits, and there are no documented Bald Eagle nests within 600 feet of the project limits. USFWS concurred with the results of the bat habitat evaluation and acoustic survey plan that the probability of the project study area supporting a viable population of northern long-eared bats is low and that this species is presumed absent. A copy of the Acoustic Bat Survey and Habitat Evaluation, dated July 30, 2015, is included in the RFP Information Package. The Acoustic Bat Study is valid for three (3) years until July 30, 2018. A copy of VDOT's preliminary Fish, Plant, and Wildlife Resources Form dated March 2016 is also included in the RFP Information Package.

The Virginia Department of Game and Inland Fisheries (DGIF) approved guidance on February 16, 2016, regarding both the little brown and tri-colored bats, which will be listed as State-Endangered on April 1, 2016. According to DGIF, there are no known hibernacula within the project area. However, summer surveys may identify roost trees that could be subject to conservation measures, as described in http://www.dgif.virginia.gov/wildlife/LBBA_TCBA_guidance.pdf, which could include a June 1 to July 31 Time of Year Restriction (TOYR) on tree removal. If tree removal is proposed within this TOYR, the Design-Builder shall be responsible for confirming with DGIF whether roost trees have been identified prior to proceeding with tree removal.

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

2.4.6 Hazardous Materials

It is not expected that hazardous materials and/or contamination is present within the Project area. However, if hazardous materials and/or contamination is found, the Design-Builder shall manage solid waste, hazardous waste, and hazardous materials in accordance with all applicable federal, state, and local environmental regulations and shall implement good housekeeping, waste minimization and pollution prevention practices.

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

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

The Offeror shall include in the Price Proposal all costs associated with complying with the above listed requirements.

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

2.4.7 Air Quality

The Project has been assessed for potential air quality impacts and conformity with all applicable Federal and state air quality regulations and requirements. The Air Quality Analysis Report, dated September 2011, along with the subsequent air quality clearance specifically for the Southern Terminus Extension Project which concluded that the September 2011 air study is still valid, are provided in the RFP Information Package. The Report identifies federal and state regulatory requirements that must be adhered to during construction of the project.

This Project is located within an area designated as being in attainment with all of the National Ambient Air Quality Standards (NAAQS). It is also located within a volatile organic compounds (VOC) and nitrogen oxides (NO_x) emission control area, so all reasonable precautions should be taken to limit the emissions of VOC and NO_x during construction of the project. In addition, the following Virginia Department of Environmental Quality (VDEQ) air pollution regulations must be adhered to during the construction of this project: 9 VAC 5-130-10 et seq., Open Burning restrictions; 9 VAC 5-45-760 et seq., Cutback Asphalt restrictions; and 9 VAC 5-50-60 et seq., Fugitive Dust precautions. The Design-Builder will be required to adhere to the limitations outlined in the Special Provision for VOC Emissions Control Areas.

Construction activities will be performed in accordance with the VDOT 2007 Road and Bridge Specifications. The specifications conform to the State Implementation Plan and require compliance with all applicable local, state, and federal regulations.

2.4.8 Noise Mitigation

A qualitative preliminary noise evaluation to address the southern terminus extension was performed by VDOT and a more-detailed review shall be completed by the Design-Builder

during final design. The qualitative preliminary evaluation determined the conclusions from the 2011 preliminary noise study are still valid. It was determined from the preliminary noise evaluation that mitigation measures are required for the Project. However, noise abatement measures that were found to be feasible and reasonable during the preliminary noise analysis may not be found to be feasible and reasonable during the final design noise analysis. Conversely, noise barriers that were not considered feasible and reasonable may meet the established criteria and be recommended for construction. A copy of the report *I-95 HOT Lanes Project Preliminary Noise Analysis Final Report* dated August 2011 is included in the RFP Information Package.

A Final Noise Abatement Design Report (NADR) shall be submitted to VDOT for review and approval. The Final NADR, consisting of a re-analysis of all noise sensitive receptors identified in the project area, will be required to confirm that noise mitigation is required.

Noise wall (noted as CNE NN), as shown on the RFP Conceptual Plans and the Preliminary Noise Analysis, shall be utilized for Proposal preparation purposes. As shown in the Preliminary Noise Analysis, the length of wall CNE NN is estimated to be 4,410 linear feet at an assumed maximum height of 20 feet. Therefore, 88,200 square feet shall be assumed for purposes of preparing the Price Proposal, and will be considered as the base square footage in which potential adjustments will be made as outlined below. The 88,200 square feet will be considered as the total exposed noise absorption area (surface area of exposed wall and posts facing the roadway). Foundations, wall structural supports, and wall panel areas below finished grade shall not be included in the square footage calculations. A post-award Final NADR, consisting of a re-analysis of all noise sensitive receptors identified in the Project area, will be required to confirm if noise mitigation is required. Based on results of the final noise analysis, one of the following scenarios will occur:

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

If the results of the Final NADR dictate; the Design-Builder will provide permanent noise mitigation in compliance with the Virginia State Noise Abatement Policy, the Highway Traffic

Noise Impact Analysis Guidance Manual (July 2015), FHWA, 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, and the Soil Design Parameters for Sound Barrier Walls, Retaining Walls and Non-Critical Slopes, and the (updated January 2016) VDOT Road Design Manual.

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

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

All noise barriers recommended for construction and concurred with by the Chief Engineer and FHWA are included in the scope of the Construction Project. This includes barriers with conditions, as long as those conditions have been met.

Prior to submitting a sound wall plan for the Department's review, the Design-Builder will have the noise consultant that completed the NADR review the plan set and certify that the proposed design meets the noise abatement requirements. This certification will be included in the plan set when it is submitted to the Department for review.

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

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

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

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

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

Sound barrier walls shall be designed (location, grading, drainage, etc.) with a 10 foot wide maintenance area behind the walls with access for personnel and equipment. The maintenance area shall be clear of trees and dense vegetation. The back of the sound barrier wall shall be a minimum of 10 feet from the existing VDOT right of way line.

A minimum 3 foot wide bench of a slope of 4:1 or flatter shall be provided at the front and back of the sound wall to allow for inspection and maintenance access. The bench shall be sloped away from the wall.

The color, texture, and finish of all sound barrier walls constructed on the Project (both the roadway side and the back side) shall match the color, texture, and finish of the existing walls along I-95 just north of the Garrisonville Road overpass. The Design-Builder shall submit sample panel(s) for review and approval by the Department, prior to installation of sound barrier panels for the Project.

Noise wall CNE NN shall be designed to accommodate the earth pressure associated with the fill, pavement, and live loadings of the future auxiliary lane to be constructed by others. Additionally, positive drainage shall be provided along the soundwall. The bottom of wall profile along the front and back faces of the sound barrier wall shall be designed to accommodate a future auxiliary lane to be designed and constructed by others. The Design-Builder shall be responsible for constructing any additional embankment (up to finished grade) and retaining wall panels to accommodate the future auxiliary lane. Drainage ditches and inlets shall be set such that the auxiliary lane can be constructed without adjusting the locations or elevations of these drainage features.

Sound barrier walls shall be located a minimum of 37 feet from the Interstate 95 edge of the existing right travel lane. Minimum barrier system offsets to the noise barriers shall be 4 feet plus the dynamic deflection zone for the Design-Builder's selected barrier system, as specified in the VDOT Road Design Manual, Appendix I.

Access shall be provided via overlapping wall gaps and access doors for VDOT maintenance personnel. Four (4) overlapping wall gaps shall be provided reasonably close to the locations shown on the Conceptual Plans. Gaps shall be provided in the walls with a minimum 3:1 ratio of barrier overlap (gaps shall have a 10-foot minimum clear width). Additionally, any continuous wall lengths greater than 900 linear feet shall be provided with an access door at approximately half the distance of the continuous wall length. Sound barrier wall design shall also be coordinated with first responders to ensure access to fire hydrants and other emergency equipment.

Special Provision for Sound Barrier Walls / Architectural Finished, June 1, 2015.

Access doors will be determined prior to fabrication, with review and approval of VDOT maintenance staff.

Personnel access doors at locations shown on the plans shall have:

- A minimum inside frame dimension of 48-inches by 86-inches;
- Stainless steel hardware, industrial grade pull handle;
- A deadbolt lock with key on both sides;
- Open away from I-95;
- A minimum 4-ft by 4-ft 4-inch thick concrete pad on both sides of the door; and
- Match color and material for sound barrier wall doors north of Garrisonville Road.

2.4.9 Environmental Compliance

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

The Design-Builder shall be responsible for any schedule delays and associated costs as a result of any delays and/or shut downs associated with non-compliance. Any monetary fines associated with violations and/or any environmental restoration activities required to resolve violations shall be the responsibility of the Design-Builder.

The Design-Builder shall carry out environmental commitments during design and construction, as applicable, as identified in the EA, the re-evaluation of the original EA, PS&E Authorization (EQ-200), and the Environmental Certification/Commitments Checklist (EQ-103). All commitment compliance shall be supported by appropriate documentation, to be provided by the Design-Builder to the VDOT Project Manager.

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

2.5 Survey

The Design-Builder is advised that the preliminary field survey and utility data provided with the RFP Information Package is not represented to be complete and/or accurate for purposes of design and construction of the Project.

The current aerial mapping product extends from 1600 feet north of Aquia Creek to Centreport Parkway to the south and approximately 800 feet from the center line of the travelway in both the east and west directions. The date of the original mapping is unknown, and was provided to a licensed survey consulting firm in May of 2011, in order to integrate mobile LiDAR data into the product. Mobile LIDAR was performed and the additional data supplemented with the existing data, and was provided to 95 Express Lanes in early 2012. Storm as-built data (unknown date) is available from just north of the Garrisonville interchange, extending to the north terminus of the project. The mapping product does not appear to have been field rectified. Preliminary field survey and utility data have been obtained, including, but not limited to the following:

- Vertical control (Based on NAVD88 Geoid 1999)**
- Horizontal control (Based on NAD83-1999)**VDOT Project Coordinates
- Planometrics from fixed wing aerial mapping
- Storm drainage as-builts along some portions of the project
- R/W lines and limited property line information
- Utilities Level B sub-surface utility investigation South of the Garrisonville Road overpass
- TIN file

The Department will provide a new mapping product to the Design-Builder prior to the due date for the RFP Price Proposal. The new mapping product will supersede the current mapping product, and shall be considered when developing the final Price Proposal. The new mapping product will contain the following:

- Vertical control (Based on NAVD88 Geoid 2012A)
- Horizontal control (Based on NAD83-US Survey Foot)
- Planometrics from aerial LiDAR, low-level photogrammetry, and field shot topography
- Storm drainage as-builts along impacted areas
- VDOT right-of-way lines (but no property lines adjoining the right-of-way)
- Utilities Level B sub-surface utility investigation, South of the Garrisonville Road overpass
- Digital Terrain Model and TIN file

The Design-Builder's scope of work shall include performing all other surveying and utility designation that is necessary to design and construct the Project in accordance with VDOT's Survey Manual. The Design-Builder shall be responsible for obtaining any additional survey data, including all right-of-entry and land use permits, locating and/or designating underground utilities, digital terrain model (DTM), utility test holes and obtaining other related data necessary for the design, limited access revisions, and construction of the Project.

The Virginia Code 33.2-1011 requires that Notice of Intent letter “shall be sent to the owner by mail, at the address recorded in the tax records, **not less than 15 days prior** to the first date of the proposed entry. Notice of intent to enter shall be deemed made on the date of mailing.” “The notice shall include the anticipated date such entry is proposed to be made and the purpose of such entry.” Advance notification of property owners is required for all data collection efforts related to the development of highway plans. Copies of the letters and address labels shall be provided to the VDOT Project Manager for forwarding to the District Survey Manager as soon as they become available for VDOT approval.

Additionally, the Design-Builder will be responsible for any update (property owner changes, subdivisions, etc.) that may occur; updates need to be reflected on the plans in order to acquire right of way and complete the final design. Any survey changes shall be verified and certified, and submitted in final documentation.

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

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

2.6 Geotechnical Work

VDOT has completed a preliminary geotechnical subsurface investigation for this Project. The results of the investigation are presented in the Geotechnical Data Report dated January 26, 2016, which is included in the RFP Information Package.

The data included in this RFP is being provided for Offeror’s information in accordance with Section 102.04 of Division I Amendments (Part 5). The Design-Builder shall perform a design-level geotechnical investigation to validate and augment the geotechnical information included in this RFP. The geotechnical engineering investigation performed by the Design-Builder shall meet or exceed both Chapter III of the VDOT Material Division’s Manual of Instructions (MOI); the current AASHTO LRFD *Bridge Design Specifications*, 6th Edition, 2012 and VDOT Modifications; and Section 700.04 (c) of the VDOT 2007 Road and Bridge Specifications. Standard penetration test borings shall be performed for all trenchless crossings at both the launch and receiving pits and at no greater than 100-foot spacing along the alignment of the crossing to a minimum depth of 2 pipe diameters below the proposed invert for all crossings of 36-inch diameter or greater. A boring location plan showing all proposed explorations shall be approved by the Department prior to initiation of the final/design geotechnical investigation.

The Design-Builder shall collect appropriate data for geotechnical evaluation of pavements, embankments, soil and rock cuts, culverts, structures (retaining/mechanically stabilized earth, sound walls, storm water management facilities, traffic structures, minor

structures including drainage pipes, and any other earth-supported or earth-retaining structures or elements of highway design and construction required for this Project.

The Design-Builder will be responsible for obtaining all necessary permits and utility clearances as required by VDOT, the Commonwealth of Virginia, or any other jurisdictional body or owner prior to accessing public or private property for the purpose of conducting geotechnical field work and shall provide the necessary traffic control in accordance with the Work Area Protection Manual. The Design-Builder shall complete laboratory tests in accordance with pertinent ASTM or AASHTO standards and analyze the data to provide design and construction requirements. Soils, rock, aggregate, asphalt, concrete and other materials tests shall be performed by a laboratory accredited through the AASHTO Accreditation Program (AMRL and CCRL) for each test it conducts for the Project, unless otherwise approved by VDOT.

The Design-Builder shall provide VDOT with all records of subsurface explorations and describe the soils encountered and their depth limits in accordance with the requirements outlined in Chapter III of the VDOT Materials Division MOI. The Design-Builder shall provide to VDOT electronic copies of all subsurface explorations in accordance with the boring log template available on the website included in Chapter 3 of the VDOT Materials Division MOI. The electronic files shall be provided by a certified professional geologist or a suitably qualified registered professional engineer in the Commonwealth of Virginia, in gINT© software. The gINT© file for the borings contained in Geotechnical Engineering Data Report, dated January 26, 2016, are provided in the RFP Information Package.

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

The Design-Builder shall submit to the VDOT for its review all geotechnical design and construction memoranda and/or reports that summarize pertinent subsurface investigations, tests, and geotechnical engineering evaluations and recommendations utilized in support of their design/construction documents. This submittal shall be made at least sixty (60) days in advance of the submittal of any final design/construction documents that are dependent upon the geotechnical evaluations and recommendations. Technical specifications for construction methods that are not adequately addressed in the Standard Specifications shall be provided by the Design-Builder as part of the final design/construction documentation. Prior to submittal of any final design/construction documentation, the Design-Builder shall review the final design/construction documents to assure that it appropriately incorporated the geotechnical components and shall submit evidence of this review to accompany the final design/construction documentation. The Design-Builder shall reference the drawings that incorporate the pertinent

results. The Design-Builder’s Quality Assurance and Quality Control (QA/QC) Plan shall document how each specific geotechnical recommendation or requirement will be addressed in the final design/construction documentation. The results of the geotechnical investigation and laboratory results shall support design and construction efforts to meet the requirements outlined in this Section.

2.6.1 Minimum Pavement Sections

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

All travel lane and shoulder pavements shall be constructed or resurfaced in accordance with the pavement criteria below:

| Facility | Minimum New Travel Lane Pavement Requirements | Minimum Existing Pavement Resurfacing Requirements | Minimum New Shoulder Pavement Requirements |
|-----------------|--|---|---|
|-----------------|--|---|---|

| Facility | Minimum New Travel Lane Pavement Requirements | Minimum Existing Pavement Resurfacing Requirements | Minimum New Shoulder Pavement Requirements |
|---|--|--|--|
| Pavement Areas Adjacent to Existing I-95 GP Lanes (Southbound Sta. 2193+00.00 to 2221+12.43) (Northbound Sta. 3200+00.00 to 3229+62.56) | <ul style="list-style-type: none"> • <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E • <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A • <u>Base</u>: minimum 11.0 inches of Asphalt Concrete Base Course BM-25.0A • <u>Drainage</u>: 3.0 inches of Stabilized Open Graded Drainage Layer (OGDL) • <u>Subbase</u>: 6.0 inches of Cement Treated Aggregate (CTA) | <ul style="list-style-type: none"> • 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"> ○ <u>Milling Existing Pavement</u>: minimum 4.0 inches ○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E ○ <u>Wedge and Leveling</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A • 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"> ○ <u>Milling Existing Pavement</u>: minimum 2.0 inches ○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E | <ul style="list-style-type: none"> • Same as Minimum New Travel Lane Pavement Requirements • Paving adjacent to guardrail shall be in accordance with the Design Waivers listed in Section 2.1.3 |

| Facility | Minimum New Travel Lane Pavement Requirements | Minimum Existing Pavement Resurfacing Requirements | Minimum New Shoulder Pavement Requirements |
|---|---|---|---|
| 95 Express Lanes Pavement Areas Not Adjacent to Existing I-95 GP Lanes (Southbound Sta. 2221+12.43 to 2232+59.00) (Northbound Sta. 3225+42.59 to 3233+39.99) (Reversible Sta. 2232+59.00 to 2310+83.74 and 82+92.43 to approx. 121+00) | <ul style="list-style-type: none"> • <u>Minimum Width</u>: 16 feet • <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E • <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A • <u>Base</u>: minimum 11.0 inches of Asphalt Concrete Base Course BM-25.0A • <u>Drainage</u>: 3.0 inches of Stabilized OGDL • <u>Subbase</u>: 6.0 inches of CTA | <ul style="list-style-type: none"> • 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 part of the previously built stub-out behind existing concrete barrier and not currently 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"> ○ <u>Milling Existing Pavement</u>: minimum 2.0 inches ○ <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E | <ul style="list-style-type: none"> • <u>Minimum Width</u>: 6 feet • <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM-12.5E • <u>Intermediate</u>: minimum 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A • <u>Subbase</u>: 21.0 inches of Aggregate Base Material, Type 1, Size No. 21B • Paving adjacent to guardrail shall be in accordance with the Design Waivers listed in Section 2.1.3 |
| Emergency Crossover | The existing emergency crossover pavement shall be demolished and reconstructed to the following depths and materials: <ul style="list-style-type: none"> • <u>Surface</u>: 2.0 inches of Asphalt Concrete Surface Course SM- 12.5E • <u>Intermediate</u>: 2.0 inches of Asphalt Concrete Intermediate Course IM-19.0A Subbase: 6.0 inches of Aggregate Base Material, Type 1, Size No. 21B | | |

Widening of existing lanes shall provide for lateral drainage of the proposed pavement layers by providing OGDL connected to a standard UD-4 edgedrain placed beneath the outside edge of the paved shoulder. The OGDL and CTA layers shall be placed at a constant thickness over the entire width of the proposed widened travel way and shoulder pavements.

Widening of the existing GP lanes shall be accomplished by full depth saw cutting a minimum one (1) foot inside the existing edge of pavement. All pavement widening shall be performed in accordance with standard WP-2. All existing underdrains shall be removed and replaced beneath the outside edge of the new pavement, and all existing cross-drains shall be extended to daylight or connected to a storm drainage structure.

The minimum pavement sections shall be based upon the following criteria: (a) a minimum soil CBR value of 5 within 3 feet of subgrade (therefore all imported fill material used within 3 feet of subgrade shall have a minimum CBR value of 5), (b) all subgrade is compacted in accordance with the applicable sections of the Road and Bridge specifications and applicable special provisions and, (c) all unsuitable materials have been removed or modified in accordance with Section 2.6.3. Pavement designs shall be performed in accordance with AASHTO Design of Pavement Structures (1993) guidelines and Chapter VI of the Materials MOI (2011).

The minimum pavement sections require that proper grading be maintained to direct surface water away from paved areas and to provide for efficient runoff from surrounding areas. Any utility excavations or excavations for storm drains within pavement areas shall be backfilled with compacted structural fill in accordance with applicable sections of the VDOT 2007 Road and Bridge Specifications and applicable Special Provisions.

VDOT guidelines specify that edgedrains/underdrains be provided for all pavements with daily traffic volumes in excess of one thousand (1,000) vehicles per day. Therefore, standard UD-4 edgedrains shall be required for all pavements on this project. The OGDL shall be connected to a standard UD-4 edgedrain placed beneath the outside edge of the paved shoulder. Standard UD-4 edgedrain shall not be placed under travel way pavement. Modified UD-1 underdrain shall be provided in lieu of standard UD-4 edgedrain for pavement sub-drainage in areas of high ground water, springs or cuts in excess of fifteen (15) feet; the modification consists of wrapping the aggregate with geotextile drainage fabric. Standard Combination Underdrain (CD-1) shall be provided at the lower end of cuts. Standard Combination Underdrain (CD-2) shall be provided at grade sags, bridge approaches, and at the lower end of undercut areas.

Temporary Pavement

The Design-Builder shall be responsible for any temporary pavement design. Temporary pavements shall be designed in accordance with the AASHTO Guide for the Design of Pavement Structures (1993 edition) and the VDOT Materials Division's Manual of Instructions. All temporary pavement designs shall be submitted to VDOT for review. All temporary pavement shall be completely removed once it is no longer in service. All temporary pavement designs for 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
- 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

2.6.2 Geotechnical Requirements

Embankments, cut slopes, and certain aspects of retaining wall design are not addressed by LRFD. Embankments and cut slopes shall be designed in accordance with Section 305 of the VDOT Materials Division’s MOI. Embankments and cut slopes shall be no steeper than 2H:1V unless supported by engineering analyses based on site specific field investigation and site specific laboratory strength testing. Slopes steeper than 2H:1V shall be approved by the Department. All embankments and cut 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 responsible for verifying the stability of all slopes, including those retained by structures.

Problem soils such as Potomac Formation clays or silts shall be analyzed for short-and long-term stability using residual strength parameters determined from laboratory shear testing. These parameters shall be determined by drained direct shear tests using sufficient stress reversals to obtain large strains as discussed in the 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).

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

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

2.6.3 Unsuitable Materials

Unsuitable Material is defined as material used as embankment fill, and in cut areas to a depth of at least three (3) feet below subgrade directly beneath pavements and at least two (2) feet beneath the bedding of minor structures and laterally at least two (2) feet beyond the outside edge of the pavement shoulders and bedding limits of the minor structures that meets one or

more of the following criteria: classifies as CH, MH, OH and OL in accordance with the Unified Soil Classification System (USCS); contains more than five (5) percent by weight organic matter; exhibits a swell greater than five (5) percent as determined from the California Bearing Ratio (CBR) test using VTM-8; exhibits strength, consolidation, durability of rock or any other characteristics that are deemed unsuitable by the Design-Builders' geotechnical engineer or as denoted in the Contract Documents for use in the Work. All materials within the uppermost three (3) feet of a pavement subgrade that exhibits a CBR value less than that stipulated in the pavement design shall also be considered unsuitable.

The anticipated locations and methods of treatment for unsuitable materials identified by the Design-Builder's qualified geotechnical engineer shall be shown on the design plans and cross sections. 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.

Saturated or very dry and/or loose or very soft coarse- and fine-grained soils that exhibit excessive pumping, weaving or rutting under the weight of construction equipment are also considered unsuitable unless they can be moisture conditioned through either mechanical or chemical means to an acceptable moisture content that allows adequate compaction to meet project specifications, and classification testing indicates they are not otherwise unsuitable. Topsoil, peat, coal and carbonaceous shale shall also be considered unsuitable material. All unsuitable material shall be disposed of and/or treated as discussed in Section 106.04 of the VDOT 2007 Road and Bridge Specifications at no additional cost to the Department. 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.

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.

2.6.4 Chemically Aggressive Soil Conditions

The potential presence of chemically aggressive soils (CAS) and potentially chemically aggressive soils (PCAS) have been reported within the project limits per the Geotechnical Data Report for I-95 Express Lanes Southern Extension (January 26, 2016). 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.

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.

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

Mitigation measures (singularly or in combination) that may be considered by the Design-Builder 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.

2.6.5 Control of Rock Blasting

2.6.5.1 Blasting Control

While not extensively anticipated, rock excavation may be required to construct this Project. If the Design-Builder elects to use explosives to remove rock, the Design-Builder shall include as part of the design team a blasting consultant, approved by the Department, with a minimum of 5-years experience developing blasting plans and providing oversight of blasting operations on highway projects in rock having comparable geologic lithology. A resume to include qualifications and relevant experience of the person responsible for review of blasting plans and oversight of blasting operations shall be submitted to the Department for approval before review and approval of the blasting plans. The consultant shall review the blasting plans used by the blasting contractor to verify it includes the results of blasting on a test section. The consultant shall make regular visits to the site as excavation progresses to verify that the plan need not be modified. The Design-Builder may utilize an in-house blasting expert to perform the role of the blasting consultant providing they meet the same minimum requirements as the blasting consultant noted above, have been approved by the Department and are not directly involved in the development of the blasting plans.

2.6.5.2 Test Blast

The Design-Builder's blasting consultant shall design a test blast that replicates the intended "weight per delay" and number of charges typical for a production blast. Seismic monitoring shall be provided for the test blast that includes monitoring points in proximity to the blast and at distances removed from the blast. Seismic records from the test blast shall be used to determine the regression of velocity and acceleration at various distances from the test blast. These data shall be used to control the weight per delay as the blasting program progresses. Provide results from test blast program to VDOT prior to production blasting.

2.6.5.3 Vibration Control

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

2.6.5.4 Coordination and Review by Design-Builder's Geotechnical Engineer

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

2.6.6 Pipe Installation Methods

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

2.7 Hydraulics

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

The ultimate proposed conveyance system (inclusive but not limited to culverts, stream realignment, and outfall conveyance channels through the project area) shall be designed by the Design-Builder to meet all applicable hydraulic requirements, including current Federal Emergency Management Administration (FEMA), Federal Highway Administration (FHWA), and VDOT guidelines as described in the VDOT Drainage Manual, (including current Errata Sheet), Hydraulic Design Advisories and applicable I&IMs.

This project is considered grandfathered under 9VAC25-870-48 in Part II of the VSMP Regulations and VDOT Method IIC applies for water quality control.

2.7.1 Drainage

The drainage work shall include the design and construction of culverts and culvert connections, junction boxes, manholes, open channels, storm sewer systems with curb opening inlets, underdrains, and structures, downstream channel and flood protection measures, stormwater management facilities, and erosion and sediment control measures in compliance with the standards and reference documents listed in Part 2, Section 2.1 and the VDOT Erosion and Sediment Control and Stormwater Management Programs.

The Design-Builder shall 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 Department.

All pipe culverts and storm sewer pipe for the Project shall conform to the allowable pipe types per standard PC-1. The Design-Builder shall provide VDOT two (2) paper and two (2) electronic copies on compact disc (CD) of a final drainage report incorporating all drainage calculations including pre and post development discharges, capacities, and supporting data such as drainage areas (with maps), ground cover calculations, etc. in accordance with the documentation requirements as outlined in the VDOT Drainage Manual. The Final Design Documentation for any hydraulic design shall be sealed and signed in accordance with latest IIM-243.

The Design-Builder shall assemble and review all available data, studies, and development plans impacting the Project corridor for use in preparing the drainage design. The Design-Builder shall perform a hydrologic analysis within the limits of the Project and extend the analysis to include all offsite areas that will drain through or impact the Project.

For the analysis required by the Minimum Standard-19 (MS-19) ESC Regulations, if the Design-Builder includes the effect of existing upstream SWM Basins for peak runoff attenuation, the Design-Builder shall obtain approval per Section 8.3.2.8 of the VDOT Drainage Manual. If the effect of upstream detention is considered in the projects MS-19 compliance, the Design-Builder shall be required to obtain existing site development plans and proof that the basins have adequate capacity for peak discharge attenuation. The Design-Builder shall ensure the existence of SWM maintenance agreements for each of these facilities. The drainage calculations shall include an analysis that demonstrates that even with the inclusion of upstream detention all MS-19 requirements are met for each outfall and that all concerns listed in Section 8.3.2.8 of the

VDOT Drainage Manual have been addressed. All site development plans, maintenance agreements, and other documents associated with the upstream basins shall be made a part of the final drainage report. The final SWM plan will also need to be shared with the local Municipal Separate Storm Sewer System (MS-4) permittee (Stafford County).

In the case that upstream detention is not considered, the Design-Builder will provide for on-site detention at outfall locations where the increase in flow increases flooding impact to downstream properties and shall include an analysis that demonstrates that with on-site detention all MS-19 requirements are met.

The Design-Builder shall design and install new drainage facilities and will be permitted to use existing drainage systems that have adequate structural and hydraulic capacities, in accordance with applicable standards and specifications set forth Part 2, Section 2.1.1.

All existing drainage facilities within the Project Right of Way that are 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 ultimate land use conditions at the Design-Builder's cost. The Design-Builder shall evaluate and verify the structural adequacy of such existing drainage facilities which will be impacted by the project design and construction.

Where the existing drainage facilities do not meet either criteria above, the existing drainage facilities shall be plugged and abandoned in accordance with VDOT Road and Bridge Standard PP-1, removed, or replaced with adequate structures designed and constructed in support of the Design-Builder's final drainage design. Offerors should note that VDOT has not assessed the structural condition of the existing culverts and storm sewer pipes within the Project limits and does not warrant its structural adequacy. If after award the Design-Builder investigates the structural condition of the affected existing drainage facilities, and as a result proposes use (or repair) of some or all, then it shall be done only with VDOT's approval. The Design-Builder shall assess the structural condition of the structures by performing a visual/video inspection of the existing pipes and culverts utilizing the assessment criteria for Post Installation Inspections presented in VDOT Supplemental Specification 302. The Design-Builder shall provide VDOT with an inspection report documenting their assessment following the methodology as prescribed in the supplemental specification. The report shall include a certification from the Design-Builder's structural engineer attesting to the structural adequacy of the structures and specific recommendations relative to improvements to the structural condition and serviceability of the structures. The Design-Builder shall provide the report to VDOT for review and approval prior to proceeding to final design. With VDOT's approval, culverts deemed repairable shall be rehabilitated in accordance with VDOT's guidelines including, but not limited to those methods outlined in Chapter 8, Section 8.3.6.7 of the VDOT Drainage Manual and Special Provisions SU302001B Pipe Rehabilitation and SU302002A Pipe Replacement.

For the purposes of developing the Price Proposal, the Offeror shall assume that the existing drainage pipes and culverts within the Project limits which are a functional element of the proposed final drainage design, are in serviceable condition from a structural aspect (Note that this assumption does not apply to the hydraulic adequacy of the pipes and culverts, and does

not apply if the Design-Builder proposes to add fill above the current fill height over the existing pipes and culverts). If after award the Design-Builder determines that the serviceability of the existing pipes and culverts requires rehabilitation or replacement of some or all of the structures, then it shall be done only with VDOT's approval under a work order. Replacement of pipes and culverts required as a result of hydraulic inadequacy or as a result of additional fill placed above the current fill height over the existing pipes and culverts shall be included in the Offeror's Price Proposal, and will not be accomplished under a work order.

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 otherwise approved by the Department.

All existing culverts, storm sewer, and drainage appurtenances to be abandoned shall be removed or plugged and abandoned in accordance with VDOT Road and Bridge Standard PP-1.

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 any private property.

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

2.7.2 Stormwater Pollution Prevention Plan (SWPPP)

A SWPPP, including, but not limited to, an Erosion and Sediment Control (ESC) Plan and Narrative, a Pollution Prevention (P2) Plan, and a post construction Stormwater Management (SWM) Plan shall be prepared and implemented by the Design-Builder in compliance with applicable requirements of the standards and reference documents listed in Part 2, Section 2.1 including the Virginia Erosion and Sediment Control Law and Regulations and the Virginia Stormwater Management Program (VSMP) Law and Regulations. In order to meet key construction dates, VDOT will provide for the Design-Builder an approved Phase 1 Erosion and Sediment Control plans for the clearing and grubbing phase.

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

variance or exception respectively must be requested through the District Drainage Engineer in accordance with the latest versions of IIM-LD-11, IIM-LD-195, and IIM-LD-251.

The Department will obtain prior to NTP a VPDES General Construction Permit for the Discharges from Construction Activities (VPDES Construction Permit) based on the RFP Conceptual Erosion and Sediment Control Plan and preliminary SWPPP. The Design-Builder shall review the VPDES Permit and has the option to use the approved activities under the VPDES Permit. Should the Design-Builder select to revise the approved activities, the Design-Builder shall complete and submit a revised ESC and SWM Plan per the requirements indicated in the paragraph below. The Design-Builder shall provide VDOT two (2) paper and two (2) electronic copies each on CD of the final ESC Plan and Narrative, P2 Plan and post construction SWM Plan incorporating all calculations, analysis, documentation and evaluations required. The ESC Narrative shall specifically include calculations (with supporting data) documenting that the design meets the water quantity requirements for downstream channel flood protection in the ESC Law and the VSMP Regulations, as appropriate, for each location where stormwater is discharged from the Project site.

If the Design-Builder selects to revise the approved Erosion and Sediment Control Plans, the Disturbed Area, or the information provided on the approved LD-445 forms, the Design-Builder is responsible for providing to the Department the necessary information and funds for revising the permit coverage for the Project. The Design-Builder shall be responsible for all fees necessary for coverage under the VPDES General Construction Permit. The Design-Builder shall review the applicable sections of the VPDES Construction Permit Registration form (LD-445), VPDES Construction Permit Contact Information (LD-445A), VPDES Construction Permit Fee Registration form (LD-445B). These forms along with the completed ESC and SWM Plan Certification form (LD-445C) and a check in the amount of the permit fee made payable to the Treasurer of Virginia shall be submitted to the VDOT Project Manager. The VDOT Project Manager will review the submitted information and, if complete and acceptable, process a request for coverage under the VPDES Construction Permit in accordance with VDOT's guidelines as outlined in the latest version of IIM-LD-242. If any information submitted by the Design-Builder is found to be incomplete and/or unacceptable, the assembly will be returned to the Design-Builder for corrective action and resubmission.

A revised working conceptual ESC and post construction SWM Plan and SWPPP for the entire Project must be submitted for review and approval with the initial application for permit coverage. This revised conceptual Plan submittal shall include the proposed total expected Land Disturbance Area and Land Development Area, including any off-site facilities, for the entire Project. Where the Project will be constructed in segments, the Design-Builder shall submit a finalized ESC Plan, a post construction SWM Plan and a P2 Plan, including the expected Land Disturbance Area, for the proposed initial work segment in addition to the conceptual plan for the entire Project. It is expected that the individual work segment submittals will be self-sustaining and not incur a deficit in post construction SWM design requirements requiring mitigation on future work segments. Subsequent work segment submittals shall include required modifications to the Land Disturbance Area value. However, these modifications, in total, shall not exceed the initially submitted Land Development Area value. The Design-Builder shall

accept all risk to the schedule and cost for revising the RFP Conceptual Erosion and Sediment Control Plan or the Disturbed Area.

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

2.7.3 Post-Construction Stormwater Management Facilities

The Design-Builder shall be responsible for the design and construction of stormwater management facilities as required for the Project in accordance with IIM-LD-195.8, and the other standards and reference documents listed in Part 2, Section 2.1 including the Virginia Stormwater Management Program Law and Regulations, and shall comply with the minimum geotechnical requirements contained therein. Performance Based Methods shall be used for determining post construction phosphorous removal and treatment requirements. For BMPs in series the pollutant bypass in terms of pounds of phosphorous per year shall be used as the pollutant inflow plus the pollutant loading from any sub-basin draining directly to the BMP.

VDOT has identified potential locations for post construction stormwater management facilities as part of the RFP Conceptual Plans. However, these locations are preliminary and have not been fully evaluated to determine if these locations are suitable, feasible or sufficient to address all of the stormwater management requirements of the project. The Design-Builder, as part of their final design, shall evaluate these locations, and if found acceptable, develop a final post construction stormwater management plan.

No stormwater management facilities, including basins or manufactured BMP units, are allowed within the median area north of Garrisonville Road unless as shown in the RFP Conceptual Plans. No stormwater management facilities are allowed within the median area south of Garrisonville Road that precludes an additional fourth lane both Northbound and Southbound to be constructed in the median of the I-95 GP Lanes.

If any of the locations are found to be unacceptable, the Design-Builder must identify other acceptable location(s) to meet the post construction stormwater management requirements of the Project. The Design-Builder is to insure proper ingress and egress to any stormwater

management facility and that any specific proprietary facilities have proper maintenance details included in the Record (As-Built) Plans.

VDOT has purchased 6.2 lbs of nutrient credits per year to meet an estimated 25% of the Project phosphorus removal requirements as described in IIM-LD-251. The Design-Builder, as part of their final design, shall develop a final post construction SWM plan for the Project. Any changes in the scope or footprint of the established basic project concept, proposed by the Offeror and acceptable to VDOT, may require additional analysis to be performed by the Design-Builder at their cost.

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

2.7.4 Other Drainage Requirements

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

For connections where a new pipe is required between the culverts underneath the Southbound and North Bound lanes and where the height of fill is over 20 feet, a minimum diameter of 60-inches shall be used per the VDOT Drainage Manual Section 8.3.6.6.

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

2.7.5 Relocated Stream Channel

The Design-Builder shall relocate the stream channel at the toe of fill of the 95 Express Lanes Southern Terminus Extension along the southbound lanes from approximately Station 2195+50 to 2200+00. The relocated stream shall be in accordance with the Virginia Drainage Manual Section 7.2.3, Section 7.3.5, Section 7.5.4, and guidelines in the current version of the FHWA HEC-20.

The relocated stream shall match the minimum sinuosity of the downstream natural channel section and shall include a riparian buffer, a 5 feet maintenance bench at the toe of the proposed fill, and at least one riffle and pool section. The design of the relocated channel and in-stream

features shall meet minimum criteria in the current Virginia Stream Restoration and Stabilization Best Management Practice Guide. The Design-Builder shall prepare a detailed plan and profile with cross sections of the relocated channel, including details for in-stream measures, a riparian planting plan, and a phased erosion and sediment control plan for approval by VDOT. The plan view of the relocated channel shall include proposed contours.

2.8 Landscaping

Section not applicable to this project.

2.9 Traffic Control Devices

The Project shall include all Traffic Control Devices (TCD), including temporary and permanent installation of the following: signage, guardrail/barrier, pavement markings/markers, lighting, and intelligent transportation systems. All TCD designed and installed under the Project shall be in accordance with standards and references in Part 2, Section 2.1. The Signing and Pavement Marking Plans, Intelligent Transportation System (ITS) Plans, Lighting Plans, and Transportation Management Plan (TMP), including Temporary Traffic Control and Traffic Operations Plans are required from the Design-Builder for final approval by VDOT and shall be included as planned work package(s). The Design-Builder shall comply with the Special Provision for Personnel Requirements for Work Zone Traffic Control and the Special Provision for Work Zone Traffic Control Management, Design-Build Projects.

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

All Traffic Structures except gates shall be located as to not preclude a future fourth lane widening towards the median of the I-95 GP Lanes (both Northbound and Southbound), and to not preclude a future second Express Lane and shoulder on the west side of the 95 Express Lanes. Overhead signs shall be designed and constructed such that required horizontal and vertical clearances will be maintained from the future travel lanes. ITS poles, cabinets, and other devices shall be designed and constructed to be outside the future construction footprint.

2.9.1 Signs

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

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

All signs and sign structures to be removed during the construction of the Project shall be disposed of by the Design-Builder. Temporary relocation of signs may be necessary as part of

this Project and it is the responsibility of the Design-Builder to perform all the required sign relocations.

All new, replaced, and relocated overhead signs shall be evaluated for illumination in accordance with IIM-TE-380. All instances of “should be provided” in IIM-TE-380 shall be considered as “shall be provided” unless otherwise approved by VDOT. The sign lighting shall be designed and constructed in accordance with VDOT Traffic Engineering Design Manual, Section V – Roadway Lighting, Chapter 4, Section 4.5.1, VDOT 2008 Road and Bridge Standards, VDOT Road and Bridge Specifications, Section 705, and the MUTCD. All conductor/communication cables shall be in conduit and junction boxes; no direct burial cable allowed. Power cables and communication cables shall be in separate conduit systems.

2.9.1.1 Limits of Project Signing

The Design-Builder shall replace all existing ground mounted and overhead mounted signage that are affected by the Project and install new signing within the Project limits, including signs outside the Project limits that are necessary to lead traffic to the Project. Any signing on adjacent roadways beyond the Project limits that require relocation, replacement, or modification due to the proposed design shall be the responsibility of the Design-Builder.

Only existing signs which meet current MUTCD and VDOT standards may be reused as a part of this Project.

2.9.1.2 Signing Plan Requirements

The signing plans shall be prepared at a one (1) inch = fifty (50) feet scale when plotted full size at thirty-five (35) inches by twenty-three (23) inches. The signing plans shall show the proposed sign message, MUTCD or Virginia Supplement sign designation (if applicable), size and location of all signs. The structure type used for mounting sign shall be noted on the signing plans. These signing plans shall show the location and messages of all existing signs. All existing sign removals shall be shown on the signing plans.

Additionally, 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 Part 2, Section 2.10. The Sign Unveiling Plan shall be coordinated with the events of the Traffic Management Plan and the opening schedule of the completed lanes. Both plans shall be approved by VDOT and Transurban 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. VDOT and Transurban will coordinate with the Design-Builder to provide a permitted timeframe to implement these plans.

2.9.1.3 Design of Sign Panels and Locations

VDOT has provided a preliminary sign design and layout plan in the RFP Conceptual Signing and Pavement Marking Plan. The Offeror shall include all overhead and Express Lane Entrance signs as shown on the RFP Conceptual Plan in the Price Proposal.

Proposed and replaced sign panels shall be in accordance with the VDOT 2007 Road and Bridge Specifications and other references in Part 2, Section 2.1. Overhead sign structures shall be located, designed, fabricated, and constructed in accordance with applicable standards and specifications. The Design-Builder shall coordinate all sign locations with all proposed and existing signing, landscaping, fencing, signals, utility, drainage, and all other roadside features to assure proper clearances and adequate sight distances. Sign sizes shall adhere to the latest edition of the FHWA Standard Highways Signs Book, the current edition of the MUTCD, the 2011 Virginia Supplement to the 2009 MUTCD, and all applicable Traffic Engineering Division Numbered memoranda. All Advance Guide Signs shall be mounted on overhead sign structures; Supplemental Guide Signs may be ground mounted. No signs shall be mounted on bridges.

The Design-Builder shall use Standard VDOT sign structures for new and relocated signs. Ground-mounted sign structures on I-95 shall use Standard SSP-VIA or SSP-VA structures, unless otherwise approved by VDOT. For all non-standard signs, the Design-Builder shall use GUIDSIGN software to design the sign panels. The Design-Builder shall utilize the current edition of the MUTCD, 2011 Virginia Supplement to the 2009 MUTCD, the FHWA's Standard Highway Signs including Pavement Markings and Standard Alphabets to design all non-standard signs that do not have a MUTCD or VDOT standard sign designation. Clearview font will not be allowed as an alternative lettering style for this project.

Prior to obtaining VDOT approval of final signing plans, the Design-Builder shall coordinate the permanent location of sign structures and all proposed, relocated, or modified with Integrated Directional Signing Program (IDSP) signs such as Supplemental Guide Signs (SGS), Specific Travel Services (Logo) Signs, General Motorist Services Signs (GMSS), Tourist Oriented Directional Signs (TODS), and all other signs approved and maintained as part of the IDSP. All impacts to IDSP signs shall be reviewed and approved by the IDSP Manager before relocation, fabrication, and installation. Whenever possible all proposed, relocated, or modified IDSP signs shall not be installed in sign assemblies with other non-IDSP signs. IDSP signs shall be installed on 2 ½ inch square tube posts and concrete foundations in accordance with Standards STP-1, Standards SSP-VA structures and foundations, or Standards SSP-VIA structures and foundation as appropriate and as approved by the IDSP Manager. The Design-Builder is responsible for costs associated with removal and replacement of IDSP signs.

Longitudinal BMP features such as bio-retention swales shall be clearly delineated by signs/markers for maintenance purposes at the beginning and end of the feature.

The Express Lanes signage scheme shall:

- Support the integration of the Express Lanes with the existing road network
- Facilitate navigation of the road network, including access to, travel along and egress from the Express Lanes,

- Be consistent with the existing directional and regulatory signing system on the existing road network and the I-95 Express Lanes.

The types of signage that constitutes directional and Express Lanes signage include:

- Advance direction signs
- Advance exit signs
- Exit direction signs
- Reassurance signs (static and dynamic)
- Permission signs

New full span sign structures and foundations shall be designed to accommodate an additional static sign load of 200 sq. ft. for future use.

The Design-Builder shall design, furnish, and install one span structure to accommodate an additional static Type 1 DMS sign with walkway as shown in the RFP Conceptual Plans. The actual DMS sign and associated wiring will be installed by others and is not part of the project. The Design-Builder shall provide the location of this future sign in the structure drawings for review and acceptance by VDOT. The Department will provide a representative shop drawing for design purposes. Additional static sign loading of 200 sq. ft. for future use shall not be applicable to this sign structure.

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 or adjust 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 shall be reinstalled in their permanent locations prior to Final Acceptance.

The Design-Builder shall be responsible for coordination with VDOT or the pertinent local agencies or jurisdictions in order to install directional signage, including, without limitation, obtaining all applicable Regulatory Approval.

The Design-Builder shall provide the necessary guide, warning and regulatory signs for the Project.

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 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 etc. – for VDOT’s review and comment, prior to relocation.

The Design-Builder shall modify or remove existing signs and structures that are rendered inaccurate, ineffective, confusing or unnecessary. The Design-Builder shall obtain VDOT’s approval prior to making any such changes.

The Design-Builder shall identify all existing signage impacted by the 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 Project, the Design-Builder shall provide comprehensive structural analysis for VDOT's review and written comment prior to the commencement of design in accordance with Part 2, Section 2.3.12. 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 standards and references in Part 2, Section 2.1.1, to replace the existing sign structures and signs.

The Design-Builder shall place milestone 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. 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.

For signing along the mainline, 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 a design waiver/exception from VDOT to reduce the spacing.

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.

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.

2.9.2 Signals

Section not applicable to this project.

2.9.3 Guardrail/Barrier

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

The Design-Builder shall be responsible for installing, replacing, or upgrading any existing guardrail/barrier on the 95 Express Lanes within the Project limits currently designed for one-way traffic operations to allow for two-way traffic operations.

All Transurban traffic structures (cabinets, sensors, poles, etc.) shall be shielded from traffic by an approved barrier system at all times. Prior to removing the existing Concrete Traffic Barrier Service at the Garrisonville Road exit, the Design-Builder shall show the sequence of shielding the existing infrastructure in the Traffic Management Plans defined in Part 2, Section 2.10. After removal from its current location, the existing Concrete Traffic Barrier Service shall be delivered to:

Virginia Department of Transportation
Express Lanes Maintenance Yard
Immediately off of U.S. Route 1, just north of the Occoquan River Bridge
Lorton, VA 22079

Fourteen (14) days prior to installation of guardrail the Design-Builder shall request VDOT field verification of the proposed layout. Accompanied by the Design-Builder, VDOT representative will inspect the locations and advise on any necessary adjustments. Additionally, the Design-Builder shall provide a copy of the manufacturer's recommendations for installation of all guardrail terminals to the VDOT Project Manager before the installation of any guardrail end treatment of terminating device.

2.9.4 Pavement Markings/Markers

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

Pavement markings shall be Type B, Class VI, patterned preformed tape. Raised Snow-Plowable Pavement Markers shall be installed along I-95 GP Lanes, 95 Express Lanes, and at ramp gore areas in accordance with the standards and references in Part 2, Section 2.1. All permanent markers shall be raised snow-plowable markers.

All existing pavement markings and markers that do not conform to the final traffic patterns shall be eradicated and removed in accordance with Part 2, Section 2.6.1 and the standards and specifications listed in Part 2, Section 2. 1.

The Design-Builder shall install a minimum of two (2) EZ-Pass logo pavement markings for the proposed northbound entrance ramp. The final location shall be shown in the signing and striping plan for approval by VDOT. Details of the EZ-Pass logo are included in the RFP Information Package.

The Design-Builder shall install channelizing posts at the proposed emergency crossover to discourage unauthorized use. The channelizing posts shall be installed at 5 feet on center and shall be located outside the clear zone of all roadways or between the guardrail terminals where guardrail is provided as clear zone shielding.

2.9.5 Intelligent Transportation Systems

The Design-Builder shall be responsible for the design and installation of an Intelligent Transportation System (ITS). Intelligent Transportation Systems may also be referred to as Electronic Toll and Traffic Management (ETTM) Systems in other project documents.

2.9.5.1 Definitions and Abbreviations:

Definitions and abbreviations as indicated below are in addition to those noted in Part 4.

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.

Commissioning - means the systematic verification of each component or system of the Design-Build Project in question is physically complete, checked, calibrated and safe for initial operation.

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 Transurban. The Design-Builder shall be responsible for this test and shall be accountable for successful and on-time execution of this test.

Level B Testing – The objective of this test is to certify roadside equipment is successfully integrated with Transurban’s Tolling and Traffic Management System (TTMS) network via executing test plans and procedures approved and witnessed by Transurban. The Design-Builder shall be responsible for this test and shall be accountable for successful and on-time execution of this test.

Level C Testing – The objective of this test is to certify Transurban’s TTMS platform can communicate and control roadside equipment via executing test plans and procedures defined by Transurban. Transurban will be responsible for this test and the Design-Builder shall support Transurban for successful and on-time execution of this test.

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.

Service Commencement - means the opening of the Project, or one direction of traffic, for normal and continuous operations and the safe use by the travelling public.

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, the Department or Transurban to manage and control traffic.

EXPRESS-OC – Express Lanes Operation Center

NRO – VDOT Northern Region Operations

ATMS – Advanced Traffic Management System

MPSTOC – McConnell Public Safety and Transportation Operations Center

2.9.5.2 Existing ITS Roadside Equipment and Infrastructure

Existing ITS roadside equipment and infrastructure is located within the project limits. Portion of the ITS roadside equipment and infrastructure is owned and maintained by VDOT while other portions are owned and maintained by Transurban.

Existing ITS roadside equipment installed under permit with VDOT and Transurban may include, but is not limited to, the following equipment located within the Project Right of Way:

- Weather stations;
- DMS for the existing Express Lanes and GP Lanes to provide general traffic management and Express Lanes regulatory information;
- Express Lanes access gates;
- Ramp meters;
- CCTV cameras;
- Traffic monitoring sensors; and
- Fiber optic cables.

The Design-Builder shall relocate existing VDOT and Transurban ITS roadside equipment located within the 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.

VDOT and Transurban will remain responsible for the operations and maintenance of the existing and relocated VDOT and Transurban ITS roadside equipment, respectively.

2.9.5.3 System Design Documentation

The following system design documentation shall be prepared and submitted to VDOT by the Design-Builder:

Technical Specifications - shall be a document or documents that specify the technical design of the roadside equipment that will comprise the ITS System and its interfaces, including reversible operations and gate control.

Test strategy – shall establish the principles of, and the Design-Builder’s approach to, the testing of the ITS system and the interfaces, including the test stages and processes.

2.9.5.4 CCTV Video Coverage

Dedicated CCTV cameras shall be provided for the following functions:

- Surveillance of the Express and GP Lanes including, approaches and interchanges
- AID on the Express Lanes

CCTV video coverage must be provided by PTZ CCTV cameras mounted on poles to enable EXPRESS-OC operators and VDOT operators to observe traffic within the limits of the Express Lanes at all hours of the day and in all weather conditions normally encountered in Virginia, consistent with reported visibility restriction (i.e., during snow storms, fog, etc.). The video provided must be stable, jitter-free, and suitable for video-based AID.

The Design-Builder shall replace existing cameras that are disturbed by the Project.

Dedicated cameras shall be provided for surveillance of the Express Lanes or to enable video-based AID under EXPRESS-OC operator control.

CCTV line-of-sight distances shall provide for full CCTV coverage of the 95 Express Lanes and I-95 GP Lanes without image degradation. The CCTV cameras shall be placed at a minimum mounting height of fifty (50) feet.

All cameras installed by the Design-Builder shall meet the requirements of Special Provision for Section 803 – Camera System, as included in Part 2, Section 2.1.

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.

The video provided must be stable at all zoom settings when viewing objects up to one mile away.

2.9.5.5 Video-based AID

The Design-Builder shall implement video-based AID for the Express Lanes at locations

where:

- Roadway gates are installed,
- Traffic enters or exits Express Lanes,
- The risk of traffic incidents is expected to be higher than average, and
- Rapid detection of incidents is required for special reasons, such as near critical infrastructure.

The video-based AID system should be compatible to the existing EXPRESS-OC Traffic Management System and capable of:

- 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;
- Detecting pedestrians on the roadway within the field of view of an AID camera or other equipment, as specified;
- A false alarm rate of less than one false alarm per 10 true alarms; and
- Detecting incidents and providing an alarm to the EXPRESS-OC and the NRO MPSTOC in less than 30 seconds

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.

2.9.5.6 Video Recording

It shall be possible to simultaneously record video from CCTV cameras, as designed, at a rate of at least one frame per second.

Sufficient capacity must be provided to store the recorded video from CCTV cameras for a duration determined by VDOT and continue to record video without intervention.

2.9.5.7 CCTV Communications Standards

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).

2.9.5.8 Traffic Monitoring Sensors (Microwave Vehicle Detectors)

Traffic monitoring sensors are to be installed to monitor and report in real-time traffic volume, lane occupancy and speed data on the Express Lanes and, where applicable, the GP Lanes. Such sensors shall enable VDOT to monitor the performance of the Project corridor.

Information collected on the GP Lanes and Express Lanes shall be made available for integration into the existing 95 Express Lanes systems. Data will be provided in raw form and be subject to quality control requirements prior to submittal to VDOT. Data shall be aggregated in increments to be mutually agreed.

Traffic monitoring sensors shall be installed by the Design-Builder approximately every 1/3 mile on the Express Lanes. Traffic monitoring sensors shall also be installed at the same spacing to cover both the Northbound and Southbound GP Lanes. Under unusual circumstances or in specific situations, longer spacing may be used as long as data collection and operational requirements are met. Additionally, traffic monitoring sensors shall cover GP lane's entry and exit points to and from the Express Lanes.

Traffic monitoring sensors shall be installed on ITS poles based on the manufacturer's recommended mounting heights. 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 95 Express Lanes and GP Lanes wherever possible.

2.9.5.9 DMS

The toll and driver information (T&DI) DMS for the Express Lanes shall be located at strategic locations for the Express Lanes and will display information to allow drivers to make decisions on whether to use the Express Lanes. The locations are shown on the RFP Conceptual Plans.

DMS cabinet shall be placed in front of DMS at a distance such that the technician can read the message displayed on the DMS while working at the DMS cabinet. Each T&DI or traffic management 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 EXPRESS-OC and the NRO MPSTOC.

2.9.5.10 Communications Infrastructure

The existing communications infrastructure must remain in place or be replaced in kind, as specified in the standards and specifications set forth in Part 2, Section 2.1.

Communication between the ITS Equipment and the ETTM Facilities 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:

- Local Express Lanes trunk fiber optic loop
- Local Express Lanes distribution fiber optic loop(s)
- Redundant switch equipment

The local Express Lanes trunk and distribution fiber optic loops shall be comprised of new fiber optic cable.

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 toggle bolts/washers for manhole covers, and installing manhole covers without manhole hook holes to eliminate rodent entry.

The new communications conduit bank for the Project shall consist of 2 four-inch diameter PVC conduits with the following configuration:

- One trunk four inch conduit and one distribution four inch conduit containing a 3-barrel textile inner duct carrying:
 - A 36-fiber Express Lanes distribution cable (installed in one (1) four inch conduit)
 - A 36-fiber Express Lanes trunk cable (installed in one (1) four inch conduit)

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.

The Design-Builder shall install a conditioned communications hub cabinet at each end of the project limits to house Layer 3 switches. The hub cabinets shall serve as the termination and connection points for the trunk fiber creating a ring topology around the distribution layer. In addition, the Design-Builder shall provide Uninterruptible Power Supply (UPS) back-up power for the operations of the designated communications hub cabinets.

The Design-Builder shall coordinate with Transurban to determine which fibers will need to be spliced to the existing 95 Express Lanes fiber to provide connectivity to the Express Lanes Operations Center. The Design-Builder shall be responsible for providing the necessary switch capacity and optics to support connectivity to the existing infrastructure.

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.

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.

The Design-Builder shall furnish and install new ITS equipment cabinets for exclusive use to support the Express Lanes devices. Existing VDOT equipment cabinets shall not be used.

The Design-Builder shall furnish and install new conduit for exclusive use to support the Express Lanes ITS equipment. Existing VDOT conduits shall not be used.

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 805.

2.9.5.11 Power

The Design-Builder shall design, install, connect, and maintain electrical power service to sustain all operations for the ITS System, including all other facilities required for the Project.

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 final project completion.

The Design-Builder shall be 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 Project.

The Design-Builder shall install and have connected power service for new or relocated lighting (sign, roadway, and interchange) for the Project.

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.

The power supplies for the Express Lanes ITS Equipment shall be separately metered. The power supplies for existing 95 Express Lanes roadside equipment and infrastructure must remain in service at all times.

Where approved by VDOT and where capacity is available, new Express Lanes lighting, ITS and TMS roadside equipment may be connected to existing VDOT electrical service panels if separately metered.

The Design-Builder shall provide generator back-up power for the operations of the gate systems which includes the reversible gates, the pricing confirmation DMS sign, CCTV cameras, and other Express Lanes ITS if part of the gate system. In addition, the Design Builder shall provide Uninterruptible Power Supply (UPS) back-up power for the operations of the designated Gate DMS and the pricing confirmation DMS.

Vehicle access shall be provided at each generator site for refueling.

Phase taping of electrical conductors shall not be permitted unless approved by the VDOT. Electrical conductors shall have a continuous colored jacket between connection and termination points.

2.9.5.12 Roadway Gates

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 points such that vehicles cannot go around a closed gate. Installed length of gates shall consider pavement markings, gore areas, and ramp widths. The Design-Builder shall submit a complete gate arm length schedule table for review and approval as a part of the Design Documentation.

A gate cabinet shall be placed at locations where the technician 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 an operator in the EXPRESS-OC and the NRO MPSTOC.

2.9.5.13 Maintenance Access

All RSE cabinets, foundations, concrete pads, and junction boxes shall be installed at elevations and locations with safe access. Handrails shall be installed for protection at locations with fall hazards.

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. 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 or communication junction boxes shall be 500 feet.

2.9.5.14 Specified New ITS Roadside Equipment

New ITS roadside equipment for use on the 95 Express Lanes system shall be the following specified equipment. To ensure the equipment will be compatible with the existing 95 Express Lanes systems, substitutions are not allowed. The following items were approved in the approved certification request form for proprietary products dated February 9, 2016.

| 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 | Moxa iWatch 100 (SNMP) | latest |
| Layer 3 Switch | Cisco 3750X-12S-E | latest |

| Device | Equipment Make/Model | Firmware Version |
|-------------------------------------|---|------------------|
| Layer 2 Switch | RuggedCom RS900G-HI-D-2SFP-C01 | 3.12.1 |
| N-Port Device Server | Moxa IA5250A | latest |
| CCTV (PTZ) | Cohu 3960HD (New pole mount)/HD35-1000 | 3.02.185 |
| Automatic Incident Detection Camera | Cohu 3930/HD15-1001 | 1.96.87 |
| Microwave Vehicle Detection | Wavetronix Smart Sensor HD | 154.5 |
| DMS (3-line, Freeway) Type b | *Daktronics VF-2420-27x90-66-A | 1.9.4588.19 |
| Gate Vertical Rise | B&B VW-4 | N/A |
| 170 Controller | VDOT Gate Firmware | VDOT |
| Uninterruptible Power Supply | Blue Earth UP Stealth UPS (SNMP) (500W Battery) | latest |

Notes:

*Firmware version indicates Equipment Make and Model Numbers required for seamless integration into existing Kapsch software

*DMS type and size shall be verified with the project requirements, design and specifications

*Generator type and size shall be verified with the project requirements, design and specifications

VDOT supplies gate firmware

2.9.5.15 Integration with existing 95 Express Lanes Systems

The Design-Builder shall be responsible for managing and scheduling the work related to the design, procurement, installation, testing, and integration of the Roadside Equipment and related infrastructure, including active coordination and engagement with both VDOT and Transurban throughout the entire project duration. The Design-Builder shall be responsible for ensuring that milestones and all related predecessor activities are being met and reviews are requested from either VDOT or Transurban to meet schedule requirements. Transurban will be responsible for supporting the Design-Builder to complete integration of the Roadside Equipment with the existing traffic and tolling management systems.

