

**FUNDING AND ADMINISTRATION AGREEMENT RELATING TO THE  
EXTENSION OF PACIFIC BOULEVARD**

Economic Development Authority of Loudoun County  
PROJECT NUMBER 1036-053-074  
Pacific Boulevard Widening and Extension  
UPC (T14454)

THIS AGREEMENT, made and executed in triplicate on this the \_\_\_\_ day of \_\_\_\_\_, 2013, between the COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION (hereinafter referred to as the "DEPARTMENT"), the Economic Development Authority of Loudoun County (hereinafter referred to as the "EDA"), and NA Dulles Real Estate Investor LLC (hereinafter referred to as the "Borrower").

WITNESSETH:

**WHEREAS**, the EDA and the Borrower have expressed their desire to have the DEPARTMENT administer work for (i) the expansion of Pacific Boulevard to the south of the intersection with Gloucester Parkway from two to four lanes and (ii) construction of a four lane extension of Pacific Boulevard from the intersection with Gloucester Parkway north to an intersection with Russell Branch Parkway in Loudoun County, Virginia (hereinafter referred to as the "Project"), as further described in Appendix A;

**WHEREAS**, the Project has been identified as a high priority highway construction project by Loudoun County and the Project is included in Loudoun County's transportation plan;

**WHEREAS**, the Project, together with a separate priority highway construction project being undertaken by Loudoun County to extend Gloucester Parkway, are expected to reduce congestion along Route 7, Route 28, and Waxpool Road by providing alternative east-west routes of travel within the Route 28 corridor;

**WHEREAS**, following construction, the Project will be a public road operated and maintained by the Department;

**WHEREAS**, in order to fund construction of the Project, the EDA intends to issue and sell a bond in the original principal amount of \$36,000,000 (the "Bond") to the Virginia Resources Authority (hereinafter referred to as the "VRA"), as manager of the Virginia Transportation Infrastructure Bank (hereinafter referred to as the "VTIB"), pursuant to that certain Bond Purchase and Loan Agreement among the EDA, the VRA, and the Borrower dated [●], 2013 (hereinafter referred to as the "Loan Agreement"), attached hereto as Appendix B;

**WHEREAS**, [following sale of the Bond, the EDA will assign the proceeds of the Bond to the VRA, and the VRA, as manager of VTIB, will cause the VTIB to use the proceeds of the Bond to make a loan to the Borrower, the proceeds of which will be used to, among other things, finance, design, and construct the Project]; [Note – Bracketed language to be conformed to the BPLA]

**WHEREAS**, this innovative financing arrangement will enable the DEPARTMENT to greatly accelerate delivery of the Project as the DEPARTMENT currently lacks funding for the Project;

**WHEREAS**, the funds as shown in Appendix C to this Agreement will be made available by the Borrower to pay for the design and construction of the Project, pursuant to the Loan Agreement;

**WHEREAS**, the DEPARTMENT has agreed to administer the design and construction of the Project;

**WHEREAS**, such design and construction work will be performed pursuant to a change order to that certain comprehensive agreement to develop, design, and construct the Route 28 corridor improvements dated September 25, 2002 (as amended or otherwise modified from time to time) (hereinafter referred to as the “Change Order” and attached hereto as Appendix A), as the Project is within the scope of the Route 28 corridor improvements;

**WHEREAS**, the EDA and the Borrower concur in the DEPARTMENT's administration of the Project in accordance with applicable federal, state, and local laws and regulations; and

**WHEREAS**, the EDA's governing body has, by resolution, which is attached hereto as Appendix D, authorized its Chairman or Vice Chairman to execute this Agreement; and

**WHEREAS**, the DEPARTMENT, the EDA, and the Borrower desire herein to set forth additional terms related to the Project, including the responsibility for the payment of all costs for the design and construction of the Project.

**NOW THEREFORE**, in consideration of the promises and mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the DEPARTMENT, the EDA, and the Borrower hereto agree as follows:

- A. The DEPARTMENT shall:
  1. Complete or cause to be completed the design and construction of the Project in accordance with the schedule for such work as further described in Appendix A to this Agreement.

2. Perform or have performed, and remit all payments for, all preliminary engineering, right-of-way acquisition, construction, contract administration, and inspection services activities for the Project as required.
  3. Provide a summary of the progress of the Project once per month to the EDA, the VRA, and the Borrower.
  4. Submit invoices monthly to the EDA, the VRA, and the Borrower for the full reimbursement of the DEPARTMENT's costs and expenses incurred in performing the work related to the Project described herein.
  5. Notify the EDA, the VRA, and the Borrower of any additional costs and expenses related to the Project resulting from unanticipated or unforeseen circumstances and provide, or cause to be provided, detailed estimates of any such additional costs and expenses; *provided however*, that the DEPARTMENT will not expand the scope of the Project as described in the Change Order to the extent such expanded scope would effectively increase the cost of the Project above the proceeds available under the Bond without the prior agreement of the EDA, the VRA, and the Borrower with respect to how such expanded scope will be funded.
  6. Return any unexpended funds to the Borrower, on behalf of the EDA, no later than 90 days after the Project has been completed and all final costs and expenses for the Project have been paid in full in accordance with this Agreement.
- B. The Borrower, on behalf of the EDA, shall:
1. Provide all necessary funds to the DEPARTMENT for preliminary engineering, right of way acquisition, construction, contract administration, and inspection services as set forth in Appendix C.
  2. Pay to the DEPARTMENT any and all additional costs and expenses related to the Project resulting from unanticipated or unforeseen circumstances including, but not limited to, any additional costs and expenses for preliminary engineering, right-of-way acquisition, construction, contract administration, and inspection services.
  3. Provide to the DEPARTMENT a payment bond or irrevocable standby letter of credit (in a form acceptable to the DEPARTMENT) as payment security for any cost overruns equal to ten percent of the lesser of (i) the total cost of the Project, including estimated costs for the acquisition of right-of-way, as set

forth in the Change Order and (ii) the amount of the Bond. If the payment security provided to the Department is an irrevocable standby letter of credit, the DEPARTMENT shall be entitled to draw such letter of credit if the Borrower fails to make payment for additional costs and expenses within 90 days of the DEPARTMENT submitting an invoice for such additional costs and expenses.

- C. The DEPARTMENT shall not be required to undertake any activities related to the design and construction of the Project until the Borrower, on behalf of the EDA, has provided the payment security described in subparagraph B(3) above. The DEPARTMENT agrees to release any such payment security promptly upon the Borrower's request therefor, such request having been made with the concurrence of the EDA and the VRA, *provided* a final determination has been made by the DEPARTMENT that: (i) the right-of-way for the Project has been acquired; (ii) there remains sufficient undisbursed proceeds under the Loan Agreement to pay all costs and expenses related to the acquisition of such right-of-way; and (iii) there remains sufficient undisbursed proceeds under the Loan Agreement to pay for all costs and expenses to be incurred with respect to the Project. In no event shall the DEPARTMENT's release of any such payment security pursuant to this subparagraph C be deemed a release or waiver of the Borrower's indemnity obligation set forth in subparagraph D below.
- D. Notwithstanding any other provision of this Agreement, the Borrower, on behalf of the EDA, shall indemnify, defend, and hold harmless the DEPARTMENT and the EDA against any losses or liabilities incurred by the DEPARTMENT or the EDA in addition to or in excess of the total amount recovered by the DEPARTMENT from the payment security described in paragraph B(3) above in carrying out its obligations under this Agreement, including but not limited to any third-party claims relating to financing, design, and construction of the Project.
- E. [The EDA's total financial and administrative responsibility to the DEPARTMENT and to the Borrower with respect to this Agreement is limited solely to assigning the proceeds of the Bond in the amount of \$36 million to VTIB, to ultimately be made available to the Borrower, pursuant to and as provided in the Loan Agreement.] [Note – Bracketed language to be conformed to the BPLA]
- F. The DEPARTMENT, the EDA, and the Borrower mutually agree and acknowledge, in entering this Agreement, that the individuals acting on behalf of the Parties are acting within the scope of their official authority and the parties agree that no party will bring a suit or assert a claim against any official, officer, or employee of any party, in their individual or personal capacity, for a breach or violation of the terms of this Agreement or to otherwise enforce the terms and conditions of this Agreement. The

foregoing notwithstanding and subject to subparagraph G below, nothing in this subparagraph shall prevent the enforcement of the terms and conditions of this Agreement by or against any party in a competent court of law.