2.9.5.15.1 Design-Builder and System Integrator Responsibilities

- Design-Builder Scope
 - Design-Builder shall serve as the Designer of Record and have overall responsibility for management and delivery of the entire Project.
 - Design-Builder shall be responsible for ensuring that the RSE and necessary integration milestones are fully incorporated and integrated into the overall Project schedule.

- Design-Builder shall be responsible for the interface management necessary to ensure that the civil and integration scopes of work are properly coordinated with other activities.
 - Design-Builder shall be responsible for the design, supply and construction of all civil works necessary for the installation of RSE, including utilities (new service and relocations), drainage, foundations, TMS structures (e.g. poles), roadside cabinets, TMS equipment access points, and roadway barriers required to protect TMS equipment.
 - Design-Builder shall be responsible for the design, supply, installation and on-site testing of TMS RSE, including dynamic messaging signage, microwave vehicle detectors, CCTV cameras, and automated incident detectors.
 - Design-Builder shall be responsible for the design, procurement, installation, testing and commissioning of the fiber optic communications backbone along the entire project length and connections to the Express Lane Operations Center.
 - Design-Builder shall be responsible for design, procurement, installation, testing, and commissioning of all power and communications cabling and network equipment deemed necessary (by Transurban) to support the TMS equipment, structures and roadside cabinets.
- Transurban Scope
 - Transurban will be the system integrator with specific and limited responsibilities related to the provision, installation, testing and commissioning of the TMS subsystems.
 - Transurban will be responsible for providing the performance requirements and specifications for the TMS subsystems (including associated roadside equipment) to the Design-Builder.
 - Transurban will be responsible for the final commissioning of the TMS Roadside Equipment, and integrating the TMS Roadside Equipment with the Express Lanes Operations Center and other subsystems.

2.9.5.15.2 Traffic Management System Scope Clarification Table

| Class | Item | Responsibility | Comment |
|--------------|-------------------|-----------------------|--|
| Civil Works | Utilities | Design-Builder | Service connections and utility relocations necessary to install and operate roadside equipment and associated infrastructure (e.g., lighting, cabinets, etc.) |
| Civil Works | Other Civil Works | Design-Builder | Necessary drainage, retaining walls, barrier structures, protective structures, equipment access points and parking areas. |

| Class | Item | Responsibility | Comment |
|----------------------------|--|-----------------------|--|
| Civil Works | Foundations for TMS Sign Structures and Other Equipment Structures | Design-Builder | Footings and conduits necessary for communications and power cabling as per Transurban and Design-Builder provided equipment requirements. |
| Civil Works | Foundations for TMS Roadside Cabinets. | Design-Builder | Footings and conduits necessary for communications and power cabling as per Transurban and Design-Builder provided equipment requirements. |
| Telecom & Cabling | Wide Area Communications Network and Cabling (Communications “Backbone”) | Design-Builder | Fiber optic telecommunication network (trunk and distribution) along the full length of the Project, connected to all roadside cabinets. Minimum of two connections from this network to Express Lanes Operations Center. |
| Telecom & Cabling | TMS Roadside Cabling | Design-Builder | All communications cabling for the TMS devices – from equipment (sensors) mounted on gantries/poles/other to the junction box in the footing of the gantries, then to the technical shelter and/or cabinets. Terminations of TMS equipment within technical shelters or roadside cabinets. |
| Electrical Power & Cabling | TMS Roadside Equipment Cabling | Design-Builder | Power supply and all distribution cabling and conduits necessary for the operation of the TMS roadside equipment and associated technical shelters and/or cabinets. Includes conduits and cabling from the junction box located in the footing of gantry to the technical shelter and/or cabinets. Placement, layout, and sizing of generators to provide back-up operating power and/or uninterrupted power supply equipment. Final design and installation of associated equipment, including site access. |
| TMS Roadside | Overhead and Dynamic Signage | Design-Builder | Placement, layout, sizing, and configuration of overhead and roadside dynamic messaging or pricing signage. Final design and construction of approved signage. Performance specifications, functional requirements and/or minimum quantities provided by Transurban and/or VDOT to be confirmed and finalized by the Design-Builder. |

| Class | Item | Responsibility | Comment |
|--------------|---|-----------------------|--|
| TMS Roadside | Closed Circuit TV Cameras (Pan-Tilt-Zoom) | Design-Builder | Placement, layout, sizing, and configuration of CCTV cameras. Final design, installation, and site-testing of approved cameras configuration. Performance specifications, functional requirements and/or minimum quantities provided by Transurban and/or VDOT to be confirmed and finalized by the Design-Builder. |
| TMS Roadside | Automated Incident Detectors | Design-Builder | Placement, layout, sizing, and configuration of AID devices. Final design, installation, and site-testing of approved AID configuration. Performance specifications, functional requirements and/or minimum quantities provided by Transurban and/or VDOT to be confirmed and finalized by the Design-Builder. |
| TMS Roadside | Traffic Sensors and Detectors | Design-Builder | Placement, layout, sizing, and configuration of traffic sensors and detectors. Final design, installation, and site-testing of approved sensor/detector configuration. Performance specifications, functional requirements and/or minimum quantities to be provided by Transurban and/or VDOT. |
| TMS Roadside | Gantry, Pole and/or Mounting Structures | Design-Builder | Placement, layout and installation of: <ul style="list-style-type: none"> o TMS Gantries o Monopoles and/or other mounting structures o Lighting, including power supply |
| TMS Roadside | Testing and Commissioning | Design-Builder | Required testing and commissioning of Design-Builder installed roadside equipment. |
| TMS Systems | TMS Delivery and Integration | Transurban | Delivery of TMS, including IT infrastructure and commissioning at the Express Lanes Operations Center. Integration of TMS Roadside Equipment with BOS and ETC systems. |
| TMS System | Testing and Commissioning | Transurban | Required testing and commissioning of Transurban TMS equipment and systems. |
| TMS System | Training and Manuals | Transurban | Training and O&M manuals for Transurban-provided equipment and systems |

| Class | Item | Responsibility | Comment |
|---------------------|--|----------------|---|
| Systems Engineering | Network Architecture and Configuration | Transurban | Systems engineering for TMS systems, including network architecture, configuration management, interface control, and systems integration |
| System Integration | End-to-end Integration | Transurban | Development, integration and commissioning of the end to end integrated systems. |

2.9.5.15.3 95 Express Lanes Systems Integration Schedule Requirements

The following milestones shall be included in the Project Schedule and shall be required to be completed by the following dates:

- 120 Days minimum before Service Commencement – All TMS Roadside Equipment shall be installed and shall have achieved Commissioning.
- 90 Days minimum before Service Commencement – All TMS Roadside Equipment and the Network shall have successfully completed both Level A and Level B Testing.
- 31-90 Days before Service Commencement – The Design-Builder shall provide MOT support and full on-site access to Transurban representatives, including lane and facility closures as approved by VDOT, to assist Transurban in completing the Level C Testing and Burn Period.
- 1-30 Days before Service Commencement – Final operational readiness and VDOT approval for Service Commencement.
- 14 Days before Service Commencement – The Design-Builder shall support necessary customer education, public outreach and Transurban’s operational readiness.

The Design-Builder shall coordinate with Transurban when milestones have been achieved and verified by VDOT. Coordination with Transurban representatives can either be done directly or through VDOT representatives, as determined by the VDOT Project Manager.

Transurban will be under no obligation to accelerate the integration process, Level C testing and Burn Period, due to the inability of the Design-Builder to meet all milestone requirements. All related work elements and requirements shall be completed for the interim milestone to be successfully achieved.

2.9.5.15.4 Maintenance of 95 Express Lanes Operating Systems

System shut downs will not be permitted. The Design-Builder shall install all work elements and test the roadside equipment without causing shut downs or outages to the existing 95 Express Lanes system.

For any temporary impacts or isolated shut-down of system elements, the Design-Builder shall coordinate directly with Transurban regarding any work within the 95 Express Lanes, or work

impacting any 95 Express Lanes facilities or equipment. An Authorization to Work form, approved by Transurban, shall be required prior to commencing any work within the 95 Express Lanes, or work impacting any 95 Express Lanes facilities or equipment. All Authorization to Work requests shall be submitted a minimum of 5 business days prior to the intended work start date. Directions for submission requirements are contained on the form.

2.9.5.15.5 Impacts to 95 Express Lanes Facilities and Operations

The Design-Builder shall be responsible for any impact to the existing ITS 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, Transurban will use its maintenance Contractor to restore critical systems and charge the Design-Builder accordingly.

The Design-Builder shall reimburse Transurban 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.

2.9.6 Lighting

All roadway lighting shall be designed and constructed in accordance with VDOT Traffic Engineering Design Manual, VDOT 2008 Road and Bridge Standards, VDOT Road and Bridge Specifications, and the FHWA Lighting Handbook.

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 VDOT. The Design-Builder may accomplish this by staging its construction operations for the repair or replacement of existing lighting assets impacted by the Project 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 of the existing lighting asset.

A lighting warrant analysis shall be performed and submitted as part of lighting Design Documentation to VDOT for review and approval. The Design-Builder shall verify the RFP Conceptual Lighting Plan and construct lighting where it is warranted. The Design-Builder shall be responsible for controlling light pollution from the proposed lighting, and shall mitigate any such light pollution if requested by VDOT.

All lighting design shall be performed using AGI-32 computer software, and include point-to-point lighting analysis and calculations submitted to VDOT for review and approval.

New or modified lighting shall consist of Partial Interchange Lighting for new or modified entry and exit connections to the Express Lanes. Lighting under the existing Garrisonville Road overpass bridge is not required.

2.10 Transportation Management Plan

The Design-Builder shall prepare a Transportation Management Plan (TMP) in accordance with I&IM-241/TE-351 for all proposed work associated with the Project. The TMP shall document how traffic shall be managed during the construction of the Project. This Project is classified as a Type C, Category V in terms of the TMP. The Design-Builder shall coordinate all work in accordance with the TMP. The phases in the Design-Builder's sequence of construction shall be followed unless the Design-Builder submits and secures VDOT approval for a sequence which will both expedite construction while lessening the effect of such construction upon the traveling public. The TMP shall incorporate and address the elements provided in Part 2, Section 2.10.

2.10.1 Maintenance of Traffic

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

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

Construction signs and pavement markings (temporary) shall be installed, maintained, adjusted, and removed by the Design-Builder throughout the duration of the Project. These items shall be shown on and coordinated with the Sign Sequencing Plan defined in Part 2, Section 2.9.1.2. 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 Part 2, Section 2.6.1.

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.

Temporary barriers shall be shown in the MOT Plans and shall be in accordance with the documents in Part 2, Section 2.1.1 and the provisions of Part 2, Section 2.9.3. 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.

2.10.2 Incident Management Plan

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

During incidents that close one or more lanes on Interstate 95, all lane closures shall be removed and all travel lanes fully opened to traffic in the same direction as the incident on Interstate 95, 95 Express Lanes, and the interchange ramps. An incident shall be defined as any condition (including contractor work operations) that cause a traffic queue extending greater than five (5) miles on Interstate 95 between the hours of 5:00AM to 9:00PM or greater than six (6) miles on Interstate 95 during all other hours. The queue length shall be measured starting at the Road Work Ahead signs.

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

- 24/7 point of contact for emergency notification of incident by TOC;
- Emergency detour routes and sign layout plans in addition to TMP signage;
- Agency and stakeholder Responsibilities Matrix/Checklist;
- Pre-staged detour equipment and material needs (i.e.; barrels, portable message boards, signage, etc.) as defined in the sign layout plans that shall be provided by the Design-Builder;
- Coordination with VDOT Northern Virginia TOC;
- Coordination with Transurban's Express Operations Center for any incidents on or impacts to the 95 Express Lanes

- Signage of emergency detour routes;
- Coordination with 1st responders and stakeholders;
- Law Enforcement, Fire, and Rescue access to the road network during incidents;
- Pre-planned Messages for various types of incidents for the portable DMS; and
- Contact list for appropriate stakeholder response personnel.

As part of the IMP, the Design-Builder shall work with the appropriate VDOT personnel to coordinate wrecker service to remove disabled vehicles within the Project limits.

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

Upon notification from the Department of an incident requiring a detour, the Design-Builder shall establish the detour within one hour from 5 AM-9 PM daily. The Design-Builder shall establish the detour within two hour during all other times not referenced.

The Design-Builder shall coordinate with the VDOT NRO and Transurban's Express Operations Center. Incident times shall be based on those recorded at the Northern Virginia TOC Traffic Management System.

2.10.3 Lane and Road Closure Restrictions

VDOT acknowledges that temporary lane closures may occasionally be required; however, temporary lane closures are only allowed at the sole discretion of VDOT when necessary to ensure the safety of the traveling public and no practical alternative exists. Offeror's Technical and Price Proposals shall be developed to meet the required lane, shoulder, or road closure restrictions specified in this section. Any deviations from these allowable lane closures may render an Offeror's Proposal non-responsive.

Lane, shoulder, or road closures shall be detailed in the Design-Builder's Transportation Management Plan. Anticipated and proposed temporary lane and/or shoulder closures shall be reviewed and approved by VDOT. The Design-Builder shall restore all lanes of traffic per the times specified in 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.

Restriction of Operations:

In addition to the allowable lane closure hours specified in the tables below, the restrictions listed shall be followed.

1. 95 Express Lanes

For any temporary impacts or isolated shut-down of system elements, the Design-Builder is required to coordinate directly with Transurban regarding any work within the 95 Express Lanes, or work impacting any 95 Express Lanes facilities or equipment. An Authorization to Work form, approved by Transurban, will be required prior to commencing any work within the 95 Express Lanes, or work impacting any 95 Express Lanes facilities or equipment. All Authorization to Work requests shall be submitted a minimum of 5 business days prior to the intended work start date. Directions for submission requirements are contained on the form (available from the Express Lanes Operations Center at (571) 419-6046.

Use of the Southbound Garrisonville flyover to access the Express Lanes at any time shall not be permitted.

2. Holiday

In addition to the Sunday or Holiday work limitations, 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 Engineer. 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 Engineer (VDOT 2007 Standard Specifications, updated 12/2014):

- **January 1:** From 5:00 a.m. on the preceding day until Noon on the following day, except as indicated below.
- **Inauguration Day:** From 3:30 p.m. on the preceding day until 9:30 a.m. 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.
- **Easter:** As indicated below.
- **Memorial Day:** As indicated below.
- **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.
- **September 11:** No daytime closures.
- **Columbus Day:** As indicated below.
- **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 Wednesday preceding Thanksgiving Day until Noon on the Monday following Thanksgiving Day.

- **Christmas Day:** From 5:00 a.m. on the preceding day until Noon on the following day, except as indicated below.

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.

| INTERSTATE 95 – Allowable Lane Closure Times (September to April) | | | |
|--|--|--|-------------------------------|
| DAY | Northbound (Excluding 95 Express Lanes reversible facility) | | |
| | Single-Lane Closures or Shoulder** | Two-Lane Closures | Complete Road* Closure |
| Monday – Thursday | 12:00 Midnight to 4:30AM 9:30AM to 3:30PM 9:00PM to 11:59PM | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 3:00AM |
| Friday | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 4:30AM | 12:00 Midnight to 3:00AM |
| Saturday – Sunday | 12:00 Midnight to 7:00AM | Not Permitted | Not Permitted |
| DAY | Southbound (Excluding 95 Express Lanes reversible facility) | | |
| | Single-Lane Closures or Shoulder** | Two-Lane Closures | Complete Road* Closure |
| Monday – Thursday | 12:00 Midnight to 10:00AM 9:00PM to 11:59PM | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 3:00AM |
| Friday | 12:00 Midnight to 6:00AM 10:00PM to 11:59PM | 12:00 Midnight to 4:30AM | 12:00 Midnight to 3:00AM |
| Saturday – Sunday | 12:00 Midnight to 7:00AM | Not Permitted | Not Permitted |

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| INTERSTATE 95 – Allowable Lane Closure Times (May to August) | | | |
|---|--|--|-------------------------------|
| DAY | Northbound (Excluding 95 Express Lanes reversible facility) | | |
| | Single-Lane Closures or Shoulder** | Two-Lane Closures | Complete Road* Closure |
| Monday – Thursday | 12:00 Midnight to 4:30AM 9:00PM to 11:59PM | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 3:00AM |
| Friday | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 4:30AM | 12:00 Midnight to 3:00AM |
| Saturday – Sunday | 12:00 Midnight to 5:00AM | Not Permitted | Not Permitted |
| DAY | Southbound (Excluding 95 Express Lanes reversible facility) | | |
| | Single-Lane Closures or Shoulder** | Two-Lane Closures | Complete Road* Closure |
| Monday – Thursday | 12:00 Midnight to 7:00AM 9:00PM to 11:59PM | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 3:00AM |
| Friday | 12:00 Midnight to 4:30AM 10:00PM to 11:59PM | 12:00 Midnight to 4:30AM | 12:00 Midnight to 3:00AM |
| Saturday – Sunday | 12:00 Midnight to 5:00AM | Not Permitted | Not Permitted |

| | | | |
|--|--|--|--|
| | | | |
| | | | |

| Route 1 – Allowable Lane Closure Times | | | |
|--|---|--|-------------------------------|
| DAY | Northbound Single-Lane Closures** | Southbound Single-Lane Closures** | Complete Road* Closure |
| Monday – Thursday | 12:00 Midnight to 5:00AM 10:00PM to 11:59PM | 12:00 Midnight to 7:00AM 8:00PM to 11:59PM | Not Permitted |
| Friday | 12:00 Midnight to 5:00AM 10:00PM to 11:59PM | 12:00 Midnight to 7:00AM 10:00PM to 11:59PM | Not Permitted |
| Saturday – Sunday | 12:00 Midnight to 7:00AM 10:00PM to 11:59PM | 12:00 Midnight to 7:00AM 10:00PM to 11:59PM | Not Permitted |
| All Other VDOT Roadways*** - Allowable Lane Closure Times | | | |
| DAY | Single-Lane Closures** | Complete Road* Closure | |
| Monday – Sunday | 12:00 Midnight to 6:00AM 9:00AM to 3:30PM 7:00PM to 11:59PM | Not Permitted | |

*Complete Road Closures: 20 minutes maximum or a time frame approved by VDOT to facilitate the erection or removal of overhead sign panels.

** Single-lane closures are only permitted for multiple-lane roadways; long-term closures of the shoulders adjacent to the GP Lanes are allowable pursuant to VDOT approval.

*** Other roadway closures will require coordination and possibly permitting with the agency having jurisdiction over the roadway. Major arterials are defined as primary routes and all other routes that connect directly to Interstate I-95.

| 95 EXPRESS LANES – Allowable Lane Closure Times | | |
|--|---|--|
| REVERSIBLE LANES (95 EXPRESS LANES South of MM 145.7)* | | |
| | Single-Lane Closures or Shoulder | Complete Road Closure** |
| MONDAY-THURSDAY | 9:00PM to 4:30AM | Only permitted when Express Lanes are operating in the NB direction (NB operation typically between 1:00 a.m. and 11:00 a.m.) |
| FRIDAY-SUNDAY | 11:00PM Friday to 4:30AM Monday | Only permitted when Express Lanes are operating in the NB direction (NB operation typically from 3:00 p.m. Sat until 11:00 a.m. Mon) |
| * 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 Express Lanes for 30 minutes or less | | |

| REVERSIBLE LANES (95 EXPRESS LANES North of MM 145.7)* | | |
|---|---|--------------------------------|
| | Single-Lane Closures or Shoulder | Complete Road Closure** |
| MONDAY-THURSDAY | 9:00PM to 4:30AM | 12:00AM to 4:00AM |
| FRIDAY-SUNDAY | 11:00PM Friday to 4:30AM Monday | 12:00AM to 4:00AM |
| * Direction of traffic control for all lane closures in reversible lanes will need to be adjusted as necessary to face direction of traffic. | | |
| ** Complete roadway closure 30 minutes maximum or a time frame approved by VDOT and Transurban only to facilitate the erection and removal of overhead sign panels or sign structures | | |

These allowable hours shall be applicable to both stationary and mobile lane closures, as well as shoulder closures. VDOT will consider changes to the allowable lane closure hours only if the Design-Builder can demonstrate why the proposed work cannot be completed within the contract allowable lane closure hours. All requests shall include an assessment of the work zone traffic impacts using a sketch planning traffic analysis tool and/or an operational level traffic analysis software program as appropriate for approval by VDOT at least 30 days prior to the operation impacting the lanes.

Two-lane closures and total closures of I-95 for such work as installation and removal of overhead sign panels and structures with substantiation of need by the contractor will require coordination with appropriate stakeholders and public notice. The Design-Builder shall provide a minimum of four (4) weeks advance notice to VDOT (this shall include the District Construction Engineer, Regional Operations Director, and District Communications Manager). This advance notice will allow the Design-Builder and VDOT to coordinate on a public outreach campaign and/or advertising to reach affected motorists and target audiences. Alternate dates can be advertised in the event of inclement weather.

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

The Design-Builder is responsible for providing advance notification via variable message and required static signing for lane and/or shoulder and complete road closures in accordance with the 2011 (revised March 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.

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

VDOT reserves the right to monitor traffic conditions impacted by the work and to make additional restrictions as may be necessary or as emergency situations dictate. Additional restrictions for other holidays or special local events may be necessary, however, in these situations VDOT will endeavor to inform the Design-Builder at the earliest and in no case less than forty-eight (48) hours prior to the event.

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

2.10.4 Damage Recovery

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

| Damage Recovery for Lane Closures | | | | |
|---|--|--|---|---|
| Elapsed Time (min) | Damage Recovery* (\$ per minute) | | | |
| | I-95 GP Lanes Northbound | | I-95 GP Lanes Southbound | |
| | Single | Double | Single | Double |
| 1-5, or any portion thereof | \$0 | \$0 | \$0 | \$0 |
| Every additional minute or any portion thereof after initial 5 minutes stated above | \$7,000 plus \$1,400 per each additional minutes | \$7,000 plus \$5,600 per each additional minutes | \$12,500 plus \$2,500 per each additional minutes | \$12,500 plus \$10,000 per each additional minute |
| Maximum damages allowable per each 24 hour period | \$220,000 | \$500,000 | \$360,000 | \$500,000 |

(*) Applicable to Non-Permitted Closures for the General Purpose Lanes only. If a Non-Permitted Closure occurs, the Department 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 Department 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 Department within 30 days of the date on which last written notice of Lane Closure Damages is given to the Design-Builder for violating 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 daily at the values shown above per violated Non-Permitted Closure.

Non-Permitted Closure: Any lane closure outside the Technical Requirements unless approved by VDOT

Additionally, damage recovery/user costs will be assessed against the Design-Builder by the Department (in coordination with 95 Express Lanes LLC) if all lanes are not open to traffic by the designated times above or if a lane closure is implemented prior to the designated times above. Costs will be assessed as follows and continue until all lanes are opened and the 95 Express Lanes are returned to normal operations as determined by the VDOT Project Manager. This assessment will be in the following table:

| Elapsed Time (min) | 95 Express Lanes |
|---|---|
| 1-5, or any portion thereof | \$0 |
| Every additional minute or any portion thereof after initial 5 minutes stated above | Value of lost revenue* (lost revenue calculation shall include initial 5 minutes) |

* Amount shall equal the lost revenue for the duration of the lane closure, based on the average revenue reported for the same 15 minute periods over the previous 4 weeks. Damage recovery/user costs will be assessed in all instances and the Design-Builder shall pay all Damage Recovery amounts within 30 Days of the date of the written notice of damage recovery.

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

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

2.10.5 Allowance for Additional Lane Closure Restrictions by the Department and/or Design-Builder Requests for Additional Lane Closures

At the Department’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.

Closures of longer durations than those listed in the tables in Part 2, Section 2.10.3 will require a review of plans, implementation of detours, and public outreach.

2.10.5.1 General Requirements

The Department will track any additional lane closure time granted outside of time allowed in the tables in Part 2, Section 2.10.3

Any additional time granted by the Department must comply with the technical requirements set forth in Part 2, Section 2.10.

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

Department's control.

2.10.5.2 Calculating Hours

Additional time (lane closures) – Any additional time requested by the Design-Builder and granted by the Department beyond the approved hours set forth in the RFP Documents will be added for every instance and every location at fifteen (15) minute intervals.

Additional Time (complete closures) – If a full closure of a roadway not specified in the RFP Documents is implemented in lieu of thirty (30) minute total temporary closure, hours will be calculated in the same manner as the hours that were requested/approved for the specific closure.

Time Deducted – When the Design-Builder is not allowed to implement a lane closure by the Department during the approved hours set forth in the tables in Part 2, Section 2.10.3, the hours during which such lane closure is not allowed will be deducted from the total hours accumulated.

2.10.5.3 Documentation

Within the first sixty (60) days, the Department and the Design-Builder will develop and agree on a format of documenting this information. The documentation shall at a minimum consist of the date, hours allowed, hours disallowed, and impacted time.

By the 10th day of each month, the Department and the Design-Builder will reconsolidate and agree on the resultant amount of hours allowed/disallowed.

2.10.5.4 Allowance

At the end of the Project, the Department and the Design-Builder will reconcile the resultant impacted time or additional granted time by subtracting the additional time granted by the Department from the time Design-Builder was disallowed per the technical requirements set forth in Part 2, Section 2.10 to implement the lane closures. The Department and the Design-Builder will endeavor to maintain a neutral balance of resultant impacted and additional granted time throughout the duration of the Project.

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.

2.10.5.5 General:

Notwithstanding anything to the contrary, it is agreed that:

- The Department 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 Department.

- The Design-Builder will provide the Department with as much notice as is possible with respect to any inability of the Design-Builder to implement lane closures which are otherwise allowed as set forth in the tables in Part 2, Section 2.10.3.
- If the Department disapproves requests for lane closures from the Design-Builder, or otherwise prevents the Design-Builder from implementing lane closures which are otherwise permitted in the tables in Part 2, Section 2.10.3, and the impact of such actions by the Department is more than one hundred twenty (120) cumulative hours, such actions shall constitute a Department Change.

At the end of the Project, the Department and the Design-Builder will reconsolidate the impacted time by subtracting the additional time granted by the Department from the time the Design-Builder was disallowed per the technical requirements to implement the lane closures. If the Department disproves requests for lane closures from the Design-Builder, or otherwise prevents the Design-Builder from implementing lane closures which are permitted by the RFP Documents, and the impact of such actions by the Department is more than 120 cumulative hours, then such actions shall be addressed through the work order process per Article 9 (Changes to the Contract Price and Time) or Article 10 (Contract Adjustments and Disputes).

2.10.5.6 Special Events

The Design-Builder will be cognizant of and compliant to traffic demands during special events. Construction activities and/or lane closures that will affect event traffic may be stopped early or not allowed to implement a closure for special events such as, but not limited to, the following list:

- Presidential motorcades traveling through Project limits
- Special events with regional impacts
- Special sport events with regional impacts
- Major accidents/incidents with regional impacts
- Holiday and/or seasonal traffic patterns
- Natural or other disasters requiring regional evacuations

2.10.6 Use of Virginia State Police

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

All lane and rolling lane closures shall be identified in the TMP and shall be in accordance with the Virginia Work Area Protection Manual, latest edition.

2.10.7 Portable Changeable Message Signs

Portable Changeable Message Signs (PCMS's) shall be used in advance of the work zone

when closing or shifting lanes within the Project limits. The Design-Builder shall provide at least eight (8) PCMS's, which are to be placed in various locations as approved by the Department and included in the TMP. PCMS's shall have the capability to be remotely controlled from the Transportation Operations Center (TOC) to facilitate emergency access during an incident. PCMS's shall also be used to provide en-route travel information about planned construction, delays or other sudden changes in travel conditions throughout the Project's duration. The PCMS shall be placed in a semi-permanent location, protected from traffic but highly visible to the public. The Design-Builder shall coordinate the implementation of PCMS's with VDOT. The use of PCMS's shall not replace any traffic control device otherwise required per the MUTCD or the Virginia Work Area Protection Manual.

2.10.8 Travel on the 95 Express Lanes

No toll exemptions shall be applied nor toll notices written off due to the Design-Builder's travel on the 95 Express Lanes related to work on this project.

2.11 Public Involvement / Public Relations

The Design-Builder shall support the Department on Public Involvement activities associated with media requests, elected official's meetings, and other project meetings. Typical support activities shall include providing displays, boards, and project information for public meetings and meeting with officials, as well as attendance at these meetings with key personnel. Project information shall also be provided for periodic public status updates, the Department and Transurban's websites, and media requests.

The Design-Builder shall be fully responsible for all communications, correspondence, and coordination with homeowners and businesses for design and construction of the noise walls. Typical activities shall include, at a minimum, notifications, letter writing, voting, and conducting meetings.

2.12 Right of Way

There are no anticipated right-of-way impacts proposed by this Project as shown on the RFP Conceptual Plans included in the RFP Information Package, with the exception of temporary or permanent easements (including utility easements) that have not yet been identified or shown on the RFP Conceptual Plans. Should right-of-way (whether fee or easements) be required to accommodate Design-Builder's unique solution and/or Design-Builder's means, methods, and resources used during construction above and beyond the right-of-way limits depicted on the RFP Conceptual Plans, then all right-of-way acquisition costs for such additional fee or easements shall be paid by the Design-Builder. These costs would include (but not be limited to) the costs of any public hearings that may be required, actual payments to property owners and all expenses related to the additional acquisitions and associated legal costs, as well as any additional monies paid to the landowners to reach a settlement or pay for court award. In the event additional right-of-way is needed as a result of an approved scope change request by the Design-Builder, the Design-Builder shall follow the procedures indicated in the VDOT's Right of Way Manual of Instructions, 3rd Edition, FHWA update approved January 1, 2016. Additionally, the Design-Builder is solely responsible for any schedule delays due to additional right-of-way acquisition associated with the Design-Builder's design

changes; no time extensions shall be granted.

2.13 Utilities

All efforts and costs necessary for all utility designations, utility locates (test holes), conflict evaluations, cost responsibility determination, utility relocation designs, utility relocations and adjustments, utility reimbursements, replacement land rights acquisition and utility coordination shall be included in the Offeror's Price Proposal. Costs for any utility betterment(s) shall not be included in the Offeror's Price Proposal but shall be reimbursed to the Design-Builder through agreement with the requesting utility owner.

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

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

The Design-Builder shall be responsible for new utility service connections, including full coordination with the utility owners 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 date of final project completion. Service shall be transferred to either VDOT or Transurban, as applicable, upon the final completion date.

The Design-Builder shall be responsible for coordination of the Project construction with all utility owners that may be affected. The Design-Builder shall be responsible for coordinating the work of the Design-Builder, its subcontractors, and the various utilities. The Design-Builder shall initiate early coordination with all utility owners with facilities located within the Project limits. The resolution of any conflicts between utilities and the construction of the Project shall be the responsibility of the Design-Builder. No additional compensation or time will be granted for any delays, inconveniences, or damage sustained by the Design-Builder or its subcontractors due to interference from utility owners or the operation of relocating utilities or betterments.

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

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

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

*Columbia Gas
4176 Bludau Dr
Warrenton, VA 20186
Contact: Nicholas Lewis
Telephone: 540-349-2924*

*Comcast
1128 Garrisonville Road
Stafford, VA 22556
Contact: Gary Folden
Telephone: 540-834-4907*

*Dominion Virginia Power - Distribution
3072 Centreville Rd
Herndon, VA 20171
Contact: Gregory Sye
Telephone: 571-203-5152*

*Dominion Virginia Power - Transmission
3072 Centreville Rd
Herndon, VA 20171
Contact: Gary Dorman
Telephone: 571-203-5085*

*MCB Quantico - Public Works Branch
2004 Barnett Avenue
Quantico, VA 22134
Contact: Joe Winterer
Telephone: 703-784-5530*

*Stafford County Utilities Dept
2128 Jefferson Davis Highway
Suite 101/103
Stafford, VA 22555
Contact: Dale Allen
Telephone: 540-658-8616*

Summit IG

*22375 Broderick Drive
Dulles, VA 20166
Contact: Chip Turner
Telephone: 703-376-3703*

*VDOT
6363 Walker Lane, Suite 500
Alexandria, VA 22310
Contact: Dave Smallwood
Telephone: 703-334-0208*

*Verizon
9401 Peabody Street
Manassas, VA 20110
Contact: Bill Lacy
Telephone: 703-369-9571*

The Design-Builder shall provide all utility owners with roadway design plans as soon as the plans have reached a level of completeness adequate to allow them to fully understand the Project impacts. The utility owners will use the Design-Builder's design plan for preparing relocation plans and estimates. If a party other than the utility owner prepares relocation plans, there shall be a concurrence box on the plans where the utility owner signs and accepts the relocation plans as shown.

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

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

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

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

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

The Design-Builder shall ensure the utility owners submit As-Built drawings upon completion of their relocation and/or adjustments. VDOT will issue an as-built permit to the utility owners after receipt of the permit application and the As-Built drawings. The Design-Builder shall accurately show the final location of all utilities on the As-Built drawings for the Project in accordance with Part 2, Section 2.16.9 of the RFP.

2.14 Quality Assurance / Quality Control (QA/QC)

The Design-Builder shall submit its Quality Assurance/Quality Control (QA/QC) for both design and construction to VDOT at the meeting held after the Date of Commencement as set forth in Part 4 General Conditions under Part 2, Section 2.1.2. Along with the QA/QC Plan submittal, the Design Manager and Quality Assurance Manager (QAM) shall provide a presentation of the QA/QC Plan for both design and construction utilizing Project related scenarios. Project scenarios shall include, but not be limited to:

- Preparatory Inspection Meeting requirements, including incorporation of at least one each, Witness and Hold Point, as set forth in Sections 5.3 and 5.14 of the Department's guidance document for Minimum Requirements for Quality Assurance and Quality Control on Design-Build and Public-Private Transportation Act Projects, January 2012 (January 2012 QA/QC Guide);
- At least one (1) material which VDOT retains responsibility for testing as identified in Table 5-2, January 2012 QA/QC Guide;

- Situation arising requiring the issuance of a Non-Conformance Report and subsequent review of the report, including completion of corrective measures and the issuance of a Notice of Correction of non-conformance work with proper log entries and proper interface with auditing and recovery requirements as set forth in Sections 5.10 and 5.11 of the January 2012 QA/QC Guide for non-conforming work resulting from:
 - defective equipment
 - construction activities/materials which fail to conform as specified;
- Inspection documentation capturing requirements as set forth in Section 5.20 and 5.21 of the January 2012 QA/QC Guide; as well as inspection of foundation and pavement subgrades that are to be performed and certified by the Design-Builder's licensed geotechnical engineer in accordance with the Contract requirements;
- Application for payment for Work Package which includes work element, including review and approval by Quality Assurance Manager; and
- Measures that will be implemented to ensure compliance with Buy America requirements on the Project.
- Detail two (2) sample entries in Materials Notebook showing completion of Form C-25, including subsequent submission and review by Department Project Manager as set forth in Section 5.21 of the January 2012 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 the VDOT Materials Division Manual of Instructions.

2.14.1 Design Management

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

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

2.14.2 Construction Management

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

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

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

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

VDOT will provide plant QA and plant QC inspection and/or testing of these items. In the event that VDOT determines that materials fail to meet the tolerances in the VDOT 2007 Road and Bridge specifications, a NCR will be issued by the VDOT Project Manager and addressed to the Design-Builder's QAM for resolution. The Design-Builder is required to submit documentation of the source of materials, including the source of each material to be incorporated into the Project and

the acceptance method that will be used for the material. A VDOT Form C-25 may be used to meet this requirement; however, the Design-Builder is required to submit a VDOT Form C-25, for all materials that VDOT retains responsibility for testing. The source of materials, C-25 is for informational purposes only and will not be approved or rejected by VDOT since it is the Design-Builder's responsibility to obtain materials that meet the contractual requirements. The Design-Builder will be responsible for providing QA and QC testing of all off-site materials that are not identified above, including materials obtained from off-site soil borrow pits.

The Design-Builder's QAM shall report directly to the Design-Builder's Project Manager and be independent of the Design-Builder's physical construction operations. The QAM shall establish quantities prior to commencing construction, and provide VDOT a total number of QC, QA (Independent Assurance (IA) and Independent Verification Sampling and Testing (IVST)), Owner's (the Department) Independent Assurance (OIA), and Owner's Independent Verification Sampling and Testing (OVST) required as a result of the quantities and the sampling and testing requirements as set forth in Table A-3 and A-4 of the January 2012 QA/QC Guide. VDOT will provide all OIA and OVST tests and, therefore, final determination of the actual number of OIA and OVST tests to be performed will be made by VDOT based on these quantities.

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

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

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

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

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

2.15 Field Office

The Design-Builder shall provide office space, equipment, and services consistent with the requirements for a Modified Field Office Type I. This field office shall be for the exclusive use by Department staff. The configuration and equipping of the field office shall be coordinated between the Design-Builder and the VDOT Project Manager prior to on-site placement of the field office. The field office will be operational throughout the duration of the Project construction and shall be removed upon final Project acceptance.

2.16 Plan Preparation

2.16.1 GEOPAK and MicroStation

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

2.16.2 Software License Requirements

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

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

The appropriate use of the License Access Key provided to the Design-Builder will become the responsibility of the Design-Builder regardless of who on the team uses the License Access Key. The Design-Builder will be responsible for keeping track of the License Access Key provided to them or a team member and, upon completion of the Project, the prompt notification to the VDOT CADD Support Section of Project Completion and removal of the software from any system used solely for the Project for which it was obtained.

2.16.3 Drafting Standards

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

2.16.4 Electronic Files

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

2.16.5 Plan Submittals

In addition to electronic files as described in Part 2, Section 2.16.4 above, the Design-Builder shall prepare and distribute hard copy paper plans in the quantities as specified below, for each of the following deliverables (at a minimum, as other submittals and/or work packages may be necessary or desired):

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

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

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

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

The Design-Builder shall submit all Right of Way and/or Construction plans to VDOT, Transurban, and FHWA simultaneously, for review and approval. VDOT shall receive two (2) full-size sets and ten (10) half-size sets of each submission, with the exception of the Released for Construction Plans (see Part 2, Section 2.16.8 below). Transurban shall receive three (3) half-size sets of each submission. FHWA shall receive one (1) half-size set of each submission. The plan submissions shall be delivered to the following addresses:

Virginia Department of Transportation
Attention – Paul Nishimoto
4975 Alliance Drive
Fairfax, VA 22030

Transurban
Attention – Kevin Ginnerty
6440 General Green Way
Alexandria, VA 22312

Federal Highway Administration
Attention – Elliott Moore
400 N. 8th Street, Suite 750
Richmond, VA 23219-4825

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

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

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

2.16.6 Right of Way Plans

Right of Way Plans and any associated Design Calculations shall be submitted to VDOT and FHWA simultaneously for review. The time frame for plan review and approval shall be in accordance with the requirements of the Contract Documents. All VDOT and FHWA comments must be adequately addressed before the Right of Way Plans will be approved. Notice to Commence Right of Way Acquisition will be granted in accordance with Part 2, Section 2.12 above. The Design-Builder shall be responsible for the design details and ensuring that the design and right of way acquisition work are properly coordinated.

2.16.7 Construction Plans

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

2.16.8 Released for Construction Plans

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

The Released for Construction Plans shall be distributed simultaneously to VDOT, Transurban, and and FHWA. VDOT shall receive one (1) full-size set and five (5) half-size sets of Released for Construction Plans, along with all electronic files. Transurban shall receive three (3) half-size hard copy sets, along with all electronic files. FHWA shall receive one (1) half-size hard copy set, along with all electronic files, of the Released for Construction Plans. The plans shall be delivered to the following addresses:

Virginia Department of Transportation
Attention – Paul Nishimoto
4975 Alliance Drive
Fairfax, VA 22030

Transurban
Attention – Kevin Ginnerty
6440 General Green Way
Alexandria, VA 22312

Federal Highway Administration
Attention – Elliott Moore
400 N. 8th Street, Suite 750
Richmond, VA 23219-4825

2.16.9 Record (As-Built) Plans

As a condition to Project Completion, the Design-Builder shall provide to the Department, Record (As-Built) Plans of the Project in accordance with the standards and specifications set forth in this Technical Requirements, which shall consist of two hard-copy sets, one electronic file of each plan in .pdf format, and one electronic file in MicroStation .dgn format of the final construction plans. The final plan milestone is Record (As-Built) Plans. The As-Built Plans shall be prepared, signed, and sealed by a Professional Engineer licensed in Virginia, and submitted to VDOT with the final application for payment. These plans shall show all adjustments and revisions to the Construction Plans made during construction and serve as a permanent record of the actual location of all constructed elements.

The As-built plans shall have Global Positioning System (GPS) location data of all installed TTMS 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, 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 a minimum the device location, model number, serial number, and test acceptance date, shall be part of the As-Built documents.

The As-built plans shall show fiber optic splicing diagrams 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 and pull box wall that the cable passes through, and include the information with the as-built documentation.

The As-Built plans shall show field verified cabinet numbers, service panel numbers, and roadway lighting pole electrical identification numbers.

2.17 Virginia Occupational Safety and Health Standards

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

- At a minimum, all Design-Builder personnel shall comply with the following, unless otherwise determined unsafe or inappropriate in accordance with OSHA regulations:
- Hard hats shall be worn while participating in or observing all types of field work when outside of a building or outside of the cab of a vehicle, and exposed to, participating in or supervising construction.
- Respiratory protective equipment shall be worn whenever an individual is exposed to any item listed in the OSHA Standards as needing such protection unless it is shown the employee is protected by engineering controls.
- Adequate eye protection shall be worn in the proximity of grinding, breaking of rock and/or concrete, while using brush chippers, striking metal against metal or when working in situations where the eyesight may be in jeopardy.
- Approved high visibility Safety apparel shall be worn by all exposed to vehicular traffic and construction equipment.
- Standards and guidelines of the current Virginia Work Area Protection Manual shall be used when setting, reviewing, maintaining, and removing traffic controls.
- Flaggers shall be certified in accordance with the Virginia Flagger Certification Program.
- No person shall be permitted to position themselves under any raised load or between hinge points of equipment without first taking steps to support the load by the placing of a safety bar or blocking.
- Explosives shall be purchased, transported, stored, used and disposed of by a Virginia State Certified Blaster in possession of a current criminal history record check and a commercial driver's license with hazardous materials endorsement and a valid medical examiner's certificate. All Federal, State and local regulations pertaining to explosives shall be strictly followed.
- All electrical tools shall be adequately grounded or double insulated. Ground Fault Circuit Interrupter (GFCI) protection must be installed in accordance with the National Electrical Code (NEC) and current Virginia Occupational Safety and Health agency (VOSH). If extension cords are used, they shall be free of defects and designed for their environment and intended use.

- No person shall enter a confined space without training, permits and authorization.
- Fall protection is required whenever an employee is exposed to a fall six (6) feet or greater.

2.18 Testing

The Design-Builder shall submit to the Department a testing plan for the 95 Express Lanes extension Work that shall include as a minimum:

- The scope, requirements and objectives of the testing plan;
- An overall high-level plan for testing the ETC and TMS, including the test stages and processes, and the scheduling of all tests 180 days prior to Service Commencement; and
- The roles and responsibilities of all those involved with the testing program and any dependencies on third parties, including Department personnel.

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 Transurban and shall utilize:

- A Verification Cross Reference Index (VCRI), which shall be developed and documented to establish the way in which requirements are satisfied. The VCRI shall utilize test, demonstrate, inspect and analyze as methods for acceptance;
- A test series that shall demonstrate compliance with the performance requirements through a test plan and procedures;
- 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
- 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:
 - Test specifications for each of the test cycles
 - Detailed requirements traceability matrix linking each of the test series to relevant requirement(s)
 - 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.

The testing strategy for the 95 Express Lanes Southern Terminus Extension shall provide the level of detail to ensure compliance with the overall testing requirements. This testing strategy shall include:

- System design and integration overview. Transurban will provide this documentation.

- 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 ETTM. The Department will approve successful completion of the UAT for Service Commencement. Transurban will provide this documentation.
- 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
- Site Acceptance Testing – tests to be conducted at the point of installation (tolling point and Traffic Operations Center) to confirm the factory acceptance testing results, plus any omissions or errors noted during the factory testing
- 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 for normal and exception operating conditions. Transurban will provide this documentation.

2.19 Service Commencement

The Design-Builder shall provide a Service Commencement Plan that defines and documents all activities, organization, and coordination efforts to activate and turnover the new ramps, and commission the ETTM system into operational service. The Service Commencement Plan will provide the schedule and phasing for activating roadway segments, operational service activities, and ETTM systems start-up, as applicable. The Service Commencement Plan shall be provided 180 days prior to the anticipated Service Commencement Date. Service Commencement activities shall be included in the project baseline schedule.

The Design-Builder shall notify the Department of the completion of all commissioning activities at least one hundred twenty (120) days prior to the anticipated date of Service Commencement. The Design-Builder shall provide to the Department commissioning completion approvals and agreements that demonstrate the readiness of the Design-Builder and O&M Contractor to proceed with Service Commencement. The Service Commencement compliance checklist, as required by the Service Commencement Plan, shall be submitted by the Design-Builder with all notices as demonstration the necessary requirements to achieve Service Commencement are complete.

The Service Commencement Plan shall include, but is not limited to, the following elements:

- A detailed narrative explaining how the Design-Builder will conduct the entire process of testing and commissioning the new ramps and components;
- A detailed schedule that demonstrates the Design-Builder will commence the testing and commissioning process with sufficient advance such that the entire new ramps and components can achieve Service Commencement as expected;
- A description of discrete activities that explains how the testing and commissioning process will proceed including all tests that must be performed, and in concert with

cooperation from the Department on how the Department has points of involvement in the process;

- A description of forms and procedures to be followed such that the process follows a systematic methodology including all formal notices;
- A listing of all points of interaction of stepped approvals needed by the Quality Management System Plan (QMSP) including all Hold and Witness Points, inspections, tests, and other QMSP functions;
- A description of required Maintenance of Traffic planning needed to achieve Service Commencement including all lane closures needed to facilitate testing and commissioning;
- An organizational structure that demonstrates the key Design-Builder staff directly engaged in the Service Commencement process including the direct lead for the Service Commencement process for the Design-Builder;
- A detailed schedule for implementing the Sign Sequencing and Sign Unveiling Plans as defined in Part 2, Section 2.9.1.2;
- A compliance checklist that demonstrates all requirements of the Agreement are achieved in order to satisfy the requirements for the Service Commencement Notice to Proceed.

2.19.1 Service Commencement Notice to Proceed

At least ninety (90) days prior to the date when the Design-Builder anticipates to achieve Service Commencement, the Design-Builder shall deliver to the Department a notice that it is ready for Service Commencement. The notice of readiness for Service Commencement shall contain a report and description of results of all Work completed with respect to the Express Lanes in a form acceptable to the Department; and with sufficient detail to support whether readiness for Service Commencement has been achieved. The notice shall include the compliance checklist as described above. Within ten (10) days after receipt of the notice of readiness for Service Commencement from the Design-Builder, the Design-Builder and the Department shall inspect the Express Lanes and all related Work completed, including the review of the report submitted by the Design-Builder, for approval and acceptance.

If readiness for Service Commencement has not been achieved, the Department shall notify the Design-Builder of the actions or additional Work necessary to achieve readiness for Service Commencement. This process shall be repeated until the Department is satisfied with the notice of readiness for Service Commencement and agrees that readiness for Service Commencement has been achieved. Within twenty (20) days after the Design-Builder has provided the notice of Service Commencement to the Department, the Design-Builder and the Department will meet regularly to expedite the steps necessary to achieve Service Commencement. The Department will issue the Service Commencement Notice to Proceed only if completion is achieved in accordance with the approved Service Commencement Plan.

2.19.2 Performance Tests

The Design-Builder shall provide all successfully completed Performance Test's reports to the Department for review and approval. The Performance Test's shall be conducted in accordance with Part 2, Section 2.18 of the Technical Requirements. Test Reports shall include: Factory Acceptance Test, Level A Testing, and Level B Testing. At least sixty (60) days prior to the date the Design-Builder wishes to commence a Performance Test, the Design-Builder shall provide to the Department for approval complete test procedures developed in accordance with Part 2, Section 2.18 of the Technical Requirements.

The Design-Builder shall designate and make available qualified and authorized representatives to conduct and observe the Performance Tests, and to monitor the taking of measurements to determine the level of achievement of the Performance Guarantees, all in accordance with the Agreement and the Performance Testing and Commissioning Plan and Program. The Department will witness and be included in such Performance Tests conducted for purposes of demonstrating effective information transfer across system interfaces. The Design-Builder shall not attempt to perform a Performance Test if any Commissioning, start-up or initial test procedures have not been completed as required prior to the Performance Test or any aspect of the Project has not been completed sufficiently to assure the safe and continuous operation of all or any part of the Project during the Performance Test in accordance with the Standard of Care, the Operating Manual, the Agreement and the Performance Testing and Commissioning Plan and Program.

2.20 Maintenance during Construction

The Design-Builder shall maintain all existing Department's ATMS devices in the 95 General Purpose Lanes and 95 Express Lanes operational during construction unless otherwise approved by the Department. These existing Department's ATMS devices include, but are not limited to: closed-circuit television (CCTV) cameras; dynamic message signs (DMS); detection; weather stations; and associated cabinets and infrastructure.

Existing Department ATMS in the Project limits shall remain continuously operational or temporarily replaced during construction unless written approval is provided by the Department. Replacement systems shall be installed, operational and integrated before removal of existing devices. The Design-Builder shall be responsible for relocating and replacing existing ATMS devices.

Once the Existing ATMS devices are impacted, the Design-Builder shall be responsible for maintaining those devices until their final acceptance.

The Design-Builder shall be responsible for any impact to the existing ITS infrastructure within the construction limits. Prompt response is required to any damage caused by the Design-Builder and in the event the repair isn't completed 2 hours prior to the next traffic peak, the Department will use its maintenance Contractor to restore critical systems and charge the Design-Builder accordingly. The cost of repair work performed, plus 25% for supervisory and administrative personnel, will be deducted from monies due to the Design-Builder for the Project.

The Design-Builder shall maintain existing ATMS devices or temporarily replace with portable unit to provide similar functionality and coverage for the duration of construction as approved by the Department.

- Portable CCTV shall provide uninterrupted view of the roadway with overlapping coverage.
- Portable DMS placement and spacing shall provide adequate coverage to convey messages to motorist.
- Both portable CCTV and DMS shall be integrated into the Department operation center for similar functionality and coverage.

The existing drainage system will be maintained by the Department until the Design-Builder starts impacting the drainage system, at which time all drainage assets within the impacted drainage system will become the Design-Builder's responsibility.

The Department shall continue to maintain all existing Department lighting within the Project until the Design-Builder begins impacting these assets, at which time impacted lighting shall become the Design-Builder's responsibility. At no time shall the lights within the Project be put out of service, unless otherwise approved by the Department.

The Department will perform snow and ice removal on all travel ways, during construction. No lane closures will be permitted, during snow mobilization of Level 2 or above.

The Design-Builder shall be responsible for maintaining the proposed SWM BMP's once all connections have been completed, and shall certify that the SWM BMP's have been maintained as per the Department, DEQ, and manufacturer's (for proprietary products) maintenance guidelines prior to transfer to the Department.

The Design-Builder shall be responsible for performing construction maintenance during detours, suspension of work situations, flagging operations, grading operations, patching operations, and on all haul routes.

2.21 Notification of Impact (NOI) to VDOT Assets

As part of the overall construction of the Project, a process for controlling the work that will impact Department traffic management system 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 the Department Assets shall be coordinated by the Design-Builder by the Notification of Impact (NOI) to the Department.

2.21.1 General Requirements

This NOI process shall apply to all Department traffic management system components (referred to herein as "the assets") within project limits that are impacted by the Design-Builder's construction activities.

The work shall be governed by the general requirement that the impacted Department assets shall be maintained or returned to a condition equal or better than the condition at the start of construction unless otherwise indicated in the plans or approved by the Department. This shall include both the functionality and maintainability of the assets.

While this NOI process is intended to provide specific controls on work impacting Department 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 by the Design-Builder or the Department for changes may be denied without good cause.

Plans related to existing Department assets have been prepared using a combination of original design drawings, as-built drawings, supplemental information provided by the Department, and site visits. This NOI process recognizes that complete documentation of the existing Department system is 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 the elements of the system can be verified as to precise location and operational status. The Department, the Design-Builder, and the Engineer shall work together to identify and coordinate those items that could not be addressed during design.

The Department and the Design-Builder shall regularly work together to coordinate work that may impact Department assets. This coordination shall include, but not be limited to Department staff and representatives attending regularly scheduled construction coordination meetings held by the Design-Builder.

"Impact" is defined as any work that will interrupt the normal operation of the Department's assets.

No work that impacts Department assets identified in the plans shall commence without prior notification to the Department per the provisions of this NOI process.

The Design-Builder shall take all measures to protect Department assets during the course of the work and maintain operation of the equipment. The means and methods for protecting Department assets shall be determined on a case-by-case basis appropriate to the scope of the work.

The Department shall make staff available upon request to assist the Design-Builder in identifying existing system conflicts and operations; conducting asset inspections; carrying out maintenance transfers; and testing and acceptance of completed work. The availability of Department staff shall be coordinated per the requirements of this NOI process. When unexpected conditions arise that requires the input of the Department, the Department shall make staff or authorized representatives available within forty-eight (48) hours of Department receipt of the Design-Builder's written request.

The provisions of this NOI process shall apply to all work impacting Department assets shown on the plans as well as to any asset impacted during the course of construction, but not identified on the plans. When assets not identified on the plans are impacted, the Design-Builder shall follow the typical construction processes (RFI, FDC, etc.) to identify and resolve the impact within the bounds of this NOI process.

The Department 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 Department shall coordinate as necessary for unanticipated impacts to operations.

Unless specifically described on the plans or special provisions or directed by the Department in writing, means and methods for completing the work related to impacted assets shall be at the discretion of the Design-Builder. Means and methods shall be consistent with the requirements of all contract documents, the Standards and Specifications, and Good Industry Practice.

With the exception of the Notification Form, written correspondence described in this NOI process 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.

Responsibility for maintenance of impacted 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 the Department upon final acceptance of the work as detailed in the Notification process. During the period when maintenance of Department assets has been transferred to the Design-Builder, events outside the control of the Design-Builder that impact the condition of the assets shall be addressed by the Department including the warranty claims and at-fault third parties. The Department shall be notified immediately of any damage to existing assets.

The Design-Builder shall be required to submit an Amended NOI if work described in initial notification is performed at least 48 hours after date stated in the NOI form.

The Design-Builder shall document all changes to VDOT infrastructure as a result of work in the NOI in the project As-Built plans according to the As-Built plans Technical Requirements. The As-Built plan will be required for all impacted VDOT assets even if such asset is not shown on project design plans.

2.21.2 Notification Procedure

| Schedule | | |
|-----------------------------|---------------------|---|
| | Milestone | |
| | Description | |
| 21 Days Prior to Work Start | First Notification | <p>The Design-Builder shall submit a complete <u>Notification of Impact to VDOT TMS Asset</u> form to the VDOT Engineer. The form shall be provided a minimum of 21 calendar days prior to the proposed start of the work impacting the asset.</p> |
| 18 Days Prior to Work Start | Notification Review | <p>The VDOT Engineer shall review the form for conformance with the plans and contract documents. Within 3 days of receipt, the VDOT Engineer shall respond to the submitted form. The VDOT Engineer shall provide one of three responses:</p> <p><i>Approved</i> – The form is found to be in conformance with all documented requirements and is approved as submitted. The process moves to the Inspection phase.</p> <p><i>Revise and Resubmit</i> – The form is conditionally approved with minor corrections or clarifications required as noted in the VDOT Engineer’s response. The process moves to the Inspection phase and the Design-Builder revises the Form as needed for resubmittal prior to the second notification</p> <p><i>Rejected</i> – The form has significant elements that are not in conformance with the plans or other contract documents. The VDOT Engineer notes the specific elements of the form not in conformance and cites the controlling contract requirements not met. The Design-Builder shall submit the form again beginning at the first notification.</p> |

| Schedule | | |
|-----------------------------|-------------|---|
| | Milestone | |
| | Description | |
| 14 Days Prior to Work Start | Inspection | <p>Following approval or conditional approval of the Notification Form, the VDOT Engineer and the Design-Builder shall conduct a joint field meeting at the asset to be impacted. VDOT shall provide the Design-Builder access to the equipment and assets to be impacted for general inspection and demonstrate the operational status of the equipment. If the proposed impact is not limited to a single site (e.g., impact to power or communications connecting multiple devices), VDOT shall also demonstrate operation at a remote location to establish the existing condition of all elements to be impacted by the work. The Design-Builder shall document the condition of the site through field notes and photos as needed. The Design-Builder shall provide written notification to the VDOT Engineer of any site deficiencies within 24 hours of the inspection. VDOT shall assess deficiencies and provide a response to the Design-Builder within 48 hours of receipt of the Design-Builder’s report. The response shall include one of the following:</p> <p><i>VDOT Repair/Replace</i> – VDOT shall repair or replace deficient equipment prior to the start of the work. A second inspection shall be scheduled to document the existing condition of the assets prior to the start of the work.</p> <p><i>Proceed per Plan</i>– VDOT shall instruct the Design-Builder to carry out the work as shown in the plans and proposed on the notification form accepting the condition of the assets as is. The Design-Builder shall complete the work as required by the Contract documents and return the system to its existing condition at the time of the inspection accounting for the deficiencies of the system noted in their report. For example, VDOT may instruct the Design-Builder to relocate a camera as called for in the plans even if the camera is inoperative at the time of inspection. The Design-Builder will relocate the camera noting that it was inoperative prior to start and maintaining its current condition.</p> <p><i>Request for Change</i> – VDOT shall request a change to the plans to address the deficient conditions. This may include requesting the Design-Builder to carry out repair or replacement or removal and disposal/salvage of the impacted assets. This process shall follow the typical process for changes to the contract accounting for any impacts to schedule and scope.</p> |

| Schedule | |
|---------------------------------------|---|
| | Milestone |
| | Description |
| 10 Days Prior to Work Start | <p style="text-align: center;">Second Notification</p> <p>The Design-Builder shall provide a second notification to the Department for the start of the work. If the notification form was required to be revised and resubmitted as part of a conditional approval, the Design-Builder shall provide the revised form with this notification. The Design-Builder may propose changes to the original request as part of the second notification. This may include minor changes to the schedule of the work or revisions to the construction work plan. If no updates to the first notification are required, the Design-Builder shall provide only a written reaffirmation of the original notification.</p> <p>The VDOT Engineer shall approve or reject the updated form within 48 hours of its receipt and provide a written response per the requirements of the first notification.</p> |
| 24 Hours Prior to Work Start | <p style="text-align: center;">Confirming Notification</p> <p>The Design-Builder shall provide written confirmation of the planned work a minimum of 24 hours prior to the scheduled start of the work. Minor deviations of the written notification form shall be allowed (e.g., minor changes in the specific start time; updated contact information, etc.)</p> |
| 15 Minutes Prior to Work Start | <p style="text-align: center;">Final Notification</p> <p>The Design-Builder shall provide final notification 15 minutes prior to the start of the work if required by the Department as noted on the approved notification form. This notification shall be made for assets identified by the Department as being of significant operational value. An asset of “significant operational value” is one which must remain in operation until an unscheduled incident or condition is resolved. The Department shall identify these assets on the notification form. The Design-Builder shall provide this final notification to the PSTOC or other Department staff as identified by the VDOT Engineer in the Notification Process.</p> |

| Schedule | | |
|--|-----------------------------------|---|
| Milestone | | |
| | Description | |
| Start of Work | Work | <p>The Design-Builder shall carry out the work in accordance with the Contract documents and approved notification form. The Design-Builder should provide daily updates to the VDOT Engineer on the progress of the work or as required on the notification form. The Design-Builder shall notify the VDOT Engineer of any events or issues that arise during the course of the work that may impact the scheduled completion of the work. The Design-Builder shall provide a plan for recovery of schedule as needed.</p> |
| Completion of Work | Notification of Completion | <p>The Design-Builder shall notify the VDOT Engineer immediately upon completing the work. The VDOT Engineer shall verify the operation of the asset as needed to ensure the basic scope of the work is completed. The VDOT Engineer shall notify the Design-Builder immediately of any impact to normal operation of the asset following completion of the work.</p> |
| 48 Hours After Completion of Work | Return of Maintenance | <p>The Design-Builder and the Department shall conduct a return of maintenance inspection within 48 hours of completion of the work. The Department shall inspect the work on site and provide a written punch list or acceptance as appropriate. Maintenance of the asset shall transfer back to the Department upon completion of any punch list items and issuance of the written acceptance. Written acceptance shall be provided no less than 48 hours following the final inspection.</p> |

3.0 ATTACHMENTS

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

ATTACHMENT 2.2 -- ROADWAY INVENTORY AND MAJOR DESIGN
CRITERIA

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

END OF PART 2 - TECHNICAL INFORMATION & REQUIREMENTS

ASSIGNMENT AGREEMENT

This Assignment Agreement (this “Agreement”), dated as of the [____] day of [____], 201_, is between [_____] (“Assignor”) and the Virginia Department of Transportation, an agency of the Commonwealth of Virginia (“Assignee”).