- G. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia. All litigation between the parties arising out of or pertaining to this Agreement will be heard and decided in the Circuit Court for the City of Richmond, John Marshall Courts Building, Richmond, Virginia, which will have exclusive jurisdiction and venue.
- H. If any term or provision of this Agreement, the deletion of which would not adversely affect the receipt of any material benefit by either party hereunder, will be held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement will be valid and enforceable to the fullest extent permitted by applicable law.
- I. The DEPARTMENT, the EDA, and the Borrower acknowledge and agree that this Agreement has been prepared jointly by the parties, that each party has been given the opportunity to review this Agreement with legal counsel, and that each party has the requisite experience and sophistication to understand, interpret, and agree to the particular language of the provisions hereof. Accordingly, this Agreement will not be interpreted or construed against the party preparing it. The language in all parts of this Agreement will in all cases be construed simply and in accordance with its fair meaning and not strictly for or against any party.
- J. This Agreement, when properly executed, shall be binding upon the parties, their successors, and assigns.
- K. This Agreement may be modified in writing upon mutual agreement of the DEPARTMENT, the EDA, and the Borrower.

[THE REMINDER OF THIS PAGE INTENTIONALLY LEFT BLANK, SIGNATURE  
PAGE(S) TO FOLLOW]

**IN WITNESS WHEREOF**, the parties, intending to be legally bound, have executed this Agreement on the date first written above.

ECONOMIC DEVELOPMENT AUTHORITY OF LOUDOUN COUNTY,  
VIRGINIA:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed or Printed Name of Signatory Date

\_\_\_\_\_  
Signature of Witness Date

NA DULLES REAL ESTATE INVESTOR LLC:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Typed or Printed Name of Signatory Date

\_\_\_\_\_  
Signature of Witness Date

COMMONWEALTH OF VIRGINIA, DEPARTMENT OF  
TRANSPORTATION:

\_\_\_\_\_  
Commissioner of Highways  
Commonwealth of Virginia  
Department of Transportation Date

\_\_\_\_\_  
Signature of Witness Date

## APPENDIX A

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
**CHANGE ORDER**

Contract ID. No.: Route 28 Corridor Improvements FHWA No.: NONE Work Order No.: 75  
 State Project No.: 1036-053-074 (Associated With) 0028-053-114, PE101, RW201, C501 Category: "ADD"  
 Original Contract Value \$ 188,984,970 Total of Other Work Orders \$ 187,483,363

NOTE: If additional space is needed, use an additional sheet(s) and label as Supplemental Attachment #.

I. LOCATION AND DESCRIPTION OF PROPOSED WORK:

See Supplemental Attachment # 1

II. RESPONSIBLE CHARGE ENGINEER'S EXPLANATION OF NECESSITY FOR PROPOSED WORK:

See Supplemental Attachment # 1

III. FUNDING SOURCE/CHARGE UPC 105331

IV. THE FIXED DATE TIME LIMIT FOR THIS CONTRACT PRIOR TO APPROVAL OF THIS WORK ORDER IS 7/23/2014

V. THE FIXED DATE TIME LIMIT FOR THIS CONTRACT UPON APPROVAL OF THIS WORK ORDER IS 12/31/2015

VI. ESTIMATE OF PROPOSED WORK:

ITEM CODE	SPEC. NO.	PCN NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	INCREASE	DECREASE	
			Phase I Nokes Blvd. to Fire Station	1	L.S.	\$338,000	\$338,000		
			Phase II Fire Safety Center to Broad One	1	L.S.	\$11,081,500	\$11,081,500		
			Phase III Broad Run to Russell Branch Pkwy.	1	L.S.	\$15,080,500	\$15,080,500		
			Phase IV Nokes Blvd. to Severn Way	1	L.S.	\$1,447,000	\$1,447,000		
			Payment and Performance Bond	1	L.S.	\$137,000	\$137,000		
NET Increase/Decrease:							\$28,084,000		
NET TOTAL							\$28,084,000		

I/WE hereby agree to perform and/or non-perform as indicated, the work described herein and at the unit prices set forth and that such work shall be performed in accordance with the contract provisions and specifications and/or other provisions incorporated herein. Further I/WE hereby agree that the quantities set forth herein will be subject to adjustment and, unless otherwise stated, the unit prices set forth herein will be applicable to the adjusted quantities.

Contractor Route 28 Corridor Improvements, LLC BY [Signature] 11/20/13  
 (Firm's Name) (Officer of the Firm) Date

RECOMMENDED FOR APPROVAL:

Susan Law Project Mgr. 11-1-13 [Signature] DCE 11-1-13  
 RECOMMENDED BY TITLE DATE RECOMMENDED BY TITLE DATE

APPROVED:

APPROVED BY\* (VDOT) TITLE DATE

APPROVED:

APPROVED BY (FHWA) TITLE DATE

\* See CD-2010-01 for Process and Authorities

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
**WORK ORDER**

Supplemental Attachment # 1

Contract ID. No.: Route 28 Corridor Improvements FHWA No.: NONE Work Order No.: 75

State Project No.: 1036-053-074 (Associated With) 0028-053-114, PE101, RW201, C501

**LOCATION AND DESCRIPTION OF PROPOSED WORK:**

This work is being accomplished in accordance with the Comprehensive Agreement to Develop, Design and Construct Route 28 Corridor Improvements dated September 25, 2002. Project funding will be provided through a Virginia Transportation Infrastructure Bank loan through Virginia Resources Authority.

This work will include the following work:

- a. Pacific Boulevard Phase I: Complete all remaining work on the phase I portion of the existing contract agreement described in Change Order No. 69;
- b. Pacific Boulevard Phase II: Construct a 4-lane divided roadway, from the northern end of the phase I project limits to approximate Station 69+84 as shown on approved Urban Engineering Plans dated July 6, 2011;
- c. Pacific Boulevard Phase III: Design and construct a 4-lane undivided roadway, from phase II northern limits (approximate Station 69+84) north across Broad Run and connecting with existing Russell Branch Parkway at Richfield Way;
- d. Pacific Boulevard Phase IV: Design and construct the remaining 2 lanes of the ultimate 4-lane divided roadway, from the intersection of Nokes Boulevard/Pacific Blvd. south to existing Severn Way.

Please see attachment 1 "Scope of Work" on Route 28 Corridor Improvements, LLC proposal letter dated September 5, 2013.

The work shall be done in accordance with 2007 Road and Bridge Specifications, 2008 R&B Standards, contract Special Provisions and/or as directed by the Engineer. The unit price specified shall be considered full compensation for all labor, equipment, materials, incidentals, overhead and profit necessary to fully complete the work as outlined.

**RESPONSIBLE CHARGE ENGINEER'S EXPLANATION OF NECESSITY FOR PROPOSED WORK:**

This scope for the extension of Pacific Boulevard is included in Part C-2 Section A of Appendix 6 of the Comprehensive agreement.

The Notice of Proceed for this work will be given once funding availability has been obtained.

The Route 28 Corridor Improvements, LLC and VDOT agree that this Work Order fully resolves and settles all claims, demands, damages of any kind relating to or arising out of the work set forth in this Work Order, including, but not limited to, delay, impact and acceleration for Route 28 Corridor Improvements, LLC and their subcontractors.

Attachment:  
**SCC Letter Dated September 5, 2013**  
**Attachment 1-A**



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive  
Fairfax, VA 22030

**GREGORY A. WHIRLEY**  
COMMISSIONER

October 21, 2013

Mr. Jon Harmon  
Route 28 Corridor Improvements, LLC  
45240 Business Court, Suite 150  
Dulles, VA 20166

**Subject: Route 28 Corridor Improvements  
Fixed Price Change Orders No. 75**

Dear Mr. Harmon:

Attached is the above noted change order, please have it signed by an officer of your company and return for further processing.

If you have any questions or need additional information, please contact me at (703) 259-2939.

Sincerely,

A handwritten signature in blue ink that reads "William H. Atkins, CCM".

William H. Atkins, CCM  
Construction Manager

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION  
**WORK ORDER**

Supplemental Attachment # 1

Contract ID. No.: Route 28 Corridor Improvements FHWA No.: NONE Work Order No.: 75

State Project No.: 1036-053-074 (Associated With) 0028-053-114, PE101, RW201, C501

**LOCATION AND DESCRIPTION OF PROPOSED WORK:**

This work is being accomplished in accordance with the Comprehensive Agreement to Develop, Design and Construct Route 28 Corridor Improvements dated September 25, 2002. Project funding will be provided through a Virginia Transportation Infrastructure Bank loan through Virginia Resources Authority.

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- b. Pacific Boulevard Phase II: Construct a 4-lane divided roadway, from the northern end of the phase I project limits to approximate Station 69+84 as shown on approved Urban Engineering Plans dated July 6, 2011;
- c. Pacific Boulevard Phase III: Design and construct a 4-lane undivided roadway, from phase II northern limits (approximate Station 69+84) north across Broad Run and connecting with existing Russell Branch Parkway at Richfield Way;
- d. Pacific Boulevard Phase IV: Design and construct the remaining 2 lanes of the ultimate 4-lane divided roadway, from the intersection of Nokes Boulevard/Pacific Blvd. south to existing Severn Way.

Please see attachment 1 "Scope of Work" on Route 28 Corridor Improvements, LLC proposal letter dated September 5, 2013.

The work shall be done in accordance with 2007 Road and Bridge Specifications, 2008 R&B Standards, contract Special Provisions and/or as directed by the Engineer. The unit price specified shall be considered full compensation for all labor, equipment, materials, incidentals, overhead and profit necessary to fully complete the work as outlined.

**RESPONSIBLE CHARGE ENGINEER'S EXPLANATION OF NECESSITY FOR PROPOSED WORK:**

This scope for the extension of Pacific Boulevard is included in Part C-2 Section A of Appendix 6 of the Comprehensive agreement.

The Notice of Proceed for this work will be given once funding availability has been obtained.

The Route 28 Corridor Improvements, LLC and VDOT agree that this Work Order fully resolves and settles all claims, demands, damages of any kind relating to or arising out of the work set forth in this Work Order, including, but not limited to, delay, impact and acceleration for Route 28 Corridor Improvements, LLC and their subcontractors.

Attachment:  
**SCC Letter Dated September 5, 2013**  
**Attachment 1-A**

September 5, 2013

Virginia Department of Transportation  
4975 Alliance Drive  
Fairfax, Virginia 22030

**ROUTE 28**  
PUBLIC/PRIVATE PARTNERSHIP

CLARK SHIRLEY

Attention: Ms. Susan Shaw  
Program Manager

Reference: **ROUTE 28 CORRIDOR IMPROVEMENTS PROJECT**  
***Subject: Pacific Boulevard Extension Project***

Dear Ms. Shaw:

As contemplated in the scope of the Route 28 Comprehensive Agreement, we are pleased to present this Proposal for the completion of the design and construction of segments of the extension of Pacific Boulevard.

The following is a summary of the Attachments included:

- Attachment 1: Scope of Work
- Attachment 1-A: Revisions to Standards
- Attachment 2: Contract Price
- Attachment 3: Allowance for Right of Way Acquisition Costs
- Attachment 4: *(not used)*
- Attachment 5: Projected Cash Flow
- Attachment 6: Preliminary Schedule
- Attachment 7: *(not used)*
- Attachment 8: *(not used)*

These improvements are proposed in anticipation of the upcoming approval of the Virginia Transportation Infrastructure Bank (VTIB) loan between the Virginia Resources Authority (VRA) and the Kincora development.

Should you have any questions, please contact me.

Sincerely,



Jon F. Harman  
Vice President

cc:  
File  
CO File 91059

## Attachment 1 – Scope of Work

Appendix 6 of the Design-Build Contract dated September 25, 2002 is revised as follows:

This proposal includes and is based on the following:

### General:

1. All terms, conditions and requirements of the *Comprehensive Agreement to Develop, Design and Construct Route 28 Corridor Improvements* dated September 25, 2002, unless specifically modified herein.
2. This Proposal includes the work necessary to perform the following:
  - a. Pacific Boulevard Phase I: Complete all remaining work on the Phase I portion of the existing Contract Agreement with NA Dulles Real Estate Investor, LLC dated November 28, 2011 and described in Work Order No. 69;
  - b. Pacific Boulevard Phase II: Construct a 4-lane divided roadway, from the northern end of the Phase I project limits to approximate Station 69+84 as shown on approved Urban Engineering Plans dated July 6, 2011;
  - c. Pacific Boulevard Phase III: Design and construct a 4-lane undivided roadway, from the Phase II northern limits (approximate Station 69+84) north across Broad Run and connecting with existing Russell Branch Parkway at Richfield Way;
  - d. Pacific Boulevard Phase IV: Design and construct the remaining 2 lanes of the ultimate 4-lane divided roadway, from the intersection of Nokes Blvd./Pacific Blvd. south to existing Severn Way.
3. Based on a Notice to Proceed (NTP) of October 1, 2013, Substantial Completion will be achieved by September 7, 2015 and Final Completion by December 31, 2015.
4. All existing commitments to various review and approval timeframes by VDOT in the Comprehensive Agreement. These commitments are critical to the successful completion of the project and are therefore specifically incorporated in this proposal.
- \* 5. Replacement of the “Standards” section of Appendix 6 of the Design-Build Agreement by the enclosed Attachment 1-A.
6. Continuing the public relations program established on the current project including the website, newsletters, notices, events, and public information meetings.
7. Perform Development Management services as necessary to provide overall management and oversight of the work included in this Proposal.
8. Proposal includes the cost to plan and hold one (1) Public Hearing for the scope of work included herein as Phase III. Additional scope resulting from the Public Hearing process is not included.
9. Perform geotechnical investigations and recommendations as needed to obtain approved construction plans. Proposal includes earthwork as unclassified; however, unusual subsurface features that could not be reasonably anticipated (ie: caverns, trash dump, etc.) are not included.
10. Provide aerial mapping; field surveys; Phase I cultural resource reviews; wetland/stream permitting and mitigation outside of current NA Dulles property;

and H&HA. All permitting and mitigation required within NA Dulles property will be provided by NA Dulles at no cost to the Project.

11. Final alignment of the Phase III scope of work will be resolved in the Public Hearing process. Proposal includes an ultimate alignment that does not impact the Toll House property, does not impact the existing residential buildings on Parcels 002 and 004, maintains the "backyard" area of Parcel 002, and remains within the limits of the "envelope" previously approved by the Loudoun County Board of Supervisors. Access to all properties, via the existing driveways, will be maintained at all times.
12. Administration of the right-of-way process as necessary for Phase III including title reports, appraisals, offers, negotiations, settlements, and preparation of the certificate of take documents. Actual costs for right-of-way, easements, relocations, damages, or any other cost(s) paid directly to landowners are not included. Proposal assumes that all right-of-way and easements required on NA Dulles property will be provided at no cost to the Project and in a timeframe necessary to meet the Project Schedule.
13. Temporary striping only as necessary to open completed portions of Pacific Boulevard prior to the completion of Gloucester Parkway (to be completed by others outside of this Work Order).
14. Provide two (2) Loudoun County standard bus shelters, one each in Phases II and III.
15. Perform relocation of existing utilities in conflict with the work.
16. Completion of a LOMR for Phase I.
17. Pavement Section for Phase III shall match the approved Phase I & II pavement sections. Phase IV pavement section shall match the section constructed for the interim 2-lanes previous completed as part of the Route 28/Nokes Boulevard Interchange.
18. Proposal includes Loudoun Water inspection and water usage fees, but excludes bonding requirements, if any.
19. The following scope issues are excluded from this Proposal:
  - a. The realignment, reconstruction, milling or overlay of any existing roadway at the tie-in point(s) for the scope of this work; noise barrier walls; lighting; signalization; overhead signage; traffic studies; environmental permitting for any work on current NA Dulles property; and hazardous materials (other than those specifically listed).
  - b. Payment and performance bonds.
  - c. VDOT administration, plan review, or any other costs and fees by any other party.
  - d. Any work resulting from or related to DCWASA including protection, relocation or other accommodations of any kind.