RECITALS

WHEREAS, on [DATE] the Assignor purchased nonpoint source phosphorus from [GENERATOR/SELLER]; and

WHEREAS, Assignor purchased [__] pounds of phosphorus credits and retired [__] pounds of nitrogen credits associated with such phosphorus credits;

WHEREAS, such phosphorus credits were generated at [FACILITY NAME] located in [COUNTY/CITY], Virginia; and

WHEREAS, Assignor has received a Bill of Sale from [GENERATOR/SELLER] dated [_____] and evidencing the purchase and attached hereto as Exhibit A; and

WHEREAS, the purchase of such phosphorus credits is associated with [PROJECT/PERMIT]; and

WHEREAS, Assignor desires to assign its rights and obligations under the Bill of Sale to Assignee and Assignee desires to assume the same.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. **Recitals.** The foregoing recitals are hereby incorporated by reference herein and made a substantive part hereof.

2. **Assignment.** Assignor hereby transfers, assigns, and conveys to Assignee all of Assignor’s right, title and interest in the phosphorus credits and associated nitrogen credits that are the subject of the Bill of Sale attached hereto as Exhibit A.

3. **Assumption.** Assignee hereby accepts all of Assignor’s right, title and interest in the phosphorus credits and associated nitrogen credits that are the subject of the Bill of Sale attached hereto as Exhibit A.

4. Counterparts. This Agreement may be executed in counterparts (including by means of telecopied signature pages), any one of which need not contain the signatures of more than one party, but all such counterparts taken together shall constitute one and the same instrument.

5. Governing Law. All matters relating to the interpretation, construction, validity and enforcement of this Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, including all matters of construction, validity and performance.

6. Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

7. Amendment. Any provision of this Agreement may be amended or waived only in a writing signed by the Assignor and Assignee.

This space intentionally left blank

IN WITNESS WHEREOF, the Assignor and Assignee have caused their duly authorized representative to execute this Agreement as of the date first above written.

ASSIGNOR:

By: _____

Name: _____

Title: _____

ASSIGNEE:

VIRGINIA DEPARTMENT OF TRANSPORTATION

By: _____

Name: _____

Title: _____

HDR Computation

| | | | | | |
|---------|--|----------|-----------|------|----------|
| Project | I-95 EXPRESS LANES SOUTHERN TERMINUS EXTENSION | Computed | C. Cholko | Date | 12/21/15 |
| Subject | ROADWAY DESIGN | Checked | C. Walsh | Date | 12/22/15 |
| Task | DESIGN CRITERIA | Updated | C. Cholko | Date | 01/21/16 |

Design Criteria
I-95 General Purpose Lanes / 95 Express Lanes

Station Range: Southbound Ramp - 2193+00.00 to 2221+12.43
Northbound Ramp - 3200+00.00 to 3225+42.59
95 Express Lanes - 97+06.00 to 465+00.00
I-95 GP Lanes

| DESIGN ELEMENT | DESIGN VALUE | SOURCE |
|---|--|--|
| Facility Type | Limited Access Interstate Freeway | VDOT |
| Design Speed (DS) | 70 MPH | RDM, Appendix A, GS-1 |
| Minimum Lane Widths Rdwy Shldr Widths | 12' travel lanes Fill: 17' w/12' paved Cut: 14' w/12' paved Fill: 15' w/10' paved (Design Waiver) Cut: 12' w/10' paved (Design Waiver) | RDM, Appendix A, GS-1 RDM, Appendix A, GS-1, Footnotes (1) & (2) AASHTO, Page 8-3 AASHTO, Page 8-3 |
| Bridge Shldr Widths | N/A | RDM, Appendix A, GS-1, Footnote (5) |
| Medlan Width | N/A | |
| Maximum Grade | 4% | AASHTO, Table 8-1 |
| Pavement Cross Slopes (Tangent) | 2% min., 3% max. | AASHTO, Pages 4-5 and 4-6 |
| Minimum Grade (Barrier Wall & Gutter Sections) | 0.3% Minimum 0.5% Desirable | AASHTO, Page 3-119 |
| Min. Stopping Sight Distance | 730' (Grades <3%) | RDM, Appendix A, GS-1 AASHTO, Table 3-2 |
| Horizontal Curves Minimum Radius @ 8% Minimum Radius w/o Super (NC) | e max = 0.08 1821' 14500' | RBS, TC-5.11, Pg. 803.42 RDM, Appendix A, GS-1 RBS, TC-5.11, Pg. 803.42 |
| Crest Vertical Curve | K = 247 Min. L = 3 x DS = 210' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-34 AASHTO, Page 3-153 |
| Sag Vertical Curve | K = 181 Min. L = 3 x DS = 210' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-36 AASHTO, Page 3-153 |
| Superelevation | e max = 0.08 Transition Relative Gradient = 0.40 Runoff (2/3 Outside and 1/3 Inside Curve) | RBS, TC-5.11, Pg. 803.42 RBS, TC-5.11, Pg. 803.20 RBS, TC-5.11, Pg. 803.06 |
| Minimum Vertical Clearance | 16'-6" Roadway Over Roadway | RDM, Appendix A, GS-1, Footnote (5) Bridge Man. Vol. V Part 2, File 06.02-2 |
| Clear Zone (Recoverable Terrain) | 30' with 6:1 Front Slopes | RDM, Table A-2-1/RDG, Table 3.1 |

| EXCEPTION / WAIVER | DESCRIPTION | REMARKS |
|--------------------|--|---------|
| DESIGN EXCEPTION | N/A | |
| DESIGN WAIVER | Design Waiver No. 3 – Use of 10' paved/12' total left shoulder width and revised MC-4 requirements along I-95 GP Lanes | |

RBS = Road and Bridge Standards (2008 - Updated Nov. 2015), Virginia Department of Transportation (VDOT)
RDM = Roadway Design Manual (2011), Virginia Department of Transportation (VDOT)
RDG = Roadside Design Guide (2006), American Assoc. of State Highway & Transportation Officials (AASHTO)
AASHTO = American Assoc. of State Highway & Transportation Officials - A Policy on Geometric Design of Highways and Streets (2011)

HDR Computation

| | | | | | |
|---------|--|----------|-----------|------|----------|
| Project | I-95 EXPRESS LANES SOUTHERN TERMINUS EXTENSION | Computed | C. Cholko | Date | 12/21/15 |
| Subject | ROADWAY DESIGN | Checked | C. Walsh | Date | 12/22/15 |
| Task | DESIGN CRITERIA | Updated | C. Cholko | Date | 01/21/16 |

| Design Criteria | | |
|---|---|--|
| Southbound Directional/Reversible Ramp From 95 Express Lanes to SB I-95 GP Lanes | | |
| Station Range: Southbound Ramp - 2221+12.43 to 97+06.00 | | |
| DESIGN ELEMENT | DESIGN VALUE | SOURCE |
| Facility Type | Interchange Ramp | VDOT |
| Design Speed (DS) | 70 MPH | RDM, Appendix A, GS-1 |
| Minimum Lane Widths | 16' - travel lane | RDM, Appendix A, GS-R |
| Rdwy Shldr Widths | 12' - travel lane (Design Waiver) | AASHTO, Page 10-102 and 10-103 |
| | Right: 10' w/8' paved | RDM, Appendix A, GS-R |
| | Right with GR: 13' w/10' paved | RDM, Appendix A, GS-R |
| | Left: 6' w/4' paved | RDM, Appendix A, GS-R |
| | Left with GR: 9' w/4' paved | RDM, Appendix A, GS-R |
| | Left: 4' w/2' paved (Design Waiver) | AASHTO, Page 10-102 |
| | Left with GR: 7' w/4' paved (Design Waiver) | AASHTO, Page 10-102 |
| | Min. Total Pavement Width: 17' | AASHTO Table 3-29, Case II, Cond. A |
| | Sum of Left and Right Paved Shoulders: 10' | RDM, Appendix A, GS-R |
| Bridge Shldr Widths | N/A | |
| Median Width | N/A | |
| Maximum Grade | 4% | AASHTO, Table 8-1 |
| Pavement Cross Slopes (Tangent) | 2% min., 3% max. | AASHTO, Pages 4-5 and 4-6 |
| Minimum Grade (Barrier Wall & Gutter Sections) | 0.3% Minimum 0.5% Desirable | AASHTO, Page 3-119 |
| Min. Stopping Sight Distance | 730' (Grades <3%) | RDM, Appendix A, GS-1 |
| Horizontal Curves | e max = 0.08 | RBS, TC-5.11, Pg. 803.42 |
| Minimum Radius @ 8% | 1821' | RDM, Appendix A, GS-1 |
| Minimum Radius w/o Super. (NC) | 14500' | RBS, TC-5.11, Pg. 803.42 |
| Crest Vertical Curve | K = 247 Min. L = 3 x DS = 210' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-34 AASHTO, Page 3-153 |
| Sag Vertical Curve | K = 181 Min. L = 3 x DS = 210' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-36 AASHTO, Page 3-153 |
| Superelevation | e max = 0.08 Transition Relative Gradient = 0.40 Runoff (2/3 Outside and 1/3 Inside Curve) | RBS, TC-5.11, Pg. 803.42 RBS, TC-5.11, Pg. 803.20 RBS, TC-5.11, Pg. 803.06 |
| Minimum Vertical Clearance (Roadway Over Roadway) | 16'-6" Desirable 14'-6" Minimum | RDM, Appendix A, GS-R, Footnote (4) Bridge Man. Vol. V Part 2, File 06.02-13 |
| Clear Zone (Recoverable Terrain) | 22' with 6:1 Front Slope, 28' with 4:1 Front Slope | RDM, Table A-2-1/RDG, Table 3.1 |
| EXCEPTION / WAIVER | DESCRIPTION | REMARKS |
| DESIGN EXCEPTION | N/A | |
| DESIGN WAIVER | Design Waiver No. 1 – Use of alternative shoulder pavement design and revised MC-4 requirements along 95 Express Lanes Design Waiver No. 2 – Use of 12' ramp lane width, 2' paved/4' total shoulder width, and revised GS-11 requirements along 95 Express Lanes | |
| <p>RBS = Road and Bridge Standards (2008 - Updated Nov. 2015), Virginia Department of Transportation (VDOT) RDM = Roadway Design Manual (2011), Virginia Department of Transportation (VDOT) RDG = Roadside Design Guide (2006), American Assoc. of State Highway & Transportation Officials (AASHTO) AASHTO = American Assoc. of State Highway & Transportation Officials - A Policy on Geometric Design of Highways and Streets (2011)</p> | | |

HDR Computation

| | | | | | |
|---------|--|----------|-----------|------|----------|
| Project | I-95 EXPRESS LANES SOUTHERN TERMINUS EXTENSION | Computed | C. Cholko | Date | 12/21/15 |
| Subject | ROADWAY DESIGN | Checked | C. Walsh | Date | 12/22/15 |
| Task | DESIGN CRITERIA | Updated | C. Cholko | Date | 01/21/16 |

| Design Criteria | | |
|--|---|--|
| Northbound Directional Ramp From NB I-95 GP Lanes to 95 Express Lanes | | |
| Station Range: Northbound Ramp - 3225+42.59 to 3237+71.64 | | |
| DESIGN ELEMENT | DESIGN VALUE | SOURCE |
| Facility Type | Interchange Ramp | VDOT |
| Design Speed (DS) | 50 MPH | RDM, Appendix A, GS-R and AASHTO, Table 10-1 |
| Minimum Lane Widths | 16' - travel lane | RDM, Appendix A, GS-R |
| Rdwy Shldr Widths | 12' - travel lane (Design Waiver) | AASHTO, Page 10-102 and 10-103 |
| | Right: 10' w/8' paved | RDM, Appendix A, GS-R |
| | Right with GR: 13' w/10' paved | RDM, Appendix A, GS-R |
| | Left: 6' w/4' paved | RDM, Appendix A, GS-R |
| | Left with GR: 9' w/4' paved | RDM, Appendix A, GS-R |
| | Left: 4' w/2' paved (Design Waiver) | AASHTO, Page 10-102 |
| | Left with GR: 7' w/4' paved (Design Waiver) | AASHTO, Page 10-102 |
| | Min. Total Pavement Width: 17' | AASHTO Table 3-29, Case II, Cond. A |
| | Sum of Left and Right Paved Shoulders: 10' | RDM, Appendix A, GS-R |
| Bridge Shldr Widths | N/A | |
| Median Width | N/A | |
| Maximum Grade | 5% | RDM, Appendix A, GS-R |
| Pavement Cross Slopes (Tangent) | 2% min., 3% max. | AASHTO, Pages 4-1 to 4-6 |
| Minimum Grade (Barrier Wall & Gutter Sections) | 0.3% Minimum 0.5% Desirable | AASHTO, Page 3-119 |
| Min. Stopping Sight Distance | 425' (Grades <3%) | AASHTO, Table 3-2 RDM, Appendix A, GS-R |
| Horizontal Curves | e max = 0.08 | RBS, TC-5.11, Pg. 803.38 |
| Minimum Radius @ 8% | 760' | RDM, Appendix A, GS-R |
| Minimum Radius w/o Super. (NC) | 8000' | RBS, TC-5.11, Pg. 803.38 |
| Crest Vertical Curve | K = 84 Min. L = 3 x DS = 150' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-34 AASHTO, Page 3-153 |
| Sag Vertical Curve | K = 96 Min. L = 3 x DS = 150' L=KA (where A=Algebraic Dif in Grades in %) | AASHTO, Table 3-36 AASHTO, Page 3-153 |
| Superelevation | e max = 0.08 Transition Relative Gradient = 0.50 Runoff (2/3 Outside and 1/3 Inside Curve) | RBS, TC-5.11, Pg. 803.38 RBS, TC-5.11, Pg. 803.20 RBS, TC-5.11, Pg. 803.06 |
| Minimum Vertical Clearance (Roadway Over Roadway) | 16'-6" Desirable 14'-6" Minimum | RDM, Appendix A, GS-R, Footnote (4) Bridge Man. Vol. V Part 2, File 06.02-13 |
| Clear Zone (Recoverable Terrain) | 22' with 6:1 Front Slope, 28' with 4:1 Front Slope | RDM, Table A-2-1/RDG, Table 3.1 |
| EXCEPTION / WAIVER | DESCRIPTION | REMARKS |
| DESIGN EXCEPTION | N/A | |
| DESIGN WAIVER | Design Waiver No. 1 – Use of alternative shoulder pavement design and revised MC-4 requirements along 95 Express Lanes Design Waiver No. 2 – Use of 12' ramp lane width, 2' paved/4' total shoulder width, and revised GS-11 requirements along 95 Express Lanes | |

RBS = Road and Bridge Standards (2008 - Updated Nov. 2015), Virginia Department of Transportation (VDOT)

RDM = Roadway Design Manual (2011), Virginia Department of Transportation (VDOT)

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AASHTO = American Assoc. of State Highway & Transportation Officials - A Policy on Geometric Design of Highways and Streets (2011)

Part 4

2013 General Conditions of contract Between Department and Design-Builder

(Date of Standard General Conditions: July 2013)

**Incorporated into this Contract by Reference. This Document
may be found at the below VDOT weblink.**

http://www.virginiadot.org/business/resources/2013_Parts_3-4-5_documents-7-3-2013.pdf

Exhibit 3.5.1

Governmental Approvals List

The following will be the responsibility of the Department to obtain:

1. National Environmental Policy Act approval, Reevaluation (March 2, 2016) – completed by VDOT.
2. Preliminary Environmental Certification/Commitments Checklist (March 2, 2016) – completed by VDOT.
3. ~~Preliminary Document Re-evaluation for Right of Way Authorization (May 7, 2012) – completed by VDOT.~~
4. Preliminary Document Re-evaluation for PSE (Plans, Specifications, and Estimates) Authorization (May 2, 2016) – completed by VDOT.
5. Final Environmental Certification/Commitments Checklist to be completed by VDOT as applicable.
6. ~~Final Document Re-evaluation for Right of Way Authorization – to be completed by VDOT as applicable.~~
7. Final Document Re-evaluation for PSE (Plans, Specifications, and Estimates) Authorization- to be completed by VDOT as applicable.

Part 5

**2013 Division I Amendments to
the Standard Specifications
General Provisions for Design-
Build Contracts Between
Department and Design-Builder**

(Date of Standard Division I Amendments July 2013)

Incorporated into this Contract by Reference. This Document
may be found at the below VDOT Weblink.

[http://www.virginiadot.org/business/resources/2013 Parts 3-4-5 documents-7-3-2013.pdf](http://www.virginiadot.org/business/resources/2013_Parts_3-4-5_documents-7-3-2013.pdf)

Exhibit 102.05(g.1)

S102CF2-0813

**VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
USE OF DOMESTIC MATERIAL**

July 26, 2013

SECTION 102.05 PREPARATION OF BID of the Specifications is amended to include the following:

In accordance with the provisions of Section 635.410(b) of Title 23 CFR, hereinafter referred to as "Buy America", except as otherwise specified, all iron and steel products (including miscellaneous steel items such as fasteners, nuts, bolts and washers) to be permanently incorporated for use on federal aid projects shall be produced in the United States of America regardless of the percentage they exist in the manufactured product or final form they take. Therefore, "Domestically produced in the United States of America" means all manufacturing processes must occur in the United States of America, to mean, in one of the 50 States, the District of Columbia, Puerto Rico or in the territories and possessions of the United States. Manufacturing processes are defined as any process which alters or modifies the chemical content, physical size or shape or final finish of iron or steel material) such as rolling, extruding, bending, machining, fabrication, grinding, drilling, finishing, or coating whereby a raw material or a reduced iron ore material is changed, altered or transformed into a steel or iron item or product which, because of the process, is different from the original material. For the purposes of satisfying this requirement "coating" is defined as the application of epoxy, galvanizing, painting or any other such process that protects or enhances the value of the material. Materials used in the coating process need not be domestic materials.

For the purposes herein the manufacturing process is considered complete when the resultant product is ready for use as an item in the project (e.g. fencing, posts, girders, pipe, manhole covers, etc.) or is incorporated as a component of a more complex product by means of further manufacturing. Final assembly of a product may occur outside of the United States of America provided no further manufacturing process takes place.

Raw materials such as iron ore, pig iron, processed, pelletized and reduced iron ore, waste products (including scrap, that is, steel or iron no longer useful in its present form from old automobiles, machinery, pipe, railroad rail, or the like and steel trimmings from mills or product manufacturing) and other raw materials used in the production of steel and/or iron products may, however, be imported. Extracting, handling, or crushing the raw materials which are inherent to the transporting the materials for later use in the manufacturing process are exempt from Buy America. The use of foreign source steel or iron billet is not acceptable under the provisions of Buy America. For the purposes of this provision all steel or iron material not meeting the criteria as domestically produced in the United States of America will be considered as "foreign" material. All iron and steel items will be classified hereinafter as "domestic" or "foreign", identified by and subject to the provisions herein.

Domestically produced iron or steel ingots or billets shipped outside the United States of America for any manufacturing process and returned for permanent use in a project would not comply with "Buy America" requirements.

Buy America provisions do not apply to iron or steel products used temporarily in the construction of a project such as temporary sheet piling, temporary bridges, steel scaffolding, falsework or such temporary material or product or material that remains in place for the Contractor's convenience.

Section 635.410(b) of Title 23 CFR permits a minimal amount of steel or iron material to be incorporated in the permanent work on a federal-aid contract. The cost of such materials or products must not exceed one-tenth of one percent of the contract amount or \$2500, whichever is greater. The cost of the foreign iron or steel material is defined as its monetary value delivered to the job site and supported by invoices or bill of sale to the Contractor. This delivered to site cost must include transportation, assembly, installation and testing.

In the event the total cost of all "foreign" iron and steel product or material does not exceed one-tenth of one percent of the total contract cost or \$2,500, whichever is greater, the use of such material meeting the limitations herein will not be restricted by the domestic requirements herein. However, by signing the bid, the Bidder certifies that such cost does not exceed the limits established herein.

Waivers:

With prior concurrence from Federal Highway Administration (FHWA) headquarters, the Federal Highway Division Administrator may grant a waiver to specific projects provided it can be demonstrated:

1. that the use of domestic steel or iron materials would be inconsistent with the public interest; or
2. materials or products requested for use are not produced in the United States in sufficient or reasonably available quantities and are of satisfactory quality for use in the permanent work.

The waiver request shall be submitted with supportive information to include:

1. Project number/description, project cost, waiver item, item cost, country of origin for the product, reason for the waiver, and
2. Analysis of redesign of the project using alternative or approved equal domestic products

In order to grant such a waiver the request for the waiver must be published in the Federal Register for a period not less than 15 days or greater than 60 days prior to waiving such requirement. An initial 15 day comment period to the waiver will be available to the public by means of the FHWA website: <http://www.fhwa.dot.gov/construction/contracts/waivers.cfm>. Following that initial 15 day period of review and comment the request for waiver will be published by the FHWA in the Federal Register. The effective date of the FHWA finding, either to approve or deny the waiver request, will be 15 days following publication in the Federal Register.

Only the FHWA Administrator may grant nationwide waivers which still are subject to the public rulemaking and review process.

Alternative Bidding Procedures:

An alternative bidding procedure may be employed to justify the use of foreign iron and/or steel. To qualify under this procedure the total project is bid using two alternatives, one based on the use of domestic products and the other, the use of corresponding foreign source steel and/or iron materials.

In accordance with the provisions of Section 103.02 the Contract will be awarded to the lowest responsive and responsible bidder who submits the lowest total bid based on furnishing domestic iron or steel unless such total exceeds the lowest total bid based on furnishing foreign iron and/or steel by more than 25 percent, in which case the award will be made to the lowest responsive and responsible

bidder furnishing foreign iron and/or steel based upon furnishing verifiable supportive data. The bidder shall submit a bid based on permanently incorporating only domestic iron and/or steel in the construction of the project. The bidder may also submit a bid for the same proposed contract based on being allowed to permanently incorporate corresponding foreign iron and/or steel materials meeting the other contract requirements into the work on the contract. If he chooses to submit such a bid, that alternate bid shall clearly indicate which foreign iron and/or steel items will be permanently installed in the work as well as contain prices for all other items listed in the corresponding domestic proposal to complete a total "Foreign" bid.

In the event the contract is awarded to the bidder furnishing foreign iron and/or steel materials or items the provision for price adjustment of steel items will be permitted, however, price fluctuations shall use the U.S. index as stated in the Special Provision for Price Adjustment For Steel. The Contractor must indicate which corresponding eligible steel items he chooses price adjustment to apply. In the event the contract is awarded to a bidder furnishing foreign iron and/or steel items and during the life of that contract the Contractor discovers he can not furnish foreign iron and/or steel material as originally anticipated and agreed upon, he shall be responsible to honor the total bid price and furnish such iron and/or steel materials meeting the contract requirements from other sources as necessary to complete the work.

In the event the Contractor proposes to furnish "foreign" iron and steel and can verify a savings in excess of 25 percent of the overall project cost if bid using domestic materials, the Contractor shall submit a second complete paper bid proposal clearly marked "Foreign" including Form C-7 and supportive data supplement on all sheets. Supportive data shall list, but not be limited to, origin of material, best price offer, quantity and complete description of material, mill analysis, evidence or certification of conformance to contract requirements, etc. The "Foreign" bid shall be completed using the best price offer for each corresponding bid item supplying foreign material in the alternative bid and submit the same with the Contractor's "Domestic" bid. The Contractor shall write the word "Foreign" by the bid total shown on Form C-7 as well as last page of Schedule of Items showing the total bid amount. The bidder shall also contact the State Contract Engineer to inform him that he is also submitting an alternate "Foreign" paper bid..

The information listed on the supportive data sheet(s) will be used to provide the basis for verification of the required cost savings. In the event comparison of the prices given, or corrected as provided in Section 103.01 of the Specifications, shows that use of "foreign" iron and steel items does not represent a cost savings exceeding the aforementioned 25 percent, "domestic" iron and/or steel and prices given there for shall be used and the "100 percent Domestic Items Total" shall be the Contractor's bid.

Certification of Compliance:

Where domestic material is supplied, prior to incorporation into the Work, the Contractor shall furnish to the Department a certificate of compliance (such as may be furnished by steel mill test reports) that all steel and/or iron products supplied to the project except as may be permitted (one-tenth of one percent of the total contract cost or \$2,500, whichever is greater) and permanently incorporated into the work satisfies the domestic requirements herein. This certification shall contain a definitive statement about the origin of all products covered under the provisions of Buy America as stated herein.

In lieu of the Contractor providing personal certification, the Contractor may furnish a stepped certification in which each handler of the product, such as supplier, fabricator, manufacturer, processor, etc. furnishes an individual certification that their step in the process was domestically performed.

Exhibit 102.05(q.2)

SF010DF-0712

May 1, 2012
FHWA-1273 (Electronic Version)

The following Form **FHWA-1273** titled **REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS** shall apply to this contract:

=====

FHWA-1273 – Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

- A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The

design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
 - b. The contractor will accept as its 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, national origin, age or disability. 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, pre-apprenticeship, and/or on-the-job training."
2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
 - c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

- 4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

- 5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
- b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement,

the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

- 8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
- 9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
 - a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
- 10. Assurance Required by 49 CFR 26.13(b):**
 - a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
 - b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
- 11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
 - a. The records kept by the contractor shall document the following:
 - (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the

project;

- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

- b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

- a. All laborers and mechanics employed or working upon the site of the work, will

be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - (I) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (II) The classification is utilized in the area by the construction industry; and
 - (II) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S.

Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 - d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.
- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (I) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (II) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (III) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.
 - (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

- a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and

Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage

rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
- d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

- 5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- 6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- 7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- 8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- 9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

- a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring

the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
 - a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, 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 prime contractor meets all of the following conditions:
 - (1) the prime contractor maintains control over the supervision of the day-today activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;
 - (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
 - b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer

determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer 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 work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined 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).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that 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 the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons

concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented; Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for

ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
 - (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
 - (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for

ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-- Lower Tier Participants:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid

to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

Exhibit 102.05(q.3)

SF030AF-0708

Reissued July 2008

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals for female and minority participation, expressed in percentage terms of the Contractor's aggregate work force in each trade on all construction works in the covered area, are as follows:

Females- 6.9%

Minorities - See Attachment "A"

The goals are applicable to all the Contractor's construction work performed in the covered area, whether or not it is Federal or federally assisted. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications, set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established herein. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executives Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days the award of any construction subcontract in excess of \$10,000 at any tier for construction works under this contract. The notification shall list the name, address and telephone number of the subcontractor, employer identification number, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the contract is to be performed.

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

1. As, used in this provision:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors and Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the coverer area. Covered construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all foreman, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off the street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union, or if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper or annual report; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents and General Foremen prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including in any news media advertisement that the Contractor is "An Equal Opportunity Employer" for minority and female, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

- i. Directs its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of Contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for such opportunities through appropriate training or other means.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated, except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. Goals for women have been established. However, the Contractor IS required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner, that is even though the Contractor has achieved its goals for women, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or nation origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director will proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate and make known to the Department a responsible official as the EEO Officer to monitor all employment related activity, to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors will not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

ATTACHMENT A

| <u>Economic Area</u> | <u>Goal (Percent)</u> |
|---|-----------------------|
| Virginia: | |
| 021 Roanoke-Lynchburg, VA | |
| SMSA Counties: | |
| 4640 Lynchburg, VA | 19.3 |
| VA Amherst; VA Appomattox; VA Campbell; VA Lynchburg | |
| 6800 Roanoke, VA | 10.2 |
| VA Botetourt; VA Craig; VA Roanoke; VA Roanoke City; VA Salem | |
| Non-SMSA Counties | 12.0 |
| VA Alleghany; VA Augusta; VA Bath; VA Bedford; VA Bland; VA Carroll; | |
| VA Floyd; VA Franklin; VA Giles; VA Grayson; VA Henry; VA Highland; | |
| VA Montgomery; VA Nelson; VA Patrick; VA Pittsylvania; VA Pulaski; | |
| VA Rockbridge; VA Rockingham; VA Wythe; VA Bedford City; VA Buena | |
| Vista: | |
| VA Clifton Forge; VA Covington; VA Danville; VA Galax; VA Harrisonburg; | |

| | | |
|---|---|------|
| | VA Lexington; VA Martinsville; VA Radford; VA Staunton; VA Waynesboro; WV Pendleton. | |
| 022 Richmond, VA | | |
| | SMSA Counties: | |
| | 6140 Petersburg - Colonial Heights - Hopewell, VA | 30.6 |
| | VA Dinwiddie; VA Prince George; VA Colonial Heights; VA Hopewell; VA Petersburg. | |
| | 6760 Richmond, VA | 24.9 |
| | VA Charles City; VA Chesterfield; VA Goochland, VA Hanover; VA Henrico; VA New Kent; VA Powhatan; VA Richmond. | |
| | Non-SMSA Counties | 27.9 |
| | VA Albemarle; VA Amelia; VA Brunswick; VA Buckingham, VA Caroline; VA Charlotte; VA Cumberland; VA Essex; VA Fluvanna; VA Greene; VA Greensville; VA Halifax; VA King and Queen; VA King William; VA Lancaster; VA Louisa; VA Lunenburg; VA Madison; VA Mecklenburg; VA Northumberland; VA Nottoway; VA Orange; VA Prince Edward; VA Richmond VA Sussex; VA Charlottesville; VA Emporia; VA South Boston | |
| 023 Norfolk - Virginia Beach - Newport News VA: | | |
| | SMSA Counties: | |
| | 5680 Newport News- Hampton, VA | 27.1 |
| | VA Gloucester; VA James City; VA York; VA Hampton; VA Newport News; VA Williamsburg. | |
| | 5720 Norfolk - Virginia Beach - Portsmouth, VA - NC | 26.6 |
| | NC Currituck; VA Chesapeake; VA Norfolk; VA Portsmouth; VA Suffolk; VA Virginia Beach. | |
| | Non-SMSA Counties | 29.7 |
| | NC Bertie; NC Camden; NC Chowan; NC Gates; NC Hertford; NC Pasquotank; NC Perquimans; VA Isle of Wight; VA Matthews; VA Middlesex; VA Southampton; VA Surry; VA Franklin. | |
| Washington, DC: | | |
| 020 Washington, DC. | | |
| | SMSA Counties: | |
| | 8840 Washington, DC - MD - VA | 28.0 |
| | DC District of Columbia; MD Charles; MD Montgomery MD Prince Georges; VA Arlington; VA Fairfax; VA Loudoun; VA Prince William VA Alexandria; VA Fairfax City; VA Falls Church. | |
| | Non- SMSA Counties | 25.2 |
| | MD Calvert; MD Frederick; MD St. Marys; MD Washington; VA Clarke; VA Culpeper; VA Fauquier; VA Frederick; VA King George; VA Page; VA Rappahannock; VA Shenandoah; VA Spotsylvania; VA Stafford; VA Warren; VA Westmoreland; VA Fredericksburg; VA Winchester WV Berkeley; WV Grant; WV Hampshire; WV Hardy; WV Jefferson; WV Morgan. | |
| Tennessee: | | |
| 052 Johnson City - Kingsport - Bristol, TN - VA | | |
| | SMSA Counties: | |
| | 3630 Johnson City - Kingsport -Bristol, TN-VA | 2.6 |
| | TN Carter; TN Hawkins; TN Sullivan; TN Washington; VA Scott: VA Washington; VA Bristol. | |
| | Non-SMSA Counties | 3.2 |
| | TN Greene; TN Johnson; VA Buchanan; VA Dickenson; VA Lee; VA Russell; VA Smyth; VA Tazewell; VA Wise; VA Norton; WV McDowell; WV Mercer. | |
| Maryland: | | |
| 019 Baltimore MD | | |
| | Non-SMSA Counties | 23.6 |

MD Caroline; MD Dorchester; MD Kent; MD Queen Annes; MD Somerset;
MD Talbot; MD Wicomico; MD Worchester; VA Accomack; VA
Northampton.

Exhibit 107.13

SF001AF-0708

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PREDETERMINED MINIMUM WAGE RATES

U.S. DEPARTMENT OF LABOR
OFFICE OF THE SECRETARY
WASHINGTON
DECISION OF THE SECRETARY

This case is before the Department of Labor pursuant to a request for a wage predetermination as required by law applicable to the work described.

A study has been made of wage conditions in the locality and based on information available to the Department of Labor the wage rates and fringe payments listed are hereby determined by the Secretary of Labor as prevailing for the described classes for labor in accordance with applicable law.

This wage determination decision and any modifications thereof during the period prior to the stated expiration date shall be made a part of every contract for performance of the described work as provided by applicable law and regulations of the Secretary of Labor, and the wage rates and fringe payments contained in this decision, including modifications, shall be the minimums to be paid under any such contract and subcontractors on the work.

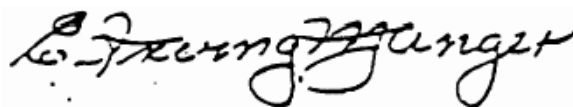
The contracting officer shall require that any class of laborers and mechanics which is not listed in the wage determination and which is to be employed under the contract, shall be classified or reclassified conformably to the wage determination, and a report of the action taken shall be sent by the Federal agency to the Secretary of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the contracting officer shall be referred to the Secretary for determination.

Before using apprentices on the job the contractor shall present to the contracting officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U.S. Bureau of Apprenticeship and Training.

The contractor shall submit to the contracting officer written evidence of the established apprentice-journeyman ratios and wage in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

Fringe payments include medical and hospital care, compensation for injuries or illness resulting from occupational activity, unemployment benefits, life insurance, disability and sickness insurance, accident insurance (all designated as health and welfare), pensions, vacation and holiday pay, apprenticeship or other similar programs and other bona fide fringe benefits.

By direction of the Secretary of Labor



E. Irving Manger, Associate Administrator
Division of Wage Determinations
Wage and Labor Standards Administration

General Decision Number: VA160135 01/08/2016 VA135

Superseded General Decision Number: VA20150135

State: Virginia

Construction Type: Highway

Counties: Alexandria*, Arlington, Clarke, Culpeper, Fairfax, Fairfax*, Falls Church*, Fauquier, Fredericksburg*, King George, Loudoun, Manassas Park*, Manassas*, Prince William, Spotsylvania, Stafford and Warren Counties in Virginia.

*INDEPENDENT CITIES

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any

classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0 | 01/08/2016 |

SUVA2013-010 09/20/2013

| | Rates | Fringes |
|-------------------------------------|----------|---------|
| ASBESTOS WORKER..... | \$ 16.91 | |
| CARPENTER (STRUCTURE)..... | \$ 16.02 | |
| CEMENT MASON/CONCRETE FINISHER...\$ | 21.71 | |
| ELECTRICIAN..... | \$ 29.27 | |
| FORM SETTER..... | \$ 14.00 | |
| IRONWORKER, REINFORCING..... | \$ 34.18 | |

IRONWORKER, STRUCTURAL.....\$ 19.13

LABORER

Asphalt Raker.....\$ 15.85

Blaster.....\$ 35.00

Construction Worker I

(Skilled Laborer).....\$ 15.77

Construction Worker II

(Laborer).....\$ 14.14

Deckhand.....\$ 13.00

Fence Erector.....\$ 14.41

Flagger.....\$ 13.64

Grade Checker.....\$ 13.42

Guardrail Erector.....\$ 22.15

Landscape Worker.....\$ 11.97

Pipe Layer.....\$ 19.00

Power Tool Operator.....\$ 15.00

Sign Erector.....\$ 25.00

MASON (STRUCTURE).....\$ 17.64

PAINTER.....\$ 15.00

PLUMBER.....\$ 25.00

POWER EQUIPMENT OPERATOR:

Air Compressor.....\$ 13.50
Asphalt Distributor.....\$ 18.64
Asphalt Paver.....\$ 19.35
Backhoe.....\$ 20.59
Boom/Auger.....\$ 20.29
Bulldozer (Utility).....\$ 15.50
Bulldozer.....\$ 20.40
Concrete Finish Machine
Operator.....\$ 18.54
Concrete Finisher Machine
Screed Operator (Bridge)....\$ 14.60
Concrete Paving Machine
Operator.....\$ 20.75
Concrete Pump Operator.....\$ 33.00
Concrete Saw Operator.....\$ 16.00
Crane, Derrick, Dragline
(1 cm & under).....\$ 24.53
Crane, Derrick, Dragline
(over 1 cm).....\$ 25.00
Crusher Tender.....\$ 14.25
Drill Operator.....\$ 15.70
Excavator (Gradall).....\$ 19.32
Front End Loader (2 cm &
under).....\$ 19.00
Front End Loader (over 2
cm).....\$ 20.42
Hydro Seeder.....\$ 17.13

Log Skidder Operator.....\$ 18.50
 Mechanic.....\$ 21.75
 Mobile Mixer.....\$ 17.00
 Motor Grader (Fine Grade)...\$ 27.25
 Motor Grader (Rough Grade)..\$ 13.58
 Oiler, Greaser.....\$ 14.00
 Pavement Marking Operator...\$ 17.00
 Pavement Marking Truck
 Operator.....\$ 16.72
 Pavement Planing Groundman..\$ 19.75
 Pavement Planing Operator...\$ 19.25
 Pile Driver Operator.....\$ 20.35
 Pile Driver, Leadsman.....\$ 21.32
 Pipe Boring/Jacking
 Machine Operator.....\$ 16.00
 Plant Operator.....\$ 14.88
 Roller (Finish).....\$ 17.94
 Roller (Rough).....\$ 17.06
 Scraper Pan Operator.....\$ 13.00
 Shot Blast Machine Operator.\$ 16.02
 Shovel Operator (2 yds and
 under).....\$ 16.00
 Shovel Operator (over 2
 yds).....\$ 25.00
 Slip-Form Paver.....\$ 21.00
 Slurry Seal Paver Machine
 Operator.....\$ 13.75

Slurry Seal Paver Truck

| | |
|-------------------------------|----------|
| Operator..... | \$ 10.32 |
| Stabilizer Operator..... | \$ 15.70 |
| Stone-Spreader..... | \$ 13.35 |
| Subgrade Machine Operator.... | \$ 19.00 |
| Tractor Operator, Crawlers.. | \$ 12.47 |
| Tractor Operator, Utility.... | \$ 12.25 |
| Trenching Machine..... | \$ 29.87 |
| Vacuum Machine..... | \$ 18.20 |

TRAFFIC SIGNALIZATION:

| | |
|----------------------------------|----------|
| Traffic Signal Installation..... | \$ 21.16 |
|----------------------------------|----------|

TRUCK DRIVER

Fuel & Lubricant Service

| | |
|---|----------|
| Truck Driver..... | \$ 17.73 |
| Transit Mix Truck Driver.... | \$ 15.00 |
| Truck Driver (Multi-Rear Axle)..... | \$ 16.69 |
| Truck Driver (Single Rear Axle)..... | \$ 17.50 |
| Truck Driver (Tandem Rear Axle)..... | \$ 16.91 |
| Truck Driver, Heavy Duty.... | \$ 17.29 |

| | |
|--------------------|-----------------|
| WELDER..... | \$ 18.15 |
|--------------------|-----------------|

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates

the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

END OF GENERAL DECISION.

**VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR SECTION 107.15
FOR
DESIGN-BUILD PROJECTS**

February 18, 2014

Section 107.15 of the Specifications is replaced by the following:

Section 107.15—Use of Disadvantaged Business Enterprises (DBEs) for Design-Build Projects

A. Disadvantaged Business Enterprise (DBE) Program Requirements

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

For the purposes of this provision, Offeror is defined as any individual, partnership, corporation, or Joint Venture that formally submits a Statement of Qualification or Proposal for the work contemplated there under; Design-Builder is defined as any individual, partnership, or Joint Venture that contracts with the Department to perform the Work; and subcontractor is defined as any supplier, manufacturer, or subcontractor performing work or furnishing material, supplies or services to the contract. The Design-Builder shall physically include this same contract provision in every supply or work/service subcontract that it makes or executes with a subcontractor having work for which it intends to claim credit.

In accordance with 49 CFR Part 26 and VDOT's DBE Program requirements, the Design-Builder, for itself and for its subcontractors and suppliers, whether certified DBE firms or not, shall commit to complying fully with the auditing, record keeping, confidentiality, cooperation, and anti-intimidation or retaliation provisions contained in those federal and State DBE Program legal requirements. By submitting a Proposal on this contract, and by accepting and executing this contract, the Design-Builder agrees to assume these contractual obligations and to bind the Design-Builder's subcontractors contractually to the same at the Design-Builder's expense.

The Design-Builder and each subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Design-Builder shall carry out applicable requirements of 49 CFR Part 26 in the award, administration, and performance of this contract. Failure by the Design-Builder to carry out these requirements is a material breach of this contract, which will result in the termination of this contract or other such remedy, as VDOT deems appropriate.

All administrative remedies noted in this provision are automatic unless the Design-Builder exercises the right of appeal within the required timeframe(s) specified herein. Appeal requirements, processes, and procedures shall be in accordance with guidelines stated herein and current at the time of the proceedings. Where applicable, the Department will notify the Design-Builder of any changes to the appeal requirements, processes, and procedures after receiving notification of the Design-Builder's desire to appeal.

All time frames referenced in this provision are expressed in business days unless otherwise indicated. Should the expiration of any deadline fall on a weekend or holiday, such deadline will automatically be extended to the next normal business day.

B. DBE Certification

The only DBE firms eligible to perform work on a federal-aid contract for DBE contract goal credit are firms certified as Disadvantaged Business Enterprises by the Virginia Department of Minority Business Enterprise (DMBE) or the Metropolitan Washington Airports Authority (MWAA) in accordance with federal and VDOT guidelines. DBE firms must be certified in the specific work listed for DBE contract goal credit. A directory listing of certified DBE firms can be obtained from the Virginia Department of Minority Business Enterprise' website: <http://www.dmbc.virginia.gov>.

C. Bank Services

The Design-Builder and each subcontractor are encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals. Such banking services and the fees charged for services typically will not be eligible for DBE Program contract goal credit.

D. DBE Program-Related Certifications Made by Offerors/Design-Builders

By submitting a Proposal and by entering into any contract on the basis of that Proposal, the Offeror/Design-Builder certifies to each of the following DBE Program-related conditions and assurances:

1. That the Offeror/Design-Builder agrees to comply with the project construction and administration obligations of the USDOT DBE Program, 49 CFR Part 26 as amended, and the Standard Specifications setting forth the Department's DBE Program requirements.
2. Design-Builder shall comply fully with the DBE Program requirements in the execution and performance of the contract. Design-Builder acknowledges that failure to comply may result in enjoinder from participation in future Department or State procurements and/or other legal sanctions.
3. To ensure that DBE firms have been given full and fair opportunity to participate in the performance of the contract. The Design-Builder certifies that all reasonable steps were, and will be, taken to ensure that DBE firms had, and will have, an opportunity to compete for and perform work on the contract. The Design-Builder further certifies that the Design-Builder shall not discriminate on the basis of race, color, age, national origin, or sex in the performance of the contract or in the award of any subcontract. Any agreement between a Design-Builder and a DBE whereby the DBE promises not to provide quotations for performance of work to other Design-Builders are prohibited.
4. Design-Builder shall make good faith efforts to obtain DBE participation in the proposed contract at or above the goal. The Offeror shall submit a written statement as a part of its Statement of Qualifications and/or Proposal indicating the Offeror's commitment to achieve the minimum requirement related to DBE goal indicated in Request for Qualification (RFQ) and/or Request for Proposal (RFP) for the entire value of the contract. The Offeror, by signing and submitting its Proposal, certifies the DBE participation information that will be submitted within the required time thereafter is true, correct, and complete, and that the information to be provided includes the names of all DBE firms that will participate in the contract, the specific item(s) that each listed DBE firm will perform, and the creditable dollar amounts of the participation of each listed DBE.
5. Offeror further certifies, by signing its Proposal, it has committed to meet the contract goal for DBE participation. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR Part 26.53 and the contract documents. By signing the Proposal, the Offeror certifies that good faith efforts will be made on work that it proposes to sublet; and that it will seek out and consider DBE firms as potential subcontractors and

subconsultants. The Design-Builder shall, as a continuing obligation, contact DBE firms to solicit their interest, capability, and prices in sufficient time to allow them to respond effectively, and shall retain on file proper documentation to substantiate its good faith efforts.

6. Design-Builder shall not unilaterally terminate, substitute for, or replace any DBE firm that was designated in the executed contract in whole or in part with another DBE, any non-DBE firm, or with the Design-Builder's own forces or those of an affiliate of the Design-Builder without the prior written consent of Department as set out within the requirements of this Special Provision.
7. Design-Builder shall designate and make known to the Department a liaison officer who is assigned the responsibility of administering and promoting an active and inclusive DBE program as required by 49 CFR Part 26 for DBE firms. The designation and identity of this officer needs to be submitted only once by the Design-Builder.
8. Design-Builder shall comply fully with all contractual requirements and Legal Requirements of the USDOT DBE Program, and shall cause each DBE firm participating in the contract to fully perform the designated work items with the DBE firm's own forces and equipment under the DBE firm's direct supervision, control, and management. Where a contract exists and where the Design-Builder, DBE firm, or any other firm retained by the Design-Builder has failed to comply with federal or Department DBE Program requirements, Department has the authority and discretion to determine the extent to which the DBE contract regulations have not been met, and will assess against the Design-Builder any remedies available at law or provided in the contract.
9. If a bond surety assumes the completion of work, if for any reason VDOT has terminated the Design-Builder, the surety shall be obligated to meet the same DBE contract terms and requirements as were required of the original Design-Builder in accordance with the requirements of this specification.

E. DBE Program Compliance Procedures

The following procedures shall apply to the contract for DBE Program compliance purposes:

1. **Prequalification of Subcontractors:** All prospective DBE subcontractors shall prequalify with the Department in accordance with the *Rules Governing Prequalification*.
2. **DBE Goal, Good Faith Efforts Specified:** Design-Builder shall evidence attainment of the DBE commitment equal to or greater than the required DBE Goal through submission, to Department, of completed Form C-111, Minimum DBE Requirements; Form C-112, Certification of Binding Agreement; and Form C-48, Subcontractor/Supplier Solicitation and Utilization, as a part of the good faith efforts documentation set forth below:

Design Phase: Thirty (30) days after the Notice to Proceed for Design, the Design-Builder shall submit to Department for review and approval Forms C-111 and C-112 for each DBE firm to be utilized during the design phase to meet the DBE minimum requirement and Form C-48. Failure to submit the required documentation within the specified timeframe shall be cause to deny credit for any work performed by a DBE firm and delay approval of the Design-Builder's monthly payment.

Construction Phase: No later than thirty (30) days prior to the DBE firm undertaking any work, Design-Builder shall submit to Department for review and approval Forms C-111, C-112, and C-48. Failure to submit the required documentation within the specified timeframe shall result in disallowed credit of any work performed prior to approval of Forms C-111 and C-112 and delay approval of monthly payment.

The District Civil Rights Office (DCRO) will monitor good faith effort documentation quarterly to determine progress being made toward meeting the DBE minimum requirement established for the contract.

Forms C-48, C-49, C-111, and C-112 can be obtained from the VDOT website at:
<http://vdotforms.vdot.virginia.gov/>

- 3. Good Faith Efforts Described:** Department will determine if Design-Builder demonstrated adequate good faith efforts, and if given all relevant circumstances, those efforts were made actively and aggressively to meet the DBE requirements. Efforts to obtain DBE participation are not good faith efforts if they could not reasonably be expected to produce a level of DBE firm participation sufficient to meet the DBE Program requirements and DBE Goal.

Good faith efforts may be determined through use of the following list of the types of actions the Design-Builder may make to obtain DBE participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts of similar intent may be relevant in appropriate cases:

- (a) Soliciting through reasonable and available means, such as but not limited to, attendance at pre-bid meetings, advertising, and written notices to DBE firms who have the capability to perform the work of the contract. Examples include: advertising in at least one daily/weekly/monthly newspaper of general circulation, as applicable; phone contact with a completely documented telephone log, including the date and time called, contact person, or voice mail status; and internet contacts with supporting documentation, including dates advertised. DBE firms shall have no less than five (5) business days to reasonably respond to the solicitation. Design-Builder shall determine with certainty if the DBE firms are interested by taking reasonable steps to follow up initial solicitations as evidenced by documenting such efforts as requested on Form C-49, DBE Good Faith Efforts Documentation.
- (b) Selecting portions of the work to be performed by DBE firms in order to increase the likelihood that the DBE Goal will be achieved. This includes, where appropriate, breaking out work items into economically feasible units to facilitate DBE firm participation, even when the Design-Builder might otherwise prefer to completely perform all portions of this work in its entirety or use its own forces;
- (c) Providing interested DBE firms with adequate information about the plans, specifications, and requirements of the contract in a timely manner, which will assist the DBE firms in responding to a solicitation;
- (d) Negotiating for participation in good faith with interested DBE firms;
 - 1. Evidence of such negotiation shall include the names, addresses, and telephone numbers of DBE firms that were considered; dates DBE firms were contacted; a description of the information provided regarding the plans, specifications, and requirements of the contract for the work selected for subcontracting; and, if insufficient DBE participation seems likely, evidence as to why additional agreements could not be reached for DBE firms to perform the work;
 - 2. Design-Builder should, using good business judgment, consider a number of factors in negotiating with subcontractors/subconsultants, and should take a DBE firm's price, qualifications, and capabilities, as well as contract goals, into consideration. However, the fact that there may be some additional costs involved in finding and using DBE firms is not sufficient reason for a Design-Builder's failure to meet the DBE goal as long as such costs are reasonable and comparable to costs customarily appropriate to the type of work under consideration. Also, the ability or desire of a Design-Builder to

perform the work with its own organization does not relieve the Design-Builder of the responsibility to make diligent good faith efforts. Design-Builders are not, however, required to accept higher quotes from DBE firms if the price difference can be shown by the Design-Builder to be excessive, unreasonable, or greater than would normally be expected by industry standards;

- (e) A Design-Builder cannot reject a DBE firm as being unqualified without sound reasons based on a thorough investigation of the DBE firm's capabilities. The DBE firm's standing within its industry, membership in specific groups, organizations, associations, and political or social affiliations, and union vs. non-union employee status are not legitimate causes for the rejection or non-solicitation of bids in the Design-Builder's efforts to meet the contract goal for DBE participation;
- (f) Making efforts to assist interested DBE firms in obtaining bonding, lines of credit, or insurance as required by Department or by Design-Builder;
- (g) Making efforts to assist interested DBE firms in obtaining necessary equipment, supplies, materials, or related assistance or services subject to the restrictions contained in this Special Provision;
- (h) Effectively using the services of appropriate personnel from VDOT and from DMBE; available minority/women community or minority organizations; contractors' groups; local, state, and Federal minority/ women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and utilization of qualified DBEs.

F. Documentation and Administrative Reconsideration of Good Faith Efforts

Design-Builder must provide Form C-49, DBE Good Faith Efforts Documentation, of its efforts made to meet the DBE goal within the time frames specified in this provision. The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the Design-Builder. Design-Builder shall attach additional pages to the certification, if necessary, in order to fully detail specific good faith efforts made to obtain the DBE firm's participation in the proposed work.

However, Design-Builder shall timely submit its completed and executed forms C-111, C-112, C-48, and C-49, as aforementioned. Failure to submit the required documentation within the specified time frames shall be cause to disallow DBE goal credit and delay approval of the Design-Builder's monthly payment.

During the Contract: If a DBE, through no fault of the Design-Builder, is unable or unwilling to fulfill his agreement with the Design-Builder, the Design-Builder shall immediately notify the Department and provide all relevant facts. If a Design-Builder relieves a DBE subcontractor of the responsibility to perform work under their subcontract, the Design-Builder is encouraged to take the appropriate steps to obtain another DBE firm to perform the remaining subcontracted work for the amount that would have been paid to the original DBE firm. In such instances, Design-Builder is expected to seek DBE participation towards meeting the goal during the performance of the contract.

If at any point during the execution and performance of the contract it becomes evident that the remaining dollar value of allowable DBE goal credit for performing the subcontracted work is insufficient to obtain the DBE contract goal, and the Design-Builder has not taken the preceding actions, the Design-Builder and any aforementioned affiliates may be subject to disallowance of

DBE credit until such time as sufficient progress toward achievement of the DBE goal is achieved or evidenced.

Project Completion: If, at final completion, the Design-Builder fails to meet the DBE goal, and fails to adequately document that it made good faith efforts to achieve sufficient DBE goal, then Design-Builder and any prime contractual affiliates, as in the case of a joint venture, may be enjoined from bidding, responding, or participating on Department projects for a period of ninety (90) days and be removed from Department's prequalification list.

Prior to such enjoinder or removal, Design-Builder may submit documentation to the State Construction Engineer or other designee of Department to substantiate that failure was due solely to quantitative underrun(s), elimination of items subcontracted to DBEs, or to circumstances beyond Design-Builder's control and that all feasible means had been used to achieve the DBE goal. The State Construction Engineer, or such other designee, upon verification of such documentation shall determine whether Design-Builder has met the requirements of the contract.

If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Design-Builder may request an appearance before the Department's Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. The Administrative Reconsideration Panel will be made up of Department Division Administrators or their designees, none of who took part in the initial determination that the Design-Builder failed to make the DBE goal or make adequate good faith efforts to do so. After reconsideration, Department shall notify the Design-Builder in writing of its decision and explain the basis for finding that the Design-Builder did or did not meet the DBE goal or make adequate good faith efforts to do so. The decision of the Administrative Reconsideration Panel shall be administratively final. If the decision is made to enjoin the Design-Builder from bidding or participating on other Department work as described herein, the enjoinder period will begin upon Design-Builder's failure to request a hearing within the designated time frame or upon the Administrative Reconsideration Panel's decision to enjoin, as applicable.

G. DBE Participation for Contract Goal Credit

DBE participation on the contract will count toward meeting the DBE contract goal in accordance with the following criteria:

1. The applicable percentage of the total dollar value of the contract or subcontract awarded to the DBE firm will be counted toward meeting the DBE goal in accordance with the **DBE Program-Related Certifications Made by Offerors/Design-Builder's** section of this Special Provision for the value of the work, goods, or services that are actually performed or provided by the DBE firm itself or subcontracted by the DBE to other DBE firms.
2. When a DBE performs work as a participant in a joint venture with a non-DBE firm, the Design-Builder may count toward the DBE goal only that portion of the total dollar value of the subcontract equal to the distinctly defined portion of the work that the DBE firm has performed with the DBE firm's own forces or in accordance with the provisions of this Section. The Department shall be contacted in advance regarding any joint venture involving both a DBE firm and a non-DBE firm to coordinate Department review and approval of the joint venture's organizational structure and proposed operation where the Design-Builder seeks to claim the goal credit.
3. When a DBE firm subcontracts part of the work to another firm, the value of that subcontracted work may be counted toward the DBE contract goal only if the DBE firm's subcontractor is a DBE firm. Work that a DBE firm subcontracts to a non-DBE firm, or to a firm that may be eligible to be a DBE firm, but has not yet been certified as a DBE firm, will not count toward the DBE. The cost of supplies and equipment a DBE subcontractor purchases or leases from

the Design-Builder or prime contractual affiliates, as in the case of a joint venture, will not count toward the DBE goal.

4. The Design-Builder may count expenditures to a DBE subcontractor toward the DBE goal only if the DBE performs a Commercially Useful Function (CUF) on that subcontract, as such term is defined in subparagraph H below.
5. A Design-Builder may not count the participation of a DBE subcontractor toward the DBE goal until the amount being counted has actually been paid to the DBE firm. Design-Builder may count sixty (60) percent of its expenditures actually paid for materials and supplies obtained from a DBE certified as a regular dealer, and one hundred (100) percent of such expenditures actually paid for materials and supplies obtained from a regular dealer of the goods or a manufacturer DBE firm.
 - (a) For the purposes of this Special Provision, a "regular dealer" is defined as a firm or person that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment required and used under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the DBE firm or person shall be an established business that regularly engages, as its principal business and under its own name, in the purchase and sale or lease of the products or equipment in question. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions will not be considered regular dealers.
 - (b) A DBE firm or person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business where it keeps such items in stock if the DBE firm both owns and operates distribution equipment for the products it sells and provides for the work, provided further that the DBE firm or person has been certified with an appropriate North American Industry Classification System (NAICS) code for supply of such bulk items. Any supplementation of a regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an *ad hoc* or contract-by-contract basis to be eligible for credit to meet the DBE goal credit.
 - (c) If a DBE regular dealer is used for DBE goal credit, no additional credit will be given for hauling or delivery to the project site goods or materials sold by that DBE regular dealer. Those delivery costs shall be deemed included in the price charged for the goods or materials by the DBE regular dealer, which shall be responsible for distribution of the goods or materials.
 - (d) For the purposes of this Special Provision, a manufacturer will be defined as a firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the contract and of the general character described by the project specifications. A manufacturer shall include firms that produce finished goods or products from raw or unfinished material, or purchase and substantially alter goods and materials to make them suitable for construction use before reselling them.
 - (e) A Design-Builder may count toward the DBE goal the following expenditures to DBE firms that are not regular dealers or manufacturers for DBE program purposes:
 1. The entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant or managerial services, or for providing bonds or insurance specifically required for the performance of the federal-aid contract, if the fee is reasonable and not excessive or greater than would normally be expected by industry standards for the same or similar services.

2. The entire amount of that portion of the contract that is performed by the DBE firm's own forces and equipment under the DBE firm's supervision. This includes the cost of supplies and materials ordered and paid for by the DBE firm for work, including supplies purchased or equipment leased by the DBE firm, except Design-Builder supplies and equipment a DBE subcontractor purchases or leases from the Design-Builder or its affiliates.
- (f) Design-Builder may count toward the DBE goal one hundred (100) percent of the fees paid to a DBE trucker or hauler for the delivery of material and supplies required on the project job site, but not for the cost of those materials or supplies themselves, provided that the trucking or hauling fee is determined by Department to be reasonable, as compared with fees customarily charged by non-DBE firms for similar services. Design-Builder shall not count costs for the removal or relocation of excess material from or on the job site when the DBE trucking company is the manufacturer of or a regular dealer in those materials and supplies. The DBE trucking firm shall also perform a CUF on the project and not operate merely as a pass through for the purposes of gaining DBE goal credit. Prior to entering into a trucking subcontract, Design-Builder shall determine, or contact the Department Civil Rights Division or its district offices for assistance in determining, whether a DBE trucking firm will meet the criteria for performing a CUF on the project. See section on **Miscellaneous DBE Program Requirements; Factors used to Determine if a DBE Trucking Firm is Performing a CUF.**
- (g) Design-Builder will receive DBE goal credit for the fees or commissions charged by and paid to a DBE broker who arranges or expedites sales, leases, or other work arrangements provided that those fees are determined by Department to be reasonable and not excessive as compared with fees customarily charged by non-DBE firms for similar services. For the purposes of this Special Provision, a broker is defined as a person or firm that regularly engages in arranging for delivery of material, supplies, and equipment, or regularly arranges for the providing of project services as a course of routine business, but does not own or operate the delivery equipment necessary to transport materials, supplies or equipment to or from a job site.

H. Performing a Commercially Useful Function (CUF)

No credit toward the DBE goal will be allowed for payments or reimbursement of expenditures to a DBE firm if that DBE firm does not perform a CUF on that contract. A DBE firm performs a CUF when the DBE is solely responsible for execution of a distinct element of the work and the DBE firm actually performs, manages, and supervises such work with the DBE firm's own forces or in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. To perform a CUF the DBE firm alone shall be responsible and bear the risk for the material and supplies used on the contract, selecting a supplier or dealer from those available, negotiating price, determining quality and quantity, ordering the material and supplies, installing those materials with the DBE firm's own forces and equipment, and paying for those materials and supplies. The amount the DBE firm is to be paid under the subcontract shall be commensurate with the work the DBE actually performs and the DBE goal credit claimed for the DBE firm's performance.

Monitoring CUF Performance: It shall be the Design-Builder's responsibility to confirm that all DBE firms selected for subcontract work on the contract, for which he seeks to claim credit toward the DBE goal, perform a CUF. Further, the Design-Builder is responsible for and shall confirm that each DBE firm fully performs the DBE firm's designated tasks in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. For the purposes of this Special Provision the DBE firm's equipment will mean either equipment directly owned by the DBE as evidenced by title, bill of sale or other such documentation, or

leased by the DBE firm, and over which the DBE has control as evidenced by the leasing agreement from a firm not owned in whole or part by the Design-Builder or an affiliate of the Design-Builder.

Department will monitor Design-Builder's DBE involvement during the performance of the contract. However, Department is under no obligation to warn the Design-Builder that a DBE firm's participation will not count toward the goal.

DBE Firms Must Perform a Useful and Necessary Role in Contract Completion: A DBE firm does not perform a CUF if the DBE firm's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE firm participation.

DBE Firms Must Perform The Contract Work With Their Own Workforces: If a DBE firm does not perform and exercise responsibility for at least thirty (30) percent of the total cost of the DBE firm's contract with the DBE firm's own work force, or the DBE firm subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involve, Department will presume that the DBE firm is not performing a CUF and such participation will not be counted toward the DBE goal.

Department Makes Final Determination On Whether a CUF Is Performed: Department has the final authority to determine, in its sole discretion, whether a DBE firm has performed a CUF on the contract. To determine whether a DBE is performing or has performed a CUF, Department will evaluate the amount of work subcontracted by that DBE firm or performed by other firms and the extent of the involvement of other firms' forces and equipment. Any DBE work performed by the Design-Builder or by employees or equipment of the Design-Builder shall be subject to disallowance under the DBE Program, unless the independent validity and need for such an arrangement and work is demonstrated. When a DBE firm is presumed not to be performing a commercially useful function the DBE may present evidence to rebut the Department's finding. Department has the final authority to determine, in its sole discretion, whether a DBE firm has performed a CUF on the contract.

I. Verification of DBE Participation and Imposed Damages

Within fourteen (14) days after subcontract execution between Design-Builder and DBE subcontractors (or subcontract execution between DBE subcontractors and DBE subcontractors), Design-Builder shall submit to the DCRO, a copy of the fully executed subcontract agreement for each DBE firm used to claim credit in accordance with the requirements stated on Form C-111. The subcontract shall be executed by both parties stating the work to be performed, the details or specifics concerning such work, and the price which will be paid to the DBE subcontractor. Because of the commercial damage that the Design-Builder and its DBE subcontractor could suffer if their subcontract pricing, terms, and conditions were known to competitors, the Department staff will treat subcontract agreements as proprietary Design-Builder trade secrets with regard to Freedom of Information Act requests. In lieu of subcontracts, purchase orders may be submitted for haulers, suppliers, and manufacturers. These too, will be treated confidentially and protected. Such purchase orders must contain, as a minimum, the following information: authorized signatures of both parties; description of the scope of work to include contract item numbers, quantities, and prices; and required federal contract provisions.

The Design-Builder shall also furnish, and shall require each subcontractor to furnish, information relative to all DBE involvement on the project for each quarter during the life of the contract in which participation occurs and verification is available. The information shall be indicated on Form C-63, DBE and SWAM Payment Compliance Report. The Department reserves the right to

request proof of payment via copies of cancelled checks with appropriate identifying notations. Failure to provide Form C-63 to the DCRO within five (5) business days after the reporting period may result in delay of approval of the Design-Builder's monthly payment. The names and certification numbers of DBE firms provided by the Design-Builder on the various forms indicated in this Special Provision shall be exactly as shown on DMBE's latest list of certified DBEs. Signatures on all forms indicated herein shall be those of authorized representatives of the Design-Builder as shown on the Prequalification Application, Form C-32 or the Prequalification/Certification Renewal Application, Form C-32A, or authorized by letter from the Design-Builder. If DBE firms are used which have not been previously documented with the Design-Builder's minimum DBE requirements documentation and for which the Design-Builder now desires to claim credit toward the contract goal, the Design-Builder shall be responsible for submitting necessary documentation in accordance with the procedures stipulated in this Special Provision to cover such work prior to the DBE firm beginning work. Form C-63 can be obtained from the VDOT website at: <http://vdotforms.vdot.virginia.gov/>

Design-Builder shall submit to the Department's Project Manager with a copy to the DCRO, a narrative with each project schedule submission, as required in the Special Provision for Design-Build Project Schedule (Part 3, Exhibit 11.1). The project schedule narrative shall include a log of applicable DBE participation activities in the Design-Builder's project schedule for which the Design-Builder intends to claim credit for attaining the DBE goal required in the contract. The log shall include the proposed start/finish dates, durations, and dollar values of the DBE participation activities.

Narratives or other agreeable format of schedule information requirements and subsequent progress determination shall be based on the commitment information shown on the latest Form C-111 as compared with the appropriate Form C-63.

Prior to beginning any major component of the work to be performed by a DBE firm not previously submitted, Design-Builder shall furnish a revised Form C-111 showing the name(s) and certification number(s) of any such DBEs for which Design-Builder seeks DBE goal credit. Design-Builder shall obtain the prior approval of the Department for any assistance it may provide to the DBE firm beyond its existing resources in executing its commitment to perform the work in accordance with the requirements listed in the **Good Faith Efforts Described** section of this Special Provision. If Design-Builder is aware of any assistance beyond a DBE firm's existing resources that Design-Builder, or another subcontractor, may be contemplating or may deem necessary and that have not been previously approved, Design-Builder shall submit a new or revised narrative statement for Department's approval prior to assistance being rendered.

If the Design-Builder fails to correctly complete and any of the required documentation requested by this Special Provision within the specified time frames, the Department will withhold payment until such time as the required submissions are received by Department. Where such failures to provide required submittals or documentation are repeated, Department will move to enjoin the Design-Builder and any prime contractual affiliates, as in the case of a joint venture, from bidding, responding or participating Department projects until such submissions are received.

J. Documentation Required for Semi-final Payment

Design-Builder must submit Form C-63 to the DCRO sixty (60) days prior to date of final completion, set forth on the Baseline Schedule (as updated from time to time in accordance with the contract). The form must include each DBE firm used on the contract and the work performed by each DBE firm. The form shall include the actual dollar amount paid to each DBE firm for the accepted creditable work. The form shall be certified under penalty of perjury, or other applicable legal requirements, to be accurate and complete. Department will use this certification and other information available to determine applicable DBE credit allowed to date by Department and the extent to which the DBE firms were fully paid for that work. The Design-Builder acknowledges by the act of filing the form that the information is supplied to obtain payment regarding the contract

as a federal participation contract. A letter of certification, signed by both the Design-Builder and appropriate DBE firms, will accompany the form, indicating the amount, including any retainage, if present, that remains to be paid to the DBE firm(s).

K. Documentation Required for Final Payment

In anticipation of final payment, Design-Builder shall submit a final Form C-63 marked "Final" to the DCRO, within thirty (30) days of the anticipated date of final completion, as set forth on the Baseline Schedule (as updated from time to time in accordance with the contract). The form must include each DBE firm used on the contract and the work performed by each DBE firm. The form shall include the actual dollar amount paid to each DBE firm for the creditable work. Department will use this form and other information available to determine if Design-Builder and DBE firms have satisfied the DBE goal and the extent to which credit was allowed. Design-Builder acknowledges by the act of signing and filing the form that the information is supplied to obtain payment regarding the contract as a federal participation contract.

L. Prompt Payment Requirements

Design-Builder shall make prompt and full payment to the subcontractor(s) (including DBE subcontractors) of any retainage held by Design-Builder after the subcontractor's work is satisfactorily completed.

For purposes of this Special Provision, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished, documented, and accepted as required by the contract documents by Department. If Department has made partial acceptance of a portion of the contract, then Department will consider the work of any subcontractor covered by that partial acceptance to be satisfactorily completed. Payment will be made in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Division I Amendments to the Standard Specifications (Part 5).

Upon Department's payment of the subcontractor's portion of the work as shown on the application for payment and the receipt of payment by Design-Builder for such work, the Design-Builder shall make compensation in full to the subcontractor for that portion of the work satisfactorily completed and accepted by the Department. For the purposes of this Special Provision, payment of the subcontractor's portion of the work shall mean the Design-Builder has issued payment in full, less agreed upon retainage, if any, to the subcontractor for that portion of the subcontractor's work that Department paid to Design-Builder pursuant to the applicable application for payment.

Design-Builder shall make payment of the subcontractor's portion of the work within seven (7) days of the receipt of payment from Department in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Division I Amendments to the Standard Specifications (Part 5).

If Design-Builder fails to make payment for the subcontractor's portion of the work within the time frame specified herein, the subcontractor shall notify the Department and the Design-Builder's bonding company in writing. Upon written notice from the subcontractor, the Design-Builder's bonding company and Department will investigate the cause for non-payment. Barring mitigating circumstances that would make the subcontractor ineligible for payment, the Design-Builder's bonding company shall be responsible for insuring payment to the subcontractor in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Division I Amendments to the Standard Specifications (Part 5).

By accepting and executing this contract, the Design-Builder agrees to assume these obligations, and to bind the Design-Builder's subcontractors contractually to these obligations.

Nothing contained herein shall preclude Design-Builder from withholding payment to the subcontractor in accordance with the terms of the subcontract in order to protect the Design-Builder from loss or cost of damage due to a breach of the subcontract by the subcontractor.

M. Miscellaneous DBE Program Requirements

Loss of DBE Eligibility: When a DBE firm has been removed from eligibility as a certified DBE firm, the following actions will be taken:

1. When a Design-Builder has made a commitment to use a DBE firm that is not currently certified, thereby making the Design-Builder ineligible to receive DBE goal credit for work performed, the ineligible DBE firm's work does not count toward the DBE goal. Design-Builder shall meet the DBE goal with a DBE firm that is eligible to receive DBE credit for work performed, or must demonstrate to the DCRO that it has made good faith efforts to do so.
2. When a Design-Builder has executed a subcontract with a DBE firm prior to official notification of the DBE firm's loss of eligibility, Design-Builder may continue to use the firm on the contract and shall continue to receive DBE credit toward DBE goal for the subcontractor's work.
3. When Department has executed a prime contract with a DBE firm that is certified at the time of contract execution but that is later ruled ineligible, the portion of the ineligible firm's performance on the contract before VDOT has issued the notice of its ineligibility shall count toward the contract goal.

Termination of DBE: If a DBE subcontractor is terminated, or fails, refuses, or is unable to complete the work on the contract for any reason, Design-Builder must promptly request approval to substitute or replace that DBE firm in accordance with this section of this Special Provision.

Design-Builder, shall notify DCRO in writing before terminating and/or replacing the DBE firm that is being used or represented to fulfill DBE-related contract obligations during the term of the contract. Written consent from the DCRO for terminating the performance of any DBE firm shall be granted only when the Design-Builder can demonstrate that the DBE firm is unable, unwilling, or ineligible to perform its obligations for which the Design-Builder sought credit toward the DBE goal. Such written consent by the Department to terminate any DBE shall concurrently constitute written consent to substitute or replace the terminated DBE with another DBE. Consent to terminate a DBE firm shall not be based on the Design-Builder's ability to negotiate a more advantageous contract with another subcontractor whether that subcontractor is, or is not, a DBE firm.

1. All Design-Builder requests to terminate, substitute, or replace a DBE firm shall be in writing, and shall include the following information:
 - (a) The date the Design-Builder determined the DBE to be unwilling, unable, or ineligible to perform.
 - (b) The projected date that the Design-Builder shall require a substitution or replacement DBE to commence work if consent is granted to the request.
 - (c) A brief statement of facts describing and citing specific actions or inaction by the DBE firm giving rise to Design-Builder's assertion that the DBE firm is unwilling, unable, or ineligible to perform;

- (d) A brief statement of the DBE firm's capacity and ability to perform the work as determined by the Design-Builder;
 - (e) A brief statement of facts regarding actions taken by the Design-Builder, that Design-Builder believes constitute good faith efforts toward enabling the DBE firm to perform;
 - (f) The current percentage of work completed by the DBE firm;
 - (g) The total dollar amount currently paid for work performed by the DBE firm;
 - (h) The total dollar amount remaining to be paid to the DBE firm for work completed, but for which the DBE firm has not received payment, and with which the Design-Builder has no dispute;
 - (i) The total dollar amount remaining to be paid to the DBE firm for work completed, but for which the DBE firm has not received payment, and over which the Design-Builder and/or the DBE firm have a dispute.
2. Design-Builder's Written Notice to DBE of Pending Request to Terminate and Substitute with another DBE.

Design-Builder shall send a copy of the "request to terminate and substitute" letter to the affected DBE firm and make best efforts to ensure its receipt by the DBE firm, in conjunction with submitting the request to the DCRO. The DBE firm may submit a response letter to the DCRO and Department within two (2) business days of receiving the notice to terminate from the Design-Builder. If the DBE firm submits a response letter, then Design-Builder shall, as part of its subcontract, obligate the DBE firm to explain its position concerning performance on the committed work. The Department will consider both the Design-Builder's request and the DBE firm's response and explanation before approving the Design-Builder's termination and substitution request.

If, after making its best efforts to deliver a copy of the "request to terminate and substitute" letter, the Design-Builder is unsuccessful in notifying the affected DBE firm, the Department will verify that the DBE firm is unable or unwilling to continue performing its subcontract let with respect to the contract. Department will timely approve the Design-Builder's request for a substitution.

3. Proposed Substitution of Another Certified DBE

Upon termination of a DBE firm, Design-Builder shall use reasonable good faith efforts to replace the terminated DBE firm. The termination of such DBE firm shall not relieve Design-Builder of its obligations under this Special Provision, and the unpaid portion of the terminated DBE firm's subcontract will not be counted toward the DBE goal.

When a DBE substitution is necessary, the Design-Builder shall submit an amended Form C-111 to the DCRO for approval with the name of another DBE firm, the proposed work to be performed by that DBE firm, and the dollar amount of the work to replace the unfulfilled portion of the work of the original DBE firm.

Should Design-Builder be unable to commit the remaining required dollar value to the substitute DBE firm, the Design-Builder shall provide written evidence of good faith efforts made to obtain the substitute value requirement. Department will review the quality, thoroughness, and intensity of those efforts. Efforts that are viewed by Department as merely superficial or pro-forma will not be considered good faith efforts to meet the DBE goal. Design-Builder must document the steps taken that demonstrated its good faith

efforts to obtain participation as set forth in the **Good Faith Efforts Described** section of this Special Provision.

Factors Used to determine if a DBE Trucking Firm is performing a CUF:

The following factors will be used to determine whether a DBE trucking company is performing a CUF:

1. To perform a CUF, the DBE trucking firm shall be completely responsible for the management and supervision of the entire trucking operation for which the DBE trucking firm is responsible by subcontract under the contract. There shall not be a contrived arrangement, including, but not limited to, any arrangement that would not customarily and legally exist under customary construction project subcontracting practices for the purpose of meeting the DBE goal;
2. The DBE firm must own and operate at least one fully licensed, insured, and operational truck used in the performance of the contract work. This does not include a supervisor's pickup truck or a similar vehicle that is not suitable for and customarily used in hauling the subject materials or supplies;
3. Design-Builder is eligible to receive full credit toward the DBE goal for the total reasonable amount the DBE firm is paid for the transportation services provided on the subcontract under the contract using acceptable trucks the DBE firm owns, insures, and operates using drivers that the DBE employs and manages;
4. The DBE trucking firm may lease trucks from another DBE firm, including from an owner-operator who is a DBE firm. Design-Builder is eligible to receive credit for the total fair market value actually paid for transportation services the lessee DBE firm provides to the DBE firm that leases trucks from such lessee DBE firm on the contract;
5. The DBE firm may also lease trucks from a non-DBE firm, including an owner-operator. Design-Builder may be eligible to receive DBE goal credit for the services of a DBE firm who leases trucks from a non-DBE firm up to the total value of the transportation services provided by non-DBE lessees, *not to exceed the value of transportation services provided by DBE-owned trucks on the contract*. For additional participation by non-DBE lessees, the DBE will only receive credit for the fee or commission it receives as a result of the lease arrangement.

Truck Counting

Design-Builders may count for credit against the DBE goal the dollar volume attributable to no more than twice the number of trucks owned by a DBE firm or leased from another DBE firm.

As an example, DBE credit would be awarded for the total transportation services provided by DBE Firm X and DBE Firm Y, and may also be awarded for the total value of transportation services by four (4) of the six (6) trucks provided by non-DBE Firm Z (not to exceed the value of transportation services provided by DBE-owned trucks).

Firm X
Truck 1
Truck 2

Owned by DBE
Owned by DBE

Firm Y

| | |
|---------|-----------------|
| Truck 3 | Leased from DBE |
| Truck 4 | Leased from DBE |

Firm Z

| | |
|----------|----------------------|
| Truck 5 | Leased from Non-DBE |
| Truck 6 | Leased from Non-DBE |
| Truck 7 | Leased from Non-DBE |
| Truck 8 | Leased from Non-DBE |
| Truck 9 | Leased from Non-DBE* |
| Truck 10 | Leased from Non-DBE* |

Credit = 8 Trucks

DBE credit would be awarded for the total transportation services provided by DBE firm X and DBE Firm Y, and may also be awarded for the total value of transportation services by four (4) of the six (6) trucks provided by non-DBE Firm Z (not to exceed the value of transportation services provided by DBE-owned trucks).

In all, full DBE credit would be allowed for the participation of eight (8) trucks (twice the number of DBE trucks owned and leased) and the dollar value attributable to the Value of Transportation Services provided by the 8 trucks.

* With respect to the other two trucks provided by non-DBE Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks that DBE Firm X receives as a result of the lease with non-DBE Firm Z.

6. For purposes of this section, the lease must indicate that the DBE firm leasing the truck has exclusive use of and control over the truck. This will not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, provided the lease gives the DBE absolute priority for and control over the use of the leased truck. Leased trucks must display the name and identification number of the DBE firm that has leased the truck at all times during the life of the lease.

N. Suspect Evidence of Criminal Behavior

Failure of Design-Builder or any subcontractor to comply with the Standard Specifications, this Special Provision, or any other contract document wherein there appears to be evidence of criminal conduct shall be referred to the Attorney General for the Commonwealth of Virginia and/or the FHWA Inspector General for criminal investigation and, if warranted prosecution.

Suspected DBE Fraud

In appropriate cases, Department will bring to the attention of the United States Department of Transportation any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g., referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General, action under suspension and debarment or "Program Fraud and Civil Penalties" rules provided in 49 CFR Part 31.

The following Form FHWA-1273 titled **REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS** shall apply to this contract:

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FHWA-1273 – Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated

(not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. **Selection of Labor:** During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. **NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of

1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, national origin, age or disability. 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, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities

and women in the area from which the project work force would normally be derived.

The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training

programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
- b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

- 9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
- a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
 - b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
- 10. Assurance Required by 49 CFR 26.13(b):**
- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
 - b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
- 11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
- a. The records kept by the contractor shall document the following:
 - (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
 - (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
 - b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. Davis-Bacon and Related Act Provisions

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

- a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth

the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (I) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (II) The classification is utilized in the area by the construction industry; and
 - (II) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage

determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

- d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

- a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except

that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

- (2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - (I) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (II) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (III) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
 - (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.
 - (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview

employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
- d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

- 5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- 6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- 7. **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may

be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. **Certification of eligibility.**
 - a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
 - a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, 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 prime contractor meets all of the following conditions:
 - (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
 - (2) the prime contractor remains responsible for the quality of the work of the leased employees;
 - (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
 - (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.
 - b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer 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 work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined 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).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that 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 the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by

engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented; Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. **Instructions for Certification – First Tier Participants:**

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
- d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for

ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
 - (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
 - (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions)

requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.
- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Lower Tier Participants:**

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a

prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

ORIGINAL

April 5, 2016

**VOLUME 1:
Letter of Submittal and
Attachments**



A Design-Build Project

**I-95 Express Lanes –
Southern Terminus
Extension**

Stafford County, Virginia

State Project No.: 0095-969-720,
P101, R201, C501

Federal Project No.: STP-000S (321)

Contract ID Number: C00108315DB90

Submitted By:



In Conjunction With:



In Association With:

Chesapeake Electrical Systems, Inc.
H&B Surveying & Mapping, LLC (DBE)
Froehling & Robertson, Inc. (SWaM)
Engineering & Materials Technology, Inc. (DBE)

ATTACHMENT 4.0.1.1

I-95 Express Lanes – Southern Terminus Extension

LETTER OF SUBMITTAL AND ATTACHMENTS CHECKLIST

Offerors shall furnish a copy of this Letter of Submittal Checklist, with the page references added, with the Letter of Submittal.

| Technical Proposal Component | Form (if any) | RFP Part 1 Cross Reference | Page Reference |
|--|--|-----------------------------------|---|
| Letter of Submittal and Attachments Checklist | Attachment 4.0.1.1 | Section 4.0.1.1 | i-ii |
| Acknowledgement of RFP, Revisions, and/or Addenda | Attachment 3.6 (Form C-78-RFP) | Sections 3.6, 4.0.1.1 | Vol. 1: Attachment 3.6 |
| Letter of Submittal | NA | Sections 4.1 | Vol. 1: Pages 1-2 |
| Letter of Submittal on Offeror's letterhead | NA | Section 4.1.1 | Vol. 1: Pages 1-2 |
| Offeror's official representative information | NA | Section 4.1.1 | Vol. 1: Page 1 |
| Authorized representative's original signature | NA | Section 4.1.1 | Vol. 1: Page 2 |
| Declaration of intent | NA | Section 4.1.2 | Vol. 1: Page 1 |
| 120 day declaration | yes | Section 4.1.3 | Vol. 1: Page 1 |
| Point of Contact information | yes | Section 4.1.4 | Vol. 1: Page 1 |
| Principal Officer information | NA | Section 4.1.5 | Vol. 1: Page 1 |
| Final Completion Date | NA | Section 4.1.6 | Vol. 1: Page 1 |
| Proposal Payment Agreement or Waiver of Proposal Payment | Attachment 9.3.1 or 9.3.2 | Section 4.1.7 | Vol. 1: Attachment 9.3.1 |
| Certification Regarding Debarment Forms | Attachment 11.8.6(a) Attachment 11.8.6(b) | Section 4.1.8 | Vol. 1: Attachment 11.8.6 (a) & (b) |
| Written statement of percent DBE participation | NA | Section 4.1.9 | Vol. 1: Page 2 |
| | | | |
| | | | |

ATTACHMENT 4.0.1.1

I-95 Express Lanes – Southern Terminus Extension

LETTER OF SUBMITTAL AND ATTACHMENTS CHECKLIST

| Technical Proposal Component | Form (if any) | RFP Part 1 Cross Reference | Page Reference |
|--|----------------------|-----------------------------------|--|
| Attachments to the Letter of Submittal | NA | Section 4.2 | Vol. 1: Pages 3-11 Vol. 2: Pages 12-57 |
| Confirmation that the information provided in the SOQ submittal remains true and accurate or indicates that any requested changes were previously approved by VDOT | NA | Section 4.2.1 | Vol. 1: Page 3 |
| Organizational chart with any updates since the SOQ submittal clearly identified | NA | Section 4.2.1 | Vol. 1: Page 9 |
| Revised narrative when organizational chart includes updates since the SOQ submittal | NA | Section 4.2.1 | Vol. 1: Pages 3-8 |
| Conceptual Roadway Plans – Plan View | NA | Section 4.2.2 | Vol. 2: Page 17-51 |
| Conceptual Roadway Plans – Typical Sections | NA | Section 4.2.2 | Vol. 2: Page 13-16 |
| Conceptual Structural Plans – Elevation View | NA | Section 4.2.3 | N/A – Per RFP |
| Conceptual Roadway Plans – Transverse Section | NA | Section 4.2.3 | N/A – Per RFP |
| Conceptual Roadway Plans – Abutment Configuration | NA | Section 4.2.3 | N/A – Per RFP |
| Proposal Schedule | | | |
| Proposal Schedule | NA | Section 4.2.4 | Vol. 1: Pages 10-11 Vol. 2: Pages 52-57 |
| Proposal Schedule Narrative | NA | Section 4.2.4.1 | Vol. 2: Pages 52-57 |
| Proposal Schedule in electronic format (CD-ROM) | NA | Section 4.2.4.2 | Vol. 1: Pages 10-11 |
| | NA | Section 4.2.4 | Included with Proposal Package |



April 4, 2016

Mr. Suril R. Shah
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Design Build I-95 Express Lanes – Southern Terminus Extension
State Project No.: 0095-969-720
Federal Project No.: STP-000S(321)
Contract ID Number: C00T108315DB90
Section 4.1 Letter of Submittal

Dear Mr. Shah,

Branch Highways, Inc. (BRANCH), as the Offeror, is pleased to submit to the Virginia Department of Transportation (VDOT) this Letter of Submittal and accompanying Attachments in response to the Request for Proposals dated February 29, 2016 for the above-referenced project.

Section 4.1.2 Branch Highways, Inc., if selected, will enter into a contract with VDOT for the Project in accordance with the terms of the RFP.

Section 4.1.3 Pursuant to Part 1, Section 8.2, Branch Highways, Inc. declares that the offer represented by the Proposals will remain in full force and effect for one hundred twenty (120) days after the date of the Letter of Submittal and Attachments are actually submitted to VDOT.

Section 4.1.4 Mr. Pete Kramer will serve as the Point of Contact for Branch Highways, Inc.

Mr. Pete Kramer, Vice President – NOVA Region
Address: 10440 Balls Ford Road, Suite 270, Manassas, VA 20109
Tel: (571) 379-5603
Fax: (571) 379-5896
Email: PeteK@branchhighways.com

Section 4.1.5 Mr. Patrick Bartorillo will serve as the Principal Officer for Branch Highways, Inc.

Mr. Patrick Bartorillo, President
Address: 442 Rutherford Ave, NE, Roanoke, VA 24016
Tel: (540) 982-1678
Fax: (540) 982-4217
Email: Patrick.Bartorillo@branchhighways.com

Section 4.1.6 Branch Highways, Inc. proposes an Interim Completion Date of December 1, 2017 and a Final Completion Date of August 22, 2018.



Exemplary Business Relationships
Exceptional Performance
Sustained Employee Ownership

Section 4.1.7 We have provided an original completed Attachment 9.3.1: Proposal Payment Agreement form as an attachment under the Tab labeled: Attachment 9.3.1: Proposal Payment Agreement Form.

Section 4.1.8 We have provided original Attachments 11.8.6 (a) & (b) Certification Regarding Debarment Forms as an attachment under the Tab labeled: Attachments 11.8.6 (a) & (b).

Section 4.1.9 This statement is to declare that Branch Highways, Inc. is committed to achieving or exceeding a fifteen (15%) DBE participation goal for the entire value of the contract.

The Branch Design-Build Team appreciates the opportunity to present this Letter of Submittal and associated attachments and we look forward to your review.

Sincerely,

Branch Highways, Inc.

A handwritten signature in black ink, appearing to read "Patrick K. Bartorillo", is written over a horizontal line.

Patrick K. Bartorillo, President

The organizational chart and Key Personnel proposed in the SOQ remains true and accurate for the Branch Design-Build Team. The following narrative and organizational chart describes the functional relationships of the team members and the clear “chain of command” to the DBPM.

TEAM STRUCTURE

Branch Highways, Inc. (Branch) will be responsible for managing the project in its entirety, supervising the construction, and performing major elements of the construction work. Additional subcontractors for various specialty items such as tolling systems, ITS, signage, guardrail, and pavement striping will be under direct subcontract to Branch. **Whitman, Requardt & Associates, LLP (WRA)** will lead the design effort for all aspects of the project and will be responsible for the design QA/QC. The Branch | WRA Design-Build Team includes highly qualified subconsultants that bring specific expertise to enhance the Team and ensure a quality project for VDOT. A listing of the Team follows and an organizational chart of the Team is included in at the end of this section.

Branch Highways, Inc. (Branch) – Offeror, Legal Entity, Lead Contractor

Branch is a member of The Branch Group of employee-owned companies, incorporated in 1986. Company headquarters are located in Roanoke, Virginia with a regional office located in the Manassas area of Northern Virginia. Branch is a full service heavy highway contractor with hundreds of successfully delivered projects to numerous public and private clients throughout the Mid-Atlantic region, including completed projects of similar size and scope to the I-95 Express Lanes – Southern Terminus Extension Project. Branch has an impressive record of successful Design-Build/PPTA projects for VDOT and local governments for over \$425 million. Branch has been able to maintain a high level of client satisfaction and is well acquainted with working closely with owners on large and complex projects. **Branch has assigned a Construction Design Coordinator (CDC) that greatly enhances the project structure of the Team by providing additional engineering oversight; similar to the role of Responsible Charge Engineer on other Design-Build projects.**

Whitman, Requardt & Associates, LLP (WRA) – Lead Designer

WRA is a full service architectural and engineering firm that was founded over 100 years ago primarily serving state and local governments in the Mid-Atlantic region. WRA will serve as the Lead Designer for this project and will be responsible for the design QA/QC. In the last three years, WRA has worked on seven Design-Build projects in Virginia and is a Design-Build leader in the Mid-Atlantic region working on over 50 Design-Build projects for Federal, State, and Local government entities as well as private Design-Build projects.

Branch and WRA worked together on three Design-Build/PPTA projects over the last three years, which are listed below:

- **George Mason University (GMU) Campus Connector Design-Build (\$13 million)** – Branch was the Lead Contractor for this project. WRA designed the Route 123 improvements, geotechnical engineering and provided QAM services for all construction in VDOT right-of-way.
- **Route 636 Extension over CSXT Augusta County PPTA (\$14 million)** – WRA designed the Route 636 Bridge over CSXT, geotechnical engineering and provided QAM services for this Branch project.
- **Greenview Drive Design-Build (\$16 million)** WRA is providing QAM services for this Branch project.

The combined Design-Build experience above and our common goal to put the quality and schedule of the project first has proven to be successful on our projects and will be for the I-95 Express Lanes projects. **Branch and WRA have worked closely with Transurban on the I-495 and I-95/395 Express Lanes projects and will leverage those professional working relationships for this project.**

Subconsultants

The Branch | WRA Design-Build Team is comprised of highly qualified subconsultants extremely knowledgeable in VDOT policies and procedures and experienced with similar VDOT Design-Build projects. The following subconsultants have been carefully selected based on their relevant past experience and established working history of project success with VDOT, Branch, and/or WRA.

Chesapeake Electrical Systems, Inc. (CES) was founded in 1993 and has grown to become the Mid-Atlantic Region's electrical contractor of choice working on some of the region's most recognizable landmarks. They bring significant experience with ITS system construction and integration of dynamic tolling infrastructure through their work on the Elizabeth River Crossing project, the I-495 Express Lanes project and the recently completed I-95 Express Lanes project.

H&B Surveying and Mapping, LLC (H&B) a Virginia-Certified, DBE/WBE (Woman-Owned Business) founded in 2009 will provide Surveying and Subsurface Utility Locating for the Branch Team. H&B has teamed with WRA to provide surveying services on over 75 projects throughout Virginia including VDOT Design-Build projects.

Froehling & Robertson, Inc. (F&R), a SWaM-certified firm founded in 1881, will provide a Quality Assurance Lab for the Branch Team. F&R's in-house soil, materials, and asphalt laboratories are accredited by AASHTO (AMRL/CCRL), the US Army Corps of Engineers (USACE), and WACEL.

Engineering & Materials Technologies, Inc. (E.M. Tech) is a certified DBE firm and will provide QC Inspectors, Testing and Lab Services for the Branch Team. Their in-house laboratory has been inspected and/or accredited by AASHTO Materials Reference Laboratory (AMRL), the Washington Area Council of Engineering Laboratories (WACEL) and the Cement and Concrete Reference Laboratory (CCRL).

3.3.1 KEY PERSONNEL

Key personnel Resume Forms were included in Attachment 3.3.1 located in Appendix C of the SOQ. A summary of key personnel is described below, and more detailed project experience for each are listed on the Resume Forms.

Design-Build Project Manager: Pete Kramer (Branch – 34 years of experience)

Pete Kramer (DBPM) has 34 years of overall experience in the heavy civil/construction industry, 19 of which have been with Branch. He has served as DBPM on numerous high-profile projects in Virginia, including the Prince William County Route 15 PPTA Project (\$52M), 2008 Stafford County Transportation Bond Referendum Projects PPTA/Design-Build (\$20M), and recently completed Prince William County Parkway Improvements project (\$14M). He has been responsible for successful management of overall project design, construction, planning, scheduling, quality, safety, overall contract administration, and procurement of proper resources on projects to which he has been assigned. His responsibilities will be the same for this project. Pete will be the primary point of contact for VDOT and any other stakeholders in the project, and will coordinate all aspects of the project and ensure that appropriate and consistent communication is maintained between all parties. He will be responsible for meeting obligations and avoidance/resolution of disputes per the Contract. The Design Manager, Construction Design Coordinator, Construction Manager, Safety Manager and the PR Manager will all report directly to Pete Kramer.

Quality Assurance Manager: Lenny Coleman, P.E., CCM, LEED AP (WRA – 11 years of experience)

Lenny Coleman (QAM) will report directly to the DBPM and will have direct, independent access to VDOT. He served in a similar role as Assistant QAM on the Fairfax County Parkway Interchange and

Widening Design-Build and held the role of QC Manager on the Fall Hill Avenue Widening & Mary Washington Boulevard Extension VDOT Design-Build project in Fredericksburg, VA, and the Walney Road Widening Design Build Project in Fairfax, VA. Lenny’s experience includes QA level oversight as Prince William County’s Construction Manager for Capital Improvement Program managing projects similar to the I-95 Express Lanes Southern Terminus Extension such as the Route 1 North Improvements PPTA project. Lenny will be responsible for the Quality Assurance program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA Testing firm, F&R. He will ensure conformance with the Contract Documents including the “approved for construction” plans and specifications. Lenny will have overall responsibility for the development of and adherence to the Design-Build QA/QC Plan including coordination with the *Design QA/QC Manager, Mike Russell, P.E.* Lenny will report to the DBPM and he will function independently from the Construction QC Manager, auditing and monitoring Branch’s Quality Control Program. He will have the authority to stop construction activities to ensure compliance with the specifications and issue Non-Compliance Reports (NCRs) if necessary. In addition, Lenny will submit monthly written reports on the status of the QA Program to both VDOT and the Branch Design-Build Team.

Design Manager: John Maddox, P.E. (WRA – 30 years of experience)

John Maddox (DM) will also report directly to the DBPM. John has 30 years of experience designing and managing major transportation projects including over 20 years on VDOT projects. He is currently the Design Manager on VDOT’s Fall Hill Avenue Design-Build project in the City of Fredericksburg and was the Design Manager for the successfully completed VDOT Design-Build Walney Road Bridge Replacement and widening project in Fairfax County. John has also worked with Branch on two Design-Build projects the GMU Campus Connector project (Route 123 Bridge, geotechnical, roadway, drainage) and the Route 636 PPTA project in Augusta, VA (bridge, geotechnical and QAM). He will be responsible for providing a quality product, meeting all design milestones, continual Design-Build Team coordination and ensuring the Design QA/QC Manager’s involvement throughout the design phase. John is responsible for ensuring all design work is performed in accordance with current VDOT Policies, Procedures and Guidelines and the requirements of the VDOT Request for Proposals. He will manage all aspects of design including roadway; hydraulic; ITS, tolling system, traffic engineering; MOT; environmental; and geotechnical. He will assign resources as needed; oversee the design subconsultant for survey; coordinate design and review schedules; develop and implement corrective measures if necessary; and ensure environmental compliance measures are integrated into the design. He will coordinate the design with *CDC, Yieshak Shata* to ensure the timely completion of a quality constructible project. John will maintain involvement in the project once construction begins to oversee any plan modifications and shop drawings, and review construction activities with the CM as work progresses.

Construction Manager: Steve Morris (Branch – 22 years of experience)

Steve Morris (CM) has over 22 years of industry experience – 15 of which have been with Branch, and has successfully managed over \$100M of Design-Build projects, including Branch’s subcontracted portion of the previous I-95 Express Lanes project. Steve will report to the DBPM and will be assigned solely to this Project for its duration, and will be responsible for planning and execution of both internally performed and subcontracted work activities and ensuring that said activities and associated materials meet contract requirements and “approved for construction” plans and specifications, including Quality Control (QC). He will also be accountable for overall project compliance with ancillary regulations, including, but not limited to, environmental, safety, and MOT. The ITS/Electrical Manager, Construction QC Manager, Grading/Roadway Superintendent, Construction Environmental/MOT Manager, Project Controls Manager and the DBE Compliance Manager will all report directly to Steve Morris.

ITS/Electrical Manager: Kevin Trippe (CES – 18 years of experience)

Kevin Trippe (ITS EM) has worked for Chesapeake Electrical Systems (CES) since his graduation from his IBEW Apprenticeship Program in 2004. Kevin has served as Project Manager for CES for the installation and integration of the ITS systems for I-95 HOT/HOV Express Lanes, the I-495/Capital Beltway Express Lanes, and the I-495/95/395 Roadside Equipment Maintenance contract, which is on-going. Kevin is very familiar with the systems and work that will be required for the I-95 Express Lanes Southern Terminus Extension, and has proven his capabilities in efficiently handling issues related to ITS/Electrical design and its integration into the project as a whole. Kevin will be responsible for supervision of all designs developed by the ITS Design Team and throughout installation to ensure that the work is done on time and in accordance with a QA/QC Plan similar to the I-495 & 95 Express Lanes. The *Master Electrician, Robert Preston* is a Certified Master Electrician and will report directly to Kevin the ITS/Electrical Manager. Kevin will report directly to the *CM, Steve Morris* and will have a lead role in the ITS Integration Team.

3.3.2 ORGANIZATIONAL CHART

The Branch Design-Build Team Organizational Chart on Page 9 identifies key personnel members and depicts the reporting structure of the Team. **Solid lines** identify the direct lines of reporting relationships of our Team members from the DBPM to the Design, Construction and QA leads. **Dashed lines** represent indirect reporting relationships and obligations to the DBPM and the team members. Furthermore, the reporting structure shows a clear separation between the Construction Quality Control duties and the Quality Assurance duties. Each function will have independent materials testing laboratory services. *To further enhance our Team structure and to ensure successful integration with the existing tolling system, specific team members will serve on our ITS Integration Team and are highlighted on the organizational chart.*

As a continuation of the functional relationships for Key Personnel described above, the following narrative further defines the roles and functional relationships of the additional team members.

Safety Manager: Danny Minnix (Branch – 20 years of experience)

Danny Minnix will report to the DBPM and has held the position of Director of Safety and Risk at Branch for well over a decade, and has 20⁺ years of experience overall with large-scale heavy civil safety program development and management.

Construction Design Coordinator: Yisehak Shata, P.E. (Branch – 15 years of experience)

Yisehak Shata, P.E. (CDC) has 15 years of overall experience in the heavy civil construction industry, 11 of which have been with Branch, and extensive Design-Build project management experience, including the I-95/395 HOT/HOV/Bus Lanes PPTA project (\$47M), Heritage Center Parkway D-B (PWC) (\$6M), Route 15 Improvements Design-Build/PPTA (PWC) (\$52M), and 2008 Stafford County Transportation Bond Referendum Projects Design-Build/PPTA (\$20M). Yisehak has acted as DBPM on nearly \$30M of Design-Build projects, where he was responsible for monitoring the design process for constructability and efficiency. Yisehak is able and qualified to make appropriate directives/decisions regarding design modifications when they arise, and is well versed in the process of managing the design-construction process that is exclusive to Design-Build projects. Yisehak will report to the DBPM, and he will work seamlessly with, and assist in directing, the DM, CM, QAM, and VDOT by maintaining and facilitating constant lines of communication.

Design

Roadway Engineer: Mark Vasco, P.E. will report to the DM and lead the roadway design efforts for the project. Mark has more than 32 years of experience in the design of transportation projects. Mark recently served as the lead designer of the Fairfax County Parkway Interchange at Fair Lakes Parkway in Fairfax County Virginia and the GMU Campus Drive Connector Design-Build with Branch Highways.

Geotechnical Engineer: *Jeff Basford, P.E.* has over 15 years of experience in subsurface explorations, geotechnical analysis, design of pavement sections and shallow and deep foundations, slope stability analysis, concrete and geosynthetic reinforced earth retaining structures, and in-situ testing and verification during construction. He has provided geotechnical expertise on Design-Build projects for WRA in Virginia and Maryland including the Route 636 Extension and the GMU Campus Connector with Branch Highways. Jeff will report to the DM and collaborate extensively with the CM and CDC.

ITS & Lighting Design: *Jeff Cheng, P.E.* will lead the ITS & Lighting Design. He has 11 years of experience and recently led the ITS & Lighting Design for the I-95 Newark Toll Plaza in Delaware for DelDOT. He has extensive experience on VDOT projects including the preliminary plans for the I-495 Shoulder Use project ITS and the Fairfax County Parkway Interchange at Fair Lakes Parkway project. Jeff will be supported by *Dave Newberger, P.E., PTOE*, who has extensive experience on the I-495 and I-95 Express Lanes ITS & Lighting systems through his lead role on the GEC contract reviewing the design. Jeff will report directly to the DM, coordinate directly with ITS/Electrical Manager and be a key person on the ITS Integration Team.

MOT/Traffic Engineer: *Dana Trone, P.E., PTOE* has over 19 years of experience in traffic engineering including development of transportation management plans (TMP) and MOT design. Dana has developed several TMPs for construction on interstates in Virginia, and numerous VDOT Design-Build projects. She also prepared the 30% design for the I-495 North Extension Shoulder Use Lane Design-Build project. Dana will report to the DM and collaborate with the *Construction MOT Manager, Anthony Varrati*.

Drainage/Hydraulics Engineer: *David Gertz, P.E.* will report to the DM and lead the design efforts for drainage and SWM. David has over 36 years of experience in roadway drainage design and stormwater management, and has designed numerous projects for VDOT utilizing the new Virginia stormwater regulations that took effect in July 2014. He most recently served as Lead Drainage/Hydraulics Engineer for three VDOT Design-Build projects.

Environmental Permitting: *Taylor Sprenkle, PWD* will report to the DM and secure any environmental permit modifications that may be needed for the project. Taylor has over 12 years of experience with environmental reviews and permitting required for transportation projects and will work closely with the *Construction Environmental Manager, Anthony Varrati*, to ensure all permit requirements are fulfilled.

Utility Coordination Engineer: *Paul Martin* has over 27 years of experience in highway and bridge construction including 12 years specializing in utility relocations for VDOT. Paul will report to the DM and will interact closely with the CM.

Erosion and Sediment Control Reviewer: *Glenn Wilson* has 18 years of experience in E&S Control design services for transportation projects. He is a certified DCR Combined Administrator (Certificate #684). Glenn will report to the DM and collaborate with the *Construction Environmental Manager, Anthony Varrati*.

Soundwall Design: *Kenneth Bauer, P.E.* will report to the DM and has 17 years of experience performing noise analyses and preparing soundwall designs including VDOT Design-Build projects such as Fall Hill Avenue and Route 7 over the Dulles Toll Road.

Design QA/QC

Design QA/QC Manager, Mike Russell, P.E. has over 26 years of progressive experience in the transportation industry including 14 years with VDOT most recently as Bristol District Engineer. He will report to the DM and will ensure compliance with the project's QA/QC Plan. Mike has served as WRA's PM on the Berkmar Drive Extension Design-Build project in Albemarle County. He also served as VDOT's PE Manager for the Route 58 Hillsville Bypass PPTA project constructed by Branch.

Construction QC

Construction QC Manager: Tom Franzino has 5 years of industry experience, 2 of which have been with Branch. Tom will report directly to the Construction Manager and will be responsible for managing all QC work for Branch, including coordinating the EM Tech's QC inspection staff and testing lab. Tom is extensively knowledgeable in all of VDOT Construction requirements, specifications, and testing methods and will coordinate with the QAM and the DBPM on the QC components of the project.

Construction

Master Electrician: Robert Preston is a Master Electrician licensed by the Virginia Department of Professional and Occupational Regulation Board for Contractors and Tradesmen with 39 years of experience performing and supervising ITS & electrical work. A relevant recent project is the I-95 HOT/HOV Express Lanes, I-495 Express Lanes. Robert will report directly to **Kevin Trippe, the ITS/Electrical Manager**. He will be responsible for supervision and coordination of fiber, power, wiring, splicing, ITS and other associated device installation, inspection and testing. Robert is 30-Hour OSHA certified, which included Arc Flash Protection training, and has completed separate Lockout/Tagout training.

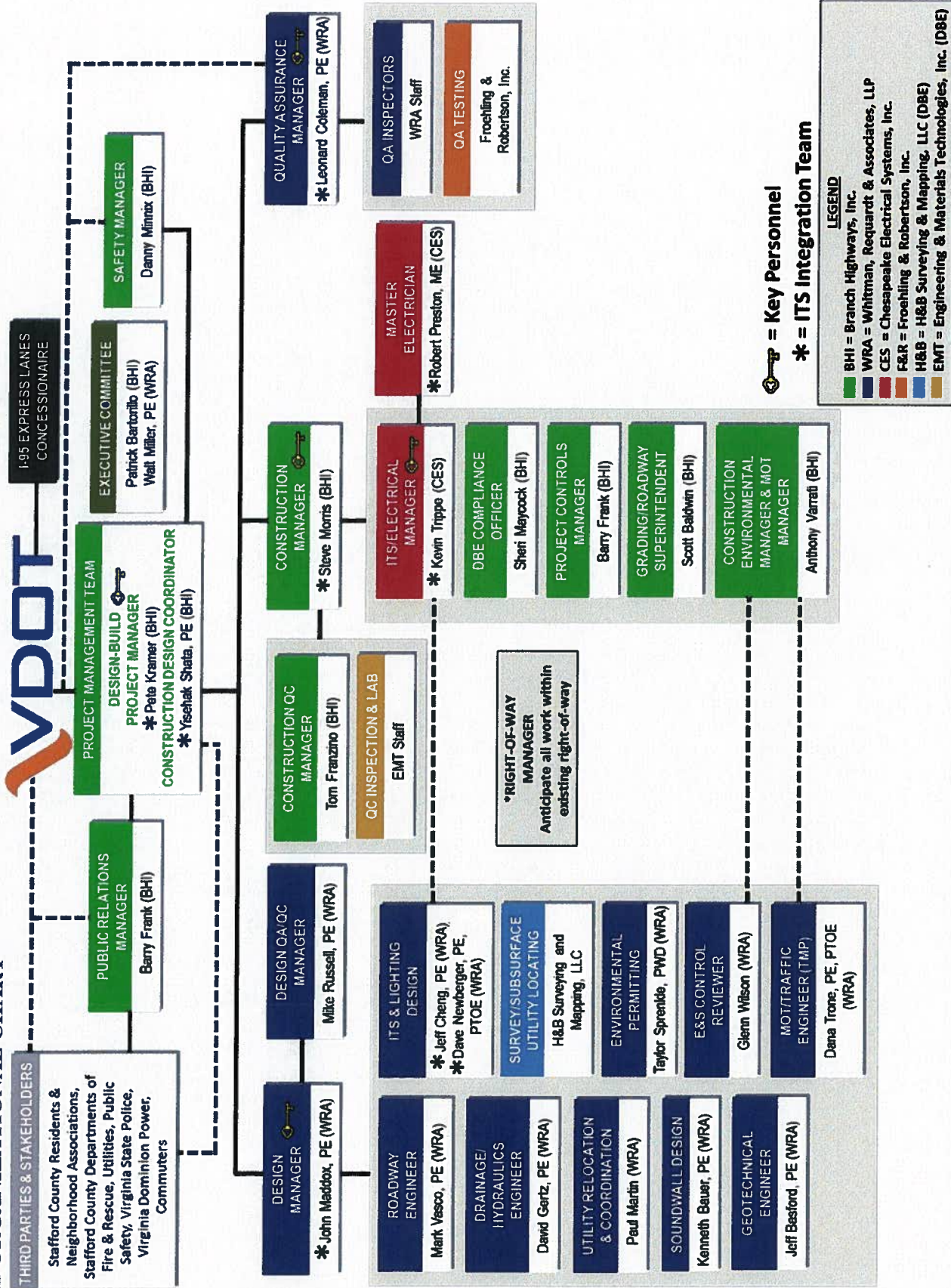
DBE Compliance Officer: Sheri Maycock has been with Branch for 24 years and will report to the DBPM. She currently serves as the DBE/EEO Compliance Officer for Branch and will oversee day to day DBE compliance for the project.

Project Controls and PR Manager: Barry Frank will report to the DBPM and has 5 years of industry experience, all with Branch.

Grading/Roadway Superintendent: Scott Baldwin has 29 years of heavy civil construction experience in the role of superintendent and will report to the CM. He has worked in the capacity of grading/roadway superintendent on numerous large-scale, high-profile interstate projects, including Phases 2-4 of the I-95/I-495/I-395 Springfield Interchange and the Seminary Road Widening.

Construction Environmental and Construction MOT Manager: Anthony Varrati will report to the CM and has 2 years of industry experience in the role of safety/environmental controls, and a B.S. in Safety Management.

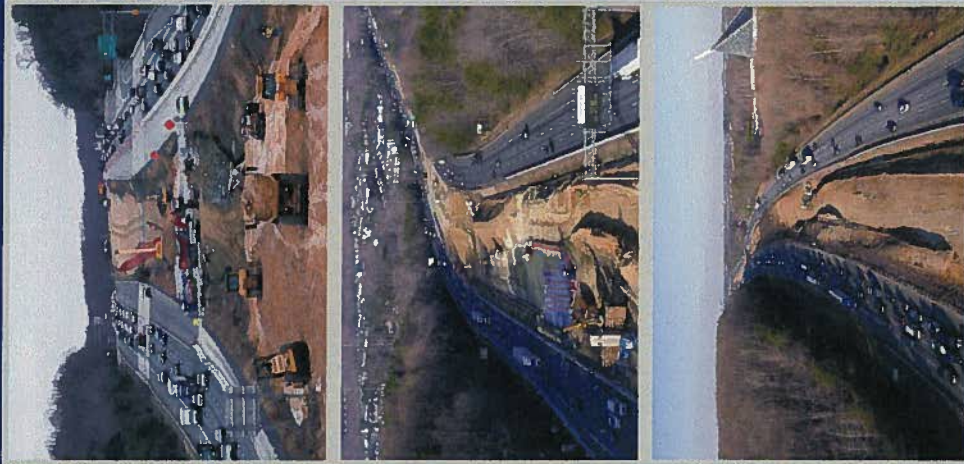
3.3.2 ORGANIZATIONAL CHART



April 5, 2016



ORIGINAL



VOLUME 2: Conceptual Plans and Proposal Schedule

A Design-Build Project

I-95 Express Lanes – Southern Terminus Extension

Stafford County, Virginia

State Project No.: 0095-969-720, P101, R201, C501
Federal Project No.: STP-000S (321)
Contract ID Number: C00108315DB90

Submitted By:



In Conjunction With:



In Association With:

Chesapeake Electrical Systems, Inc.
H&B Surveying & Mapping, LLC (DBE)
Foehling & Robertson, Inc. (SWaM)
Engineering & Materials Technology, Inc. (DBE)

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

DESIGN BUILD PROJECT 95 EXPRESS LANES SOUTHERN TERMINUS EXTENSION

From: MILE MARKER 142.5 (SOUTH OF GARRISONVILLE ROAD)
 To: MILE MARKER 145.0 (NORTH OF GARRISONVILLE ROAD)

INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|----------------|---------------------|
| 1 | TITLE SHEET |
| 2A - 2C | TYPICAL SECTIONS |
| 2G | GEOTECHNICAL DETAIL |
| 3 - 14 | PLAN SHEETS |
| 15(1) - 15(23) | TRAFFIC PLANS |

THIS PROJECT WAS DEVELOPED UTILIZING THE DATA PROVIDED BY THE STATE OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) AND THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

THESE PLANS ARE UNDESIGNED AND NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

- CONVENTIONAL SIGNS
- TRAFFIC PLANS
- CONSTRUCTION PLANS
- UTILITY PLANS
- LANDSCAPE ARCHITECTURE
- ENVIRONMENTAL
- HYDROLOGICAL
- SOILS
- VEGETATION
- WATERWAYS
- WETLANDS
- ARCHAEOLOGICAL
- PALEONTOLOGICAL
- PLANTING
- LANDSCAPE ARCHITECTURE
- ENVIRONMENTAL
- HYDROLOGICAL
- SOILS
- VEGETATION
- WATERWAYS
- WETLANDS
- ARCHAEOLOGICAL
- PALEONTOLOGICAL
- PLANTING

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS SHOWN HAS BEEN SEALED AND STORED USING DOT AS SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERS, SEE THE GENERAL NOTES.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND FINISHED IN ACCORDANCE WITH STANDARD TC-3.1R, EXCEPT WHERE OTHERWISE NOTED.

THE ORIGINAL APPROVED TITLE SHEETS, INCLUDING ORIGINAL CONTRACTS, SHALL BE KEPT ON FILE IN THE OFFICE OF THE STATE ENGINEER AND FORWARDED TO THE FULL EXTENT OF THE LAW.



| DATE | SECTION | FEDERAL PROJECT NO. | TYPE CODE | UPC NO. | EMULATES | LENGTH EXISTING (FEET) | LENGTH EXISTING (MILES) | TYPE PROJECT | DESCRIPTION |
|--------------|---------|---------------------|-----------|---------|----------|------------------------|-------------------------|--------------|---|
| 0095-989-720 | P00 | | 0000 | 00000 | 2834.9 | 5.57 | 5.57 | REF. EXIST. | FROM MILE MARKER 142.5 (S. OF GARRISONVILLE ROAD) TO MILE MARKER 145.0 (N. OF GARRISONVILLE ROAD) |
| | C50 | | 0000 | 00000 | 2834.9 | 5.57 | 5.57 | CONSTR. | TO MILE MARKER 145.0 (N. OF GARRISONVILLE ROAD) |

Population Stafford County (2000 Census)
 - RTE 95 EXPRESS LANES SB CONST. & STA 1296+00.00 TO 1534+00.00
 - 95 Express Lanes SB Construction Baseline from Sta. 1296+00.00 to 1534+00.00
 - 95 Express Lanes SB Construction Baseline from Sta. 1296+00.00 to 1534+00.00
 - 95 Express Lanes SB Construction Baseline from Sta. 1296+00.00 to 1534+00.00

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION

ALL CONSTRUCTION IS TO BE PERFORMED WITHIN EXISTING RIGHT OF WAY.

SCALE 0 1000' 2000'

Copyright 2006, Commonwealth of Virginia

0095-989-720

Page 12

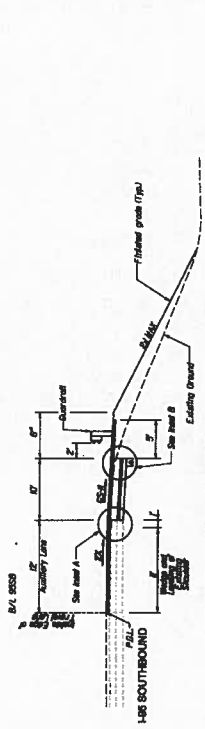
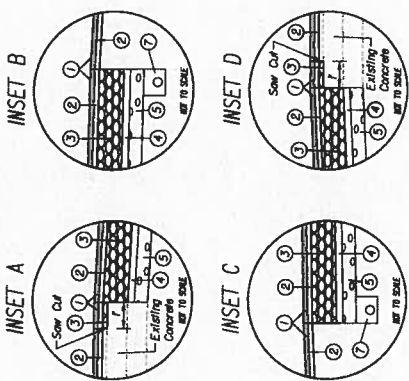
TYPICAL SECTIONS NOT TO SCALE

THESE PLANS ARE UNFINISHED
 AND ARE NOT
 TO BE USED FOR THE
 ACQUISITION OF RIGHT OF WAY.

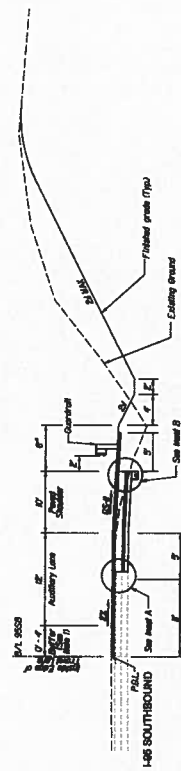
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| DATE | PROJECT | SECTION |
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 AND ARE NOT
 TO BE USED FOR THE
 ACQUISITION OF RIGHT OF WAY.

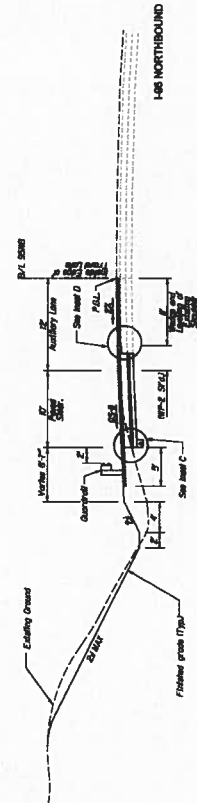
- PAVEMENT SECTION NOTES**
- 1 SURFACE - 2" ASPHALT CONCRETE TYPE SM-RSE
 - 2 INTERMEDIATE - 2" ASPHALT CONCRETE TYPE IM-RDA
 - 3 BASE - 4" ASPHALT CONCRETE BM-R50A
 - 4 DRAINAGE - 3" STABILIZED OPEN GRADED DRAINAGE LAYER
 - 5 SUBBASE - 6" CEMENT TREATED AGGREGATE
 - 6 SUBBASE - 2" AGGREGATE BASE MATERIAL TYPE 1, SIZE NO. 20
 - 7 STD 10" UNDERDRAIN



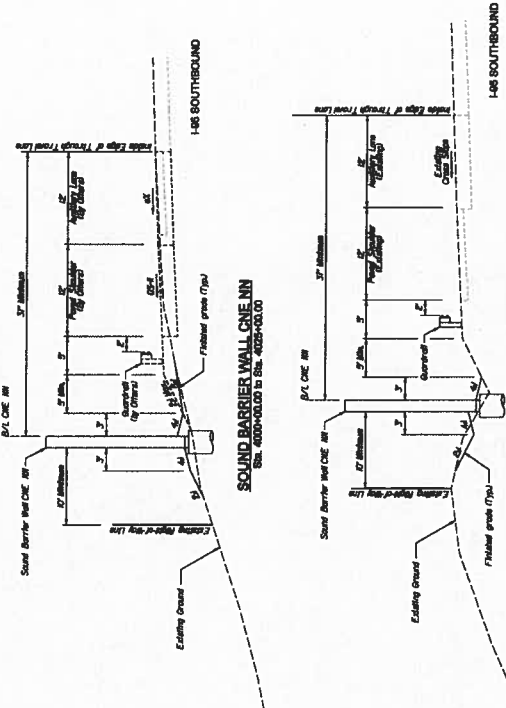
Additional shoulder width for grade and sloping handrails between
 guardrail and ditch.



Additional shoulder width for grade and sloping handrails between
 guardrail and ditch.



Additional shoulder width for grade and sloping handrails between
 guardrail and ditch.



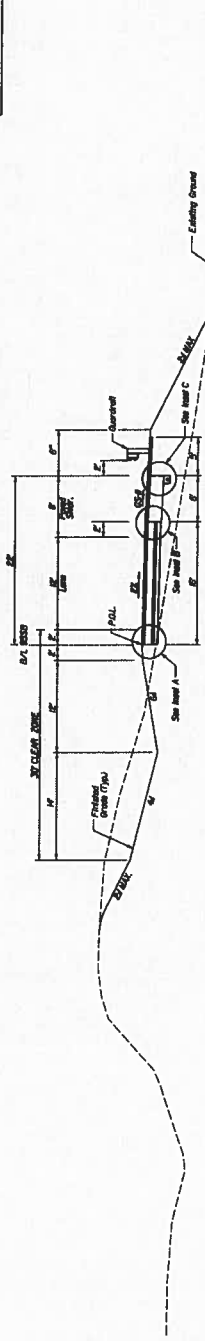
Additional shoulder width for grade and sloping handrails between
 guardrail and ditch.