## Attachment 1-A

### Revisions to Design-Build Agreement Appendix 6 – Standards:

- AASHTO A Policy on Geometric Design of Highways and Streets (2004).
- VDOT Road Design Manual, Vol. I (2005)
- VDOT Survey Manual – April 2010 Edition
- VDOT Manual of Instructions for Material Division
- AASHTO LRFD Bridge Design Specifications, 4<sup>th</sup> Edition 2007, with 2008 and 2009 Interims and VDOT Modifications
- VDOT Manual of Structure and Bridge Division, Vol. V (all current)
- AASHTO's Manual of Bridge Evaluation, 1<sup>st</sup> Edition, 2008
- USDOT FHWA Standard Highway Signs (2004)
- AASHTO Guide for Design of Pavement Structures (Rigid Pavement and Flexible Pavement), 1993 Edition
- VDOT Guidelines for 1993 AASHTO Pavement Design, Revised – May 2003
- Special Provision for Density Control of Embankments and Backfill
- Special Provision for Construction of Deep Foundation Systems
- 2011 Virginia Work Area Protection Manual,
- National Electric Code (NEC),
- 2003 Manual of Uniform Traffic Control Devices (MUTCD)
- VA Supplement to MUTCD
- VDOT Traffic Engineering Design Manual, 2006
- VDOT Right of Way and Utilities Division Manuals, Vol. I (July 1999) and II (November 2003)
- VDOT Land Use Permit Manual, 1983
- VDOT Policy Manual for Public Participation in Transportation Projects (Revised January 22, 2010)
- VDOT Instructional & Information Memorandums (I&IM) All Divisions
- VDOT Road and Bridge Standards, Vol. 1 and Vol. 2 (2008)
- VDOT Road and Bridge Specifications (2007), including all revisions
- Virginia Stormwater Management Handbook (First Edition – 1999)
- DCR Stormwater Management, 1st Edition, 1999
- Virginia Erosion and Sediment Control Handbook (Third Edition – 1992)
- VDOT Stormwater and Erosion and Sediment Control Program Manual, March 2004
- VDOT 2002 Drainage Manual (Revised 2009)
- VDOT Hydraulic Design Advisories (all current)
- VDOT CADD Manual, Version 2009
- VDOT Construction Manual, 2005
- VDOT Post Construction Manual, 2009
- VDOT Construction Inspection Manual, April 2008

- **Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities**
- **Transportation Research Board Highway Capacity Manual, Fourth Edition, 2000**
- **Mobility Management Division Memoranda**

Attachment 2 - Contract Price

Appendix 2 of the Design-Build Contract dated September 25, 2002 is revised as follows:

**PART C-2**

**Section B - Pacific Boulevard Segments**

**Phase I - Nokes Boulevard to Fire Safety Center (FSC)**

<b>Hard Costs:</b>		
Construction	\$	300,000
Utility Relocation Construction	\$	-
Subtotal Hard Costs:	\$	300,000
<b>Soft Costs:</b>		
Right of Way Administration	\$	-
Utility Relocation Administration	\$	-
Design and Engineering	\$	5,500
QA/CIP	\$	32,500
Wetland and Stream Mitigation	\$	-
Development Management	\$	-
Construction Management	\$	-
Mobilization	\$	-
Subtotal Soft Costs:	\$	38,000
<b>TOTAL FIXED PRICE:</b>	\$	338,000
<b>Allowances:</b>		
Right of Way Acquisitions	\$	-
Subtotal Allowances:	\$	-
<b>TOTAL - Phase I:</b>	\$	338,000

Attachment 2 - Contract Price

Appendix 2 of the Design-Build Contract dated September 25, 2002 is revised as follows:

**PART C-2**

**Section B - Pacific Boulevard Segments**

**Phase II - Fire Safety Center (FSC) to Broad Run**

**Hard Costs:**

Construction	\$	9,442,000
Utility Relocation Construction	\$	800,000
<b>Subtotal Hard Costs:</b>	\$	<b>10,242,000</b>

**Soft Costs:**

Right of Way Administration	\$	-
Utility Relocation Administration	\$	20,000
Design and Engineering	\$	39,500
QA/CIP	\$	560,000
Wetland and Stream Mitigation	\$	-
Development Management	\$	-
Construction Management	\$	25,000
Mobilization	\$	175,000
<b>Subtotal Soft Costs:</b>	\$	<b>819,500</b>

**TOTAL FIXED PRICE:** \$ **11,061,500**

**Allowances:**

Right of Way Acquisitions	\$	-
<b>Subtotal Allowances:</b>	\$	<b>-</b>

**TOTAL -Phase II:** \$ **11,061,500**

**Phase III - Broad Run to Russell Branch Parkway**

**Hard Costs:**

Construction	\$	12,388,000
Utility Relocation Construction	\$	145,000
<b>Subtotal Hard Costs:</b>	\$	<b>12,533,000</b>

**Soft Costs:**

Right of Way Administration	\$	70,000
Utility Relocation Administration	\$	10,000
Design and Engineering	\$	805,000
QA/CIP	\$	962,500
Wetland and Stream Mitigation	\$	275,000
Development Management	\$	175,000
Construction Management	\$	25,000
Mobilization	\$	225,000
<b>Subtotal Soft Costs:</b>	\$	<b>2,547,500</b>

**TOTAL FIXED PRICE:** \$ **15,080,500**

**Allowances:**

Right of Way Acquisitions	\$	307,809
<b>Subtotal Allowances:</b>	\$	<b>307,809</b>

**TOTAL -Phase III:** \$ **15,388,309**

Attachment 2 - Contract Price

Appendix 2 of the Design-Build Contract dated September 25, 2002 is revised as follows:

**PART C-2**

**Section B - Pacific Boulevard Segments**

**Phase IV - Nokes Boulevard to Severn Way**

**Hard Costs:**

Construction	\$	1,140,000
Utility Relocation Construction	\$	-
<b>Subtotal Hard Costs:</b>	<b>\$</b>	<b>1,140,000</b>

**Soft Costs:**

Right of Way Administration	\$	-
Utility Relocation Administration	\$	-
Design and Engineering	\$	137,000
QA/CIP	\$	125,000
Wetland and Stream Mitigation	\$	-
Development Management	\$	40,000
Construction Management	\$	5,000
Mobilization	\$	-
<b>Subtotal Soft Costs:</b>	<b>\$</b>	<b>307,000</b>

**TOTAL FIXED PRICE: \$ 1,447,000**

**Allowances:**

Right of Way Acquisitions	\$	-
<b>Subtotal Allowances:</b>	<b>\$</b>	<b>-</b>

**TOTAL -Phase IV: \$ 1,447,000**

<b>SUMMARY - PHASES I-IV:</b>		
<b>TOTAL - FIXED PRICE:</b>	<b>\$</b>	<b>27,927,000</b>
<b>TOTAL - ALLOWANCES:</b>	<b>\$</b>	<b>307,809</b>
<b>GRAND TOTAL:</b>	<b>\$</b>	<b>28,234,809</b>