TYPICAL SECTIONS NOT TO SCALE

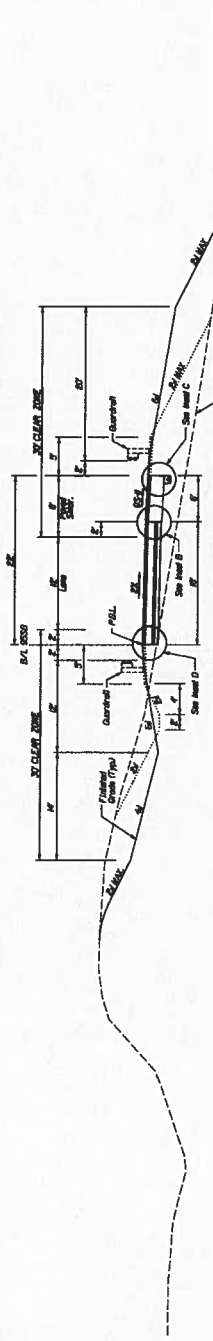
THESE PLANS ARE UNFINISHED AND SHOULD NOT BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

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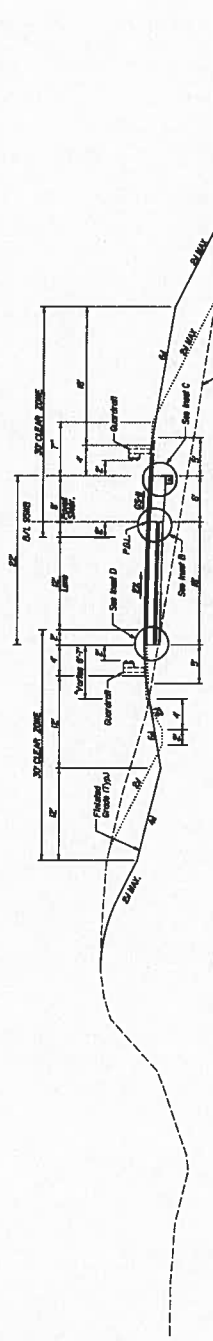
GENERAL NOTES:
 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE VA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 2. ALL MATERIALS SHALL BE SUBJECT TO INSPECTION AND CONTROL OF TRAFFIC BY THE DEPARTMENT.



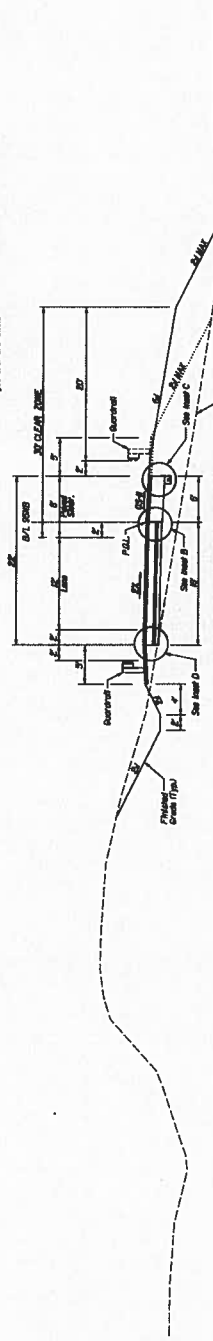
95 EXPRESS LANES - REVERSIBLE
 Sta. 2211+12.43 to Sta. 2230+00 (R658)



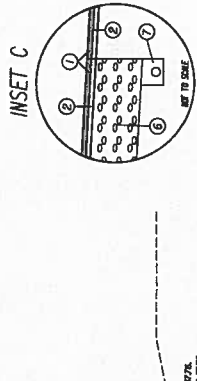
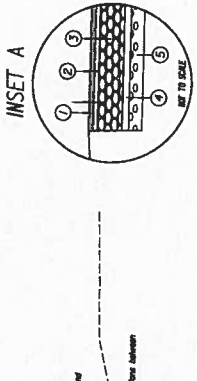
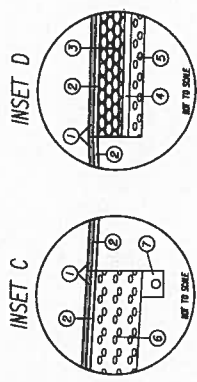
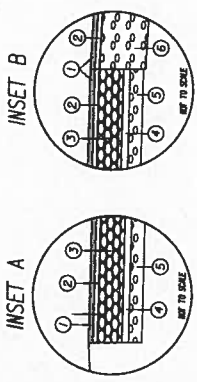
95 EXPRESS LANES - REVERSIBLE
 Sta. 2230+00.00 to Sta. 2231+32.78 (R658)
 Sta. 2231+32.78 to Sta. 2232+25.00 (R658)



95 EXPRESS LANES - REVERSIBLE
 Sta. 2232+00.00 to Sta. 2237+40 (R648)
 Sta. 2237+40.00 to Sta. 2238+00.00 (R648)



95 EXPRESS LANES - REVERSIBLE
 Sta. 2237+40.00 to Sta. 2238+00.00 (R648)



PAVEMENT SECTION NOTES

- 1 SURFACE - 2 ASPHALT CONCRETE TYPE SM-25E
- 2 INTERMEDIATE - 2 ASPHALT CONCRETE TYPE IM-50A
- 3 BASE - 4 ASPHALT CONCRETE BM-50A
- 4 DRAINAGE - 3 STABILIZED OPEN GRADED DRAINAGE LAYER
- 5 SUBBASE - 6 CEMENT TREATED AGGREGATE
- 6 SUBBASE - 21 AGGREGATE BASE MATERIAL TYPE 1, SIZE NO. 20
- 7 STD. 40-1 UNDERDRAIN

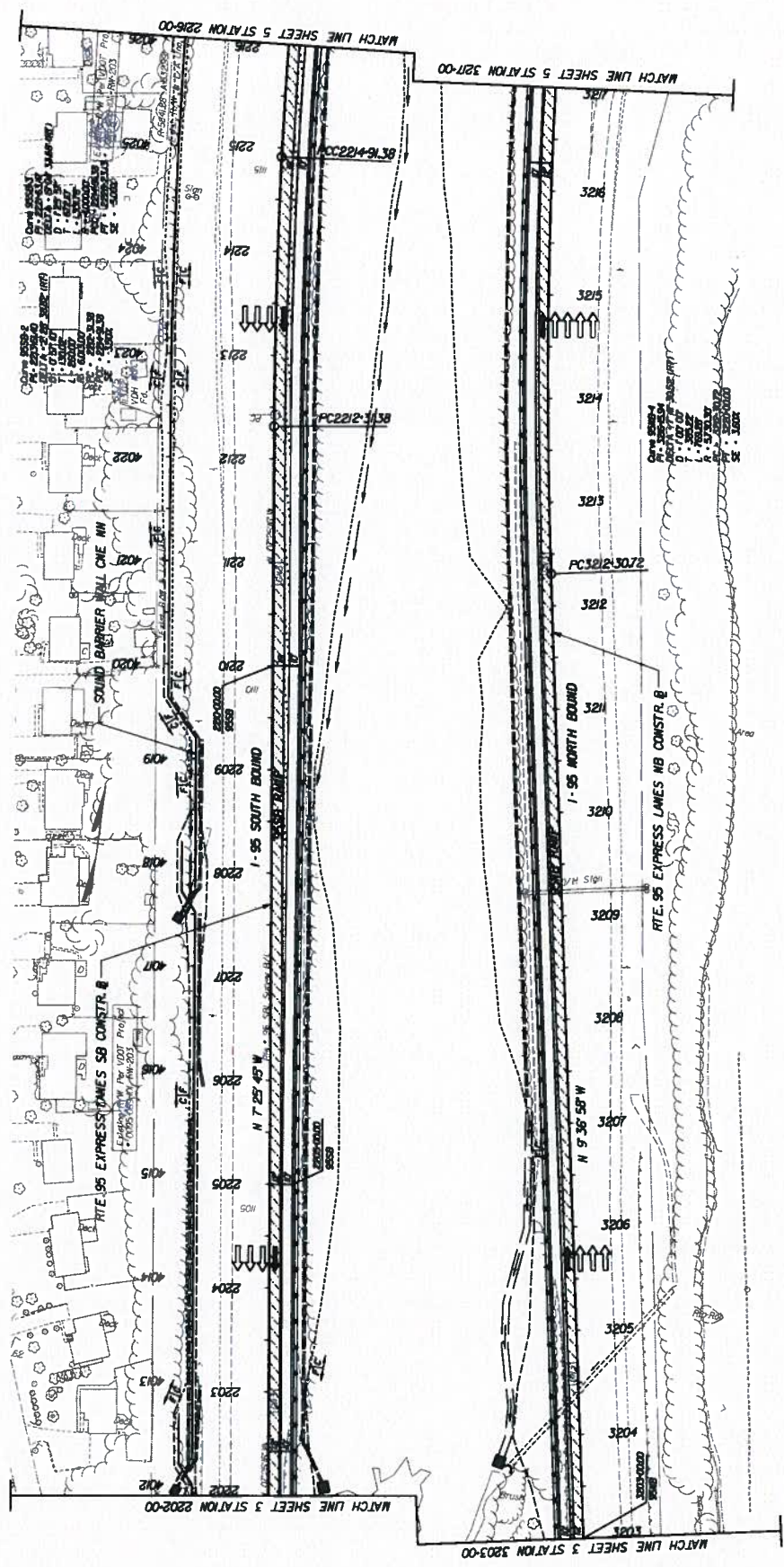
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| VA 95 | | 0095-989-720, 0501 | 4 |

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

THESE PLANS ARE SUBJECT TO CONSTRUCTION ON TO REGULATION AND TO THE NECESSARY BY THE DEPARTMENT

PROJECT NUMBER: 00000000
 DRAWN BY: DATE
 CHECKED BY: DATE
 SURFACE UTILITY BY: DATE



LEGEND

- Double Proposed Full Depth Pavement
- Double Proposed Pavement Milling & Overlay
- Double Construction Limits in Cuts
- Double Construction Limits in Fills

SCALE
 0 50 100
 Feet

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| DATE | REVISED | PROJECT | REVISION |
| VA 95 | | 0095-989-720 | 4 |

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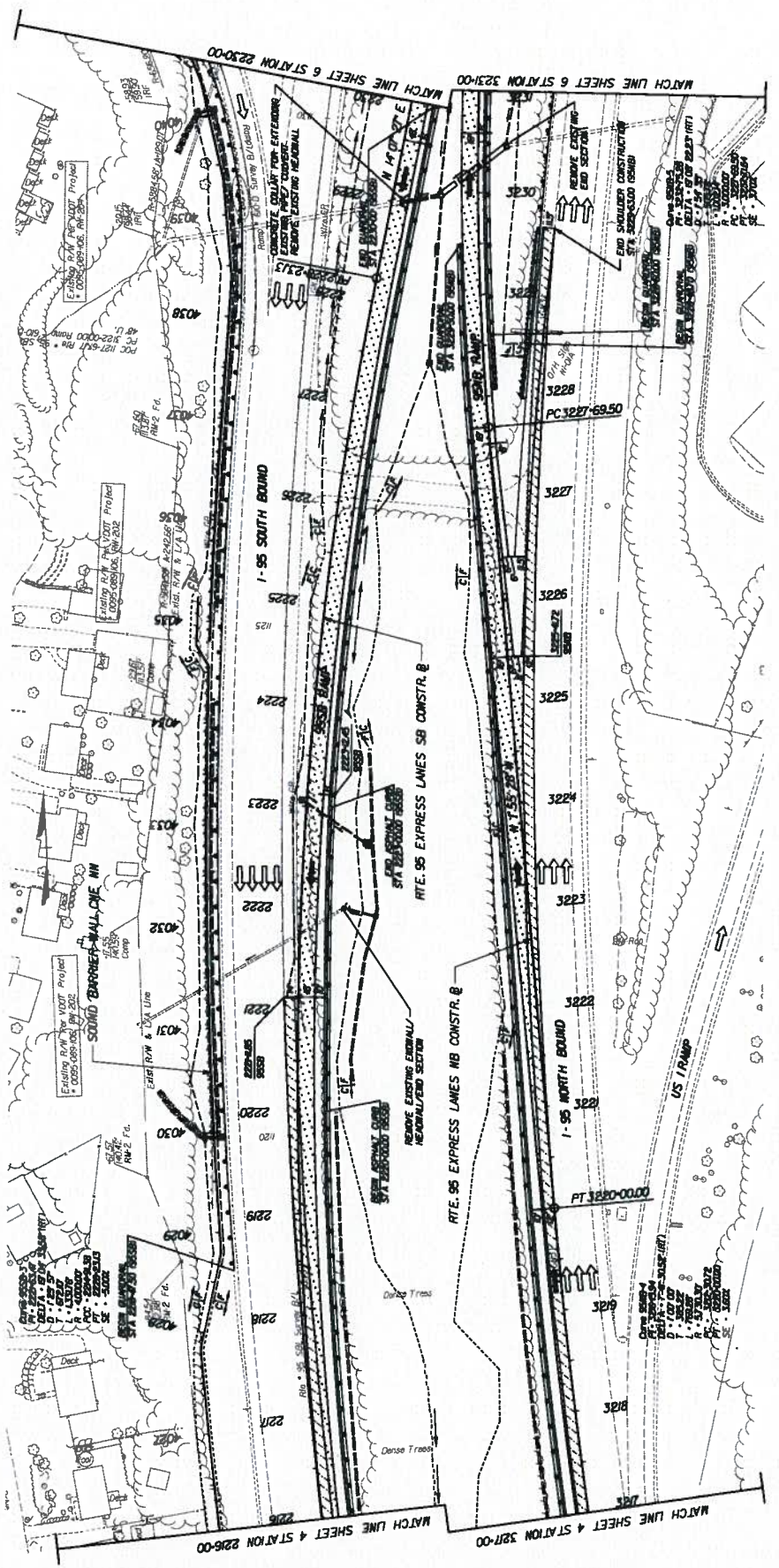
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| VA 95 | 00055-989-720, CS501 | 5 |

THESE PLANS ARE UNFINISHED AND NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REGULATIONS AND ORDINANCES OF THE DEPARTMENT OF TRANSPORTATION AND SHALL BE NECESSARY TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

PROJECT: 00055-989-720
 DRAWN BY: DATE
 CHECKED BY: DATE
 DESIGNED BY: DATE
 SURFACE UTILITY BY: DATE



- LEGEND**
- Double Proposed Full Depth Pavement
 - Double Proposed Pavement Milling & Overlay
 - Double Construction Limits in Cuts
 - Double Construction Limits in Fills



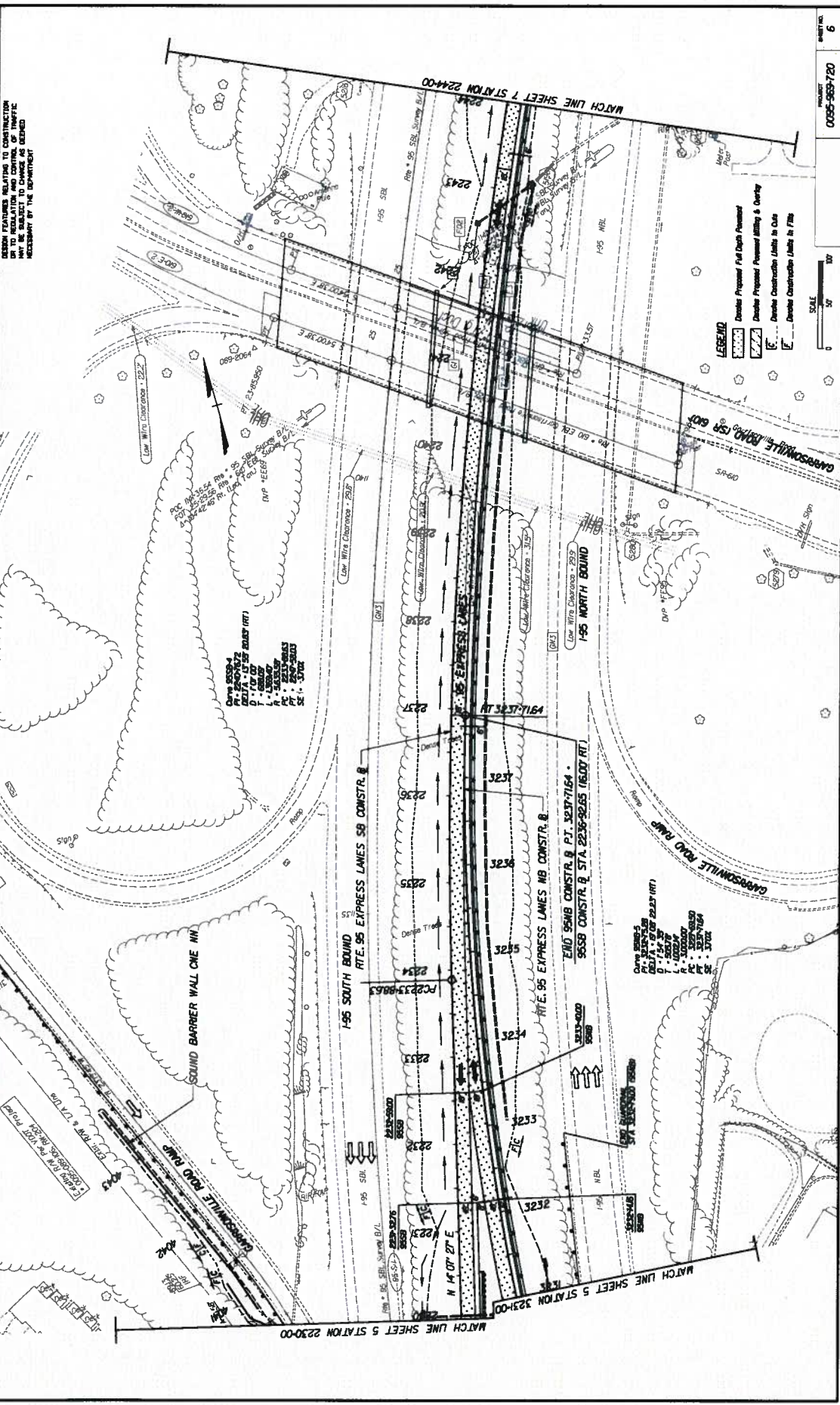
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 SHEET NO. 5

44020264ap
 Project: 95-000

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| VA 95 | 0095-989-720, C501 | 6 |

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

DESIGN FEATURES RELATING TO CONSTRUCTION MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.



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| DATE | PROJECT | SHEET NO. |
| VA 95 | 0095-989-720 | 6 |

LEGEND

- Double Proposed Full Depth Treatment
- Double Proposed Pavement Milling & Overlay
- Double Construction Joints in Cuts
- Double Construction Joints in Fills

SCALE: 0 50 100

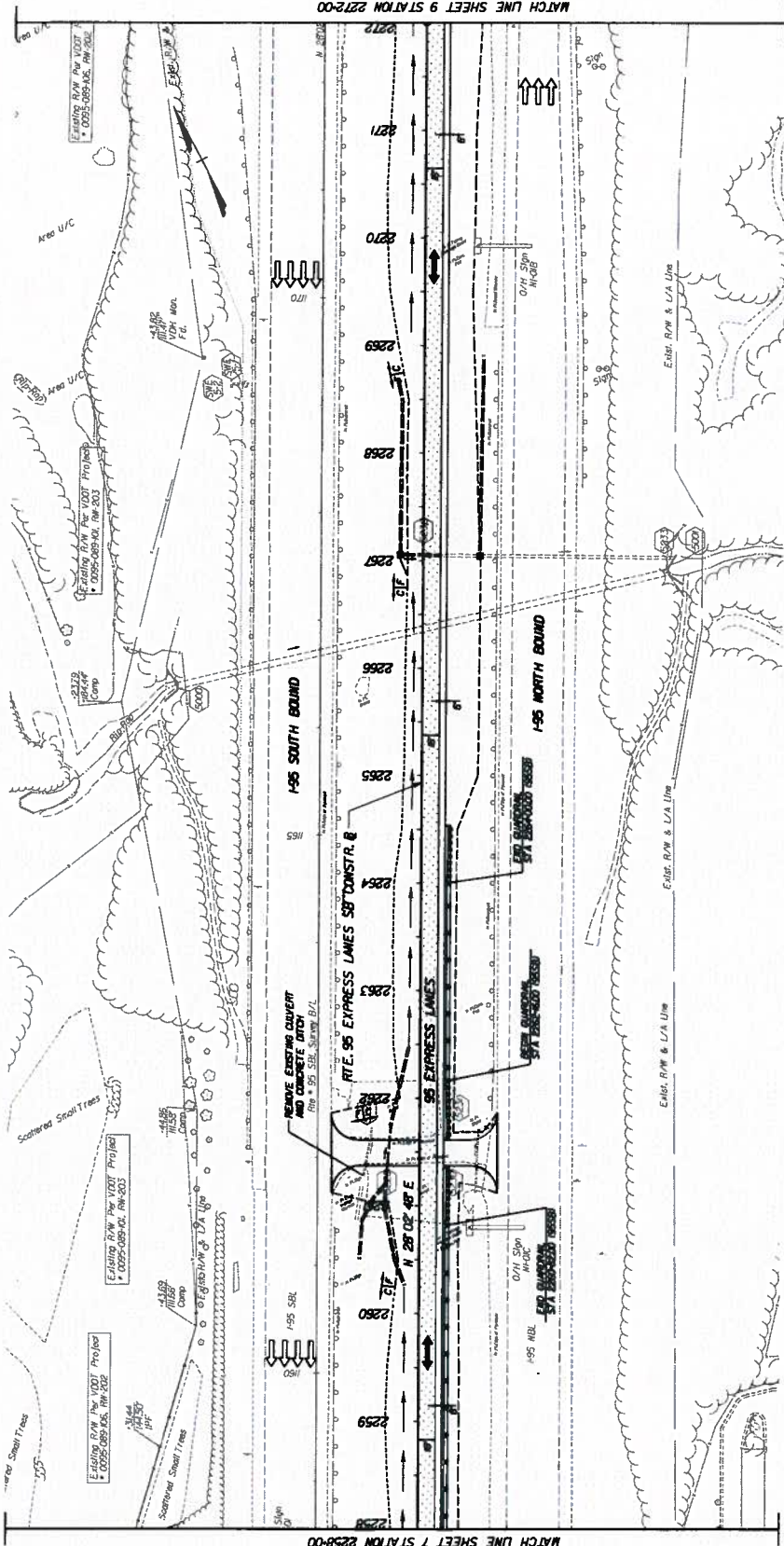
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| THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY. | | | 8 |

DESIGN FEATURES RELATING TO CONSTRUCTION OF THIS PROJECT MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

0000000000
 Project No. 00000000

DESIGNED BY: [Name]
 CHECKED BY: [Name]
 SURFACE UTILITY BY: DATE



- LEGEND**
- Double Proposed Full Depth Pavement
 - Double Proposed Pavement Milling & Overlay
 - Double Construction Utility in Cuts
 - Double Construction Utility in Fills

SCALE
 1" = 50'

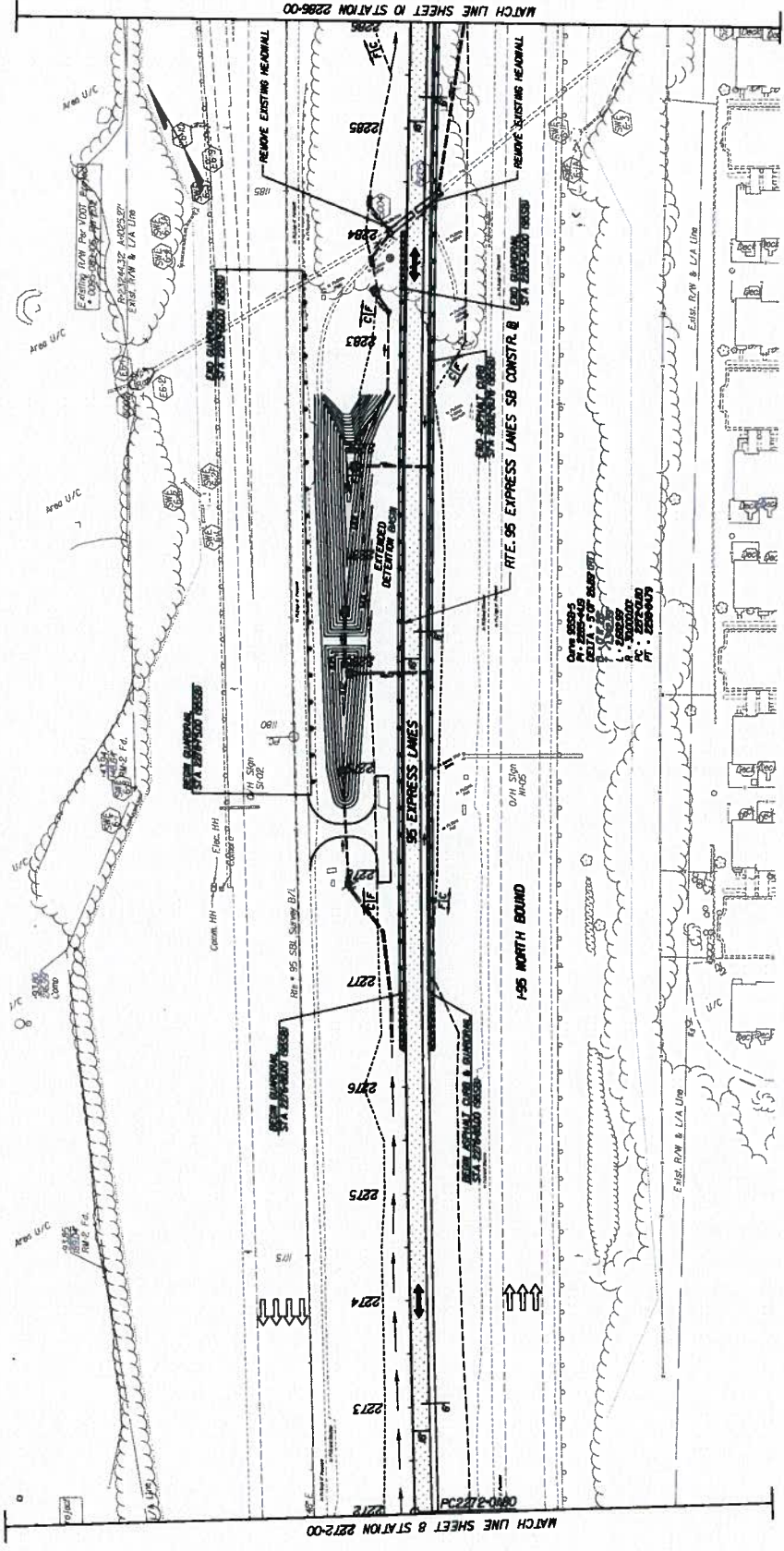
PROJECT NO.
 0095-969-720

PROJECT: I-95 Express Lanes
 DESIGNED BY: DATE
 SUBMITTED: DATE

THESE PLANS ARE UNFINISHED AND SHOULD NOT BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

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| PROJECT | 0095-989-720, CS01 | SHEET NO. | 9 |
| DATE | VA 95 | PROJECT | |



- LEGEND**
- Double Proposed Full Depth Pavement
 - Double Proposed Pavement Milling & Overlay
 - Double Construction Limits in Cuts
 - Double Construction Limits in Fills



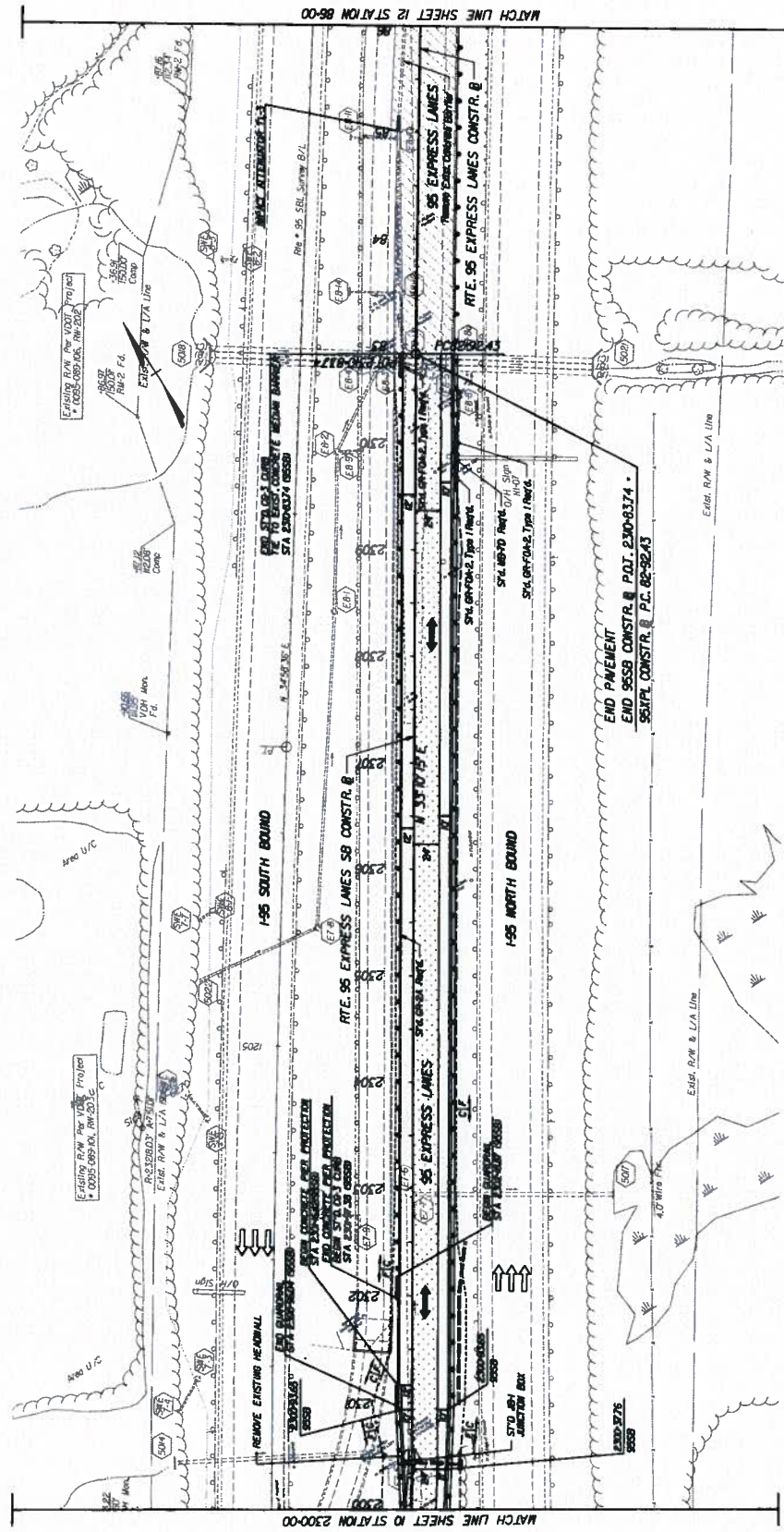
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PROJECT: I-95 Express Lanes
 DRAWN BY: DATE
 CHECKED BY: DATE
 SURFACE UTILITY BY: DATE

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| PROJECT | ISSUE | DATE | QUANTITY |
| VA 95 | REVISED | | |
| 0095-989-720, CS01 | | | 11 |

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THESE PLANS ARE SUBJECT TO CONSTRUCTION ON TO MODIFICATION AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.



LEGEND
 Dashed Proposed Full Depth Pavement
 Dashed Proposed Pavement Milling & Overlay
 Dashed Construction Limits in Data
 Dashed Construction Limits in Plans

SCALE
 0 50 100
 FEET

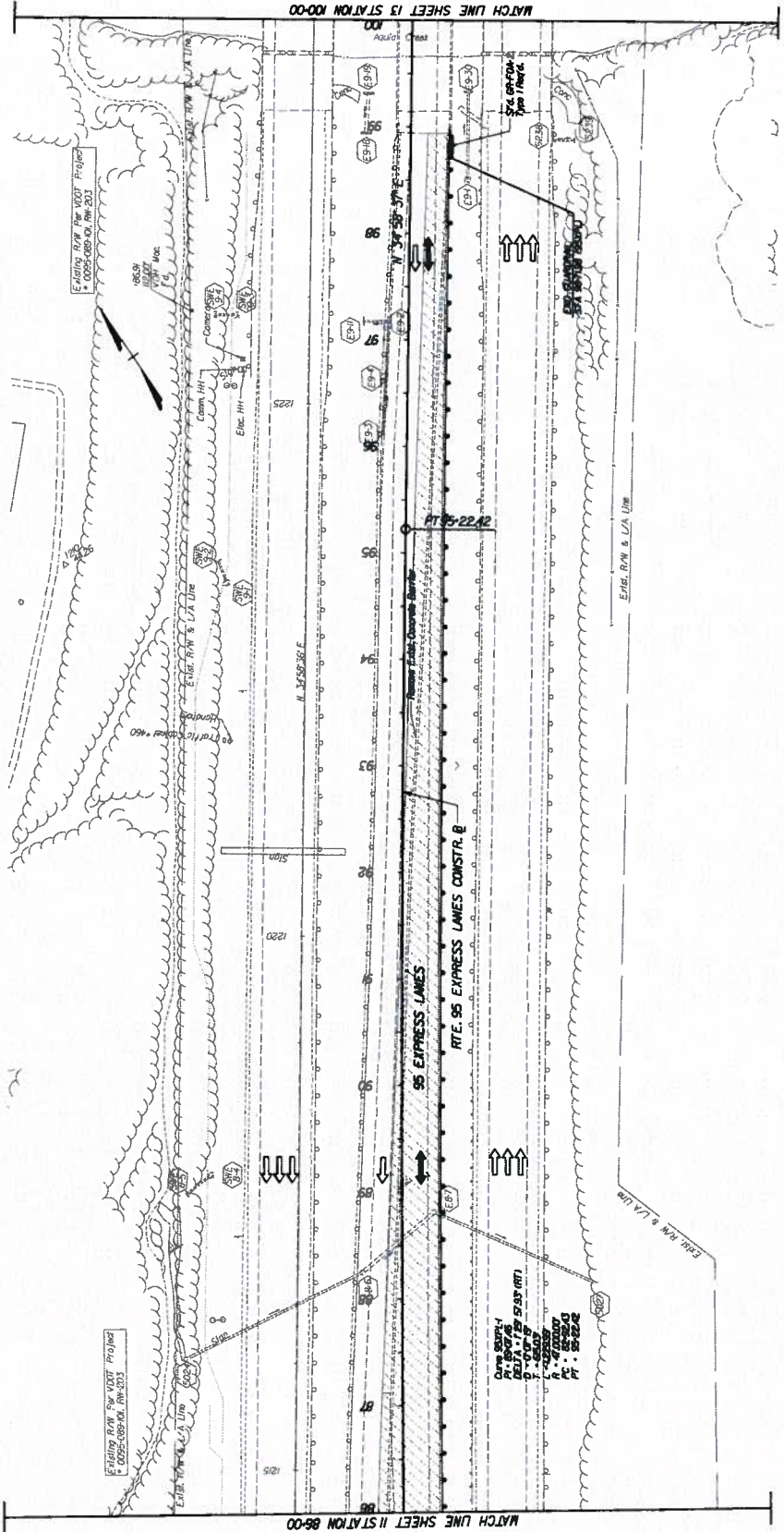
PROJECT
 0095-989-720
 SHEET NO.
 11

PROJECT MANAGER: Jeff E. Smith
 SURVEYED BY: DATE
 DESIGN BY: Virginia, Rouse & Associates, LLC
 SURFACE UTILITY BY: DATE

| | | |
|-------|-------------------|-----------|
| DATE | PROJECT | SHEET NO. |
| VA 95 | 0095-969-720, CSO | 12 |

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONSTRUCTION OF THIS PROJECT MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

THESE PLANS ARE UNFINISHED AND NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.



LEGEND
 [Symbol] Double Proposed Full Depth Pavement
 [Symbol] Double Proposed Pavement Milling & Overlay
 [Symbol] Double Construction Lane in Old
 [Symbol] Double Construction Lane in FTR



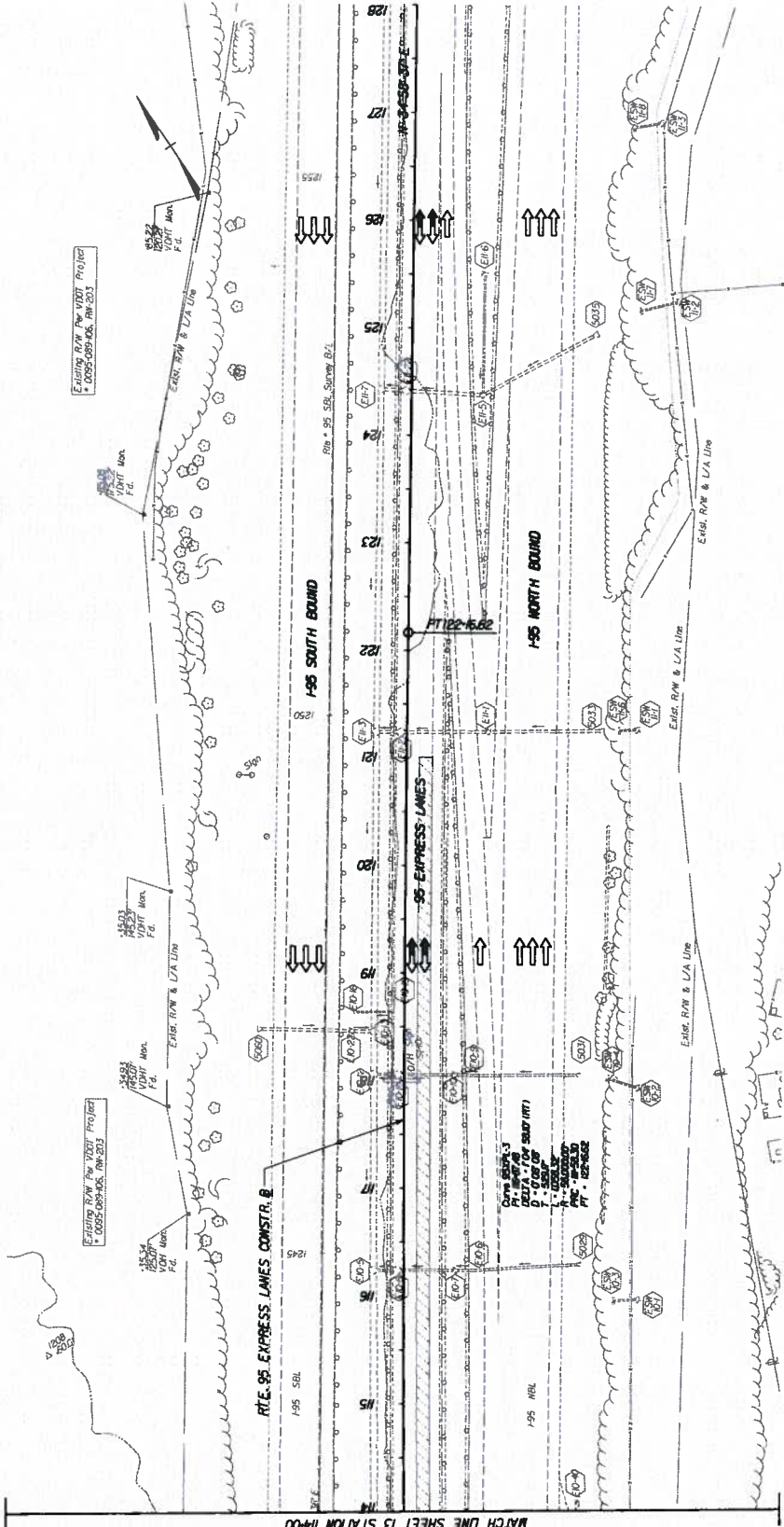
PROJECT: 0095-969-720
 SHEET NO: 12

PROJECT: I-95 Express Lanes
 DRAWN BY: DATE
 CHECKED BY: GREGORY A. ANDERSON, LLC
 SURFACE UTILITY BY: DATE

THESE PLANS ARE UNFINISHED
 AND UNAPPROVED AND ARE NOT
 TO BE USED FOR THE
 CONSTRUCTION OF THE
 ACQUISITION OF RIGHT OF WAY.

DESIGN FEATURES RELATING TO CONSTRUCTION
 MAY BE SUBJECT TO CHANGE AS DEEMED
 NECESSARY BY THE DEPARTMENT

| | | | |
|-------|--------------------|------|-----|
| STATE | PROJECT | DATE | NO. |
| VA | 0095-989-720, CS01 | 95 | 14 |



- LEGEND**
- ▭ Double Proposed Full Depth Pavement
 - ▭ Double Proposed Pavement Milling & Overlay
 - ▭ Double Construction Limits in Cuts
 - ▭ Double Construction Limits in Fills



| | |
|--------------|-----|
| PROJECT | NO. |
| 0095-989-720 | 14 |

PROJECT MANAGER: Jeff A. Smith
 DESIGNED BY: DATE
 SURFACE UTILITY BY: DATE

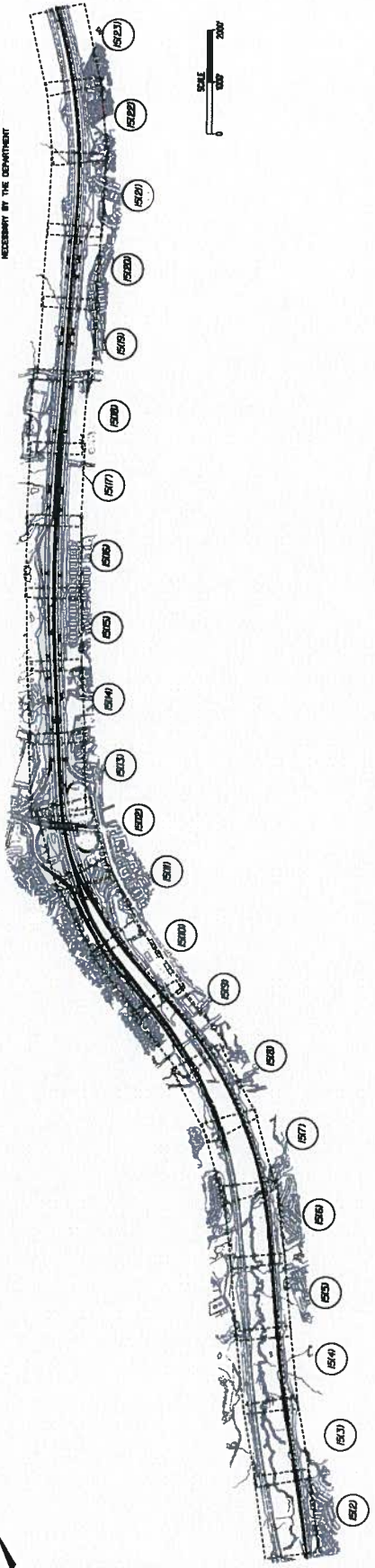
PROJECT NO.
 0085-989-780, CS01 /S10

THESE PLANS ARE UNFINISHED
 AND ARE NOT
 TO BE USED FOR THE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.

THESE PLANS ARE NOT TO BE USED FOR THE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.



TRAFFIC KEY PLAN



TMS AND LIGHTING LEGEND

| PLAN ITEM | PLAN SYMBOL | |
|---|-------------|----------|
| | PROPOSED | EXISTING |
| GROUND-MOUNTED EQUIPMENT CABINET | | |
| POLE-MOUNTED EQUIPMENT CABINET | | |
| MICROWAVE VEHICLE DETECTOR | | |
| CITY CAMERA | | |
| AUTOMATED INCIDENT DETECTION CAMERA | | |
| ITS DEVICE POLE AND FOUNDATION | | |
| ROADWAY GATE | | |
| ROADWAY LIGHTING POLE, JCP, TYPE H, FOUNDATION AND LED LIGHTING | | |
| SERVICE PANEL | | |
| JUNCTION BOX JB-S1 | | |
| JUNCTION BOX JB-S2 | | |
| JUNCTION BOX JB-S3 | | |
| GENERATOR | | |
| METERED ELECTRIC SERVICE | | |
| COMMUNICATION DUCT BANK | | |
| COMMUNICATION AND POWER DUCT BANK | | |
| POWER DUCT BANK | | |
| ROADWAY LIGHTING CONDUIT | | |

STANDARD SIGN LEGEND

| PLAN ITEM | PLAN SYMBOL | |
|--|-------------|----------|
| | PROPOSED | EXISTING |
| Single Post Sign Support | | |
| Double Post Sign Support | | |
| O/H Cantilever Sign Support | | |
| O/H Span Sign Support | | |
| SIGN CALL-OUTS | | |
| Existing Sign to Remain or to be Relocated | | |
| Existing Sign to be Removed | | |
| Proposed Sign Panel | | |

GENERAL NOTES:
 1. ALL PAVEMENT MARKINGS SHALL BE TYPE B, CLASS VI, PATTERNED PREFORMED TAPE.

4/1/88
RCS/AM

PROJECT: WASHINGTON STATE
 DESIGNED BY: DATE
 SURFACE UTILITY BY: DATE

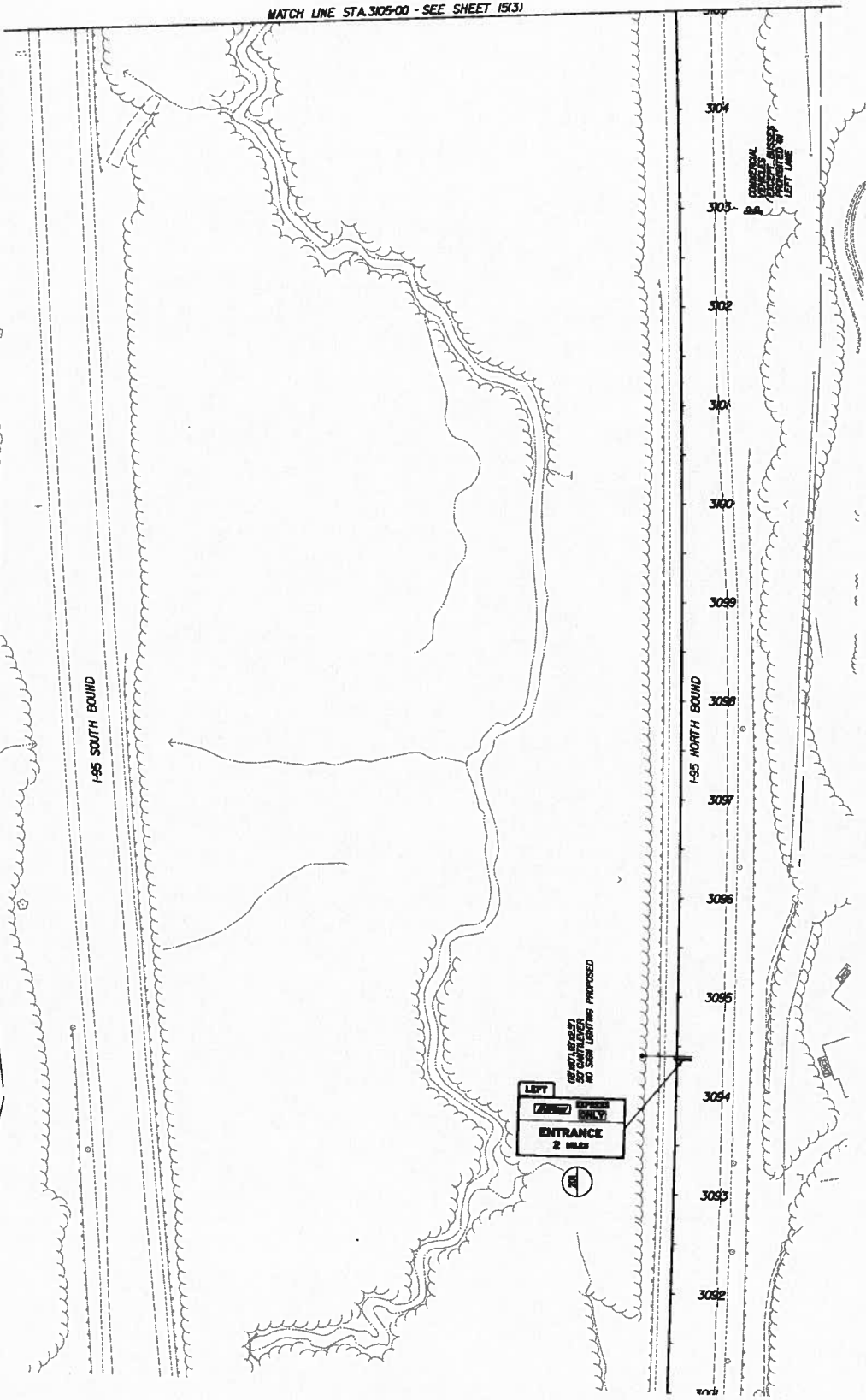
PLAN NOTES

1. ALL EXISTING SIZES WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
 2. ALL EXISTING SIZES RELATED TO THE CONSTRUCTION AND OPERATION
 OF THE PROJECT ARE SHOWN. OTHER SIZES, REGULATORY AND
 WARNING SIZES FOR THE GENERAL PURPOSES ARE NOT TO BE SHOWN.

THESE PLANS ARE UNFINISHED
 AND ARE NOT
 TO BE USED FOR THE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.

CONSTRUCTION OF THIS PROJECT
 OR TO MODIFICATION OF THE
 MAY BE SUBJECT TO CHANGE AS DEEMED
 NECESSARY BY THE DEPARTMENT

| | | | |
|-------------|----------|--------------------------|-----|
| DATE | REVISION | BY | NO. |
| VA | 95 | | |
| PROJECT NO. | | 0095-989-780, CS01 (5/2) | |
| SHEET NO. | | 15(2) | |



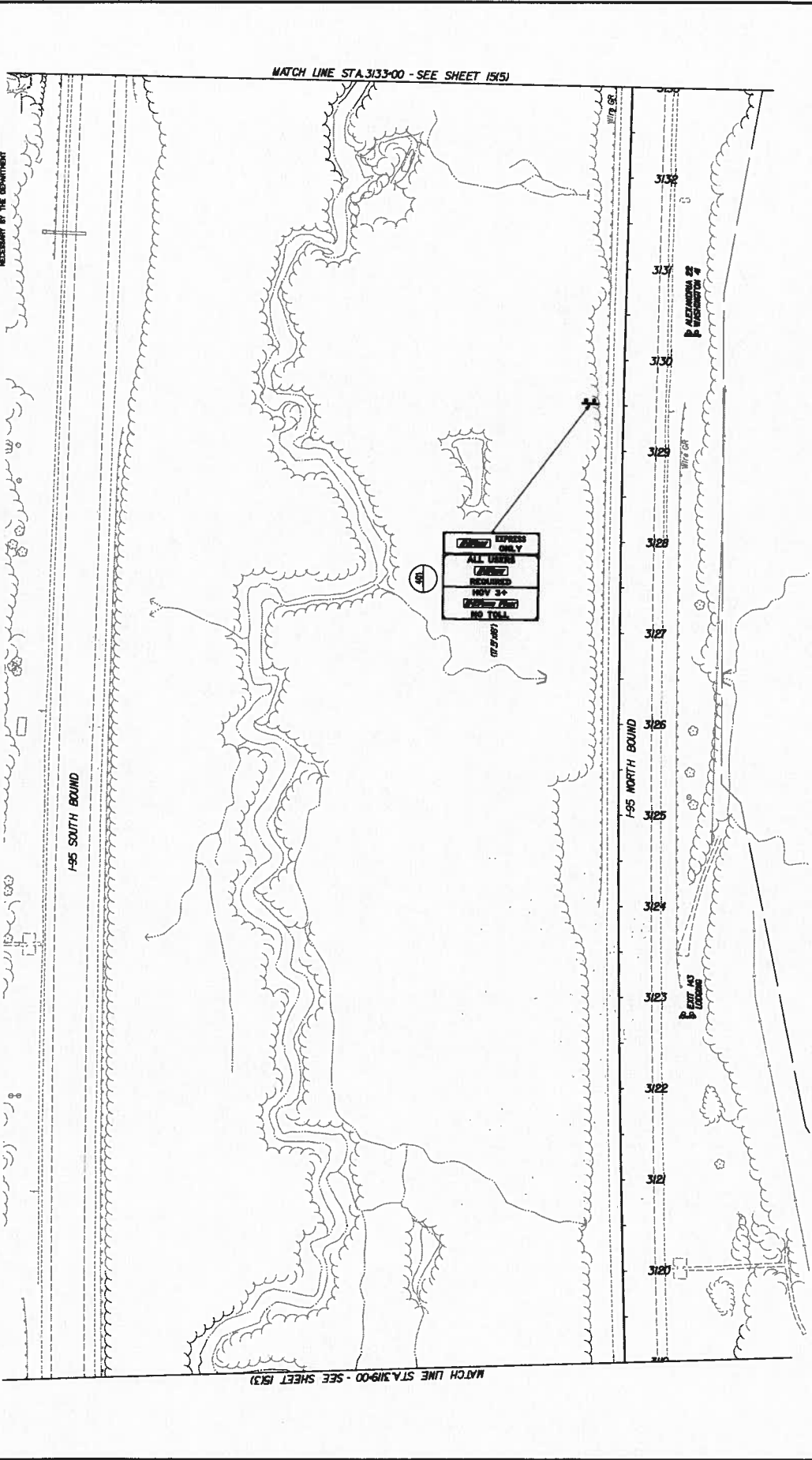
PROJECT NO.
0095-989-780

SHEET NO.
15(2)

4/1/2006
14:53:14

| | | | | | | | |
|---|--|---------------|--|---|--|--------------------|--|
| PROJECT MANAGER/DATE SERVICED BY DATE SUBCOMPACT UTILITY BY DATE | | DATE ISSUE | | PROJECT NO. 0095-989-720, CS01 (5/4) | | SHEET NO. 15(4) | |
| PLANS NOTES DESIGN FOR THE I-95 SOUTH BOUND EXPRESS ONLY ALL EXISTING AND PROPOSED LINES ARE SHOWN ON THE PLAN AND ALL EXISTING AND PROPOSED LINES ARE SHOWN ON THE PLAN OF THE EXPRESS LANES EXTENSION AND SIMILAR OTHER GROUND, REGULATION AND WARNING SIGNS FOR THE I-95 GENERAL PURPOSE LANES MAY NOT BE SHOWN. | | DATE ISSUE | | PROJECT NO. 0095-989-720, CS01 (5/4) | | SHEET NO. 15(4) | |

DESIGN FOR THE I-95 SOUTH BOUND
EXPRESS ONLY
ALL EXISTING AND PROPOSED LINES ARE SHOWN ON THE PLAN
AND ALL EXISTING AND PROPOSED LINES ARE SHOWN ON THE PLAN
OF THE EXPRESS LANES EXTENSION AND SIMILAR OTHER GROUND, REGULATION AND
WARNING SIGNS FOR THE I-95 GENERAL PURPOSE LANES MAY NOT BE SHOWN.



SCALE 1" = 20'
PROJECT NO. 0095-989-720
SHEET NO. 15(4)

REVISIONS
 DATE BY

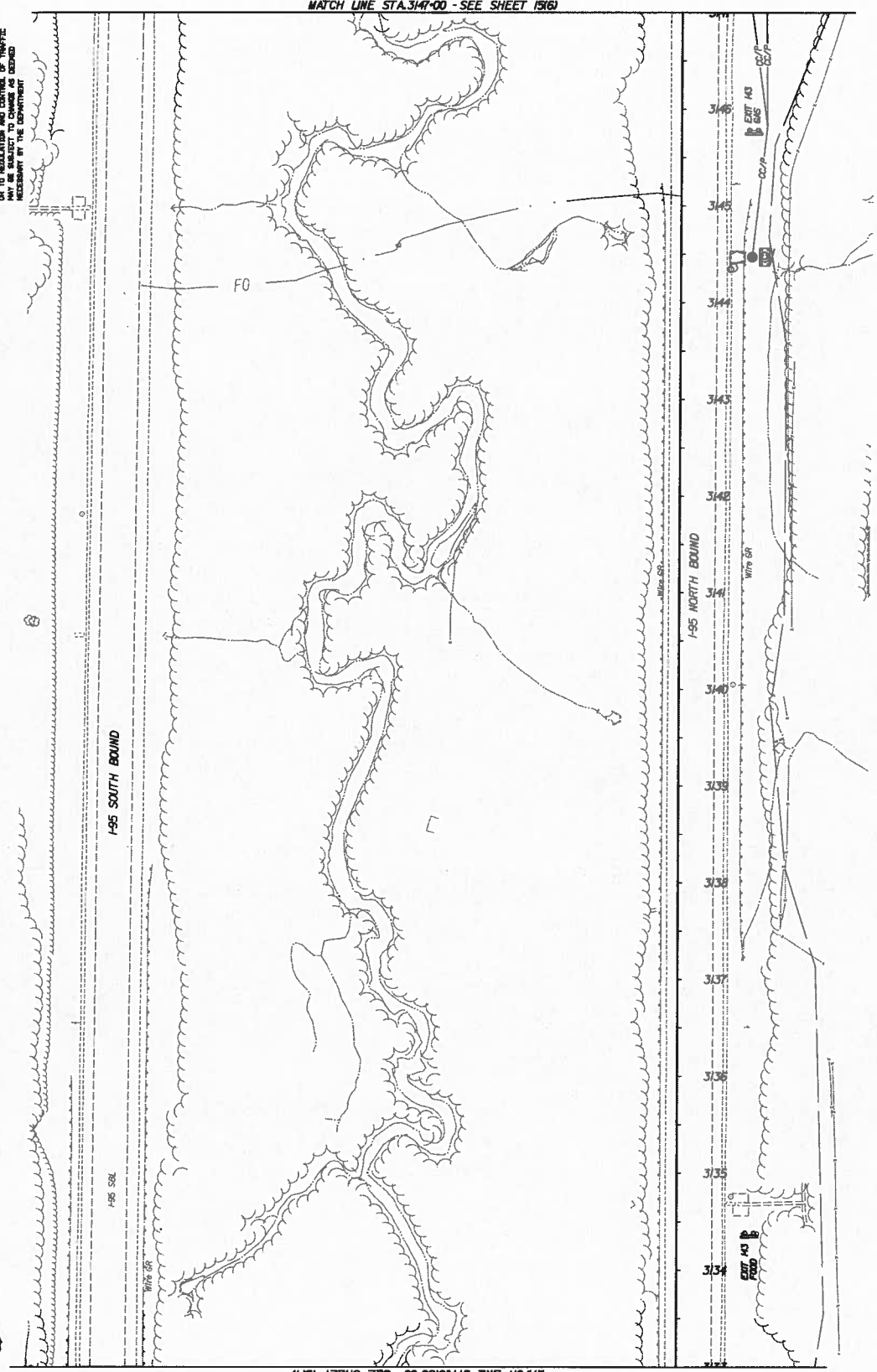
| | | |
|-------|----|--------------------------|
| DATE | BY | REVISION |
| VA 95 | | 0085-989-720, CS01 (S/S) |

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

DESIGN FEATURES RELATING TO CONSTRUCTION SHALL BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

PLAN NOTES
 1. ALL EXISTING SLOPES WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
 2. ALL PROPOSED AND EXISTING SLOPES RELATED TO THE CONSTRUCTION AND OPERATION OF THE PROJECT ARE SHOWN ON THE PLAN.
 3. THE SHOWN OTHER SLOPES, REGULATORY AND UTILITY SLOPES FOR THE I-95 GENERAL PURPOSE LIMITS MAY NOT BE SHOWN.

DESIGNED BY DATE
 SURVEYED BY DATE
 SUBSURFACE UTILITY BY DATE



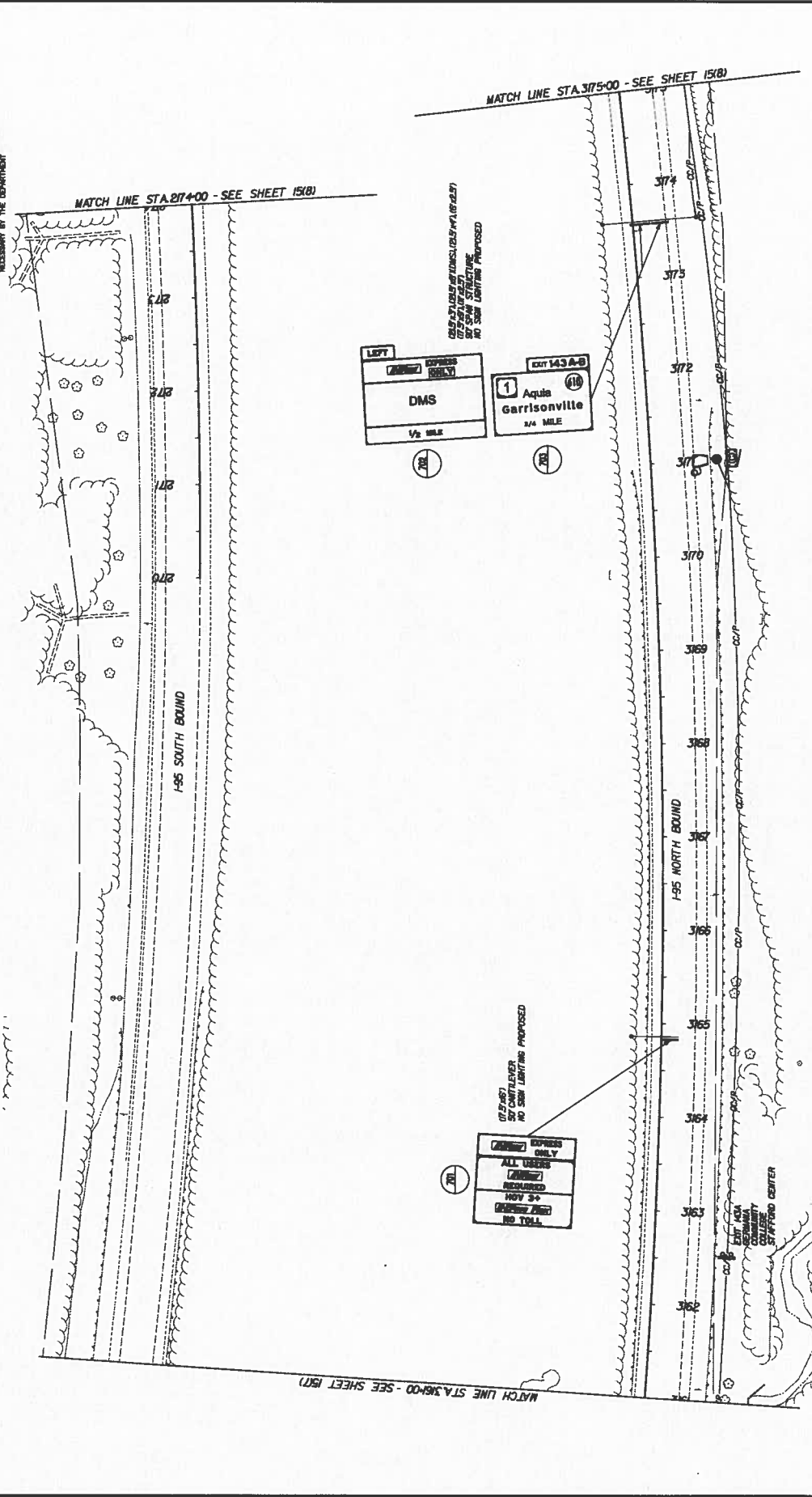
| | |
|-------------|--------------|
| PROJECT NO. | 0085-989-720 |
| SHEET NO. | 1515 |

6/1/2006
 00059897.Dwg
 Project: By J. Jones

| | | |
|---------------------------|----------------|------------------------------------|
| PROJECT MANAGER: J. Jones | DATE: 6/1/2006 | PROJECT: 0005-989-720, CS30 (1577) |
| DESIGNER: J. Jones | DATE: 6/1/2006 | PROJECT: 0005-989-720, CS30 (1577) |
| SUBGROUP: J. Jones | DATE: 6/1/2006 | PROJECT: 0005-989-720, CS30 (1577) |

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

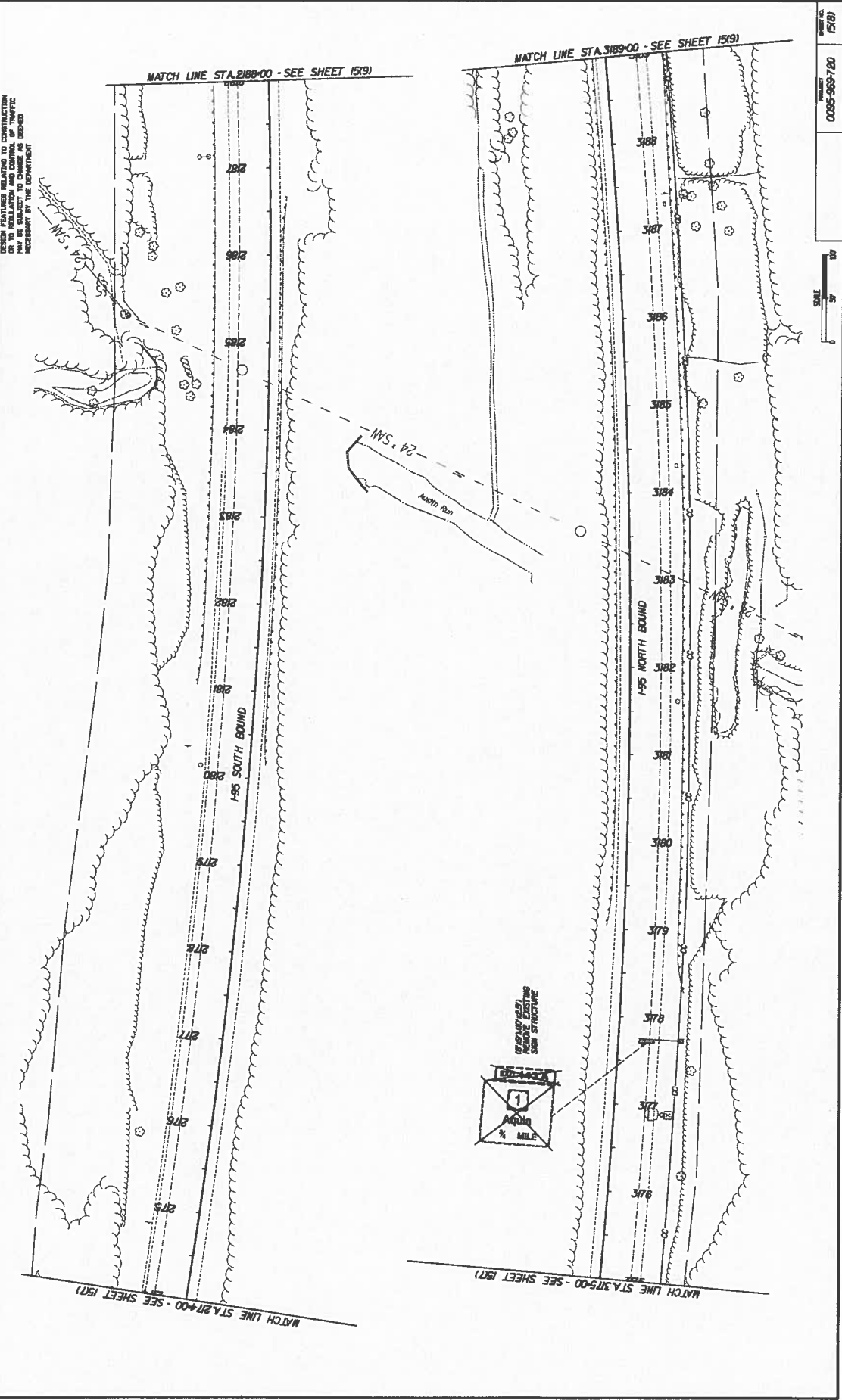
THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



| | |
|-----------------------|----------------|
| PROJECT: 0005-989-720 | DATE: 6/1/2006 |
| PROJECT: 0005-989-720 | DATE: 6/1/2006 |

4/2/06
 4:53:52 AM

| | | | |
|---|--|--|--|
| PROJECT MANAGER: J. S. ... | | DATE: 04/2/06 | |
| DESIGNER: ... | | PROJECT NO.: 0085-989-720, CS01 | |
| SURVEYED BY: ... | | SHEET NO.: 15(8) | |
| SUBSURFACE UTILITY BY: ... | | PROJECT: 0085-989-720 | |
| PLAN NOTES: | | SCALE: 1" = 40' | |
| <p>1. ALL EXISTING SIZES WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.</p> <p>2. ALL EXISTING SIZES RELATED TO THE CONSTRUCTION AND OPERATOR</p> <p>3. THE CONTRACTOR SHALL VERIFY THE SHOWN OTHER REGULATORY AND</p> <p>4. VARIATIONS FROM THE 1-95 GENERAL PURPOSE LINES MAY BE SHOWN.</p> | | <p>THESE PLANS ARE UNFINISHED</p> <p>AND SHOULD NOT BE USED FOR ANY</p> <p>CONSTRUCTION OR THE</p> <p>ACQUISITION OF RIGHT OF WAY.</p> | |
| <p>DESIGNER'S REVIEW AND SIGNATURE IS NECESSARY FOR THE CONSTRUCTION</p> <p>OR TO REGULATION AND CONTROL OF TRAFFIC</p> <p>MAY BE SUBJECT TO CHANGE AS DEEMED</p> <p>NECESSARY BY THE DEPARTMENT</p> | | <p>0085-989-720</p> <p>15(8)</p> | |



4/1/2008
R06106 M

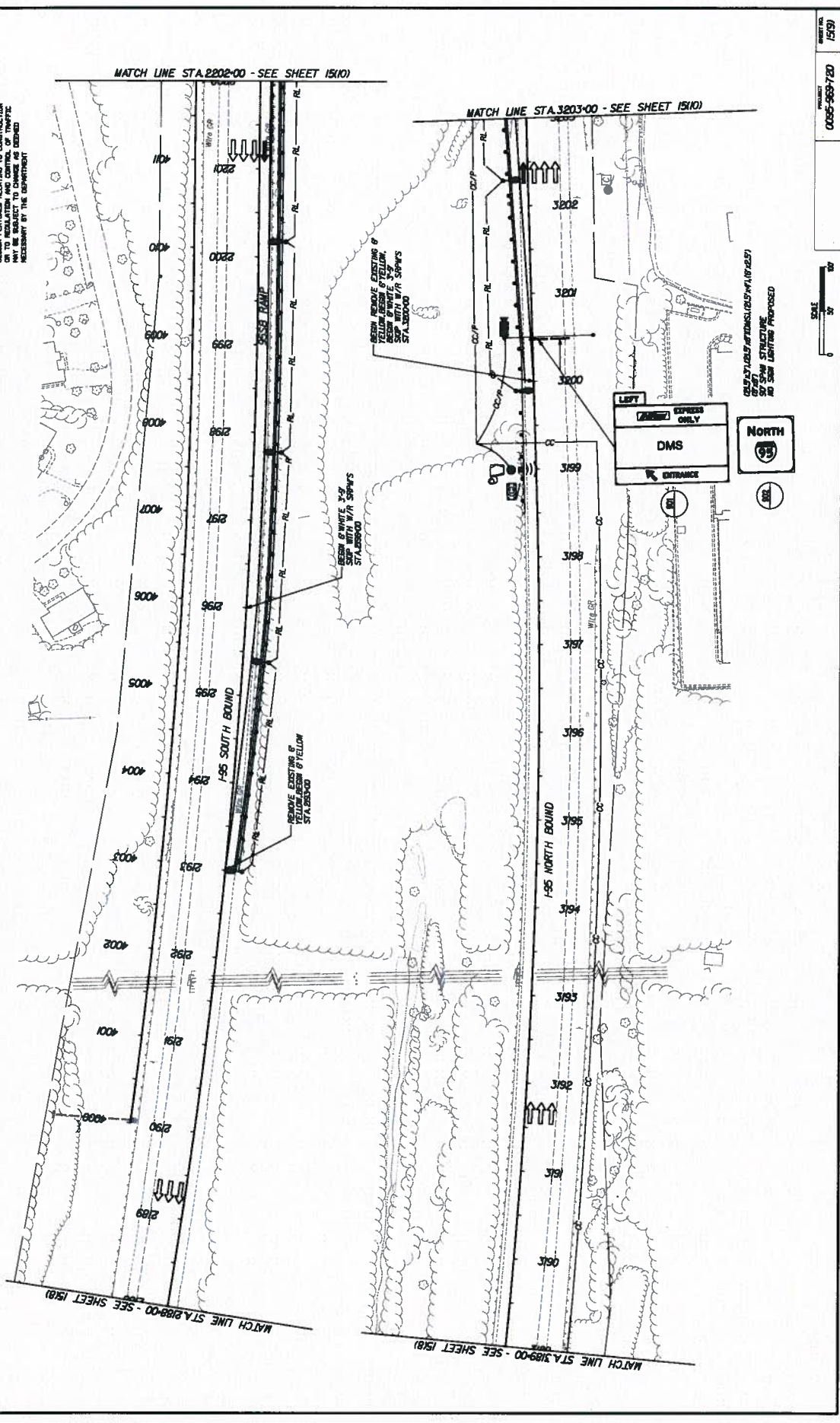
PROJECT: UNIVERSITY OF TEXAS AT AUSTIN
 SURVEYED BY: DATE
 SUBSURFACE UTILITY BY: DATE

PLAN NOTES
 ALL EXISTING DIMENSIONS WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN. ALL EXISTING DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR. DIMENSIONS OF THE EXISTING LINES EXTENSION ARE SHOWN OTHER THAN REGULATORY AND WARNING SIGNS FOR THE I-95 GENERAL PURPOSE LINES AND NOT BE SHOWN.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

OTHER FEATURES RELATING TO CONSTRUCTION OF THIS PROJECT MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

| | | |
|-------|--------------------|-------------|
| DATE | REVISION | DESCRIPTION |
| VA 95 | 0055-969-720, CS50 | FS(9) |

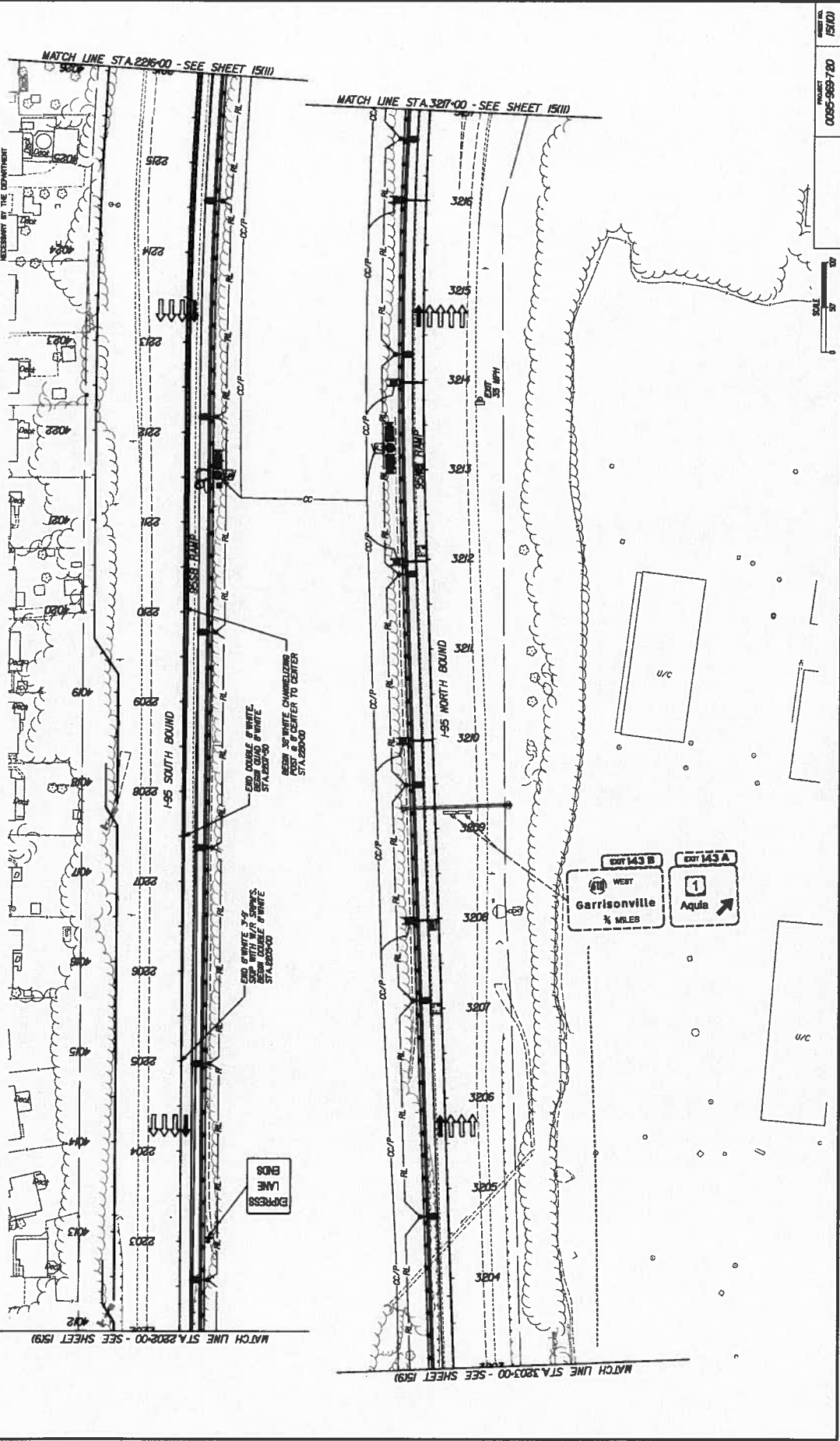


4/1/2008
 8:00:07 AM

| | | | |
|---|--|--------------------------------|--|
| PROJECT MANAGER: J. S. BISHOP | | DATE: 04/01/08 | |
| DESIGNER: William B. Bishop, Jr., Associated, LLC | | PROJECT: VA 95 | |
| SUBSIDIARY: FACILITY UTILITY DIVISION | | PROJECT NO: 0085-989-720, CS01 | |
| DRAWN BY: J. S. BISHOP | | SHEET NO: 15(K) | |

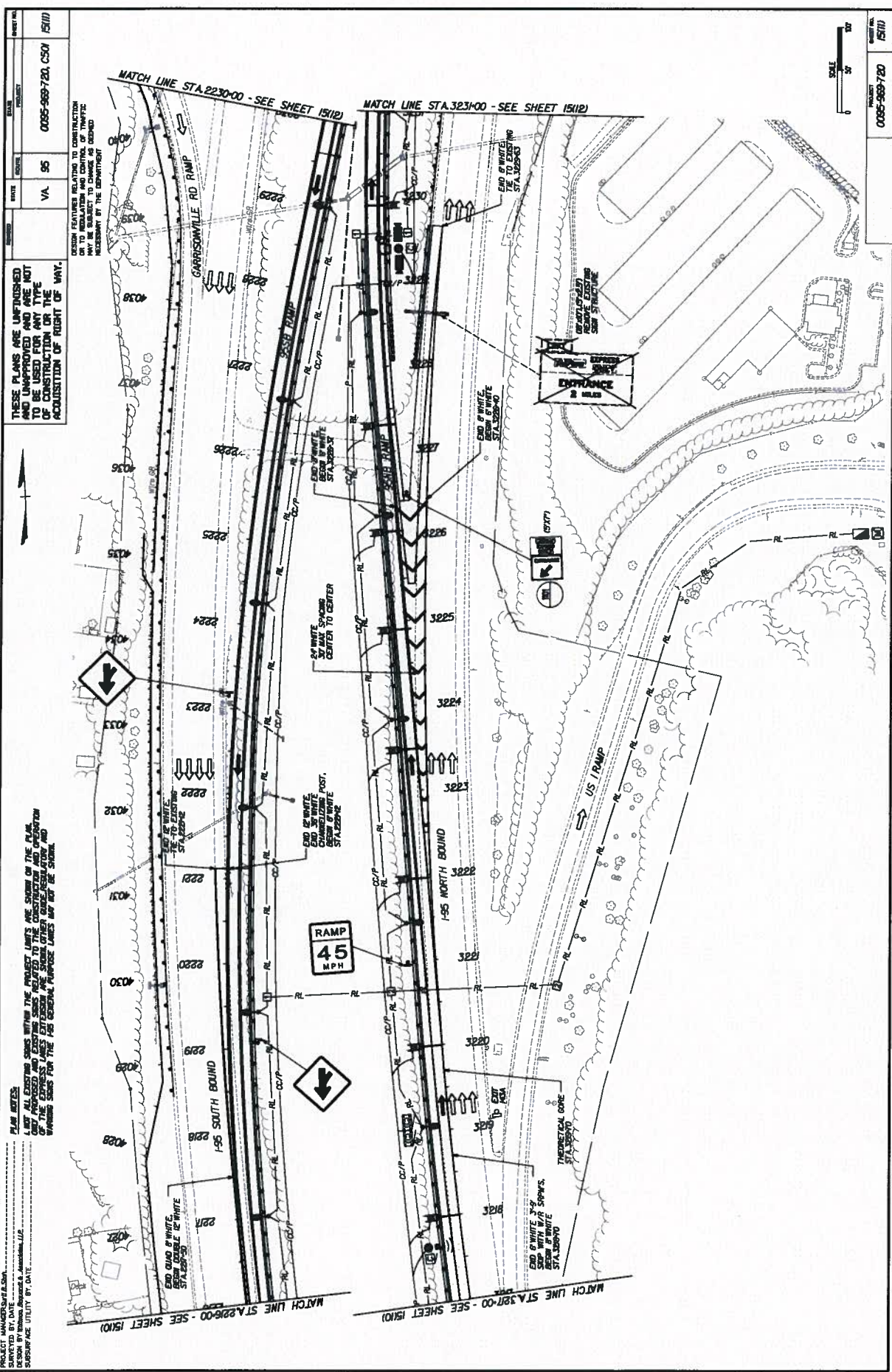
THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE FEDERAL HIGHWAY ADMINISTRATION AND THE STATE OF VIRGINIA. ANY CHANGES TO THESE PLANS SHALL BE MADE BY THE ENGINEER AND SHALL BE SUBJECT TO THE APPROVAL OF THE FEDERAL HIGHWAY ADMINISTRATION AND THE STATE OF VIRGINIA.



| | | | |
|--------------------------------|--|-----------------|--|
| PROJECT: 0085-989-720 | | SHEET NO: 15(K) | |
| DATE: 04/01/08 | | PROJECT: VA 95 | |
| PROJECT NO: 0085-989-720, CS01 | | SHEET NO: 15(K) | |

CONTRACTOR
 Project No. 0085-989-720



THESE PLANS ARE UNFINISHED AND MAY BE SUBJECT TO CHANGE OR TO MODIFICATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS ORDERED NECESSARY BY THE DEPARTMENT

PLAN NOTES:
 1. ALL EXISTING CONDITIONS WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
 2. ALL EXISTING AND PROPOSED AND EXISTING SEAS RELATED TO THE CONSTRUCTION AND OPERATION OF THE EXPRESS LANE EXTENSION ARE SHOWN OTHER THAN REGULARITY AND WARNING SIGNS FOR THE PAS GENERAL PURPOSE LINES MAY NOT BE SHOWN.

PROJECT MANAGER: J. B. Smith
 SURVEYED BY: DATE: _____
 DESIGNED BY: William, Rebecca & Associates, LLC
 SUBSIDIARY: DATE: UTILITY BY: DATE: _____

PROJECT NO. 0085-989-720
 SHEET NO. 15110

6/1/2006
 4/1/2006
 4/1/2006

PROJECT: MANASSAS PARK
 SURVEYED BY: DATE
 DESIGN BY: DATE
 SUBSIDIARY: DATE

THESE PLANS ARE UNFINISHED
 AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

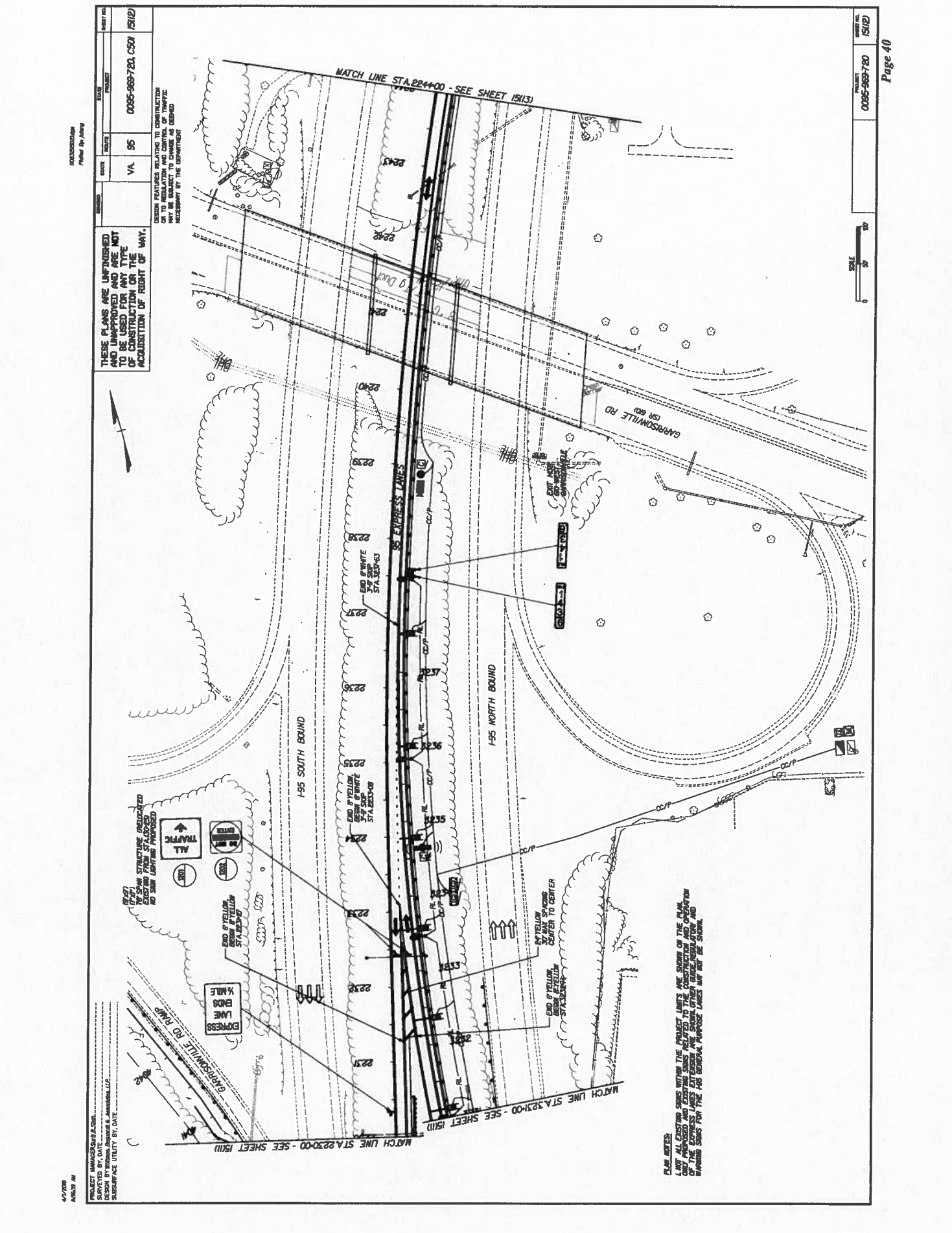
CONSTRUCTION OF THE I-495 EXPRESS LANE PROJECT
 IS SUBJECT TO THE NECESSARY CHANGES AS REQUIRED BY THE DEPARTMENT

VA 95 0055-969-720, CS50 151(2)

PROJECT NO. 0055-969-720
 SHEET NO. 151(2)

SCALE 1" = 40'

8/22/06



PLAN NOTES
 1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
 2. ALL EXISTING SIGNS NOT SHOWN ON THE PLAN ARE TO BE REMOVED AND RELOCATED
 UP THE CROSS-SLOPE BETWEEN THE EXISTING AND PROPOSED LANE ENDS.
 3. WARNING SIGNS FOR THE I-495 EXPRESS LANE PROJECT ARE NOT TO BE SHOWN.

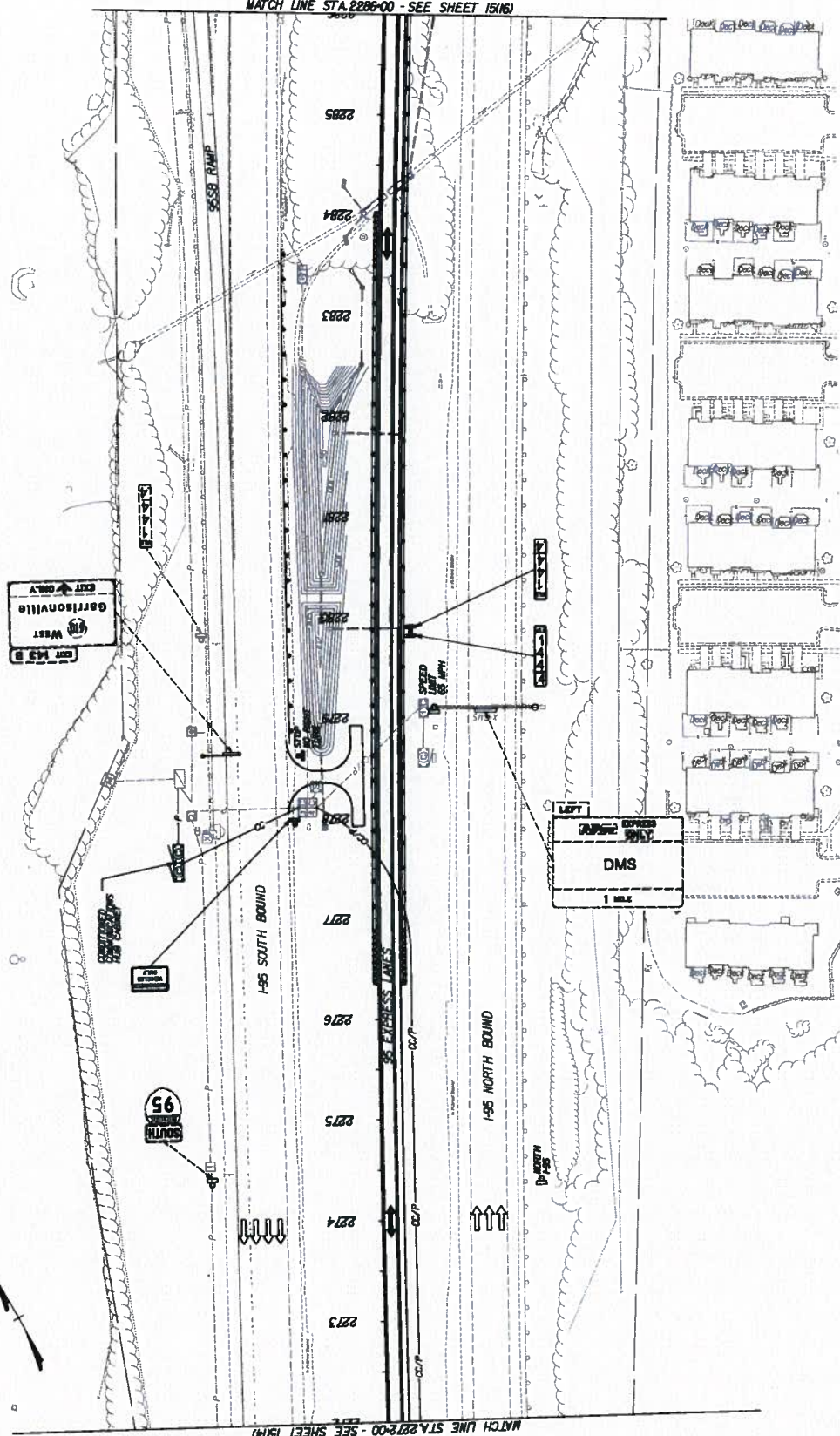
4/1/2006
 150623 7/01

| | | | |
|-----------------------------------|--|----------------|--|
| PROJECT: I-95 SOUTH EXPRESS Lanes | | SHEET NO. 1516 | |
| DESIGN: I-95 SOUTH EXPRESS Lanes | | SHEET NO. 1516 | |
| SURVEYED BY: DATE | | DATE | |
| DESIGNED BY: DATE | | DATE | |
| CHECKED BY: DATE | | DATE | |
| DRAWN BY: DATE | | DATE | |
| PROJECT NO. 0095-989-720, CS01 | | SHEET NO. 1516 | |
| SHEET NO. 1516 | | SHEET NO. 1516 | |

THESE PLANS ARE UNFINISHED AND NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

CONSTRUCTION OF THIS PROJECT IS SUBJECT TO REGULATIONS AND CONTROL OF TRAFFIC. ANY CHANGES TO THESE PLANS WILL BE NECESSARY BY THE CONTRACTOR.

PLAN NOTES:
 1. ALL EXISTING CURBS WITHIN THE PROJECT LIMITS ARE SHOWN AS THE PLAN. ALL EXISTING CURBS NOT SHOWN ARE TO BE RECONSTRUCTED TO THE CONSTRUCTION AND OPERATOR OF THE EXPRESS LANES EXPANSION AND SHOWN EITHER AS A RECONSTRUCTED CURB OR A NEW CURB FOR THE I-95 GENERAL PURPOSE LANES THAT ARE TO BE SHOWN.



PROJECT NO. 0095-989-720
 SHEET NO. 1516

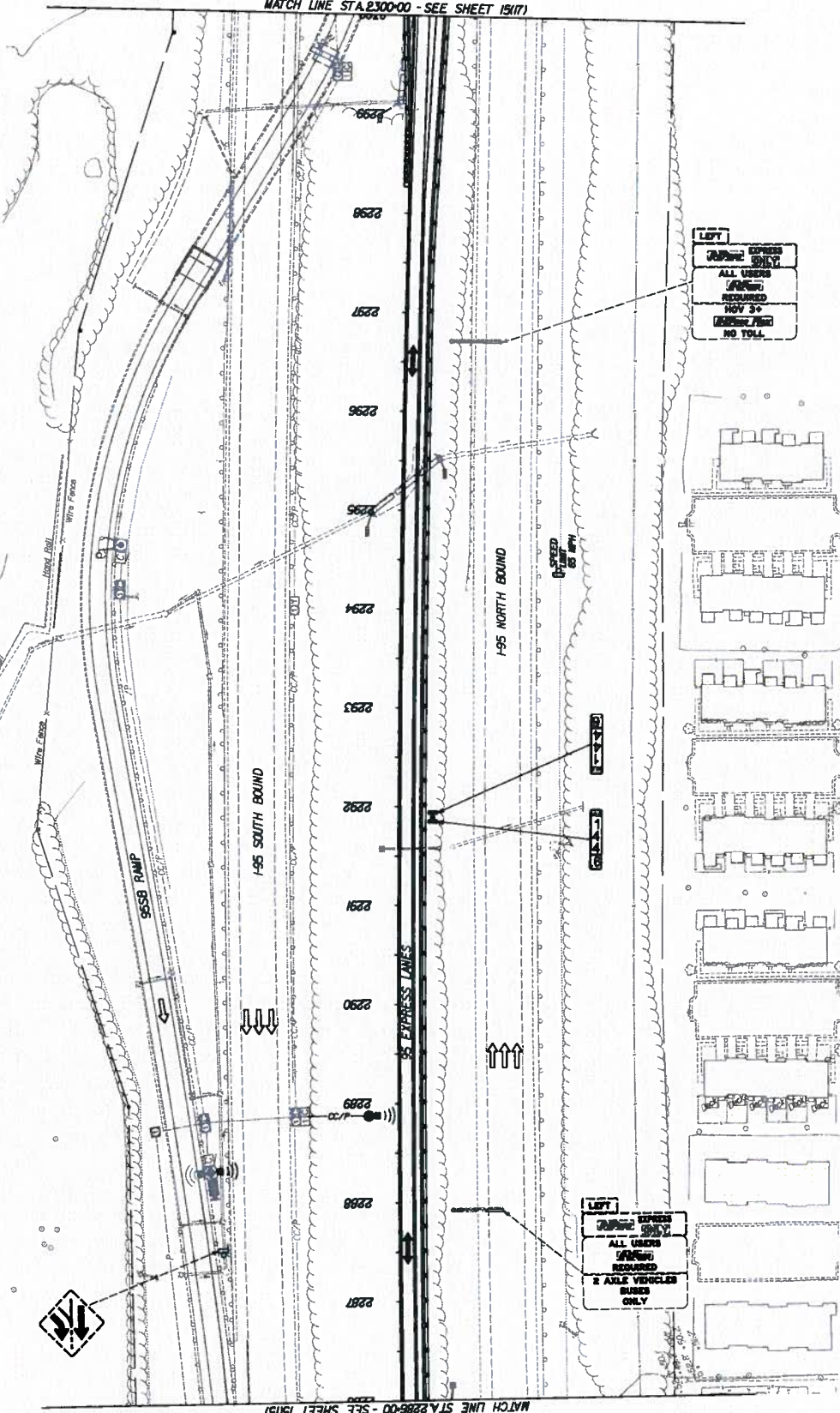
6/2/2006
 2:00pm

| | | | |
|--------------------------------|--|------------------|--|
| PROJECT MANAGER: J. A. COLE | | DATE: 6/2/2006 | |
| DESIGN BY: J. A. COLE | | DATE: 6/2/2006 | |
| CHECKED BY: J. A. COLE | | DATE: 6/2/2006 | |
| PROJECT NO: 0055-989-720, CS01 | | SHEET NO: 15(16) | |
| STATE: VA | | ZONE: 95 | |

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

DESIGN REVISIONS RELATIVE TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

PLAN NOTES
 1. ALL EXISTING SIZES WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN. ONLY APPROVED AND EXISTING SIZES RELATED TO THE CONSTRUCTION AND OPERATION OF THE PROJECT ARE TO BE SHOWN. OTHER SIZES ARE FOR GENERAL REFERENCE AND ARE NOT TO BE USED FOR CONSTRUCTION.



PROJECT NO: 0055-989-720
 SHEET NO: 15(16)

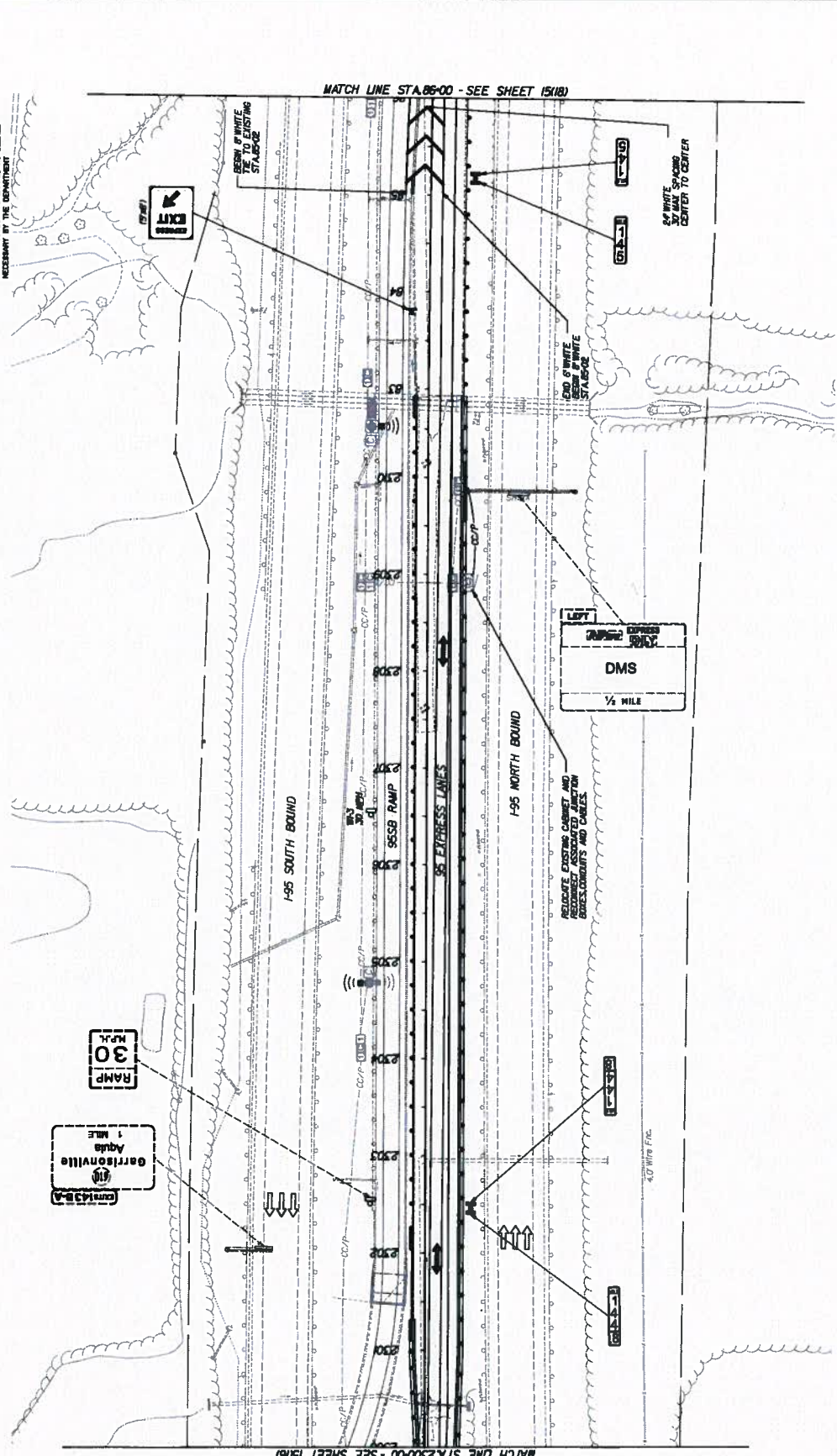
4/1/06
 10:05 AM

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|---------------------|-------------------|-----------|-------|
| PROJECT INFORMATION | | SHEET NO. | |
| PROJECT NO. | 0005-969-720, CS0 | SHEET NO. | 15/17 |
| DATE | VA 95 | DATE | |
| DESIGNER | | DATE | |
| CONTRACTOR | | DATE | |

DESIGN FEATURES RELATED TO CONSTRUCTION SHALL BE SHOWN IN DASHED LINES. ANY CHANGES TO THESE FEATURES SHALL BE SUBJECT TO CHANGE AS ORDERED NECESSARY BY THE DEPARTMENT.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

PLAN NOTES:
 1. ALL EXISTING CURBS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN. ALL PROPOSED AND EXISTING CURBS RELATED TO THE CONSTRUCTION AND OPERATION OF THE EXPRESS LANES EXTENSION ARE SHOWN. OTHER CURBS, REGULATION AND IMPROVEMENTS FOR THE I-95 GENERAL PURPOSE LANES MAY NOT BE SHOWN.



MATCH LINE STA. 2300+00 - SEE SHEET 15/16

MATCH LINE STA. 86+00 - SEE SHEET 15/18



PROJECT NO. 0005-969-720
 SHEET NO. 15/17

4/1/2006
AS067 M

| | | | |
|---------------------------|--------------------|-------|-----------|
| PROJECT MANAGER/IN CHARGE | DATE | SCALE | SHEET NO. |
| PROJECT ENGINEER | DATE | SCALE | SHEET NO. |
| DESIGNER | DATE | SCALE | SHEET NO. |
| CHECKER | DATE | SCALE | SHEET NO. |
| APPROVED | DATE | SCALE | SHEET NO. |
| VA 95 | 0035-969-720, C500 | 15/10 | 15/10 |

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR THE ACQUISITION OF RIGHT OF WAY.

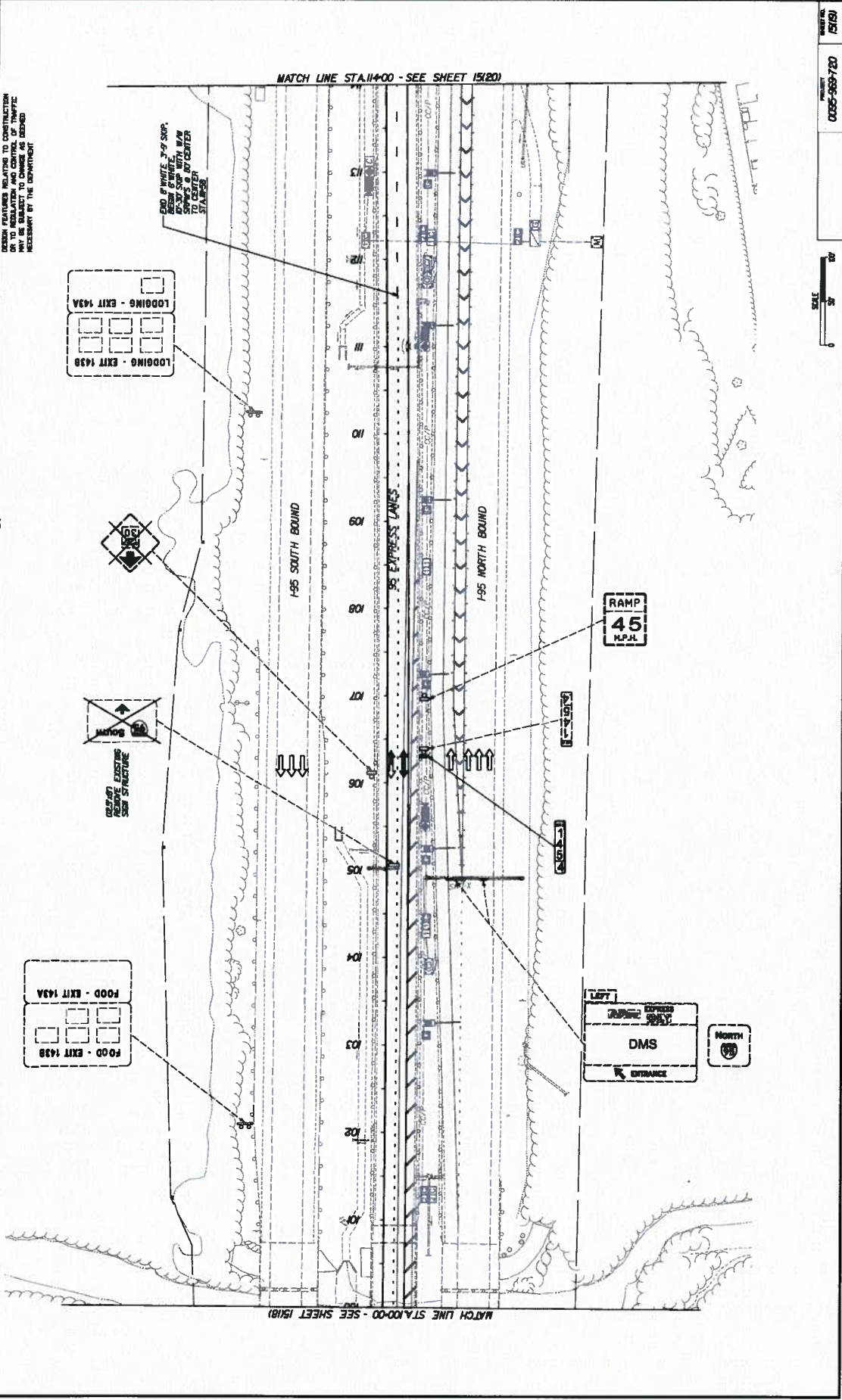
CONTRACT RELATIVE TO CONSTRUCTION OF THIS PROJECT MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

ALL NOTES:
1. ALL EXISTING SHIMS WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
2. ALL PROPOSED AND EXISTING SHIMS RELATED TO THE CONSTRUCTION AND OPERATION OF THIS PROJECT ARE SHOWN ON THE PLAN.
3. ALL SHIMS FOR THE USE OF GENERAL PURPOSE LUMBS ARE NOT TO BE SHOWN.

FOOD - EXIT 1438
FOOD - EXIT 143A

LOGGING - EXIT 1438
LOGGING - EXIT 143A

END IF WHITE 3'-9" SHIP.
IF 3'-9" SHIP WITH W/M
37' TO 39' 6" CENTER
STAIRS



0035-969-720
15/10

Page 47

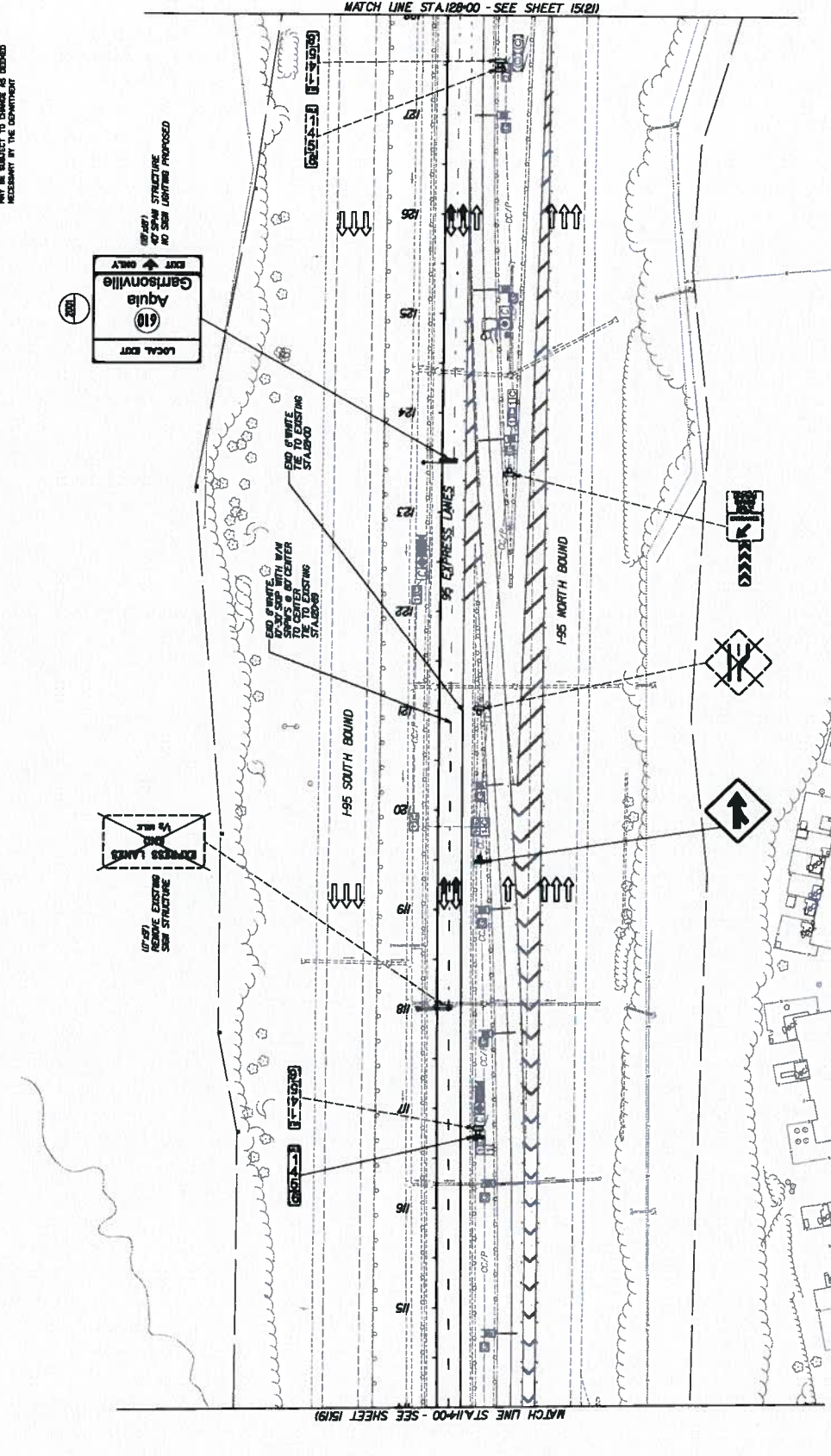
4/1/2008
 4:58:48 AM

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|--|----------------|
| PROJECT NUMBER: 0005-969-720 | DATE: 05/20/15 |
| DESIGN NUMBER: 0005-969-720, CS01 | DATE: 05/20/15 |
| STATE: VA | PROJECT: 95 |
| THESE PLANS ARE UNFINISHED AND SHOULD NOT BE USED FOR CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY. THESE PLANS ARE UNFINISHED AND SHOULD NOT BE USED FOR CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY. | |
| DESIGN PLANS AND SPECIFICATIONS ON TO REGULATOR AND CONTROL OF CONSTRUCTION MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT | |

PLAN NOTES

1. ALL EXISTING SHOPS WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
 2. ALL EXISTING SHOPS RELATED TO THE CONSTRUCTION AND OPERATION
 OF THE PROJECT ARE SHOWN ON THE PLAN. OTHER EXISTING SHOPS
 ARE SHOWN FOR GENERAL PURPOSES ONLY AND ARE NOT TO BE
 CONSIDERED FOR THE PROJECT.

DESIGNED BY: DATE: 05/20/15
 SURVEYED BY: DATE: 05/20/15
 SUBMIT FOR UTILITY BY: DATE: 05/20/15



SCALE 1" = 20'

PROJECT: 0005-969-720
 SHEET NO: 15(20)

4/1/2006
 4:56:00 AM

| | | | |
|---|----------------|------------------|------------------------------------|
| PROJECT MANAGER: J.E. Sisk | DATE: 04/01/06 | TIME: 4:56:00 AM | PROJECT: 0005-969-720, CS01 (5/22) |
| DESIGNED BY: Nathan Brown & Associates, LLP | DATE: VA | SCALE: 35 | PROJECT: 0005-969-720, CS01 (5/22) |
| SUBMITTAL DATE: 04/01/06 | DATE: VA | SCALE: 35 | PROJECT: 0005-969-720, CS01 (5/22) |

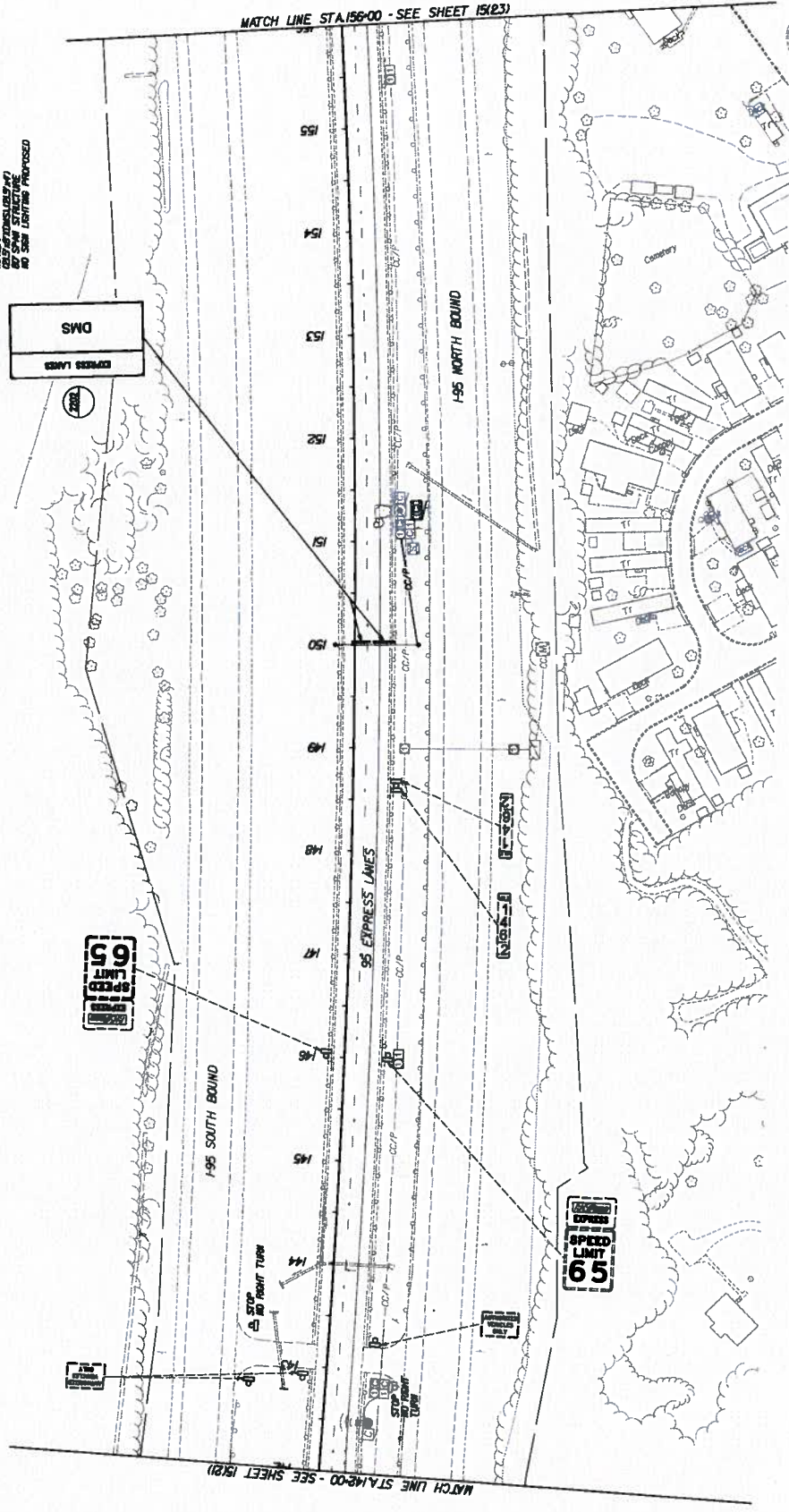
PLAN NOTES
 1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN.
 2. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN.
 3. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN.
 4. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN.
 5. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE SHOWN ON THIS PLAN.

THESE PLANS ARE UNFINISHED
 AND ARE NOT
 TO BE USED FOR THE
 OF CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY.

LOCAL EXIT
 619
 Aquia
 Gamsonville
 1 MI. S
 EXIT ONLY

DMS
 EXPRESS LANES

DESIGN
 OF THIS PROJECT
 IS UNFINISHED
 AND IS NOT
 TO BE USED
 FOR THE
 OF CONSTRUCTION
 OR THE
 ACQUISITION OF
 RIGHT OF WAY.



SCALE
 0 50 100
 FT

PROJECT: 0005-969-720
 SHEET NO: 15(22)

4/1/2008
2:00:00 PM

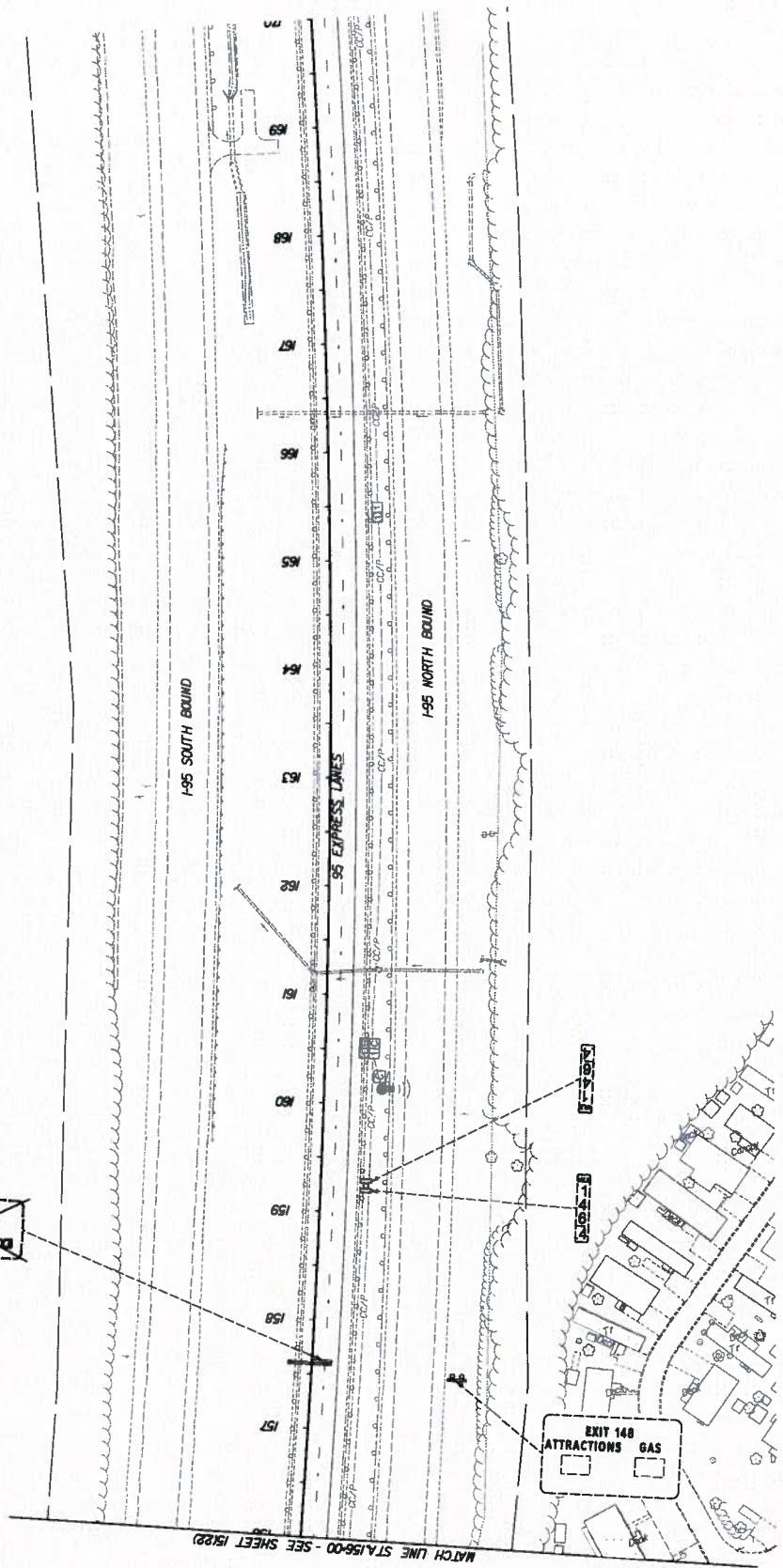
| | | | |
|--|-------------------------|--------------------------------------|-------------------|
| PROJECT: WASHINGTON STATE SURVEYED BY: DATE DESIGN BY: WILSON, BROWN & ASSOCIATES, LLP SURFACE UTILITY BY: DATE | STATE: VA COUNTY: SP | PROJECT: 00095-989-720, CS01, 15/231 | SHEET NO.: 15/231 |
|--|-------------------------|--------------------------------------|-------------------|

THESE PLANS ARE UNFINISHED
AND SHOULD NOT BE USED FOR
CONSTRUCTION OR THE
ACQUISITION OF RIGHT OF WAY.