Parcel No.	GPIN No.	Landowner Name	DAMAGES TO PROPERTY							Subtotal	Comments
			Qty	Cost	Building Reconst. Cost	Relocation Cost	Total	Other Damages			
								Cost/ per space	Total		
7A	040-39-0661-000	Murphy, Alfred E. & Mary C.	1	\$ 55,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8A	040-39-5426-000	Pabbant, Mark & F Citizen	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Tennis Court & Out bldg.
<b>SUBTOTALS:</b>			<b>2</b>	<b>\$ 55,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 55,000</b>	

**TOTAL \$55,000**

Appendix 12 of the Design-Build Contract dated September 27, 2012 is revised as follows:

**Projected Cash Flow**

Description	Period Ending		January	February	March	April	May	June	July	August	September	October	November	December	January		
	2013	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2015		
Total Value	#1	#2	#3	#4	#5	#6	#9	#10	#10	#11	#12	#13	#14	#15	#16		
<b>A. COSTS INCLUDED IN PROPOSAL:</b>																	
<b>1. HARD COSTS</b>																	
<b>1.1. CONSTRUCTION COSTS</b>																	
Phase I	\$ 6,100.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ 6,413.00	\$ 50.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 2,388.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 1,400.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 10,301.00	\$ 50.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>1.2. UTILITIES, RELOCATION, CONSTRUCTION</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ 900.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 18,100.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 19,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>TOTAL HARD COSTS: \$ 29,301.00</b>																	
<b>2. SOFT COSTS:</b>																	
<b>2.1. ROW ADMINISTRATION</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 7,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 7,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.2. UTILITIES, RELOCATION, ADMINISTRATION</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 3,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 6,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 9,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.3. DESIGN &amp; ENGINEERING</b>																	
Phase I	\$ 4,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ 9,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 21,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.4. OAKS</b>																	
Phase I	\$ 32,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ 560.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 962.500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 25,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 1,020,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.5. METLAND AND STREAM MITIGATION</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 215,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 215,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.6. REDEVELOPMENT MANAGEMENT</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 40,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 45,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.7. CONSTRUCTION MANAGEMENT</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 24,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 25,300.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 49,300.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>2.8. MOBILIZATION</b>																	
Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase III	\$ 75,300.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phase IV	\$ 225,300.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal:	\$ 300,600.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>TOTAL SOFT COSTS: \$ 3,712,000.00</b>																	
<b>TOTAL HARD AND SOFT COSTS: \$ 27,927,000.00</b>																	
<b>CASH FLOW (Costs Included in Proposal):</b>																	
MONTHLY TOTALS:	\$ 316,098	\$ 699,196	\$ 693,489	\$ 643,092	\$ 407,294	\$ 1,060,174	\$ 1,964,445	\$ 2,058,848	\$ 2,202,313	\$ 1,729,026	\$ 668,857	\$ 870,786	\$ 437,857	\$ 547,857	\$ 17,598,714	\$ 16,958,857	\$ 16,958,857
CUMULATIVE TOTALS:	\$ 27,927,000	\$ 316,098	\$ 699,196	\$ 1,618,783	\$ 2,261,875	\$ 2,669,168	\$ 3,729,342	\$ 4,916,300	\$ 6,876,797	\$ 8,641,241	\$ 10,700,089	\$ 12,902,402	\$ 14,641,429	\$ 15,250,286	\$ 16,121,071	\$ 16,958,857	\$ 17,598,714

Appendix 2 of the Design-Build Contract dated September 25, 2002 is revised to show

**Projected Cash Flow**

Description	Period Ending		October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	
	2013	2013	2013	2013	2013	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2015	
	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	4	
Phase I																			
Phase II																			
Phase III																			
Subtotal:																			
<b>B. COSTS EXCLUDED FROM PROPOSAL:</b>																			
STATE ADMINISTRATION																			
STATE ADMINISTRATION (NET OF ESTIMATE @ 2.75%)	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540
Subtotal:	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540
<b>TOTAL EXCLUDED FROM PROPOSAL:</b>	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540	\$ 515,540
<b>CASH FLOW (Costs Excluded from Proposal):</b>																			
MONTHLY TOTALS	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322	\$ 6,322
CUMULATIVE TOTALS:	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349	\$ 866,349
<b>CASH FLOW TOTAL:</b>																			
MONTHLY TOTALS	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028	\$ 312,028
CUMULATIVE TOTALS:	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349	\$ 28,793,349



Appendix 12 of the Design-Build Contract dated September 25, 2002, as revised has (all)

**Projected Cash Flow**

Description	Inward Ending		March		April		May		June		July		August		September		October		November		December	
	2015	Total Value	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5	2015	01/5
Phase I	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
Phase II	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
Phase III	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
Phase IV	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
Subtotal	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	

**B. COSTS EXCLUDED FROM PROPOSAL:**

B. COSTS EXCLUDED FROM PROPOSAL:	
Phase I	\$
Phase II	\$
Phase III	\$
Phase IV	\$
Subtotal	\$

**INVOICING ADMINISTRATION:**

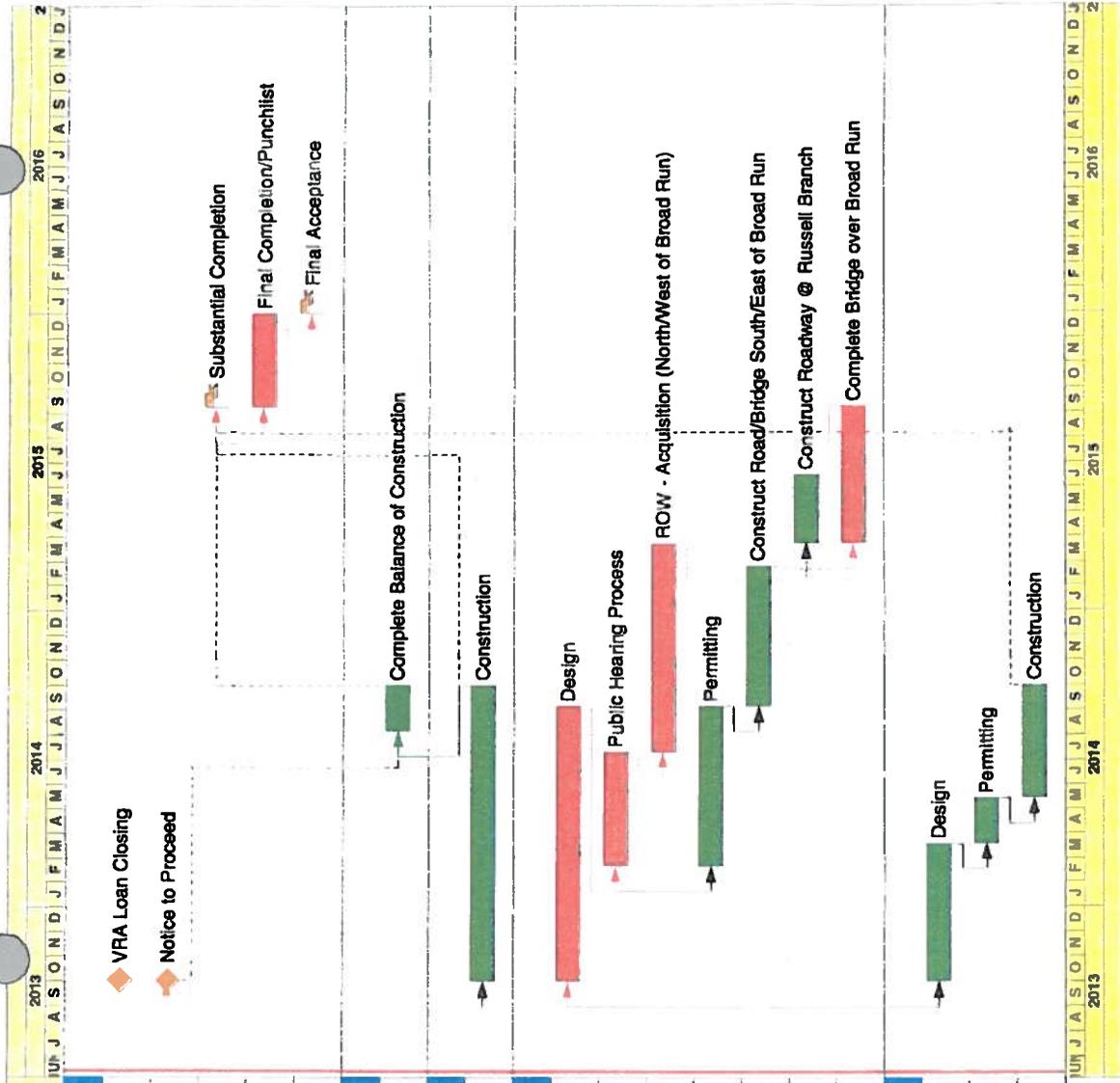
Subtotal	\$	2,594
TOTAL EXCLUDED FROM PROPOSAL:	\$	2,594