NO OTHER FEATURES RELATING TO CONSTRUCTION
OR TO THE OPERATION OF THE PROJECT
MAY BE SUBJECT TO CHANGE AS DEEMED
NECESSARY BY THE DEPARTMENT

PLAN NOTES

1. ALL EXISTING SEWER LINES WITHIN THE PROJECT LIMITS ARE SHOWN ON THE PLAN.
ONLY APPROVED AND EXISTING SEWERS RELATED TO THE CONSTRUCTION AND OPERATION
OF THE PROJECT ARE TO BE MAINTAINED. ALL OTHER SEWERS ARE TO BE REMOVED.
WARNING SEWERS FOR THE USE OF GENERAL PURPOSE LINES ARE NOT TO BE SHOWN.



PROJECT: 00095-989-720
SHEET NO.: 15/231

ORIGINAL

April 5, 2016

PRICE PROPOSAL



A Design-Build Project

I-95 Express Lanes – Southern Terminus Extension

Stafford County, Virginia

State Project No.: 0095-969-720,
P101, R201, C501

Federal Project No.: STP-000S (321)

Contract ID Number: C00108315DB90

Submitted By:



In Conjunction With:



In Association With:

Chesapeake Electrical Systems, Inc.
H&B Surveying & Mapping, LLC (DBE)
Froehling & Robertson, Inc. (SWaM)
Engineering & Materials Technology, Inc. (DBE)

ATTACHMENT 4.0.1.2

**DESIGN-BUILD PRICE PROPOSAL
CHECKLIST**

**Project Name: I-95 Express Lanes – Southern Terminus Extension
Contract ID Number: C00108315DB90**

➤ **Contents of Price Proposal:**

- Proposal Price, in both numbers and words (Attachment 4.3.1)**
 - Schedule of Items itemized in accordance with Part 1, Section 4.3.2, including material quantities and costs of each proposed work package**
 - Proposed Monthly Payment Schedule showing the anticipated schedule on which funds will be required and associated value of work in accordance with Part 1, Section 4.3.3**
 - Price Adjustment Information and Forms for Fuel, Asphalt and Steel, including identification of pay items and associated quantities eligible for adjustment (Part 3, Section 6.3, Attachments 6.3)**
 - Proposal Guaranty (C-24) required by Section 102.07 of Part 5, Division I Amendments to the Standard Specifications**
 - Sworn Statement Forms (C-104, C-105, Attachments 4.3.6(a) and 4.3.6(b))**
 - CD-ROM containing the entire Price Proposal in a single cohesive Adobe PDF file**
-

ATTACHMENT 4.3.1

PRICE PROPOSAL FORM

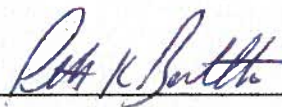
4.3.1 Offeror shall specify the pricing information for the items below, the dollars amount shall be in whole numbers:

Price Proposal Cost Breakdown Summary;

| | |
|---|-------------------------|
| Design Services, LS | \$ <u>2,200,000.00</u> |
| Construction Services (exclude QA/QC), LS | \$ <u>26,685,000.00</u> |
| Quality Assurance (QA) (Construction), LS | \$ <u>1,150,000.00</u> |
| Quality Control (QC) (Construction), LS | \$ <u>1,050,000.00</u> |

Proposal Price; (Specify the Total Lump Sum price in both numbers and words, this price shall equal to the total sum of the items listed above)

Lump Sum (LS): THIRTY ONE MILLION EIGHTY-FIVE THOUSAND
DOLLARS AND ZERO CENTS (\$ 31,085,000.00)

Signature:  Date: 4/15/2016

Design-Builder: Branch Highways, Inc.

Vendor No.: B319

Attachment 4.3.2
State Project 0095-969-720

SCHEDULE OF ITEMS (ver. 4-15-2014)

This Schedule of Items shall identify 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 Schedule of Items shall be used to cost-load the project schedule, which will serve as the basis for progress payments. Any pay items considered for price adjustments shall be identified. The values and quantities shall be clearly supported by the escrowed pricing documents.

Date: 4/15/2016

| VDOT Item Code ¹ | Item Description | Fuel (F) or Price (P) Adjustment | Approximate Quantity | Units ¹ | Budgeted Cost (\$) |
|-----------------------------|--------------------------------------|----------------------------------|----------------------|--------------------|--------------------|
| 25591 | DESIGN SERVICES | | 1 | LS | \$ 2,200,000.00 |
| 25593 | QUALITY ASSURANCE (QA) | | 1 | LS | \$ 1,150,000.00 |
| 25595 | QUALITY CONTROL (QC) | | 1 | LS | \$ 1,050,000.00 |
| 85023 | PROJECT MANAGEMENT | | 26 | MO | \$ 2,834,000.00 |
| 85130 | BOND | | 1 | LS | \$ 300,000.00 |
| 00100 | MOBILIZATION | | 1 | LS | \$ 550,000.00 |
| 00101 | CONSTRUCTION SURVEYING | | 1 | LS | \$ 115,000.00 |
| 00110 | CLEARING AND GRUBBING | | 1 | LS | \$ 259,641.00 |
| 00120 | REGULAR EXCAVATION | F | 182,646 | CY | \$ 1,278,522.00 |
| 00134 | NS TEST EXCAVATION | | 1 | LS | \$ 18,300.00 |
| 00143 | BORROW EXCAVATION | F | 12,450 | CY | \$ 99,600.00 |
| 00525 | CONCRETE CLASS A3 MISC. | | 37 | CY | \$ 22,385.00 |
| 00588 | UNDERDRAIN UD-4 | | 15,653 | LF | \$ 140,877.00 |
| 00590 | COMB. UNDERDRAIN CD-1 | | 1,153 | LF | \$ 20,754.00 |
| 00591 | COMB. UNDERDRAIN CD-2 | | 17 | LF | \$ 306.00 |
| 00595 | OUTLET PIPE | | 2,610 | LF | \$ 44,370.00 |
| 00596 | ENDWALL EW-12 | | 72 | EA | \$ 46,944.00 |
| 00700 | POST INSTALLATION INSPECTION - STORM | | 2,479 | LF | \$ 81,807.00 |
| 00700 | POST INSTALLATION INSPECTION - UD | | 18,263 | LF | \$ 36,526.00 |
| 01156 | STORM SEWER PIPE 15" | | 62 | LF | \$ 6,262.00 |
| 01180 | 18" PIPE | | 50 | LF | \$ 3,800.00 |
| 01182 | 18" CONC. PIPE | | 77 | LF | \$ 7,392.00 |
| 01186 | STORM SEWER PIPE 18" | | 659 | LF | \$ 44,812.00 |
| 01242 | 24" CONC. PIPE | | 46 | LF | \$ 6,900.00 |
| 01246 | STORM SEWER PIPE 24" | | 1,085 | LF | \$ 91,140.00 |
| 01308 | STORM SEWER PIPE 30" | | 38 | LF | \$ 5,928.00 |
| 01366 | STORM SEWER PIPE 36" | | 6 | LF | \$ 1,524.00 |
| 01426 | STORM SEWER PIPE 42" | | 41 | LF | \$ 7,708.00 |
| 01606 | STORM SEWER PIPE 60" | | 415 | LF | \$ 158,530.00 |
| 06181 | 18" END SECTION ES-1 | | 4 | EA | \$ 3,568.00 |
| 06241 | 24" END SECTION ES-1 | | 5 | EA | \$ 5,500.00 |
| 06749 | DROP INLET DI-2B, L=8' | | 4 | EA | \$ 25,200.00 |
| 07508 | DROP INLET DI-7 | | 14 | EA | \$ 67,200.00 |
| 08904 | DROP INLET DI-12, L=8' | | 15 | EA | \$ 84,000.00 |
| 09046 | MANHOLE MH-1 | | 284 | LF | \$ 180,340.00 |
| 09057 | FRAME & COVER MH-1 | | 13 | EA | \$ 8,203.00 |
| 09150 | EROS.CONTR.STONE CL. I, EC-1 | | 244 | TON | \$ 26,352.00 |
| 09250 | SLOPE DRAIN | | 20 | EA | \$ 28,000.00 |
| 10013 | CEM.STAB.AGGR.MATL.NO. 21A | F | 10,493 | TON | \$ 440,706.00 |
| 10062 | ASPH-STAB. OPEN-GRADED MATERIAL | P | 6,165 | TON | \$ 524,025.00 |
| 10113 | AGGR. BASE MATL. TY. I NO. 21B | F | 11,190 | TON | \$ 358,080.00 |
| 10609 | ASPHALT CONCRETE TY. SM-12E | P | 6,950 | TON | \$ 639,400.00 |
| 10610 | ASPHALT CONCRETE TY. IM-19.0A | P | 5,725 | TON | \$ 469,450.00 |
| 10612 | ASPH.CONC.BASE CR. TY. BM-25.0 | P | 20,675 | TON | \$ 1,405,900.00 |
| 10630 | FLEXIBLE PAVEMENT PLANING | | 16,923 | SY | \$ 152,307.00 |

Attachment 4.3.2
State Project 0095-969-720

SCHEDULE OF ITEMS (ver. 4-15-2014)

This Schedule of Items shall identify 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 Schedule of Items shall be used to cost-load the project schedule, which will serve as the basis for progress payments. Any pay items considered for price adjustments shall be identified. The values and quantities shall be clearly supported by the escrowed pricing documents.

Date: 4/15/2016

| VDOT Item Code ¹ | Item Description | Fuel (F) or Price (P) Adjustment | Approximate Quantity | Units ¹ | Budgeted Cost (\$) |
|-----------------------------|--|----------------------------------|----------------------|--------------------|--------------------|
| 12030 | STD. CURB CG-3 | | 881 | LF | \$ 17,620.00 |
| 12322 | ASPHALT CONCRETE CURB TY. MC-3B | | 894 | LF | \$ 14,304.00 |
| 12505 | ASPHALT CONCRETE, CURB BACKUP MATERIAL | P | 72 | TN | \$ 13,752.00 |
| 13212 | R/W MONUMENT RM-2 | | 100 | EA | \$ 9,800.00 |
| 13320 | GUARDRAIL GR-2 | | 19,857 | LF | \$ 337,569.00 |
| 13345 | ALTERNATE BREAKWAY CABLE TERMINAL (GR-9) | | 12 | EA | \$ 31,200.00 |
| 13383 | FIXED OBJECT ATTACHMENT, GR-FOA-1, TY. I | | 3 | EA | \$ 6,000.00 |
| 13392 | FIXED OBJECT ATTACH. GR-FOA-2 TY. I | | 9 | EA | \$ 18,000.00 |
| 13460 | MEDIAN BARRIER MB-7D | | 16 | LF | \$ 3,344.00 |
| 13462 | MEDIAN BARRIER MB-7F | | 73 | LF | \$ 11,023.00 |
| 13607 | IMPACT ATTEN.(TL-3, >45MPH DES.SP.) | | 1 | EA | \$ 20,800.00 |
| 13610 | IMPACT ATTEN.TY. IA (TL-3, >45MPH DES.SP.) | | 3 | EA | \$ 29,400.00 |
| 13755 | SOUND BARRIER WALL ABSORPTIVE | | 88,200 | SF | \$ 3,087,000.00 |
| NS | NS STREAM RELOCATION | | 1 | LS | \$ 159,750.00 |
| 24152 | TYPE III BARRICADE 8' | | 5 | EA | \$ 4,100.00 |
| 24160 | CONSTRUCTION SIGNS | | 655 | SF | \$ 36,025.00 |
| 24265 | MAINTENANCE OF TRAFFIC | | 22 | MO | \$ 198,000.00 |
| 24271 | TRUCK MOUNTED CRASH CUSHION | | 1,000 | HR | \$ 36,000.00 |
| 24279 | PORTABLE CHANGEABLE MESSAGE SIGN | | 1,000 | HR | \$ 171,000.00 |
| 24280 | GROUP 2 CHANNELIZING DEVICES | | 36,600 | DAY | \$ 9,150.00 |
| 24281 | ELECTRONIC ARROW | | 1,000 | HR | \$ 1,000.00 |
| 24286 | FLEXIBLE POST DELINEATOR | | 180 | EA | \$ 14,400.00 |
| 24296 | DEMO. EX. TRAFF. BARR.SERV. | | 1,395 | LF | \$ 13,950.00 |
| 24297 | TRAF.BARR.SER.CONC.DOUBLE FACE | | 11,680 | LF | \$ 350,400.00 |
| 24415 | SAWCUT APSHALT | | 5,320 | LF | \$ 15,960.00 |
| 24430 | DEMOLITION OF PAVEMENT (FLEXIBLE) | | 1,679 | SY | \$ 13,432.00 |
| 24600 | REMOVE EXISTING GUARDRAIL | | 2,717 | LF | \$ 16,302.00 |
| 25508 | NS MODIFIED FIELD OFFICE TY.I | | 26 | MO | \$ 150,800.00 |
| 25565 | PROGRESS SCHEDULE BASELINE | | 1 | LS | \$ 16,900.00 |
| 25567 | PROGRESS SCHEDULE UPDATES | | 24 | EA | \$ 57,600.00 |
| 27012 | TOPSOIL CLASS A 2" | | 21 | ACRE | \$ 155,400.00 |
| 27102 | REGULAR SEED | | 5,325 | LB | \$ 53,250.00 |
| 27103 | OVERSEEDING | | 2,662 | LB | \$ 29,282.00 |
| 27215 | FERTILIZER(15-30-15) | | 3 | TON | \$ 4,480.00 |
| 27275 | NS EROSION CONTROL MAINT. | | 1 | LS | \$ 470,800.00 |
| 27250 | LIME | | 42 | TON | \$ 36,414.00 |
| 27321 | PROTECTIVE COVERING EC-2 | | 5,687 | SY | \$ 11,374.00 |
| 27410 | CHECK DAM, ROCK TY. I | | 24 | EA | \$ 16,680.00 |
| 27415 | CHECK DAM(ROCK) TY. II | | 32 | EA | \$ 16,896.00 |
| 27345 | TEMPORARY DIVERSION DIKE | | 9,962 | LF | \$ 19,924.00 |
| 27336 | TEMP.DIVE.CHANNEL LINING CL. A | | 1,725 | SY | \$ 8,625.00 |
| 27340 | TEMP.DIVE.CHANNEL EXCAVATION | | 1,150 | CY | \$ 3,450.00 |
| 27451 | INLET PROTECTION, TYPE A | | 3 | EA | \$ 519.00 |
| 27461 | INLET PROTECTION, TYPE B | | 29 | EA | \$ 6,032.00 |
| 27505 | TEMP. SILT FENCE | | 7,919 | LF | \$ 15,838.00 |

Attachment 4.3.2
State Project 0095-969-720

SCHEDULE OF ITEMS (ver. 4-15-2014)

This Schedule of Items shall identify 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 Schedule of Items shall be used to cost-load the project schedule, which will serve as the basis for progress payments. Any pay items considered for price adjustments shall be identified. The values and quantities shall be clearly supported by the escrowed pricing documents.

Date: 4/15/2016

| VDOT Item Code ¹ | Item Description | Fuel (F) or Price (P) Adjustment | Approximate Quantity | Units ¹ | Budgeted Cost (\$) |
|-----------------------------|---|----------------------------------|----------------------|--------------------|--------------------|
| 27275 | NS TEMP. SUPER SILT FENCE | | 3,299 | LF | \$ 19,794.00 |
| 27545 | STORM WATER MAN. BASIN EXCAVATION | | 7,535 | CY | \$ 45,210.00 |
| 27550 | STORM WATER MAN.DRAIN.STR.SWM | | 12 | LF | \$ 22,800.00 |
| 27580 | TEMP. SEDIMENT BASIN EXCAVATION | | 8,078 | CY | \$ 105,014.00 |
| 50108 | SIGN PANEL GROUND MOUNTED | | 940 | SF | \$ 48,854.00 |
| 50108 | SIGN PANEL OVERHEAD | | 2,277 | SF | \$ 118,378.00 |
| 50108 | SIGN PANEL MAST ARM MOUNTED | | 819 | SF | \$ 42,588.00 |
| 50435 | SIGN POSTS - GRND. MOUNTED | | 28 | EA | \$ 21,756.00 |
| 50576 | CONC. FDN. - CANTILEVER & OH SIGNS | | 11 | EA | \$ 715,000.00 |
| 50495 | CONC. FDN. - GROUND MTD. SIGNS | | 28 | EA | \$ 56,000.00 |
| 50864 | REMOVE-DISPOSE SIGN STRUCT. CANTILEVER | | 6 | EA | \$ 37,200.00 |
| 50864 | REMOVE-DISPOSE SIGN STRUCT. GROUND MOUNTED | | 2 | EA | \$ 4,000.00 |
| 50864 | REMOVE-DISPOSE SIGN STRUCT. OVERHEAD | | 1 | EA | \$ 19,700.00 |
| 50902 | NS TRAFFIC SIGN OH 80' SPAN 1801-1802 | | 1 | EA | \$ 70,900.00 |
| 50902 | NS TRAFFIC SIGN CANTILEVER 40' SPAN 2001 | | 1 | EA | \$ 60,000.00 |
| 50902 | NS TRAFFIC SIGN OH 80' SPAN 2201-2202 | | 1 | EA | \$ 72,000.00 |
| 50902 | NS TRAFFIC SIGN OH 75' SPAN 1201-1202 | | 1 | EA | \$ 65,000.00 |
| 50902 | NS TRAFFIC SIGN CANTILEVER 52' SPAN 1301 | | 1 | EA | \$ 60,000.00 |
| 50902 | NS TRAFFIC SIGN CANTILEVER 50' SPAN 201 | | 1 | EA | \$ 60,000.00 |
| 50902 | NS TRAFFIC SIGN OH 95' SPAN 601-602 | | 1 | EA | \$ 70,000.00 |
| 50902 | NS TRAFFIC SIGN OH 110' SPAN 603 | | 1 | EA | \$ 90,000.00 |
| 50902 | NS TRAFFIC SIGN CANTILEVER 50' SPAN 701 | | 1 | EA | \$ 60,000.00 |
| 50902 | NS TRAFFIC SIGN OH 90' SPAN 702-703 | | 1 | EA | \$ 72,000.00 |
| 50902 | NS TRAFFIC SIGN OH 90' SPAN 901-902 | | 1 | EA | \$ 72,000.00 |
| 54076 | TY.B CL VI PAVE. LINE MARK. 6" | | 29,920 | LF | \$ 119,680.00 |
| 54077 | TY.B CL VI PAVE. LINE MARK. 8" | | 9,050 | LF | \$ 45,250.00 |
| 54078 | TY.B CL VI PAVE. LINE MARK. 12" | | 723 | LF | \$ 5,061.00 |
| 54100 | NS TY.B CL VI PAVE. LINE MARK. 24" | | 1,496 | LF | \$ 25,432.00 |
| 54101 | NS PAVEMENT MESSAGE MARK. "ONLY" | | 2 | EA | \$ 1,502.00 |
| 54101 | NS PAVEMENT MESSAGE MARK. "E-Z PASS" | | 2 | EA | \$ 5,200.00 |
| 54105 | ERAD. OF EXIST. PAVE.MARKING | | 270 | LF | \$ 810.00 |
| 54217 | SNOW PLOW,RAISED PAVE.MARKER ASPH.CONC. | | 65 | EA | \$ 2,080.00 |
| 55348 | SERVICE PANEL SE-9 | | 1 | EA | \$ 30,200.00 |
| 55140 | CONC. LIGHT POLE FDN. LF-1 Type A | | 33 | EA | \$ 92,400.00 |
| 55192 | LIGHT POLES LP-2 Type H (48-52 Ft.) | | 33 | EA | \$ 198,000.00 |
| 55348 | SERVICE PANEL SE-9 TY. A MOD W/ GENERATOR SVC | | 2 | EA | \$ 205,000.00 |
| 55353 | LIGHTING CTRL. CENTER CCW-1 TY. D | | 1 | EA | \$ 27,500.00 |
| 55514 | LUMINAIRE 400 WATT HPS OFFSET | | 33 | EA | \$ 32,142.00 |
| 55587 | JUNCTION BOX JB-S2 | | 38 | EA | \$ 121,600.00 |
| 55588 | JUNCTION BOX JB-S3 | | 62 | EA | \$ 210,800.00 |
| 56050 | (1) 2" SDR-11 BORED CONDUIT | | 75 | EA | \$ 3,375.00 |
| 56052 | (1) 4" SDR-11 BORED CONDUIT | | 300 | EA | \$ 13,500.00 |
| 56052 | (2) 4" SDR-11 BORED CONDUIT | | 150 | LF | \$ 10,500.00 |
| 56052 | (4) 4" SDR-11 BORED CONDUIT | | 1,180 | LF | \$ 133,340.00 |
| 56053 | 2" PVC CONDUIT | | 46,000 | LF | \$ 276,000.00 |

Attachment 4.3.2
State Project 0095-969-720

SCHEDULE OF ITEMS (ver. 4-15-2014)

This Schedule of Items shall identify 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 Schedule of Items shall be used to cost-load the project schedule, which will serve as the basis for progress payments. Any pay items considered for price adjustments shall be identified. The values and quantities shall be clearly supported by the escrowed pricing documents.

Date: 4/15/2016

| VDOT Item Code ¹ | Item Description | Fuel (F) or Price (P) Adjustment | Approximate Quantity | Units ¹ | Budgeted Cost (\$) |
|-----------------------------|---|----------------------------------|----------------------|--------------------|--------------------|
| 56055 | 4" PVC CONDUIT | | 47,200 | LF | \$ 472,000.00 |
| 56200 | TRENCH EXCAVATION EC-1 | | 26,800 | LF | \$ 482,400.00 |
| 59050 | 30 TO 60 KW GENERATOR & UPS | | 2 | EA | \$ 248,000.00 |
| 59050 | LARGE FIBER OPTIC JUNCT. BOX JB-FO3 | | 62 | EA | \$ 347,200.00 |
| 59050 | POLE FDN. (ITS) W/ GRADE BEAM | | 13 | EA | \$ 187,200.00 |
| 59050 | AT-GRADE CABINET | | 8 | EA | \$ 407,200.00 |
| 59050 | POLE-MOUNTED CABINET | | 10 | EA | \$ 424,000.00 |
| 59050 | STEEL ITS POLE | | 13 | EA | \$ 188,000.00 |
| 59050 | VERTICAL SWING GATES | | 19 | EA | \$ 950,000.00 |
| 59050 | DMS THREE LINE FREEWAY TYPE A | | 4 | EA | \$ 440,000.00 |
| 59050 | CCTV CAMERA | | 7 | EA | \$ 105,000.00 |
| 59050 | AID CAMERA | | 7 | EA | \$ 70,000.00 |
| 59050 | VEHICLE DETECTOR | | 13 | EA | \$ 260,000.00 |
| 59050 | GATE CONTROLLER | | 4 | EA | \$ 320,000.00 |
| 59050 | GENERATOR COMM. CABINET | | 2 | EA | \$ 60,000.00 |
| 59050 | UPS SYSTEMS | | 4 | EA | \$ 40,000.00 |
| 59050 | FIBER CABLE TESTING, SPLICING, TERMINATIONS | | 1 | LS | \$ 140,000.00 |
| 59050 | RELOCATION OF EXISTING DMS | | 1 | EA | \$ 65,000.00 |
| 59050 | COMMUNICATION HUB | | 2 | EA | \$ 180,000.00 |
| 59071 | 3 CELL TEXTILE INNER DUCT | | 45,000 | LF | \$ 225,000.00 |
| 59071 | # 8 TRACER WIRE | | 16,335 | LF | \$ 16,335.00 |
| 59071 | 2/0 AWG | | 72,200 | LF | \$ 505,400.00 |
| 59071 | # 2 AWG | | 65,685 | LF | \$ 328,425.00 |
| 59071 | # 4 AWG | | 28,600 | LF | \$ 85,800.00 |
| 59071 | # 6 AWG | | 8,085 | LF | \$ 18,170.00 |
| 59071 | 36 COUNT FIBER OPTIC CABLE | | 47,800 | LF | \$ 239,000.00 |
| 85021 | TEMPORARY SEEDING | | 21 | AC | \$ 52,500.00 |

¹ Use five-digit work item codes and units of measure that are consistent with VDOT's list of standard and non-standard item codes (i.e. 00100-Mobilization; 00120-Regular Excavation, etc...).

Project Name: I-95 Express Lanes-Southern Terminus Extension

Contract ID Number: C00108315DB90

PROPOSED MONTHLY PAYMENT SCHEDULE

| Period Ending (Month) | Projected Monthly Total: | Projected Cumulative Total: |
|------------------------------|---------------------------------|------------------------------------|
| July 2016 | \$480,467 | \$480,467 |
| August 2016 | \$1,159,373 | \$1,639,840 |
| September 2016 | \$863,496 | \$2,503,337 |
| October 2016 | \$881,845 | \$3,385,182 |
| November 2016 | \$612,552 | \$3,997,733 |
| December 2016 | \$996,127 | \$4,993,860 |
| January 2017 | \$1,088,779 | \$6,082,640 |
| February 2017 | \$958,022 | \$7,040,662 |
| March 2017 | \$1,141,656 | \$8,182,319 |
| April 2017 | \$1,277,700 | \$9,460,018 |
| May 2017 | \$1,277,700 | \$10,737,718 |
| June 2017 | \$1,274,044 | \$12,011,762 |
| July 2017 | \$1,361,938 | \$13,373,700 |
| August 2017 | \$1,579,746 | \$14,953,447 |
| September 2017 | \$1,773,660 | \$16,727,106 |
| October 2017 | \$1,754,341 | \$18,481,447 |
| November 2017 | \$1,729,066 | \$20,210,513 |
| December 2017 | \$1,626,148 | \$21,836,661 |
| January 2018 | \$1,527,090 | \$23,363,751 |
| February 2018 | \$1,553,297 | \$24,917,048 |
| March 2018 | \$1,487,265 | \$26,404,312 |
| April 2018 | \$1,288,522 | \$27,692,834 |
| May 2018 | \$1,191,569 | \$28,884,403 |
| June 2018 | \$1,092,566 | \$29,976,968 |
| July 2018 | \$631,833 | \$30,608,802 |
| August 2018 | \$476,198 | \$31,085,000 |
| | | \$31,085,000 |

Request For Qualifications



Original

I-95 Express Lanes Southern Terminus Extension *Design-Build Project*



Submitted By:

BranchHighways



Whitman Raquardt & Associates, LLP
1915 100 YEARS 2015

In Association With:

Chesapeake Electrical Systems, Inc.
H&B Surveying & Mapping, LLC (DBE)
Froehling & Robertson, Inc. (SWaM)
Engineering & Materials Technology, Inc. (DBE)

State Project No. 0095-969-720
Contract ID Number: C00T17210DB90
February 8, 2016

Page 375 of 412



February 8, 2016

Mr. Suril R. Shah
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: Design-Build I-95 Express Lanes – Southern Terminus Extension | Stafford County, VA
State Project No.: 0095-969-720 | Contract ID Number: C00T17210DB90
Letter of Submittal – Statement of Qualifications

Dear Mr. Shah,

Branch Highways, Inc. (Branch), as the Offeror, hereby submits to the Virginia Department of Transportation (VDOT) this Letter of Submittal and accompanying Statement of Qualifications in response to the Request for Qualifications dated January 4, 2016 and Addendum dated January 28, 2016 for the above-referenced project. For this pursuit, Branch has partnered with Whitman, Requardt & Associates, LLP (WRA) to furnish a product that exceeds expectations with respect to design, cost, and schedule.

3.2.1 Full legal name and address of the Offeror:

Branch Highways, Inc. | 442 Rutherford Ave, NE, Roanoke, VA 24016

3.2.2 Point of Contact and authorized representative of the Offeror:

Mr. Pete Kramer, Vice President – NOVA Region
Address: 10440 Balls Ford Road, Suite 270, Manassas, VA 20109
Tel: (571) 379-5603 | Fax: (571) 379-5896 | Email: PeteK@branchhighways.com

3.2.3 Principal Officer of the Offeror:

Mr. Patrick K. Bartorillo, President
Address: 442 Rutherford Ave, NE, Roanoke, VA 24016
Tel: (540) 982-1678 | Fax: (540) 982-4217 | Email: Patrick.Bartorillo@branchhighways.com

3.2.4 Corporate Structure of the Offeror:

Branch is a registered Corporation in the Commonwealth of Virginia. Branch will take full financial responsibility for the Project, and has no known liability limitations.

3.2.5 Lead Contractor: Branch Highways, Inc. | **Lead Designer:** Whitman, Requardt & Associates, LLP

3.2.6 Affiliated and/or Subsidiary Companies Table (Attachment 3.2.6) is in the Appendix.

3.2.7 Certifications Regarding Debarment (Attachments 3.2.7(a) and 3.2.7(b)) are in the Appendix.

3.2.8 VDOT Prequalification Branch's Vendor ID is B319; status is Active. See Appendix for Evidence.

3.2.9 Surety Letter is in the Appendix.

3.2.10 Full Size Copies of SCC Registration and DPOR Licenses (Attachment 3.2.10) are in the Appendix.

3.2.11 DBE Participation Goal: Branch recognizes and is committed to achieving the fifteen percent (15%) DBE goal for the entire value of the contract.

Branch and WRA are well-versed and respected within the Heavy Civil Construction industry, specifically with regard to Design-Build projects. Our Team eagerly anticipates yet another successful delivery with this endeavor.

Sincerely,

BranchHighways, Inc.

Patrick K. Bartorillo, President

3.3 OFFEROR’S TEAM STRUCTURE

Branch Highways, Inc. (Branch) will be responsible for managing the project in its entirety, supervising the construction, and performing major elements of the construction work. Additional subcontractors for various specialty items such as tolling systems, ITS, signage, guardrail, and pavement striping will be under direct subcontract to Branch. **Whitman, Requardt & Associates, LLP (WRA)** will lead the design effort for all aspects of the project and will be responsible for the design QA/QC. The Branch | WRA Design-Build Team includes highly qualified subconsultants that bring specific expertise to enhance the Team and ensure a quality project for VDOT. A listing of the Team follows and an organizational chart of the Team is included in Section 3.3.2.

Branch Highways, Inc. (Branch) – Offeror, Legal Entity, Lead Contractor

Branch is a member of The Branch Group of employee-owned companies, incorporated in 1986. Company headquarters are located in Roanoke, Virginia with a regional office located in the Manassas area of Northern Virginia. Branch is a full service heavy highway contractor with hundreds of successfully delivered projects to numerous public and private clients throughout the Mid-Atlantic region, including completed projects of similar size and scope to the I-95 Express Lanes – Southern Terminus Extension Project. Branch has an impressive record of successful Design-Build/PPTA projects for VDOT and local governments for over \$425 million. Branch has been able to maintain a high level of client satisfaction and is well acquainted with working closely with owners on large and complex projects. **Branch has assigned a Construction Design Coordinator (CDC) that greatly enhances the project structure of the Team by providing additional engineering oversight; similar to the role of Responsible Charge Engineer on other Design-Build projects.**

Whitman, Requardt & Associates, LLP (WRA) – Lead Designer

WRA is a full service architectural and engineering firm that was founded over 100 years ago primarily serving state and local governments in the Mid-Atlantic region of the United States. WRA will serve as the Lead Designer for this project and will be responsible for the design QA/QC. In the last three years, WRA has worked on seven Design-Build projects in Virginia and as a firm we have been a Design-Build leader in the Mid-Atlantic region working on over 50 Design-Build projects for Federal, State, and Local government entities as well as private Design-Build projects.

Branch and WRA have work together on three Design-Build/PPTA projects over the last three years as shown below:

- **George Mason University (GMU) Campus Connector Design-Build (\$13 million)** – Branch was the Lead Contractor for this project. WRA designed the Route 123 improvements, geotechnical engineering and provided QAM services for all construction in VDOT right-of-way.
- **Route 636 Extension over CSXT Augusta County PPTA (\$14 million)** – WRA designed the Route 636 Bridge over CSXT, geotechnical engineering and provided QAM services for this Branch project.
- **Greenview Drive Design-Build (\$16 million)** WRA is providing QAM services for this Branch project.

The combined Design-Build experience above and our common goal to put the quality and schedule of the project first has proven to be successful on our projects and will be for the I-95 Express Lanes projects. **Branch and WRA have worked closely with Transurban on the I-495 and I-95/395 Express Lanes projects and will leverage those professional working relationships for this project.**

Subconsultants

The Branch | WRA Design-Build Team is comprised of highly qualified subconsultants extremely knowledgeable in VDOT policies and procedures and experienced with similar VDOT Design-Build projects. The following subconsultants have been carefully selected based on their relevant past experience and established working history of project success with VDOT, Branch, and/or WRA:

Chesapeake Electrical Systems, Inc. (CES) was founded in 1993 and has grown to become the Mid-Atlantic Region’s electrical contractor of choice working on some of the region’s most recognizable landmarks. They bring significant experience with ITS system construction and integration of dynamic tolling infrastructure through their work on the Elizabeth River Crossing project, the I-495 Express Lanes

project and the recently completed I-95 Express Lanes project.

H&B Surveying and Mapping, LLC (H&B) a Virginia-Certified, DBE/WBE (Woman-Owned Business) founded in 2009 will provide Surveying and Subsurface Utility Locating for the Branch Team. H&B has teamed with WRA to provide surveying services on over 75 projects throughout Virginia including VDOT Design-Build projects.

Froehling & Robertson, Inc. (F&R), a SWaM-certified firm founded in 1881, will provide a Quality Assurance Lab for the Branch Team. F&R's in-house soil, materials, and asphalt laboratories are accredited by AASHTO (AMRL/CCRL), the US Army Corps of Engineers (USACE), and WACEL.

Engineering & Materials Technologies, Inc. (E.M. Tech) is a certified DBE firm and will provide QC Inspectors, Testing and Lab Services for the Branch Team. Their in-house laboratory has been inspected and/or accredited by AASHTO Materials Reference Laboratory (AMRL), the Washington Area Council of Engineering Laboratories (WACEL) and the Cement and Concrete Reference Laboratory (CCRL).

3.3.1 KEY PERSONNEL

Key personnel Resume Forms are included in Attachment 3.3.1 located in Appendix C. A summary of key personnel is described below, and more detailed project experience for each are listed on the Resume Forms.

Design-Build Project Manager: Pete Kramer (Branch – 34 years of experience)

Pete Kramer (DBPM) has 34 years of overall experience in the heavy civil/construction industry, 19 of which have been with Branch. He has served as DBPM on numerous high-profile projects in Virginia, including the Prince William County Route 15 PPTA Project (\$52M), 2008 Stafford County Transportation Bond Referendum Projects PPTA/Design-Build (\$20M), and recently completed Prince William County Parkway Improvements project (\$14M). He has been responsible for successful management of overall project design, construction, planning, scheduling, quality, safety, overall contract administration, and procurement of proper resources on projects to which he has been assigned. His responsibilities will be the same for this project. Pete will be the primary point of contact for VDOT and any other stakeholders in the project, and will coordinate all aspects of the project and ensure that appropriate and consistent communication is maintained between all parties. He will be responsible for meeting obligations and avoidance/resolution of disputes per the Contract. The Design Manager, Construction Design Coordinator, Construction Manager, Safety Manager and the PR Manager will all report directly to Pete Kramer.

Quality Assurance Manager: Lenny Coleman, P.E., CCM, LEED AP (WRA – 11 years of experience)

Lenny Coleman (QAM) will report directly to the DBPM and will have direct, independent access to VDOT. He served in a similar role as Assistant QAM on the Fairfax County Parkway Interchange and Widening Design Build and held the role of QC Manager on the Fall Hill Avenue & Mary Washington Boulevard Extension VDOT Design-Build project in Fredericksburg, VA, and the Walney Road Widening Design Build Project in Fairfax, VA. Lenny's experience includes QA level oversight as Prince William County's Construction Manager for Capital Improvement Program managing projects similar to the I-95 Express Lanes Southern Terminus Extension such as the Route 1 North Improvements PPTA project. Lenny will be responsible for the Quality Assurance program and will coordinate with VDOT, supervise project QA inspection staff, and coordinate with the QA Testing firm, F&R. He will ensure conformance with the Contract Documents including the "approved for construction" plans and specifications. Lenny will have overall responsibility for the development of and adherence to the Design-Build QA/QC Plan including coordination with the *Design QA/QC Manager, Mike Russell, P.E.* Lenny will report to the DBPM but will function independently from the Construction QC Manager, auditing and monitoring Branch's Quality Control Program. He will have the authority to stop construction activities to ensure compliance with the specifications and issue Non-Compliance Reports (NCRs) if necessary. In addition, Lenny will submit monthly written reports on the status of the QA Program to both VDOT and the Branch Design-Build Team.

Design Manager: John Maddox, P.E. (WRA – 30 years of experience)

John Maddox (DM) will also report directly to the DBPM. John has 30 years of experience designing and

managing major transportation projects including over 20 years on VDOT projects. He is currently the Design Manager on VDOT's Fall Hill Avenue Design-Build project in the City of Fredericksburg and was the Design Manager for the successfully completed VDOT Design-Build Walney Road Bridge Replacement and widening project in Fairfax County. John has also worked with Branch on two Design-Build projects the GMU Campus Connector project (Route 123 Bridge, geotechnical, roadway, drainage) and the Route 636 PPTA project in Augusta, VA (bridge, geotechnical and QAM). He will be responsible for providing a quality product, meeting all design milestones, continual Design-Build Team coordination and ensuring the Design QA/QC Manager's involvement throughout the design phase. John is responsible for ensuring all design work is performed in accordance with current VDOT Policies, Procedures and Guidelines and the requirements of the VDOT Request for Proposals. He will manage all aspects of design including roadway; hydraulic; ITS, tolling system, traffic engineering; MOT; environmental; and geotechnical. He will assign resources as needed; oversee the design subconsultant for survey; coordinate design and review schedules; develop and implement corrective measures if necessary; and ensure environmental compliance measures are integrated into the design. He will coordinate the design with *CDC, Yieshak Shata* to ensure the timely completion of a quality constructible project. John will maintain involvement in the project once construction begins to oversee any plan modifications and shop drawings, and review construction activities with the CM as work progresses.

Construction Manager: Steve Morris (Branch – 22 years of experience)

Steve Morris (CM) has over 22 years of industry experience – 15 of which have been with Branch, and has successfully managed over \$100M of Design-Build projects, including Branch's subcontracted portion of the previous I-95 Express Lanes project. Steve will report to the DBPM and will be assigned solely to this Project for its duration, and will be responsible for planning and execution of both internally performed and subcontracted work activities and ensuring that said activities and associated materials meet contract requirements and "approved for construction" plans and specifications, including Quality Control (QC). He will also be accountable for overall project compliance with ancillary regulations, including, but not limited to, environmental, safety, and MOT. The ITS/Electrical Manager, Construction QC Manager, Grading/Roadway Superintendent, Construction Environmental/MOT Manager, Project Controls Manager and the DBE Compliance Manager will all report directly to Steve Morris.

ITS/Electrical Manager: Kevin Trippe (CES – 18 years of experience)

Kevin Trippe (ITS EM) has worked for Chesapeake Electrical Systems (CES) since his graduation from his IBEW Apprenticeship Program in 2004. Kevin has served as Project Manager for CES for the installation and integration of the ITS systems for I-95 HOT/HOV Express Lanes, the I-495/Capital Beltway Express Lanes, and the I-495/95/395 Roadside Equipment Maintenance contract, which is on-going. Kevin is very familiar with the systems and work that will be required for the I-95 Express Lanes Southern Terminus Extension, and has proven his capabilities in efficiently handling issues related to ITS/Electrical design and its integration into the project as a whole. Kevin will be responsible for supervision of all designs developed by the ITS Design Team and throughout installation to ensure that the work is done on time and in accordance with a QA/QC Plan similar to the I-495 & 95 Express Lanes. The *Master Electrician, Robert Preston* is a Certified Master Electrician and will report directly to Kevin the ITS/Electrical Manager. Kevin will report directly to the *CM, Steve Morris* and will have a lead role in the ITS Integration Team.

3.3.2 ORGANIZATIONAL CHART

The Branch Design-Build Team Organizational Chart on Page 7 identifies key personnel members and depicts the reporting structure of the Team. **Solid lines** identify the direct lines of reporting relationships of our Team members from the DBPM to the Design, Construction and QA leads. **Dashed lines** represent indirect reporting relationships and obligations to the DBPM and the team members. Furthermore, the reporting structure shows a clear separation between the Construction Quality Control duties and the Quality Assurance duties. Each function will have independent materials testing laboratory services. *To further*

enhance our Team structure and to ensure successful integration with the existing tolling system, specific team members will serve on our ITS Integration Team and are highlighted on the organizational chart.

As a continuation of the functional relationships for Key Personnel described in section 3.3.1, the following narrative further defines the roles and functional relationships of the additional team members.

Safety Manager: Danny Minnix (Branch – 20 years of experience)

Danny Minnix will report to the DBPM and has held the position of Director of Safety and Risk at Branch for well over a decade, and has 20+ years of experience overall with large-scale heavy civil safety program development and management.

Construction Design Coordinator: Yisehak Shata, P.E. (Branch – 15 years of experience)

Yisehak Shata, P.E. (CDC) has 15 years of overall experience in the heavy civil construction industry, 11 of which have been with Branch, and extensive Design-Build project management experience, including the I-95/395 HOT/HOV/Bus Lanes PPTA project (\$47M), Heritage Center Parkway D-B (PWC) (\$6M), Route 15 Improvements Design-Build/PPTA (PWC) (\$52M), and 2008 Stafford County Transportation Bond Referendum Projects D-B/PPTA (\$20M). Yisehak has acted as DBPM on nearly \$30M of D-B projects, where he was responsible for monitoring the design process for constructability and efficiency. Yisehak is able and qualified to make appropriate directives/decisions regarding design modifications when they arise, and is well versed in the process of managing the design-construction process that is exclusive to Design-Build projects. Yisehak will report to the DBPM, and he will work seamlessly with, and assist in directing, the DM, CM, QAM, and VDOT by maintaining and facilitating constant lines of communication.

Design

Roadway Engineer: Mark Vasco, P.E. will report to the DM and lead the roadway design efforts for the project. Mark has more than 32 years of experience in the design of transportation projects. Mark recently served as the lead designer of the Fairfax County Parkway Interchange at Fair Lakes Parkway in Fairfax County Virginia and the GMU Campus Drive Connector Design-Build with Branch Highways.

Geotechnical Engineer: Jeff Basford, P.E. has over 15 years of experience in subsurface explorations, geotechnical analysis, design of pavement sections and shallow and deep foundations, slope stability analysis, concrete and geosynthetic reinforced earth retaining structures, and in-situ testing and verification during construction. He has provided geotechnical expertise on Design-Build projects for WRA in Virginia and Maryland including the Route 636 Extension and the GMU Campus Connector with Branch Highways. Jeff will report to the DM and collaborate extensively with the CM and CDC.

ITS & Lighting Design: Jeff Cheng, P.E. will lead the ITS & Lighting Design. He has 11 years of experience and recently led the ITS & Lighting Design for the I-95 Newark Toll Plaza in Delaware for DelDOT. He has extensive experience on VDOT projects including the preliminary plans for the I-495 Shoulder Use project ITS and the Fairfax County Parkway Interchange at Fair Lakes Parkway project. Jeff will be supported by **Dave Newberger, P.E., PTOE**, who has extensive experience on the I-495 and I-95 Express Lanes ITS & Lighting systems through his lead role on the GEC contract reviewing the design. Jeff will report directly to the DM, coordinate directly with ITS/Electrical Manager and be a key person on the ITS Integration Team.

MOT/Traffic Engineer: Dana Trone, P.E., PTOE has over 19 years of experience in traffic engineering including development of transportation management plans (TMP) and MOT design. Dana has developed several TMPs for construction on interstates in Virginia, and numerous VDOT Design-Build projects. She also prepared the 30% design for the I-495 North Extension Shoulder Use Lane Design-Build project. Dana will report to the DM and collaborate with the **Construction MOT Manager, Anthony Varrati**.

Drainage/Hydraulics Engineer: David Gertz, P.E. will report to the DM and lead the design efforts for drainage and SWM. David has over 36 years of experience in roadway drainage design and stormwater management, and has designed numerous projects for VDOT utilizing the new Virginia stormwater regulations that took effect in July 2014. He most recently served as Lead Drainage/Hydraulics Engineer

for three VDOT Design-Build projects.

Environmental Permitting: *Taylor Sprenkle, PWD* will report to the DM and secure all environmental permits needed for the project. Taylor has over 12 years of experience with environmental reviews and permitting required for transportation projects and will work closely with the **Construction Environmental Manager, Anthony Varrati**, to ensure all permit requirements are fulfilled.

Utility Coordination Engineer: *Paul Martin* has over 27 years of experience in highway and bridge construction including 12 years specializing in utility relocations for VDOT. Paul will report to the DM and will interact closely with the CM.

Erosion and Sediment Control Reviewer: *Glenn Wilson* has 18 years of experience in E&S Control design services for transportation projects. He is a certified DCR Combined Administrator (Certificate #684). Glenn will report to the DM and collaborate with the **Construction Environmental Manager, Anthony Varrati**.

Soundwall Design: *Kenneth Bauer, P.E.* will report to the DM and has 17 years of experience performing noise analyses and preparing soundwall designs including VDOT Design-Build projects such as Fall Hill Avenue and Route 7 over the Dulles Toll Road.

Design QA/QC

Design QA/QC Manager, *Mike Russell, P.E.* has over 26 years of progressive experience in the transportation industry including 14 years with VDOT most recently as Bristol District Engineer. He will report to the DM and will ensure compliance with the project's QA/QC Plan. Mike has served as WRA's PM on the Berkmar Drive Extension Design-Build project in Albemarle County. He also served as VDOT's PE Manager for the Route 58 Hillsville Bypass PPTA project constructed by Branch.

Construction QC

Construction QC Manager: *Tom Franzino* has 5 years of industry experience, 2 of which have been with Branch. Tom will report directly to the Construction Manager and will be responsible for managing all QC work for Branch, including coordinating the EM Tech's QC inspection staff and testing lab. Tom is extensively knowledgeable in all of VDOT Construction requirements, specifications, and testing methods and will coordinate with the QAM and the DBPM on the QC components of the project.

Construction

Master Electrician: *Robert Preston* is a Master Electrician licensed by the Virginia Department of Professional and Occupational Regulation Board for Contractors and Tradesmen with 39 years of experience performing and supervising ITS & electrical work. A relevant recent project is the I-95 HOT/HOV Express Lanes, I-495 Express Lanes. Robert will report directly to **Kevin Trippe, the ITS/Electrical Manager**. He will be responsible for supervision and coordination of fiber, power, wiring, splicing, ITS and other associated device installation, inspection and testing. Robert is 30-Hour OSHA certified, which included Arc Flash Protection training, and has completed separate Lockout/Tagout training.

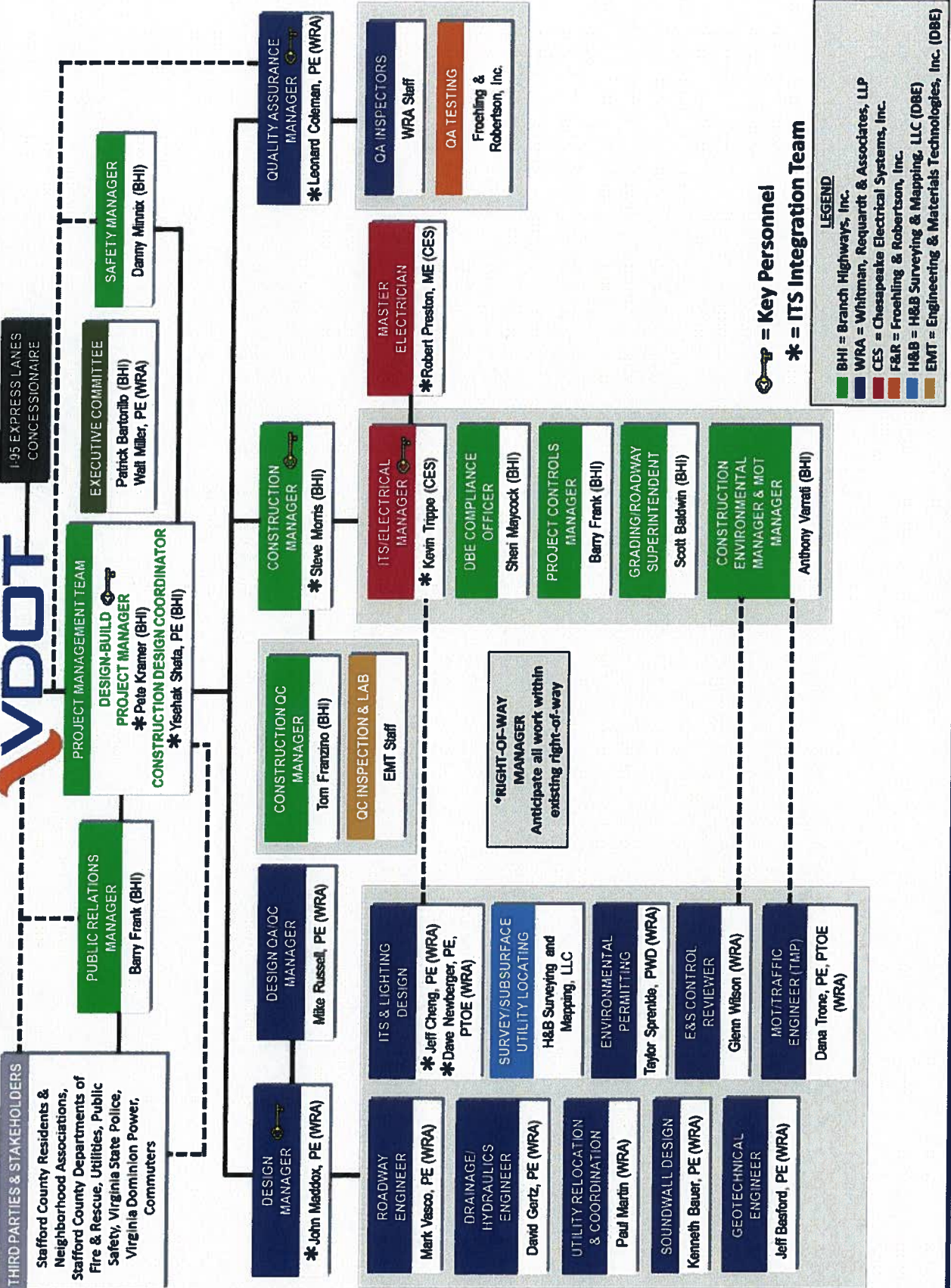
DBE Compliance Officer: *Sheri Maycock* has been with Branch for 24 years and will report to the DBPM. She currently serves as the DBE/EEO Compliance Officer for Branch and will oversee day to day DBE compliance for the project.

Project Controls and PR Manager: *Barry Frank* will report to the DBPM and has 5 years of industry experience, all with Branch.

Grading/Roadway Superintendent: *Scott Baldwin* has 29 years of heavy civil construction experience in the role of superintendent and will report to the CM. He has worked in the capacity of grading/roadway superintendent on numerous large-scale, high-profile interstate projects, including Phases 2-4 of the I-95/I-495/I-395 Springfield Interchange and the Seminary Road Widening.

Construction Environmental and Construction MOT Manager: *Anthony Varrati* will report to the CM and has 2 years of industry experience in the role of safety/environmental controls, and a B.S. in Safety Management.

3.3.2 ORGANIZATIONAL CHART



3.4 EXPERIENCE OF TEAM

Please refer to Attachment 3.4.1 (a) Lead Contractor Work History Forms and Attachment 3.4.1 (b) Lead Designer Work History Forms, located in the Appendix of the SOQ for detailed relevant project experience.

RATIONALE FOR WORK HISTORY PROJECT SELECTION

As Lead Contractor and Offeror, Branch is proud to present the following projects that demonstrate experience and success with scope, magnitude, risks and associated mitigation that are common to the I-95 Express Lanes Southern Terminus Project.

I-95 HOT/HOV Express Lanes – Section 1: Branch's portion of this project ties directly into the proposed Express Lanes extension. In fact, the northernmost half mile of the proposed Project was actually graded and manipulated as part of our scope. We are familiar with the highly variable soils conditions that will be encountered as part of the Express Lanes Southern Terminus Extension, as well as the challenges that will be faced with soundwalls and ITS design and installation. The knowledge gained on Section 1, gives the Branch | WRA Team the experience necessary to ensure success on the I-95 Express Lanes Southern Terminus Extension project.

Route 15 PPTA/Design-Build: This project was chosen for several reasons. It was a Design-Build of similar overall dollar magnitude. The same three Branch Key Personnel were on this project as will be on the I-95 Express Lanes Southern Terminus Extension, and these individuals were responsible for management of many of the same elements and challenges that are part of the Proposed Project. These includes high public profile, variable geological conditions, connection to existing high-traffic-volume roadway, and coordination with multiple governing departments and agencies.

Route 58 Hillsville Bypass PPTA/Design-Build: Branch constructed nearly 4 miles of new roadway as the primary scope of the Design-Build project. Similar scope components included varying soils conditions that necessitated utilization of varying forms of treatment, environmental permitting, complex construction sequencing, and connections to existing roadways. One of the most impressive facts about this project is that the entire \$83M project was performed without any Branch-requested Change Orders. The continued success of this on-going 36-mile VDOT PPTA/Design-Build project shows Branch Highways' ability to partner with the Department.

As Lead Designer, WRA is pleased to present the following three projects to showcase definitive experience along I-95 in interstate widening, tolled express lane design and Design-Build expertise.

I-95 Newark Toll Plaza: This highlighted project rehabilitated an existing heavily congested toll plaza on I-95 in New Castle County, Delaware with the addition of highway speed E-ZPass lanes constructed in the median. Many of project features are virtually identical to the I-95 Express Lanes Southern Terminus Extension project. The new E-ZPass lanes in the median of I-95 required very similar roadway, SWM, drainage, MOT and TMP components and more importantly included very similar ITS, electrical, and tolling features to those required for the I-95 Express Lanes Extension project.

I-95/I-495 at Arena Drive from MD 202 to MD 214 Design-Build: This project for the Maryland State Highway Administration highlights WRA's expertise in successfully delivering Design-Build projects involving improvements on the I-95 corridor in very high traffic volume settings. The project TMP and MOT has similar complexities to the proposed project.

Fall Hill Avenue Widening and Mary Washington Boulevard Extension Design-Build: This project is highlighted because it is a current Design-Build project over I-95 in close proximity to the I-95 Express Lanes Southern Terminus Extension project. As a VDOT Design-Build project, we successfully delivered the design to the Contractor with all of the design constraints and contractual requirements that will be required for the I-95 Express Lanes Southern Terminus Extension project. Additionally, the knowledge gained from developing MOT and TMP components for I-95 and the geotechnical analysis will be invaluable and directly applicable to the I-95 Express Lanes Extension Design-Build project.

3.5 PROJECT RISKS

The combined 150+ years of experience for the Branch | WRA Team in the industry, including over \$575 Million in combined Design-Build projects has enabled each firm to build upon their ability to anticipate risks and determine mitigation strategies to manage/eliminate these risks. Branch Highways’ risk assessment and mitigation procedure is described briefly in the diagram, below. It is based on concepts presented in the Breakthrough Project Leadership Institute created by two well-known construction management consultants, Mike Casten and Dave Peterson, owners of Construction Concepts and Sage Limited, respectively.



The cycle starts with choosing partners that compliment your strengths and bring different perspectives to the table much like the Branch | WRA Team has proven to do in numerous endeavors. Working as a Team to evaluate the criteria and assess risks leads to effective solutions that are implemented into the project design. This implementation then leads to an evolving process that runs through the project cycle of performing, evaluating, and adjusting.

While risks involved with every Design-Build project are numerous, the Branch | WRA Team has identified the three risks critical to the success of the I-95 Express Lanes Southern Terminus Extension. These three risks, identified below, each require a unique mitigation strategy.

RISK #1: INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

This portion of the project scope consists of installation, testing, and integration of ITS devices to provide reversible lane operation for the I-95 Express Lanes Southern Terminus Extension, as well as providing other traffic control, monitoring, and informational systems. ITS devices specific to the I-95 Express Lanes Southern Terminus Extension project include DMS signs, CCTV cameras, automated incident detection cameras, traffic detectors, vehicular gates and the control cabinets, power generators, communications, and electrical power to support these systems. This effort will also require close coordination with VDOT and the I-95 Express Lanes Concessionaire (Transurban) to integrate all new ITS devices and expand the operation of the existing system. The Branch | WRA Team’s ITS/Electrical subconsultant for this project, *Chesapeake Electrical Systems, Inc. (CES)* has extensive experience with managing design, coordination, and installation of these same ITS components. Similarly, WRA is well-versed in designing these same elements and coordinating with Transurban.

Why Critical: Our Team has identified key elements of risk associated with ITS on this project and how they are fundamental to the completion and overall success of the project. These elements include:

- **Operation of the Existing Express Lanes:** A functioning ITS system is absolutely necessary for the operation and safety of the I-95 Express Lanes. Therefore, it is necessary to complete construction in a manner that does not impact the existing system and to sequence construction of the proposed ITS system to allow for integration and testing so that the project is completed and opened on time. The system also interfaces with VDOT’s Traffic Operations Centers to provide travel information and with E-ZPass Virginia for toll collection. Any disruption to the existing or proposed ITS systems could inhibit these functions.
- **Design Coordination:** Coordination between the roadway design and the electrical drawings is a critical component to project success and can’t be overlooked, especially on those large-scale projects with many detailed elements that require the work of multiple teams to complete. Minimizing the importance of this

coordination will result in schedule impacts, and also potential re-work to correct conflicts in the field. On a project such as this, schedule delays and public perception of re-work would put unnecessary pressure on all parties involved.

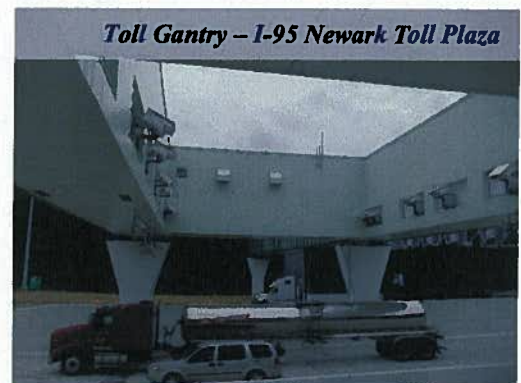
- **Schedule:** Our Team understands that the ITS design, construction, activation, testing and integration schedule is critical to the successful completion and opening of the project. Grading along the corridor creates an issue whereas the Electrical/ITS infrastructure installation could be delayed and easily become part of the critical path of the schedule and in turn be subject to increased costs and constrain the time available for turnover and testing of the ITS system. The proposed devices must be installed and activated early in the overall project schedule to provide ample time for integration and programming so that the roadway extension can be opened when completed.

Impacts: Failure to implement the ITS systems will result in the following impacts:

- **Operation of Existing Express Lanes:** While the majority of the proposed ITS devices are constructed south of the existing ITS infrastructure, there are still some areas of overlap and communications tie-ins must be made between the proposed and existing systems. Any unplanned impacts to the existing system during the installation of the proposed system can be costly and possibly halt operation of the existing system. As previously noted, the ITS system is vital for the operation of the reversible lane and any impacts during construction causing the existing system to not operate will potentially result in lost toll revenue to Transurban.
- **Design Coordination:** The design for grading, drainage, and ITS infrastructure must coordinate with one another to avoid conflicts during construction. All of these, and other operations in the same area of the project, will be affected in terms of schedule not only in terms of overall time frame, but also the order in which operations are executed. If these conflicts are not resolved during design there is the potential for significant impacts to cost and schedule.
- **Schedule:** Much publicity has been given to the delay currently experienced by both I-95 Express Lane and General Purpose lane users at the existing Express Lanes terminus. The existing conditions with heavy weaving movements are undesirable and commitments have been made to the public through the I-95 Express Lanes Southern Terminus Extension project to provide relief. It is crucial for this project to be constructed and opened on time to reduce congestion and avoid a negative public perception. Any missteps in the ITS implementation will extend current undesirable conditions, delay the project opening, and will decrease customer satisfaction with the Express Lanes system.

Mitigation: Our Team will apply our risk management strategy to evaluate, identify, and determine solutions to manage and monitor ITS risks throughout the project delivery process. Given our past experience with these systems, we will bring innovative solutions to the risks identified above.