**CASH FLOW (Costs Excluded from Proposal):**

Subtotal	\$	866,349
CUMULATIVE TOTALS:	\$	866,349

**CASH FLOW TOTAL:**

Subtotal	\$	28,793,340
CUMULATIVE TOTALS:	\$	28,793,340



Description	Dur	Start	Finish
<b>Milestones</b>			
VRA Loan Closing	0	01 OCT 13	
Notice to Proceed	0	01 OCT 13	
Substantial Completion	0		07 SEP 15
Final Completion/Punchlist	82d	08 SEP 15	31 DEC 15
Final Acceptance	0		31 DEC 15
<b>Phase I - Nokes to Fire Safety Center (FSC)</b>			
Complete Balance of Construction	40d	06 AUG 14	30 SEP 14
<b>Phase II - FSC to Broad Run (Urban Design)</b>			
Construction	258d	01 OCT 13	30 SEP 14
<b>Phase III - Broad Run to Russell Branch</b>			
Design	240d	01 OCT 13	04 SEP 14
Public Hearing Process	100d	20 FEB 14	10 JUL 14
ROW - Acquisition (North/West of Broad Run)	180d	11 JUL 14	23 MAR 15
Permitting	140d	20 FEB 14	04 SEP 14
Construct Road/Bridge South/East of Broad Run	120d	05 SEP 14	23 FEB 15
Construct Roadway @ Russell Branch	60d	24 MAR 15	15 JUN 15
Complete Bridge over Broad Run	120d	24 MAR 15	07 SEP 15
<b>Phase IV - Nokes to Severn Way Widening</b>			
Design	120d	01 OCT 13	19 MAR 14
Permitting	40d	20 MAR 14	14 MAY 14
Construction	98d	15 MAY 14	30 SEP 14

**Start date** 12 JUN 13

**Finish date** 31 DEC 15

**Data date** 12 JUN 13

**Run date** 05 SEP 13

**Page number** 1A

© Primavera Systems, Inc.

**Attachment 6 - Preliminary Schedule**

**Pacific Boulevard Extension Project**

**Route 28 Corridor Improvements, LLC**

**Legend:**

- Early bar
- Progress bar
- Critical bar
- Summary bar
- Start milestone point
- Finish milestone point





**PACIFIC BOULEVARD EXTENSION PROJECT @ KINCORA**  
**ROUTE 28 CORRIDOR IMPROVEMENTS PROJECT**  
 Route 28 Corridor Improvements, LLC

**COST ESTIMATE SUMMARY - ALTERNATE ALIGNMENT**

APPROX.	QTY.	UNIT	INDUSTRY REFERENCE	INDUSTRY REFERENCE	PAGE	INDUSTRY REFERENCE	INDUSTRY REFERENCE	VDOT HISTORIC	INDUSTRY REFERENCE	TOTAL COST	TOTAL COST	TOTAL COST	VDOT
								UNIT RATES	UNIT RATES		HISTORIC		
<b>I. DESIGN AND ENGINEERING:</b>													
1	1.0	LS	\$	-	\$	-	\$	-	\$	50,000	\$	50,000	
2	1.0	LS	\$	-	\$	-	\$	-	\$	1,178,753	\$	1,415,145	
3	1.0	LS	\$	-	\$	-	\$	-	\$	40,000	\$	40,000	50,000
4													
<b>II. RIGHT-OF-WAY ADMINISTRATION:</b>													
5	4.0	EA	\$	-	\$	-	\$	-	\$	-	\$	-	50,000
6	1.0	EA	\$	-	\$	-	\$	-	\$	-	\$	-	1,600,000
7													350,000
8													
<b>III. UTILITIES:</b>													
9	1.0	LS	\$	-	\$	-	\$	30,000	\$	30,000	\$	30,000	10,000
10	2,000.0	LF	\$	-	\$	-	\$	250	\$	500,000	\$	500,000	
11	4.0	POLES	\$	-	\$	-	\$	20,000	\$	80,000	\$	80,000	
12	1.0	LS	\$	-	\$	-	\$	1,000	\$	1,000	\$	1,000	
<b>IV. ENVIRONMENTAL PERMITTING:</b>													
13	1.0	LS	\$	-	\$	-	\$	-	\$	50,000	\$	50,000	10,000
14	1.5	ACRES	\$	-	\$	-	\$	-	\$	150,000	\$	150,000	
14a	250.0	LF								25,000	\$	25,000	
<b>V. CONSTRUCTION:</b>													
12	1.0	LS						221,115	\$	221,115	\$	221,115	
13	24.0	MO						2,250	\$	2,250	\$	2,250	
14	35.0	ACRE						4,375	\$	4,500	\$	4,500	
15	1.0	EA						5,250	\$	10,000	\$	10,000	
15a	1.0	EA						5,250	\$	25,000	\$	25,000	
16	1.0	LS						5,250	\$	12,500	\$	12,500	
17	1.0	EA						1	\$	24	\$	24	
18	31,563.0	CY						11	\$	15	\$	15	
19	192,692.0	CY						14	\$	20	\$	20	
20	125,617.0	CY						10	\$	22	\$	22	
21	1,500.0	LF						2	\$	2,992	\$	2,992	
22	1,700.0	LF						24	\$	359,664	\$	359,664	
23	14,986.0	CY						24	\$	268,032	\$	268,032	
24	11,168.0	CY						21	\$	175,556	\$	175,556	
25	209,007.0	SY						1	\$	209,007	\$	209,007	
26		EA							\$		\$		
27	1.0	LS						200,000	\$	200,000	\$	200,000	
28	14,520.0	CY						24	\$	348,480	\$	348,480	
29	6,621.0	LF						22	\$	244,977	\$	146,641	
30	15" STORM DRAIN	LF						55	\$	102,750	\$	149,884	
31	18" STORM DRAIN	LF						52	\$	84,403	\$	96,979	
32	24" STORM DRAIN	LF						69	\$	126,204	\$	167,220	
33	27" STORM DRAIN	LF						64	\$	7,565	\$	5,440	
34	30" STORM DRAIN	LF						100	\$	87,759	\$	81,691	
35	33" STORM DRAIN	LF						59	\$	30,945	\$	18,349	
36	36" STORM DRAIN	LF						106	\$	17,545	\$	15,428	
37	42" STORM DRAIN	LF						142	\$	44,844	\$	43,002	
38	38"x60" STORM DRAIN	LF						132	\$	50,358	\$	28,820	
39	48" STORM DRAIN	LF						177	\$	117,882	\$	125,770	
40	48" STORM DRAIN AT SWM POND OUTLET	LF						195	\$	28,320	\$	31,176	

COST ESTIMATE SUMMARY - ALTERNATE ALIGNMENT

APPROX.	QTY.	UNIT	INDUSTRY REFERENCE	CREW	PAGE	INDUSTRY REFERENCE	INDUSTRY REFERENCE	UNIT RATES	VDOT HISTORIC	INDUSTRY REFERENCE	TOTAL COST	HISTORIC	TOTAL COST	VDOT
	76.0	LF	B-13B	355			\$ 177	400	\$	\$	13,452	\$	30,400	
41	54"	STORM DRAIN												
42	66"	STORM DRAIN	B-13B	355			\$ 335	375	\$	\$	56,280	\$	63,000	
43	24"	ES-1	B-13B	355			\$ 717	717	\$	\$	717	\$	717	
44	36"	ES-1					\$ 600	600	\$	\$	600	\$	600	
45	54"	EW-1					\$ 600	600	\$	\$	600	\$	600	
46	66"	EW-1					\$ 600	600	\$	\$	600	\$	600	
47	33"	EW-6S (DOUBLE)					\$ 1,200	1,200	\$	\$	1,200	\$	1,200	
48	DI-3/4	L=2.5 INLET	B-29	357			\$ 1,275	3,515	\$	\$	1,275	\$	3,515	
49	DI-3/4	L=4 INLET	B-29	357			\$ 1,275	3,788	\$	\$	15,300	\$	45,460	
50	DI-3/4	L=6 INLET	B-29	357			\$ 1,275	3,830	\$	\$	26,775	\$	80,438	
51	DI-3/4	L=8 INLET	B-29	357			\$ 1,275	3,351	\$	\$	44,625	\$	117,292	
52	DI-3/4	L=10 INLET	B-29	357			\$ 1,275	4,096	\$	\$	6,375	\$	20,482	
53	DI-3/4	L=12 INLET	B-29	357			\$ 1,275	4,153	\$	\$	1,275	\$	4,153	
54	DI-3/4	L=14 INLET	B-29	308			\$ 1,275	4,655	\$	\$	2,550	\$	9,311	
55	DI-3/4	L=14 INLET	B-29	308			\$ 1,275	3,674	\$	\$	1,275	\$	3,674	
56	MH-1		D-1	360			\$ 1,525	4,200	\$	\$	1,525	\$	4,200	
57	JB-1		D-1	360			\$ 1,525	1,000	\$	\$	3,050	\$	2,000	
58	EXTEND EXIST DBL 7*6 BOX CULVERT		B-69	355			\$ 425		\$	\$	27,625	\$	70,000	
59	SWIM POND WEIR STRUCTURE		B-13	268			\$ 3,350	3,350	\$	\$	27,360	\$	38,400	
60	CL.1 RIP RAP		B-13	268			\$ 29	40	\$	\$	68,457	\$	120,100	
61	CL.2 RIP RAP		B-13	268			\$ 414	414	\$	\$	1,242	\$	1,242	
62	TIE-IN EXISTING STORM DRAIN						\$ 1,000	1,250	\$	\$	1,000	\$	1,250	
63	TEST PIT EXISTING UTILITIES						\$ 3	3	\$	\$	30,000	\$	30,000	
64	TV-VIDEO STORM DRAIN						\$ 3	3	\$	\$	3,450	\$	3,450	
65	TV-VIDEO DCWASA SEWER		B-20	349			\$ 9	160	\$	\$	8,579	\$	151,680	
66	8" DR-25 PVC SANITARY SEWER		B-20	349			\$ 12	162	\$	\$	3,623	\$	51,030	
67	10" DR-25 PVC SANITARY SEWER		B-6	357			\$ 575	5,745	\$	\$	2,875	\$	28,725	
68	SANITARY SEWER MANHOLE		B-6	357			\$ 575	26	\$	\$	1,150	\$	1,000	
69	CORE EXISTING MANHOLE		B-13B	29			\$ 47	26	\$	\$	15,531	\$	8,684	
70	REMOVE EXISTING SANITARY SEWER		B-6	30			\$ 222	500	\$	\$	444	\$	1,000	
71	REMOVE EXISTING SANITARY MANHOLE		B-6	30			\$ 1	1	\$	\$	1,263	\$	1,263	
72	SANITARY SEWER TESTING		B-13	337			\$ 157	179	\$	\$	904,006	\$	1,030,682	
73	24" CL.52 DIP WATER MAIN		B-6	344			\$ 11,900	525	\$	\$	1,050	\$	1,050	
74	TIE-IN EXISTING WATER MAIN		B-6	344			\$ 2,025	2,804	\$	\$	119,000	\$	74,180	
75	24" BUTTERFLY VALVE		B-6	345			\$ 3,683	3,683	\$	\$	6,075	\$	8,413	
76	12" GATE VALVE		B-6	345			\$ 1,805	1,805	\$	\$	18,050	\$	36,830	
77	24" MJ BEND		B-21	345			\$ 4,900	4,900	\$	\$	3,750	\$	9,800	
78	24" MJ TEE		B-21	345			\$ 1,875	1,870	\$	\$	5,610	\$	5,610	
79	FIRE HYDRANT		B-21	345			\$ 2,182	2,182	\$	\$	10,910	\$	10,910	
80	AIR RELEASE		B-21	344			\$ 4,475	143	\$	\$	67,924	\$	67,924	
81	BLOWOFF		B-21	344			\$ 4,475	276	\$	\$	38,615	\$	38,615	
82	24" SLEEVE (FUT.MAIN)		B-21	344			\$ 430	992	\$	\$	247,008	\$	247,008	
83	30" SLEEVE (FUT.MAIN)		B-42	336			\$ 950	950	\$	\$	152,000	\$	152,000	
84	42" JACK AND BORE						\$ 100	100	\$	\$	200	\$	200	
85	42" STEEL SLEEVE						\$ 1	1	\$	\$	5,758	\$	5,758	
86	TEST PIT AND TUNNEL STORM SEWER FOR W/L						\$ 0	0	\$	\$	702	\$	702	
87	WATER MAIN TESTING						\$ 0	0	\$	\$	840,750	\$	764,935	
88	LOUDDOWN WATER INSPECTION FEES		B-36	298			\$ 29	26	\$	\$	79,515	\$	97,845	
89	21-B AGGREGATE BASE STONE		B-36	298			\$ 29	35	\$	\$	1,481,430	\$	1,610,250	
90	21-B AGGREGATE CURB STONE		B-25	299			\$ 76	78	\$	\$	605,811	\$	512,264	
91	BM-25 0-BASE ASPHALT		B-25	299			\$ 81	81	\$	\$	833,016	\$	658,569	
92	IM-19 0A INTERMED.ATE ASPHALT		B-25	299			\$ 91	91	\$	\$		\$		
93	SM-9 5D SURFACE ASPHALT		B-25	299			\$ 82	82	\$	\$		\$		