- **Operation of the Existing Express Lanes:** Our ITS/Electrical Manager has an excellent understanding of the existing ITS systems on the Express Lanes from working on previous projects in the same corridor. Our Team will review in detail the ITS architecture and concept of operations of the existing system so that we have a complete understanding of all channels of communication and the functional requirements of the proposed ITS system. This information and system understanding will allow us to work seamlessly during the integration process. Our ITS subconsultant, CES has assigned both an ITS/Electrical Manager, and a master electrician, who were essential personnel in virtually the same roles on previous Transurban Express Lanes projects. These same individuals are also currently assigned to the maintenance contracts that CES has for both the I-495 Capital Beltway & I-95 Express Lanes. In order to minimize any construction impacts to existing ITS



Toll Gantry – I-95 Newark Toll Plaza

systems and infrastructure, a thorough review of all available as-built information and field verification will be completed to ensure the location of all existing ITS equipment is known. In addition to spatial considerations, other strategies that will be considered are the use of temporary services, back-up generators and redundant communication systems when tie-ins or disruptions to the existing systems must occur.

- **Design Coordination:** Branch, WRA, and CES all have recent first-hand experience in coordinating design of ITS/Electrical components with site grading. From all previous experiences, the ITS portion has to be installed as early as possible in the construction sequence in order to ensure a successful project. In order to mitigate this issue, portions of fiber lines may need to be installed using “non-traditional” boring techniques as opposed to traditional ductbank. This “boring” method of installation will allow the majority of the conduit systems to be installed concurrently with grading activities. Once grading activities are completed from north to south, boxes, fiber, wire and cabinet foundations can be installed closely behind. To the greatest extent possible, junction boxes and cabinet foundations will be located where there is minimal cut/fill. Along the same lines, equipment cabinets will not be mounted on sign structures and junction boxes will not be located in the shoulders of any roads. Both of these design elements typically delay installation and expose the boxes and wire/fibers to impacts.
- **Schedule:** The Branch | WRA Design-Build Team will develop a detailed schedule to plan the construction, inspection, activation, integration, testing and implementation of the proposed ITS devices. This schedule will be coordinated among all aspects of work so that other elements are completed as required for ITS construction (e.g., ensuring the roadway is completed so that testing of vehicular gates and automated incident detection cameras can occur). CES will work with Branch’s Team to ensure the coordination of work activities of all disciplines is done efficiently and in such a way that critical path for the project is unaffected.

Role of VDOT and other Agencies: VDOT’s role will be to provide all available as-built plans during the bidding and design phases, to provide review and approval of the ITS design (along with Transurban), and to facilitate coordination with Transurban during design, activation and integration of the new ITS systems.

RISK #2: GEOTECHNICAL

The Branch | WRA Team has reviewed the project information provided with the RFQ including the conceptual plans and typical sections. In addition, we have considered our recent experience on VDOT projects in the area on Route 1, Fall Hill Avenue, and the I-95 HOT/HOV Express Lanes project immediately to the north where coastal plain soils were encountered. The site is underlain by artificial fill materials and sedimentary soils of the Potomac formation. The Potomac formation may include high-plasticity clay strata that can exhibit very low effective residual friction angles. In addition, acidic soils may also be present at the project site. While the southernmost Express Lane grading already performed by Branch, indicated less probability at that point for in situ acidic soils, our other projects in the area such as Fall Hill Avenue and others in the region provides enough evidence that these soils cannot be discounted.

In considering the geotechnical risks associated with this project the most significant factor that we identified is that the subsurface conditions in the project area have not been well defined to a site level. Although we can speculate the conditions of the fill placed as part of the highway based on our knowledge of historic VDOT practices as well as what we have unearthed first hand on the adjacent I-95 Express Lanes project, the actual project site conditions are unknown and therefore are a significant risk to the project.

Why Critical: The majority of the project site is within the median area of I-95. The project site has been disturbed by earthwork operations for the original I-95 roadway construction and includes areas of embankment fill and stockpiled materials. It is likely that unsuitable materials from the original roadway construction have been placed in the median area or in side slope fills and will be encountered during

construction. Unsuitable materials can pose a problem with subgrade preparation, and may present slope stability issues with cut slopes and fill slopes in areas of embankment widening. Historic VDOT practice was to dispose of unsuitable materials such as organic soils, stumps, roots, construction debris, asphalt, concrete, and other waste materials in side hill fills and in median areas.

It is possible that portions of the site are underlain by soft or loose soils rather than the heavily over consolidated soils of the Potomac formation. Without subsurface information and laboratory testing the magnitude of settlement induced by the new embankment loading is uncertain. Additional concern related to settlement is the time duration that it takes for the settlement to occur. A 20-foot thick soft clay layer could take more than a year to consolidate without remediation measures. This could have a significant impact on the construction schedule and sequencing.

The overall stability of the proposed cut and fill slopes at maximum slope ratios of 2(H):1(V) must be carefully evaluated. High-plasticity cohesive soils of the Potomac formation (Potomac clay) can be problematic for cut slopes at slope ratios as flat as 4(H):1(V). Unsuitable fill materials at new embankment subgrade and along embankment side slopes may result in sloughing, sliding, or global stability failures. If flattening of the side slopes is required, retaining walls may need to be incorporated into the project. Additionally, the design and construction of the overhead signage, ITS features, and drainage elements may require special considerations to account for the aforementioned geotechnical conditions.

Impact: Based on our Team's review of the data, we identified these major geotechnical issues to be considered during design and construction:

- Earthwork impacts due to the possibility of unsuitable fill materials.
- Settlement of embankment fill.
- Stability of cut and fill slopes.
- Acidic soils.

Each has the potential to impact the cost, schedule, constructability, and future maintenance cost and must be managed throughout design and construction.

Mitigation: Based on the Branch | WRA Team's past experience mitigating geotechnical risk, a thorough field investigation based on a detailed geotechnical boring and testing program is Step One. In order to properly assess the geotechnical risks associated with the proposed construction, we will develop a comprehensive geotechnical investigation to define the subsurface conditions including soil, rock, groundwater, and uncontrolled fill within the project limits. WRA will perform a site reconnaissance walk to identify areas of concern, prior to planning and developing the scope of the geotechnical investigation. The geotechnical investigation will include laboratory testing to develop the appropriate design soil parameters for evaluation of embankment settlement and for slope stability. Additionally, geotechnical evaluation and recommendations for compacted embankment fill, pavement subgrade preparation, pavement thickness design, noise barrier walls, sign structures, light structures, and ITS components will be provided as required.

Unsuitable Materials: Due to the previous roadway construction it is likely that we will encounter unsuitable materials within areas of subgrade cut for the new road alignment, subgrade fill for new roadway embankment, or side slope fills for widening existing embankments. The extent and impact of the unsuitable materials will need to be evaluated. If unsuitable materials are encountered they may require undercutting and replacement with select borrow material, as needed to provide stable slopes, to prepare pavement subgrades, and prior to placement of embankment fill for the roadway or widening. If the extent of unsuitable subgrade conditions are not identified early in the project design, additional material and hauling costs could be realized.

Settlement: We anticipate placing fills up to 35 feet in height to accommodate the proposed I-95 Express Lanes roadway grade. We will consider the results of SPT sampling, undisturbed tube sampling, and laboratory consolidation testing, to estimate the magnitude of settlement and time of consolidation under the proposed embankment loads. To mitigate the effects of settlement on the roadway embankment fill a waiting period can be established with periodic monitoring of settlements to determine when most of the estimated settlement has occurred. The scheduling of the final pavement will take into account the settlement and monitoring period to ensure the RFP requirements are met. If calculations show that the settlement period is beyond the construction timeline, surcharging may be necessary to speed the time of settlement. Estimation and monitoring of embankment settlement are key to effective and economical roadway design and construction phasing. Properly evaluating the settlement will allow our Team to avoid:

- Excessive settlement due to underestimating consolidation time.
- Embankment subgrade failure.
- Schedule delays for installing final pavement, if consolidation time is underestimated.

Slope Stability: Our Team is familiar with the site geology consisting of Potomac formation soils, and we understand the potential slope stability issues related to unsuitable soils left along shoulder and median areas from previous construction projects. During the geotechnical investigation we can identify the presence of unsuitable soils and problematic Potomac clay soils. Where unsuitable soils or weak Potomac clay soils are encountered, slope stability issues are generally addressed in design and construction by:

- Removal and replacement with suitable borrow material.
- Reducing the slope ratio to flatten the slope.
- Benching the slope.
- Construction of retaining walls.

Acidic Soils in Design and Construction: Our Team has extensive experience with the geology in the region and the prevalence of acidic soils in the area. We can identify the presence of these soils through pH, and acid-base accounting tests. Issues associated with acidic soils are generally addressed in design and construction by:

- Reuse of Soil from Cut Area.
- Use proper long-term vegetative cover.
- Run-off Control from Acidic Soils during Construction.
- Foundation and SWM Facility Element Selection for Acidic Soils.



Role of VDOT and other Agencies: VDOT’s role will be to provide all existing geotechnical data during the RFP stage to allow full evaluation of the project risk and to review the final geotechnical report for the project.

RISK #3: SOUNDWALLS

The soundwall construction on the I-95 Express Lanes Southern Terminus Extension Project poses a host of potential impacts with the requirement for soundwalls to be incorporated. Not only does this feature require work outside of the general purpose lanes of existing I-95, it also introduces potential right-of-way, utility, and access concerns, and significant schedule impacts to the Project. Branch Highways’ role in the construction of soundwalls on the previous I-95 Express Lanes project was to provide initial grading for

access and foundation installations and to complete the final drainage, grading, and stabilization in coordination with the soundwall installation, which was performed and managed by others. Soundwall installation actually extended the project completion date by 7 months. This recent experience offers several “Lessons Learned” that will enable the Branch | WRA Design-Build Team to anticipate critical steps to ensure on-time delivery of the I-95 Express Lanes Southern Terminus Extension Project in its entirety.

Why Critical: Our Team has identified three main areas of risk associated with the soundwall component of this project:

Fabrication Schedule: While there were multiple causes for the schedule impacts with regard to soundwalls on the previous I-95/395 Express Lanes project, fabrication time ultimately had the biggest impact on schedule – plants could simply not keep up with the demand of the project. If the fabrication lead time is not addressed the I-95 Express Lanes Southern Terminus Extension project could realize these same schedule delays.

Location: As with the previous segment of the I-95 Express Lanes, these soundwalls will be on the side slopes of I-95 tight to the right-of-way line or at the edge of an existing embankment. Consequently, there will be several grading and drainage considerations put into question the ability to keep the wall and associated drainage features within the current right-of-way. The conceptual drawings indicate at least eight areas where drainage will need to be accommodated through the wall location and push the line of the wall tight against the existing right-of-way. If adequate right-of-way is not available additional time and expense will be incurred while easements are purchased. Additionally, the proposed soundwalls positioned on top of the embankments present numerous constructability and design concerns to ensure stability of the existing fill slope with protection and drainage in front of the soundwall.



Construction Access Points: Careful selection of ingress/egress points for soundwall construction will be critical to the TMP design and soundwall execution of this portion of the project. Since the walls run adjacent to construction on the interior side of the southbound GP lanes, it will be paramount that ingress/egress is provided at points carefully scrutinized and effectively handled in the Maintenance of Traffic Plan. The delivery of concrete and reinforcing steel for foundations, more than 200 posts, and an estimated 100,000 sq. ft. of panels, all must be done without affecting the existing traffic flow, while also providing adequate space for construction activities.

Impacts:

Fabrication Schedule: While soundwall construction itself does not directly impact the Express Lanes’ functionality, it does affect public opinion regarding the perceived successful completion of the work. Despite the fact that soundwall activities will take place outside of the existing GP lanes, there is always a degree of disruption to the flow of traffic created by the visual distraction of work being performed on the side of the road. Additionally, the old adage of “Time is Money” rings absolutely true: the longer a specific work zone is active, the higher the costs that will be incurred.

Location: It is possible that the final design of the soundwalls on this Project could require acquisition of construction and/or permanent easements to allow for associated grading and drainage. Additionally, at the Dominion power lines located at the southern end of the soundwall may need to be adjusted to provide adequate clearance above the soundwall. As highlighted in our Geotechnical Risk narrative, the likelihood of varying subsoil conditions may warrant additional foundation design efforts and slope stability analysis. These conditions will dictate in large measure the needed right-of-way clearances and allowances for foundation and drainage features. Both of these issues could have a significant effect on cost and schedule. Therefore, it is essential that they be addressed early on in the Design-Build process, and are monitored to ensure that all possible exposures are mitigated.

Construction Access Points: While the width of existing ROW throughout the I-95 corridor for this project are relatively consistent, the slope and grade of existing ground outside of the roadway itself are not. This creates the potential for a safety concern, not only for the public traveling on the GP lanes adjacent to these points, but also in our work areas. The combination of limited work/maneuvering space, crews working, large trucks and equipment, and employees on the ground present risk to both the project and our people.

Mitigation:

Fabrication Schedule: In an effort to mitigate these impacts, the Branch | WRA Design-Build Team has entered into an agreement in principal with the *Smith-Midland Corporation (SMC)* to set aside precious fabrication and storage assets in order to facilitate the delivery of the estimated 100,000 SF of panels and 200 posts. As a long-time partner of Branch Highways with a proven track record of meeting VDOT quality requirements, SMC has a proven track record and we have full faith in their ability to manufacture and deliver all of the posts and panels required for this soundwall within the tight time constraints that this Project includes. In fact, SMC has recently upgraded its capacity to hold in ready panels and posts fabricated for this Project in an effort to play a role in assuring Success for the Branch | WRA Design-Build Team.

Location: The Branch | WRA Team will analyze the location limitations and closely coordinate the alignment to consider foundation and drainage designs in coordination with grading and existing soils conditions in order to eliminate the need for additional right-of-way to the fullest extent possible and minimize overall cost. In areas where the ground line sinks below the existing roadway elevations, innovative design considerations will be employed to provide the best long-term solution for each specific location.

Construction Access Points: Access points must be carefully considered and located in areas where there will be sufficient room to allow for materials and equipment deliveries to be safely executed. Factors that our Team will consider to ensure that this risk is minimized or eliminated include existing traffic pattern, width and evaluation of existing ROW, existing profile and horizontal alignment of the GP lanes, and the location of existing and proposed ITS/Electrical appurtenances that may create spatial obstacles. The number of access points will be kept to an absolute minimum. At its northernmost point, the wall starts adjacent to the Route 610 on-ramp to I-95 South. In order to best accommodate access so as not to interfere with traffic merging onto I-95, the Branch | WRA Team will incorporate access points at or near the northern end of the soundwall prior to the acceleration lane. Additional access points will be incorporated past the southern end of the acceleration lanes.

Role of VDOT and Other Agencies: The Branch | WRA Design-Build Team requires little from the Department in order to effectively manage the risk associated with soundwall construction on this project. Assistance with our public outreach in terms of simple participation in public meetings, coupled with timely turn-around of submittals satisfies the initial need to expedite reviews and approvals. Beyond that, the Branch | WRA Team will request the Department's further cooperation by allowing us to manufacture standard panels prior to final design approvals. Of course, we would proceed at our own risk so long as we could receive preliminary approvals of materials and standard panel details.

ATTACHMENT 3.1.2

Project: 0095-969-720

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|---|--|---------------------|--------------------------------|--------------------|
| Statement of Qualifications Checklist and Contents | Attachment 3.1.2 | Section 3.1.2 | no | Appendix |
| Acknowledgement of RFQ, Revision and/or Addenda | Attachment 2.10 (Form C-78-RFQ) | Section 2.10 | no | Appendix |
| Letter of Submittal (on Offeror's letterhead) | | | | |
| Authorized Representative's signature | NA | Section 3.2.1 | yes | Page 1 |
| Offeror's point of contact information | NA | Section 3.2.2 | yes | Page 1 |
| Principal officer information | NA | Section 3.2.3 | yes | Page 1 |
| Offeror's Corporate Structure | NA | Section 3.2.4 | yes | Page 1 |
| Identity of Lead Contractor and Lead Designer | NA | Section 3.2.5 | yes | Page 1 |
| Affiliated/subsidiary companies | Attachment 3.2.6 | Section 3.2.6 | no | Appendix |
| Debarment forms | Attachment 3.2.7(a) Attachment 3.2.7(b) | Section 3.2.7 | no | Appendix |
| Offeror's VDOT prequalification evidence | NA | Section 3.2.8 | no | Appendix |
| Evidence of obtaining bonding | NA | Section 3.2.9 | no | Appendix |
| | | | | |
| | | | | |

ATTACHMENT 3.1.2

Project: 0095-969-720

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|--|------------------|---------------------|--------------------------------|--------------------|
| Full size copies of SCC and DPOR registration documentation (appendix) | NA | Section 3.2.10 | no | Appendix |
| SCC Registration | 3.2.10 | Section 3.2.10.1 | no | Appendix |
| DPOR Registration (Offices) | 3.2.10 | Section 3.2.10.2 | no | Appendix |
| DPOR Registration (Key Personnel) | 3.2.10 | Section 3.2.10.3 | no | Appendix |
| DPOR Registration (Non-APELSCIDLA) | 3.2.10 | Section 3.2.10.4 | no | Appendix |
| DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal | NA | Section 3.2.11 | yes | Page 1 |
| Offeror's Team Structure | | | | |
| Identity of and qualifications of Key Personnel | NA | Section 3.3.1 | yes | Pages 2-7 |
| Key Personnel Resume – DB Project Manager | Attachment 3.3.1 | Section 3.3.1.1 | no | Pages 2-4 |
| Key Personnel Resume – Quality Assurance Manager | Attachment 3.3.1 | Section 3.3.1.2 | no | Appendix |
| Key Personnel Resume – Design Manager | Attachment 3.3.1 | Section 3.3.1.3 | no | Appendix |
| Key Personnel Resume – Construction Manager | Attachment 3.3.1 | Section 3.3.1.4 | no | Appendix |
| Key Personnel Resume – Lead Utility Coordination Manager | Attachment 3.3.1 | Section 3.3.1.5 | no | Appendix |
| Organizational chart | NA | Section 3.3.2 | yes | Page 7 |
| Organizational chart narrative | NA | Section 3.3.2 | yes | Pages 4-6 |

ATTACHMENT 3.1.2

Project: 0095-969-720

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|---|---------------------|---------------------|--------------------------------|--------------------------|
| Experience of Offeror's Team | | | | Page 8 |
| Lead Contractor Work History Form | Attachment 3.4.1(a) | Section 3.4.1 | no | Appendix |
| Lead Designer Work History Form | Attachment 3.4.1(b) | Section 3.4.1 | no | Appendix |
| Project Risk | | | | |
| Identify and discuss three critical risks for the Project | NA | Section 3.5.1 | yes | Pages 9-15 Pages 9-15 |

ATTACHMENT 3.2.6

State Project No. 0095-969-720

Affiliated and Subsidiary Companies of the Offeror

Offerors shall complete the table and include the addresses of affiliates or subsidiary companies as applicable. By completing this table, Offerors certify that all affiliated and subsidiary companies of the Offeror are listed.

The Offeror does not have any affiliated or subsidiary companies.

Affiliated and/ or subsidiary companies of the Offeror are listed below.

| Relationship with Offeror (Affiliate or Subsidiary) | Full Legal Name | Address |
|--|-----------------------------|--|
| Affiliate (Parent Company) | The Branch Group, Inc. | P.O. Box 40004, Roanoke, VA 24022 |
| Affiliate | E.V. Williams, Inc. | 925 South Military Hwy, Virginia Beach, VA 23464 |
| Affiliate | G.J. Hopkins, Inc. | P.O. Box 12467, Roanoke, VA 24025 |
| Affiliate | Branch and Associates, Inc. | P.O. Box 8158, Roanoke, VA 24014 |
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COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

BRANCH HIGHWAYS, INC.

Vendor Number: B319

In accordance with the Regulations of the Virginia Department of Transportation, your firm is hereby notified that the following Rating has been assigned to your firm:

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; UNDERGROUND UTILITIES

Issue Date: February 28, 2015

Suzanne FR Lucas, State Prequalification Officer

This Rating and Classification will Expire: February 29, 2016

Don E. Silies, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.

10 Franklin Road, SE
Suite 550
Roanoke, VA 24011
Tel (540) 343-8071
Fax (540) 345-2958



Charlotte
Greensboro
Knoxville
Lynchburg
Nashville
Raleigh
Richmond

February 8, 2016

Mr. Suril R. Shah
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Re: **Branch Highways, Inc.**
Request for Qualifications for the Design/Build
I-95 Express Lanes – Southern Terminus Extension
From: 0.9 mi. South of the Garrisonville Road Overpass
To: 1.3 mi. North of the Garrisonville Road Overpass (Current
Terminus of the Express Lanes)
Stafford County, Virginia
State Project No.: 0095-969-720
Contract ID Number: C00T17210DB90

Dear Mr. Shah:

The Hartford, through its operating entities, has issued surety bonds to Branch Highways, Inc., a subsidiary of The Branch Group since 1995. During this time we have favorably considered projects up to \$150,000,000 with an aggregate program of \$850,000,000 for member companies of The Branch Group. Our experience with Branch Highways, Inc. has been excellent, and we highly recommend them to you.

As surety for Branch Highways, Inc., The Hartford will favorably consider providing a 100% Performance Bond and a 100% Labor and Materials Payment Bond for the referenced project in the estimated project amount of \$40,000,000 and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, provided a contract is awarded to, and executed by Branch Highways, Inc.

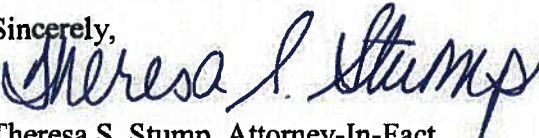
Please understand that any arrangement for any bonds is a matter between Branch Highways, Inc. and The Hartford and we assume no liability to third parties or you if, for any reason, we do not issue requested bonds.

The Hartford expressly reserves the right to review the terms and conditions of the contract, contract amount and bond form, evaluate pertinent underwriting data, and verify the adequacy of project financing prior to the issuance of bonds for the referenced project.

Branch Highways, Inc. bonds are issued through Hartford Fire Insurance Company which is listed on the U.S. Treasury Department List and has an A.M. Best Rating of "A+" with Financial Size Category: XV (\$2 Billion or greater). They are licensed to do business in the State of Virginia.

This letter will expire one hundred and eighty (180) days from the above date.

Sincerely,

A handwritten signature in black ink that reads "Theresa S. Stump". The signature is written in a cursive style with a large initial 'T' and 'S'.

Theresa S. Stump, Attorney-In-Fact

cc: Branch Highways, Inc.
Hartford Fire Insurance Company

POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD

Bond T-4

One Hartford Plaza

Hartford, Connecticut 06155

call: 888-266-3488 or fax: 860-757-5835

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 14-730214 (MC), 14-730836, 14-731912

- Hartford Fire Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois**, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast**, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, *up to the amount of unlimited:*

Tracy L. Carlile, Chris James, Christi Horn of Franklin TN, Robert M. Coon, Susan F. Westbrook, Linda P. Greenway of Greensboro NC, Windy Lovelady of Raleigh NC, Latimer Williams, Tambri Doby of Charlotte NC, E. Bruce Wilsie, Theresa S. Stump, Deanna W. Sparks, Sherrie B. Denison, Matthew D. Karr III, Vickie H. Bibee, Bethany Murphy of Roanoke VA, R. Hutcheson Mauck Jr., Mike Philhower, Stacey W. Hall, Nancy L. Adams, James J. Roberts III of Richmond VA, William B. San Soucie, Joanna M. Carson, Lindsey M. DeJarnette, Stephen B. Dolln, Cary A. McFadden, Cara Brown of Lynchburg VA

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on 10/1/98, 9/19/00, 7/21/03, 1/22/04, 3/1/07, 8/1/09 or 8/1/12 the Companies have caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



John Gray
John Gray, Assistant Secretary

Gary W. Stumper
Gary W. Stumper, Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss. Hartford

On this fifteenth day of March, 2013, before me personally came Gary W. Stumper, to me known, who being by me duly sworn, did depose and say: that (s)he resides in the County of Hartford, State of Connecticut; that (s)he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that (s)he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that (s)he signed his/her name thereto by like authority.



CERTIFICATE

Kathleen T. Maynard
Kathleen T. Maynard
Notary Public
My Commission Expires July 31, 2016

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of

Signed and sealed at the City of Hartford.

February 8, 2016



Kevin Heckman
Kevin Heckman, Assistant Vice President

ATTACHMENT 3.2.10

State Project No. 0606-088-653, C501 & 0606-088-622, C501, B634

SCC and DPOR Information

Offerors shall complete the table and include the required state registration and licensure information. By completing this table, Offerors certify that their team complies with the requirements set forth in Section 3.2.10 and that all businesses and individuals listed are active and in good standing.

| Business Name | SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2) | | | | | | |
|---|--|-------------------------------|-----------------------------|---|------------------------|--------------------------|----------------------|
| | SCC Information (3.2.10.1) | | DPOR Information (3.2.10.2) | | | | |
| | SCC Number | SCC Type of Corporation | SCC Status | DPOR Registered Address | DPOR Registration Type | DPOR Registration Number | DPOR Expiration Date |
| Branch Highways, Inc. | 0295618-3 | Corporation | Active | P.O. Box 40004 Roanoke, VA 24022-0004 | Class A Contractor | 2701029434 | 03/31/2017 |
| Whitman, Requardt & Associates, LLP (Baltimore, MD) | K000382-4 | Limited Liability Partnership | Active | 801 South Caroline Street Baltimore, MD 21231 | ARC, ENG, LS, LA | 0407001676 | 12/31/2017 |
| Whitman, Requardt & Associates, LLP (Richmond, VA) | K000382-4 | Limited Liability Partnership | Active | 9030 Stony Point Parkway, Suite 220 Richmond, VA 23235 | ENG | 0411000133 | 02/29/2016 |
| Whitman, Requardt & Associates, LLP (Fairfax, VA) | K000382-4 | Limited Liability Partnership | Active | 3701 Pender Drive, Suite 450 Fairfax, VA 22030 | ENG | 0411000134 | 02/29/2016 |
| Whitman, Requardt & Associates, LLP (Bristol, TN) | K000382-4 | Limited Liability Partnership | Active | 100 5 th Street, Suite L-2000 Bristol, TN 37620 | ENG | 0411001228 | 02/29/2016 |
| Chesapeake Electrical Systems, Inc. | F124990-5 | Corporation | Active | 9381 Davis Avenue Laurel, MD 20723 | Class A Contractor | 2705033850 | 05/31/2016 |
| H&B Surveying and Mapping, LLC | S290560-4 | Limited Liability Company | Active | 612 Hull Street, Suite 101B Richmond, VA 23224 | LS | 0407005432 | 12/31/2017 |
| Froehling & Robertson, Inc. | 0027211-2 | Corporation | Active | 22923 Quicksilver Drive, Suite 111 Sterling, VA 20166 | ENG | 0411000051 | 02/28/2016 |
| Engineering & Materials Technologies, Inc. | 0478633-1 | Corporation | Active | 7857 Coppermine Drive Manassas, VA 20109 | ENG | 0407005994 | 12/31/2017 |

ATTACHMENT 3.2.10


State Project No. 0606-088-653, C501 & 0606-088-622, C501, B634

SCC and DPOR Information

| DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4) | | | | | | |
|--|--------------------------|--|--|-----------------------|---|-------------------------------------|
| Business Name | Individual's Name | Office Location Where Professional Services will be Provided (City/State) | Individual's DPOR Address | DPOR Type | DPOR Registration Number | DPOR Expiration Date |
| Whitman, Requardt & Associates, LLP | John Maddox | Richmond, Virginia | 2825 Willbrook Drive Richmond, VA 23233 | Professional Engineer | 0402026613 | 01/31/2018 |
| Chesapeake Electrical Systems, Inc. | Robert Preston | Laurel, Maryland | | | | |

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

| | |
|---|---|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | Pete Kramer – Vice President, NOVA Region |
| b. Project Assignment: | Design-Build Project Manager |
| c. Name of Firm with which you are now associated: | Branch Highways, Inc.  |
| <p>d. Employment History: With this Firm <u>19</u> Years With Other Firms <u>15</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Vice President Branch Highways, Inc. March 2014 – Present Pete oversees and ensures the successful operation of all components of Branch’s business that are managed out of the Northern Virginia regional office in Manassas, including Design-Build and PPTA Project oversight, resource assignment, contract execution and monitoring, client relations, employee staffing, scheduling, production management, quality control, training, safety compliance, and project close-out. To date, Pete has played a critical role in over \$200 Million of Design-Build work, the majority of which his primary role was either Design-Build Project Manager or Design-Build Construction Manager.</p> <p>Senior Project Manager/Area Manager Branch Highways, Inc. March 2009 – February 2014 Responsibilities included oversight of all northern Virginia projects including both public and private sectors. Clients consisted of state and local departments of transportation, federal government agencies and private corporations. Typical projects incorporated one or more of the following: interstate widening, primary and secondary road widening/relocation, and interchange work. While serving as the Area Manager for Northern Virginia, duties included field operations and production management, as well as Value-Engineering Proposal development and administration. On several Design-Build projects during this time, Pete was responsible for contract administration, owner relations, internal reporting and overall project monitoring along with oversight authority for design, utility relocation, environmental permitting, ROW procurement, and all construction activities. These efforts required interfacing directly with landowners regarding specific proffer terms and conditions, as well as acting as the point person for specific project-related property owner interactions for the Owner.</p> <p>Project Manager Branch Highways, Inc. January 1996 – February 2009 In this role, Pete was responsible for managing the construction process, including Quality Control (QC) and executing the work in accordance with “approved for construction” plans and specifications. He was also accountable for compliance with all material and construction requirements. Additional responsibilities included planning, scheduling, and allocation of manpower and equipment resources. Management of Owner/subcontractor/supplier contracts also fell under Pete’s direct charge. He supported EEO compliance, enforcement & compliance with corporate safety regulations & associated training. During this time, Pete also served as the Bridge Construction Manager concurrently with other project management duties for approximately three dozen bridge structures throughout North Carolina and Virginia. Duties included all scheduling, requests for information, and submittal preparations/monitoring, along with crew and equipment scheduling for all bridge crews, as well as overall contract management and oversight including correspondence, owner and subcontractor notifications, and compliance issues.</p> | |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | Virginia Military Institute – Lexington, VA BS 1988 Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2009 Certified LEED AP – United States Green Building Council #10444816 2007 VDOT Erosion and Sediment Control Contractor Certification (ESCCC) #3156C |
| <p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> <i>Note whether experience is with current firm or with other firm.</i> <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p> <p>Design-Build/PPTA I-95 HOT/HOV Express Lanes Dates: August 2011 – May 2015 Segment 1 – Prince William and Stafford Counties, VA Project Role: Area Manager With Current Firm? Yes</p> | |

Responsibility/Specific Job Duties: As *Area Manager*, Pete directed Branch Highways' efforts as a key subcontractor for this project, ensuring that design, construction, quality management, contract administration, and client communications were valuable and efficient. The ~9 miles of new I-95 HOT Lanes within Branch's scope of work adjoins the I-95 Express Lanes Southern Terminus Project. Consequently, Pete supported, directed, and provided guidance to Branch's Project Team in order to ensure that similar Geotechnical, Safety, and Scheduling challenges as can be expected on the I-95 Express Lanes Southern Terminus Project were mitigated and/or eliminated. Other specific duties that required Pete's focus entailed oversight of the coordination of Branch's work with the concessionaire, contractors, sub-tier specialty contractors, and QA/QC staff to accommodate a very aggressive construction schedule combined with extensive and project-specific standards of quality and safety for this multifaceted project. His diligent communication, effective staffing, and global awareness of the project and its needs created an environment where resources were allocated as needed to maximize efficiency of operation.
Client: Fluor-Lane I-95, LLC (VDOT) | Total Branch Cost: \$47 Million

Relevancy: Same I-95 Corridor Location/Traffic Volume, VDOT Design-Build/PPTA, FHWA guidelines and requirements, interstate alignment/widening, ROW acquisition, utility relocations, environmental monitoring, geotechnical challenges/mitigation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Stafford County PPTA – Heritage Center Parkway and Garrisonville Road Improvements – Stafford County, VA
Project Role: Design-Build Project Manager

Dates: February 2013 – May 2017

With Current Firm? Yes

Responsibility/Specific Job Duties: As *Design-Build Project Manager*, Pete played an essential role in the procurement process for this PPTA one of the first for Stafford County, and remains ultimately responsible for all DBPM duties on this project including, overall design, construction, quality management, contract administration, procurement, ROW acquisition, development of Traffic Management Plans, environmental permitting and monitoring, and communication/coordination with the Owner and the affected public. These two projects have the same critical factors have been faced: multiple challenging soils conditions that require various methods of mitigation, effective Maintenance of Traffic, particularly on the Heritage Parkway portion at the tie-in with Route 1, and expedited schedule. Pete's leadership abilities and extensive knowledge and experience in Design-Build work is evidenced by the ongoing success of this project. **Client: Stafford County | Total Cost: \$20 Million**

Relevancy: Design-Build, roadway alignment/widening, ROW acquisition, extensive utility relocations, environmental permitting and monitoring, geotechnical challenges, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

Design-Build Route 15 James Madison Highway Haymarket, VA
Project Role: Design-Build Project Manager

Dates: February 2007 – December 2009

With Current Firm? Yes

Responsibility/Specific Job Duties: As *Design-Build Project Manager* Pete directed Branch's project team for this 22 lane miles project, including a Construction Manager, 3 area superintendents, project engineers and staff. In addition to managing actual construction activities onsite, Pete's duties included constructability reviews during the design phases for the 5 distinct and separate roadway segments adjacent to the I-66/US-15 Interchange, including 5 bridge structures, which comprised this project. He also led the development and enforcement of Quality Control Program prior to and during construction, much as he will do for the I-95 Express Lanes Southern Terminus Project. Coordinating with DEQ and USACE, Pete played a crucial role in developing Construction Sequencing Plans that allowed for early starts to construction activities in each segment of the project. These plans included Maintenance of Traffic coordination with VDOT and Prince William County. Another similar and significant feature of this project to the I-95 Express Lanes Southern Terminus Project involves Geotechnical challenges and associated remedies. There were intermittent segments of highly plastic, light, and/or saturated soils and rock in all 5 segments and each required a unique approach for mitigation. These approaches included removal and replacement, mechanical manipulation, and chemical stabilization. Pete's duties also required him to meet with local businesses, communities, and developers through public outreach and simple face-to-face communications to address concerns and create a team atmosphere with shareholders.
Client: Prince William County | Total Cost: \$55 Million


Relevancy: Design-Build, roadway alignment/widening, ROW acquisition, utility relocations, environmental permitting and monitoring, geotechnical challenges, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. *N/A*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

| | |
|---|---|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | Leonard Coleman, PE, CCM, LEED AP – Senior Construction Manager |
| b. Project Assignment: | Quality Assurance Manager |
| c. Name of Firm with which you are now associated: | Whitman, Requardt & Associates, LLP  |
| d. Employment History: With this Firm <u>1</u> Years With Other Firms <u>10</u> Years | <p>Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Mr. Coleman has over 11 years of progressive experience in construction management and project management of major infrastructure projects in Virginia, managing the quality program for teams of Quality Assurance and Quality Control inspectors on roadway, bridge and utility, including federally and state funded VDOT and locally administered Design-Build and Design-Bid-Build projects, ensuring compliance with plans and specifications.</p> <p>Senior Construction Manger Whitman, Requardt & Associates, LLP October 2014 – Present Manages Quality Assurance and Quality Control staff, leading quality management teams on Design-Build and Design-Bid-Build projects implementing QA plans. Serves as Quality Control Manager on over \$40 million worth of VDOT Design-Build projects, and manages QA inspection staff on over \$80M worth of construction and maintenance.</p> <p>Construction Manager Prince William County DOT March 2012 – October 2014 Served as County’s Project Construction Manager for the Capital Improvement Division on two PPTA projects valued at over \$90 million and two design-bid build projects valued at over \$75M. In an Independent Assurance role, oversaw QA staff and the quality program, and ensured testing and inspection frequencies in accordance with QA/QC Plan.</p> <p>Lead Engineer McDonough Bolyard Peck, Inc. January 2006 – March 2012 Assistant Quality Assurance Manager on \$150M VDOT Design-Build project, assisting in developing and implementing the quality management program, including overseeing QA staff and testing and inspection frequencies. Also served as Project Controls Engineer on multiple projects, including constructability review, cost estimating, CPM schedule review, claim analysis, material testing review and overseeing project record keeping systems.</p> <p>Engineer-in-Training The Engineering Groupe May 2005 – August 2005</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | George Mason University – Fairfax County, Virginia B.S. 2009 Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 2013 Professional Engineer VA Registration #0402051494; Certified Construction Manager (#3392); LEED AP; VDOT Certifications: Int. WZ Traffic Control w/ LEO (6/2017), Soil/Aggr. Field Compaction (12/2018), Asphalt Field Level I & II (12/2018), Hyd. Cement Concrete Field (12/2017), Pavement Marking (12/2018), GRIT Inspector (4/2016), Slurry Seal (12/2018), Surface Treatment (12/2018); ACI Grade I Testing Tech (8/2017); DEQ E&SC Inspector (5/2016); Nuclear Gauge Safety Training; OSHA 10-Hour Safety; NASSCO PACP (12/2017) |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. | <ol style="list-style-type: none"> <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> <i>Note whether experience is with current firm or with other firm.</i> <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p> <p>Fairfax County Parkway Interchange and Widening Dates: August 2009 – March 2012 Design-Build – Fairfax County, VA Project Role: Assistant Quality Assurance Manager With Current Firm? No Responsibility/Specific Job Duties: Assistant Quality Assurance Manager providing Quality Assurance oversight on an Eastern Federal Lands (EFLHD) Design-Build project to VDOT standards for 2 miles of new roadway, including six new bridges, widening of an existing bridge and three limited access interchanges. The project also included the construction of gravity retaining walls, overhead sign structures, roadway lighting, soundwalls, stormwater management facilities, pedestrian facilities, major excavation and filling of embankment, subgrade stabilization, in-plan utility relocations, rock blasting, and earthwork for the future Saratoga Park and Ride Lot. Responsibilities included assisting the Quality Assurance Manager oversee the quality assurance and quality control program for the project by ensuring that all work and materials, testing, and sampling were performed in conformance with the contract requirements, the</p> |

QA/QC Plan, and the "approved for construction" plans and specifications. He verified QC and QA staff frequencies of inspection and material testing were performed accordance to the approved project QA/QC Manual. He conducted hold-point and preconstruction meetings, reviewed Contractor submittals, identified and created non-conformance reports (NCR) for deficiencies, and maintained Issue and NCR Logs. He maintained all project documentation records including a Materials Book to VDOT standards, issuing Design-Build Tracking (DBT) numbers, as-built project records, and material test result data. He was responsible for reviewing and approving contractor C-25s, monitoring site activities on a daily basis, review and initial approval of all inspector daily diaries, creating and maintaining a project punchlist, reviewing contractor quantities for owner's review of monthly pay applications, and coordination with FHWA, EFLHD, VDOT, and the Contractor. **Client: FHWA EFLHD/VDOT | Construction Cost: \$150 million**

Relevancy: VDOT Design-Build project, major project with extensive traffic control, Quality Assurance Manager duties, implementing QA/QC Plan, Non-compliance reports and resolving quality issues, managing staff; coordination with Design-Builder, Quality Control and VDOT; Materials Book certification and oversight.

Design-Build Fall Hill Avenue Widening and

Dates: November 2014 – Present

Mary Washington Boulevard Extension – Fredericksburg, VA

Project Role: Quality Control Manager

With Current Firm? Yes

Responsibility/Specific Job Duties: *Quality Control Manager* on this VDOT Design-Build project to widen Fall Hill Avenue and extend Mary Washington Blvd. Includes a 5-span bridge over I-95, bridge support of excavation, MSE walls, soil nail walls, stream diversions, soundwalls, a precast double cell box culvert, earthwork, shared use path, sidewalk, storm drainage and a multi-phase MOT plan. Responsibilities included coordinating with Design-Build Project Manager and Quality Assurance Manager to ensure Quality Control services are in compliance with the approved QA/QC Plan, coordinating all inspections and testing to frequencies required by the Plan, managing and assigning QC inspection staff and the QC laboratory, facilitating meetings, review and acceptance of material testing reports, and reviewing field issues and recommending solutions. He is also responsible for revising and updating the QA/QC Manual for the project, overseeing the compliance of the VDOT Materials Book, maintaining an electronic project documentation system, reviewing and approving contractor material submittals, reviewing work for compliance with plans and specifications, and VDOT coordination. **Client: VDOT | Total Cost: \$31 million**

Relevancy: VDOT Design-Build, large project with traffic control on I-95, Quality Management duties, implementing QA/QC Plan, Non-compliance reports and resolving quality issues, managing staff; coordination with Design-Builder, Quality Team and VDOT; Materials Book certification and oversight. Similar project features include sound walls, geology in the project area, roadway alignment/widening, new connector road, utility relocations, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC.

Walney Road Widening Design-Build – Fairfax County, VA

Dates: December 2014 – February 2016

Project Role: Quality Control Manager

With Current Firm? Yes

Responsibility/Specific Job Duties: *Quality Control Manager* for this VDOT Design-Build project to widen Walney Road from Westfields Blvd to Willard Road, including the replacement of a bridge over Flatlick Branch, construction of a shared use path, sidewalk, utility relocation, grading, asphalt paving and modification of two signalized intersections. Mr. Coleman's responsibilities included overseeing QC inspection services and staff, ensuring inspections, sampling, and testing of all work and materials are performed in accordance with the contract requirements and the QA/QC Plan. He coordinated with the design teams to resolve plan discrepancies and recommended solutions. Attended progress meetings, maintained project documentation, coordinated Punchlist inspections, and coordinated with the Quality Assurance team to document and resolve non-compliant work. **Client: VDOT | Construction Cost: \$12.2 million**

Relevancy: VDOT Design-Build project, Quality Management duties, implementing QA/QC Plan, resolving Non-compliance reports, managing staff; coordination with Design-Builder, the Quality Team and VDOT; Materials Book certification and oversight. Critical utility relocations, multiple stakeholders, environmentally sensitive areas.

Route 1 North Improvements PPTA – Prince William County, VA

Dates: August 2013 – October 2014

Project Role: Construction Manager

With Current Firm? No

Responsibility/Specific Job Duties: *Construction Manager* for Prince William County on a 2-mile long road widening project to expand the existing four-lane roadway to a six-lane divided roadway. Construction included retaining walls, embankment widening, paving, subsurface slope stabilization, major in plan and out of plan utility relocations, six traffic signal modifications, multiple traffic shifts, major drainage improvements, a quadruple box culvert, environmental impact mitigation and a shared use path. Responsibilities included overseeing the Design-Builder's quality assurance program for compliance with testing and inspection requirements, ensuring the County's compliance with VDOT's LAP program and coordinating County/LA inspection staff. Facilitated project meetings, cost and budget controls and progress reporting, pay application approval, material price adjustments, change order analysis and negotiation, utility company coordination and relocation, serving as point of contact for the community, right-of-way acquisition assistance, and contractor submittal review and approval. He coordinated construction and shop drawing plan review and approvals with VDOT and other state/local agencies, coordinated with adjoining construction projects, ensured project environmental compliance, managed staff, reviewed and approved the CPM Schedule, and coordinated directly with VDOT TOC for major traffic control operations. **Client: Prince William County, Virginia | Total Cost: \$58 million**


Relevancy: Major Design-Build project built to VDOT standards, Quality Management program oversight; coordination with Design-Builder, the Quality Team, and VDOT; manage staff, ensure resolution to quality issues.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. *N/A*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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|---|--|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | John Maddox, P.E. – Senior Vice President |
| b. Project Assignment: | Design Manager |
| c. Name of Firm with which you are now associated: | Whitman, Requardt & Associates, LLP  |
| d. Employment History: With this Firm <u>20</u> Years With Other Firms <u>10</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): | <p>Senior Vice President/Design Manager Whitman, Requardt & Associates, LLP June 1995 – Present</p> <p>John has served as a Project Manager for major VDOT design projects continuously since August 1997 and recently as the Design Manager on two VDOT Design-Build projects, including the Fall Hill Avenue Design-Build project in the VDOT Fredericksburg District. He routinely manages the design of major transportation interchange projects ranging in construction value from \$30 million to \$100 million, including interstate widening and other capacity improvement projects on heavily traveled Virginia highways. He specializes in the design of complex projects requiring a multi-discipline design team. As Design Manager, John is responsible for the complete design efforts, including interchange, roadway, bridge, retaining walls, H&H, traffic engineering, utility relocation, environmental compliance, ROW coordination and QA.</p> |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | West Virginia Institute of Technology (is now a division of West Virginia University) – Montgomery, West Virginia B.S. 1985 Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 1996 Professional Engineer VA Registration #0402026613 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> | |
| (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) | |
| Fairfax County Parkway Interchange at Fair Lakes Parkway Fairfax County, VA Project Role: Design Manager | Dates: October 2001 – October 2013 With Current Firm? Yes |
| Responsibility/Specific Job Duties: As <i>Design Manager</i> , John was responsible for the design, which widened Fairfax County Parkway (FCP) from four to six lanes for 2.3 miles, and provided an innovative split diamond interchange at Fair Lakes Parkway and Monument Drive. The interchange included two new bridges and over 43,000 SF of retaining walls. There were also minor modifications to the interchanges at I-66 and Route 50. John oversaw and coordinated all design elements, including interchange roadway, hydraulic, river mechanics, SWM, structural, utility relocation, ITS, traffic engineering, environmental permits, traffic forecast and analysis, public involvement, geotechnical engineering for retaining walls and bridge foundations, and Quality Assurance. He provided a leadership role in stakeholder outreach to the Homeowners' Associations, Fair Lakes League and the Fairfax County Park Authority to minimize ROW impacts. Extensive coordination with FHWA for the traffic forecasting and analysis due to the potential for operational impacts to the I-66 interchange. During construction, John attended progress and partnering meetings with the construction team, shop drawing review and technical support. Client: VDOT Construction Cost: \$44 Million | |
| Relevancy: Design of freeway improvements on a heavily traveled corridor in Northern Virginia allowing traffic operations to be maintained during all construction phases, developed a complex TMP, designed roadway and over 70,000 SF of sound barriers along the 2.3-mile corridor, roadway widening, ROW, utility design, permit sketch, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, and construction engineering. | |
| I-81 Widening and Bridge Replacements over Buffalo Creek and Maury River – Rockbridge County, VA Project Role: Design Manager | Dates: August 1999 – December 2007 With Current Firm? Yes |

Responsibility/Specific Job Duties: Mr. Maddox was the *Design Manager* responsible for the design of both projects under a single design contract. The project construction included **widening 2 miles of I-81 from four to six lanes**. The project included the replacement of the I-81 Bridge over Buffalo Creek with an approximate length of 600 feet and the bridge over Maury River with an approximate length of 800 feet. The design included a complex maintenance of traffic plan to maintain two lanes of traffic in each direction during all phases of construction. Mr. Maddox provided oversight and coordination for all elements of the design, including roadway, hydraulic, SWM, structural, geotechnical, environmental permits, public involvement, and Quality Assurance. Duties included coordination of the design with FHWA and VDOT staff. During construction provided shop drawing reviews and coordinated with the Construction Team. The projects received the 2008 ACEC Grand Award and the Buffalo Creek was awarded the "VDOT Virginia Statewide Construction Quality Award" and NPHQ Award "Breaking the Mold".

Client: VDOT | **Construction Cost:** \$45 million

Relevancy: The I-81 widening added one additional lane primarily in the median in each direction and total replacement of the existing pavement required a complex maintenance of traffic plan that carefully evaluated access points to the work zone. Similar elements of design include; roadway alignment/widening, ROW, survey, permit sketches, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction and engineering.

**Design-Build Fall Hill Avenue Widening and
Mary Washington Boulevard Extension – Fredericksburg, VA**
Project Role: Design Manager

Dates: March 2014 – January 2017

With Current Firm? Yes

Responsibility/Specific Job Duties: As *Design Manager*, John is responsible for WRA's design and construction inspection roles for this widening and reconstruction project of 2.2 miles of Fall Hill Avenue (FHA) and Mary Washington Blvd. (MWB), including a roundabout at the intersection with FHA and MWB. There is a five span, 419-foot long bridge over I-95 and future CD lanes. The proposed roadway is a four-lane divided curb and gutter section with a sidewalk on the south side and a shared-use path on the north side. The project has significant 4(f) coordination requirements and includes relocating/reconstructing Snowden Park with baseball fields and basketball courts. John is overseeing design elements, including roadway, hydraulic, SWM, bridge, retaining walls, sound barriers, utility relocation and coordination, traffic engineering, lighting, environmental coordination of permits, public involvement, ROW acquisition, park design, quality assurance and coordination during construction. **Design is completed on this Design-Build project.**

Client: VDOT | **Total Cost:** \$30.8 million

Relevancy: VDOT Design-Build, design of 3 sound barriers, maintenance of traffic on I-95, geology in the project area is similar to the I-95 Express Lane Extension requiring the evaluation of retaining walls and slopes in Potomac clays, roadway alignment/widening, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering and inspection.

**Route 123 Interchange at Route 1
Prince William County, VA**
Project Role: Design Manager

Dates: Dec. 2007 – Construction Plans:
Phase I – Sept. 2015; Phase II: June 2018
With Current Firm? Yes

Responsibility/Specific Job Duties: As *Design Manager*, John is responsible for the design of this tight urban interchange project at Route 123 and Route 1 and the widening from four to six lanes for 1.7 miles of Route 1 and Route 123 with sidewalks and shared-use path. The project requires three new bridges; Route 123 over Route 1, Route 123/Belmont Bay Drive over CSXT, and Route 1 over Marumsco Creek. The geotechnical analysis and design required careful consideration of settlement of the elevated MSE approaches to the bridges over Route 1 and CSXT tracks. The extensive improvements along the Route 1 corridor carefully considered access management for numerous commercial entrances in the vicinity of proposed signalized intersections. John oversees and coordinates all design elements, including surveys, interchange, roadway, hydraulics, river mechanics, SWM, structural, sound barriers, geotechnical, traffic engineering, utility design/coordination, ITS, TMP, traffic forecasting/analysis, permitting, public involvement and Quality Assurance. **Client:** VDOT | **Construction Cost:** \$83 Million (Utility Undergrounding, Phase I Widening & Phase II Interchange)

Relevancy: Geotechnical analysis carefully considered the poor soils (Potomac Clays) along the project, roadway alignment/widening, ROW, utility undergrounding/relocations, survey, permit sketches, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction & engineering.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. *N/A*

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

| | |
|---|--|
| Brief Resume of Key Personnel anticipated for the Project. | |
| a. Name & Title: | Steve Morris – Construction Manager |
| b. Project Assignment: | Construction Manager |
| c. Name of Firm with which you are now associated: | Branch Highways, Inc.  |
| d. Employment History: With this Firm <u>15</u> Years With Other Firms <u>22</u> Years | Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): |
| Construction Manager | Branch Highways, Inc. 2011 – Present Steve supervises trade and project superintendents to ensure that manpower, equipment, and subcontracted needs are being met and shared amongst multiple operations as needed so that schedules for projects are being met and the overall flow of the project is consistent. As part of that, he is responsible for communicating with his superintendents and foremen to assess operational labor and equipment needs, and ensuring that those resources are utilized effectively and efficiently. He promotes field employee development in all levels, and ensures that all work performed meets the highest of safety, quality, and environmental standards. Steve has a thorough understanding of project contracts, design plans/means and methods, company resources and assets, schedule, and budget. Steve will also lead the process of identification, communication, and implementation of best practices to ensure that all operations on the project are able to perform efficiently and safely, and that the order in which operations move through any specific area complement one another. |
| Superintendent | Branch Highways, Inc. 2007 – 2011 As a project-level superintendent, Steve was jointly responsible with the Project Manager for project success. He was responsible for developing and executing operational schedules that fulfill overall schedule requirements, controlling costs and maximizing production of all operations, as well as managing manpower, equipment, Quality Control, and environmental quality on assigned projects. Steve provided hands-on field supervision of construction operations, including subcontractors and other construction-related personnel by directing them in the planning, scheduling, execution of work on time, within budget, and with high standards of workmanship. Steve understands the necessity of and facilitates workplace safety while meeting or exceeding owner's expectations. |
| Superintendent | Angler Construction Company, Inc. 2002 – 2007 Steve was responsible for supervision of all construction activities onsite, manpower, equipment, materials, and QC management as a superintendent at Angler. He was responsible for long-and short-term planning and scheduling of projects to ensure timely delivery of critical milestones. |
| Superintendent | Ryan Incorporated Eastern 2000 – 2002 Steve was responsible for supervision of all construction activities onsite, manpower, equipment, materials, and QC management as a superintendent at Ryan. He was responsible for long-and short-term planning and scheduling of projects to ensure timely delivery of critical milestones. |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: | North Harford High School – Pylesville, MD 1981 |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: | 11/2008 VDOT Erosion Sediment Control Contractor Certification (ESCCC) #1-04468 01/2016 Virginia Responsible Land Disturber #RLD003353 11/2008 VDOT Intermediate Work Zone Traffic Control #112014010 01/2011 OSHA 30-Hour 02/2009 MSHA General Mineral Miner # 0010694 1981 First Aid/CPR GPB0P0 03/2013 ACI Concrete Field Testing Certification # 1210168 2009 Competent Person – Excavation |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. | 1. Note your role, responsibility, and specific job duties for each project, not those of the firm. 2. Note whether experience is with current firm or with other firm. 3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation. |
| (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) | |

**Design-Build/PPTA I-95 HOT/HOV Express Lanes
Segment 1 – Prince William and Stafford Counties, VA
Project Role: Construction Manager**

Dates: August 2011 – May 2015

With Current Firm? Yes

Responsibility/Specific Job Duties: Branch Highways was a key subcontractor for this project consisting of constructing 9 miles of new I-95 HOT Lanes in one of the most congested regional corridors in the US, from Dumfries to Stafford, at the current terminus of the Express Lanes. As **Construction Manager**, Steve managed and/or coordinated all construction for the entire length of Branch's portion of the project. Major items of work in this corridor were clearing, erosion and sediment control in highly sensitive areas, earthwork, extensive drainage improvements, MSE & soundwall construction, 2 new flyover bridges with interchange improvements, three sets of merge lanes with widened shoulders to provide ingress and egress to the newly constructed HOT/Express lanes, and installation of ITS & electrical devices. Steve was also responsible for initiating several Field Change Orders (FCO), which helped to mitigate issues arising from unforeseen field conditions and coordination of different sets of drawings. These FCO's improved coordination among all contractors onsite, resulting in an overall smoother project flow.

Client: Fluor-Lane 95, LLC (VDOT) | Total Branch Cost: \$47 Million

Relevancy: VDOT Design-Build, Express Lane construction, roadway alignment/widening, ROW acquisition, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

**Design-Build Route 15 James Madison Highway
Haymarket, VA**

Dates: February 2007 – December 2009

Project Role: Construction Superintendent

With Current Firm? Yes

Responsibility/Specific Job Duties: Steve was **Construction Superintendent** for this Design-Build/PPTA project for Prince William County that consisted of the widening of 22 lane miles of Route 15 from a two-lane roadway to a four-lane median divided facility along with improvements to adjacent secondary roadways. MOT during construction was a major component as this portion of Route 15 provides access to several large developments in the area and a multi-purpose recreational facility. There were three bridge structures spanning environmentally-sensitive areas, including live streams. Utility relocations included water and sanitary sewer public utilities and the electric, telephone, cable, fiber optic, and communication utilities servicing the area. There were five separate phases/roadways, which were delivered within a 3-year timeframe. Steve managed all construction, including QC activities to ensure materials used and work performed met the contract requirements, managed relationships and continuously coordinated with stakeholders that included two major developers, Prince William County Supervisors, local businesses, and VDOT, during construction.

Client: Prince William County | Total Cost: \$55 Million

Relevancy: VDOT Design-Build, roadway alignment/widening, new connector road, ROW acquisition, utility relocations, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

Lorton Road Improvements

Dates: May 2014 – August 2016 (projected)

Fairfax County, VA

Project Role: Construction Manager

With Current Firm? Yes

Responsibility/Specific Job Duties: Steve serves as the **Construction Manager** for this project that consists of widening/new construction of approx. 3 miles of existing Lorton Road & Furnace Road from 2 lanes to 4 lanes between Ox Road & Silverbrook Road in Lorton, VA. Steve's responsibilities on this project include sequencing and management of all activities on-site, ensuring Quality Control requirements are fulfilled, and communication/coordination with the client. Scope of work includes over 400,000 CY of onsite and borrow excavation, 15,000 LF of storm sewer, 8,000 LF of sanitary sewer and force main, 9,000 LF of large (>30") and 3,500 LF of small (8-12") water main, three retaining walls, two vehicular crossings over existing waterways, a precast pedestrian arch, and extensive Low Impact Development structure work. Working with Fairfax County, Steve and his project team have thus far been able to improve constructability and lessen impact on existing traffic flow by re-sequencing the project from its depiction on the plans. To date, multiple unforeseen site conditions and delays caused by others have impacted the critical path throughout this project; however, Steve's team has identified as many potential issues as possible ahead of these delays, and has successfully managed these challenges to minimize impact on projected completion date.

Client: Fairfax County | Total Cost: \$29 Million

Relevancy: Roadway alignment/widening, new connector road, ROW acquisition, utility relocation coordination, survey, environmental, geotechnical, and hydraulics analyses, TMP, public involvement/communications, QA/QC, construction engineering & inspection.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Current Project Assignment: Lorton Road Improvements, Fairfax County, VA

Current Project Role: Construction Manager

Anticipated Duration of Current Role: Summer 2016

systems, and over 216 miles of electrical, fiber optic, and communication cables throughout the construction of this 14-mile project – all in the midst of the building/re-routing of over fifty bridges and overpasses on the project. Kevin's specific responsibilities included providing design input, planning, directing, coordinating, and executing the ITS and electrical work for the project. **Client: Fluor-Lane, LLC | Construction Cost: \$42 Million**

Relevancy: The ITS/Electrical work and infrastructure components for the I-495 Capital Beltway Express Lanes is the same as what will be required for the I-95 Express Lanes Southern Terminus Extension project including installation of power, fiber optic, communication cables, generators, and all associated tolling equipment.

Design-Build/PPTA I-95 HOT/HOV Express Lanes

Dates: May 2014 – July 2015

Prince William and Stafford Counties, VA

Project Role: Project Manager

With Current Firm? Yes

Responsibility/Specific Job Duties: Kevin was responsible for allocation and assignment of over sixty (60) employees on this 28-mile project, with the specific goal of completing portions of the ITS (Intelligent Transportation System). In addition to manpower, Kevin also managed, supervised and coordinated installation of the majority of the ITS/Electrical components of the project including Dynamic Message Signs and Reversible Lane Signals, as well as large sections of communication power, and lighting for the project. Kevin's leadership, planning skills, and careful review of drawings for potential conflicts and subsequent proposed solutions were essential to the success of the ITS/Electrical components of this project's scope, as they will be to the I-95 Express Lanes Southern Terminus Extension Project.

Client: Fluor-Lane 95, LLC | Construction Cost: \$2.8 Million

Relevancy: The ITS/Electrical work and infrastructure performed for the I-95 HOT/HOV Lanes is identical to that required for the I-95 Express Lanes Southern Terminus Extension Project, as the two projects will actually tie into one another. Major components of work included installation of power, fiber optic, communication cables, reversible lane signals, generators, and all associated tolling equipment.

Elizabeth River Crossing Tolling Infrastructure

Dates: March 2012 – July 2015

City of Portsmouth, VA

Project Role: Project Manager

With Current Firm? Yes

Responsibility/Specific Job Duties: Kevin led a team providing communications, electrical, ITS, and associated underground and overhead infrastructure for toll locations along the Mid-Town and Down-Town Tunnels, as well as the MLK extension in Portsmouth, VA. He was responsible for management, procurement, installation, and quality of typical scope items, such as corridor lighting, generators, roadside ITS cabinets, and 143 traffic loops to support the ITS. In addition to these items that are fairly typical for a toll road project, Kevin also managed and developed a complex MOT/TMP plan for this project for the erection of several large, overhead gantries that spanned well of 160' of active roadway to ensure that minimal traffic impacts were induced on the two tunnels. After months of planning and coordination, the operations Kevin developed was executed successfully. Kevin's understanding of and ability to minimize traffic impacts, especially in highly congested areas will serve VDOT and its shareholders well on the I-95 Express Lanes Southern Terminus Extension.

Client: 3M | Construction Cost: \$2.5 Million

Relevancy: The ITS/Electrical work performed for the Elizabeth River Crossing is very similar to that required for the I-95 Express Lanes Southern Terminus Extension project including installation of power, fiber optic, communication cables, reversible lane signals, generators, and all associated tolling equipment.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. *N/A*