COST ESTIMATE SUMMARY - ALTERNATE ALIGNMENT

DESCRIPTION	APPROX. QTY.	UNIT	CREW	INDUSTRY REFERENCE	PAGE	INDUSTRY REFERENCE	UNIT RATES	VDOT HISTORIC	TOTAL COST		TOTAL COST	VDOT
									INDUSTRY REFERENCE	INDUSTRY REFERENCE		
94 MILL EXISTING ASPHALT	4,450.0	SY	B-71		289		\$	3	\$	13,408	\$	8,633
95 10FT ASPHALT TRAIL	9,330.0	SY	B-37		296		\$	11	\$	120,170	\$	93,300
96 SWM POND ACCESS ROADS	2,840.0	SY					\$	10	\$	28,400	\$	28,400
97 UD-4 UNDERDRAIN	15,923.0	LF	C-2A		307		\$	9	\$	148,880	\$	166,555
98 CG-6 CURB AND GUTTER	15,813.0	LF	C-2A		307		\$	14	\$	221,382	\$	302,819
99 CG-2 CURB AND GUTTER	8,604.0	LF	C-2A		307		\$	9	\$	80,447	\$	196,085
100 5FT CONC SIDEWALK	601.0	SY	B-24		296		\$	75	\$	45,075	\$	56,819
101 MS-1 CONCRETE MEDIAN	907.0	SY	B-29		382		\$	77	\$	69,670	\$	69,670
102 MS-2 GRASS MEDIAN	400.0	SY	C-2A		308		\$	13	\$	5,340	\$	15,240
103 CG-12 APRON	1,100.0	LF	B-80C		312		\$	5	\$	5,940	\$	20,944
105 CONSTRUCTION ENTRANCE	5.0	EA					\$	1,000	\$	5,000	\$	5,000
106 SILT FENCE	14,705.0	LF	2 Clab		261		\$	3	\$	12,058	\$	37,204
107 DIVERSION DIKE	4,900.0	LF	2 Clab		261		\$	6	\$	29,792	\$	29,792
108 SUPER SILT FENCE	6,300.0	LF					\$	5	\$	5,166	\$	28,350
109 15FT X 30FT SEDIMENT TRAP	9.0	EA					\$	1,551	\$	13,959	\$	13,959
110 TEMPORARY STREAM CROSSING	2.0	EA			494		\$	1,250	\$	2,500	\$	2,500
111 EC-3	320.0	SY					\$	29	\$	5,888	\$	9,238
112 SEDIMENT TRAP WITH PIPE OUTLET	6.0	EA					\$	1,400	\$	8,400	\$	8,400
113 SEDIMENT BASIN	5.0	EA					\$	1,000	\$	5,000	\$	5,000
114 INLET PROTECTION	88.0	EA					\$	110	\$	9,659	\$	9,659
115 PERMANENT SEEDING/MULCHING 24 ACRES	117,707.0	SY	1 Clab		323		\$	4	\$	63,360	\$	63,360
115a Landscaping	191,332.0	SY	1 Clab		323		\$	4	\$	24,000	\$	24,000
116 TEMPORARY SEEDING/MULCHING 40 ACRES	1.0	LS					\$	3,500	\$	84,000	\$	84,000
117 MAINTAIN AND REMOVE EROSION CONTROLS	715.0	LF	B-79		309		\$	2	\$	1,080	\$	3,275
118 CLEARING & EROSION CONTROLS - STOCKPILE/FILL AREAS	16,590.0	LF	B-79		309		\$	1	\$	8,793	\$	7,466
119 PAVEMENT MARKING TY B CL 1 2 4"	14,915.0	LF	B-79		309		\$	1	\$	7,905	\$	38,779
120 PAVEMENT MARKING TY B CL 1 4"	2,160.0	LF	B-79		310		\$	3	\$	6,480	\$	10,800
121 PAVEMENT MARKING TY B CL IV 4"	366.0	EA	B-79		311		\$	9	\$	3,111	\$	3,111
122 PREFORMED TAPE - CONTRASTING 6"	55.0	EA	B-80		142		\$	75	\$	4,125	\$	5,326
123 PAVEMENT MARKERS	88.0	LF					\$	13	\$	1,174	\$	1,174
124 ELONGATED SINGLE ARROW	192.0	LF	B-80		142		\$	65	\$	12,553	\$	12,553
125 WOOD 4x4 POST	356.0	SF	1 Clab		309		\$	22	\$	13,884	\$	7,939
126 SIGN POST STEEL 3"	2,200.0	LF					\$	1	\$	3,168	\$	1,276
127 SIGN PANEL	1.0	LS					\$	10,000	\$	10,000	\$	10,000
128 ERADICATE PAVEMENT MARKINGS	500.0	LF	B-29		382		\$	25	\$	32,750	\$	12,500
129 MAINTENANCE OF TRAFFIC	1,700.0	LF	B-29		382		\$	50	\$	111,350	\$	85,000
130 TEMP. BARRICADE TYPE III	2.0	EA	B-16		382		\$	8,500	\$	17,000	\$	17,000
131 TEMPORARY CONCRETE BARRIER	4,200.0	SF	B-62		318		\$	50	\$	159,600	\$	210,000
132 TEMPORARY IMPACT ATTENUATOR	100.0	LF	1-Clab		83		\$	2,000	\$	200,000	\$	200,000
133 MSE RETAINING WALL	400.0	LF					\$	145	\$	58,000	\$	58,000
133A Concrete Retaining Wall	400.0	LF					\$	175	\$	70,000	\$	70,000
134 MSE MOMENT SLAB/COPING	400.0	LF					\$	175	\$	25,000	\$	25,000
135 MSE PARAPET	1,250.0	CY	B-12C		225		\$	28	\$	35,000	\$	82,213
136 BRIDGE CONSTRUCTION ACCESS	1,920.0	LF	B-19		273		\$	31	\$	59,520	\$	78,682
137 STRUCTURAL EXCAVATION/ROCK KEY/BACKFILL	901.0	CY	C-20		70		\$	500	\$	450,500	\$	620,537
138 H-PILES	124,000.0	LBS					\$	1.03	\$	130,200	\$	127,720
139 SUBSTRUCTURE CONCRETE CLASS A3	1,400,000.0	lbs					\$	18,000	\$	1,540,000	\$	1,540,000
140 REINFORCING STEEL (BLACK)	1,720.0	CY	C-6		71		\$	550	\$	936,100	\$	1,462,699
141 PCBT GIRDERS	960.0	LF	C-22		320		\$	167	\$	160,320	\$	240,000
141a Structural Steel Girders							\$	1.1	\$	1,540,000	\$	1,540,000
142 SUPERSTRUCTURE CONCRETE CLASS A4							\$	859	\$	936,100	\$	1,462,699
143 PARAPET W/ BR27C RAIL							\$	250	\$	160,320	\$	240,000

**PACIFIC BOULEVARD EXTENSION PROJECT @ KINCORA**  
**ROUTE 28 CORRIDOR IMPROVEMENTS PROJECT**  
 Route 28 Corridor Improvements, LLC

**COST ESTIMATE SUMMARY - ALTERNATE ALIGNMENT**

DESCRIPTION	QTY.	UNIT	APPROX.	INDUSTRY REFERENCE		PAGE	INDUSTRY REFERENCE		VDOT-HISTORIC	TOTAL COST		TOTAL COST	VDOT
				INDUSTRY REFERENCE	INDUSTRY REFERENCE		INDUSTRY REFERENCE	INDUSTRY REFERENCE		HISTORIC	VDOT		
144 CRSS REINFORCING STEEL (MMPX)	391,460.0	TONS		4 Rodm		370	\$	2	\$	598,934	\$	688,970	
145 PEDESTRIAN FENCE 10 VINYL	960.0	LF		B-1		315	\$	32	\$	30,720	\$	78,173	
146 DECK GROOVING	2,860.0	SY		B-71		289	\$	4	\$	11,440	\$	14,958	
147 BRIDGE CONDUIT SYSTEM	960.0	LF		1 Elec		201	\$	4	\$	3,840	\$	6,509	
148 APPROACH SLAB CONCRETE	148.0	CY		C-14E		68	\$	228	\$	33,744	\$	74,000	
149 APPROACH SLAB REINFORCING STEEL (BLACK)	11.8	TONS		4 Rodm		64	\$	2,625	\$	31,080	\$	78,144	
150 BRIDGE BACKFILL ZONE (CBR-30)	3,225.0	TON		B-10A		234	\$	10	\$	31,283	\$	112,875	
151 RIPRAP SLOPE PROTECTION	2,200.0	SY		B-13		268	\$	125	\$	275,000	\$	299,200	
152 ROADWAY CONDUIT CROSSINGS	1.0	LS					\$	200,000	\$	200,000	\$	200,000	
153 PUNCHLIST/DEMOLITION	1.0	LS					\$	100,000	\$	100,000	\$	100,000	
<b>VI. O&amp;M:</b>													
154 COMPLETE PHASE 1	1.0	LS	\$				\$		\$		\$		
155 PHASES II, III, & IV	1.0	LS	\$				\$		\$	1,800,000	\$	2,100,000	1,000,000
<b>VII. DEVELOPMENT MANAGEMENT:</b>													
156 DESIGN/BUILD PROJECT MANAGEMENT	1.0	LS	\$				\$		\$	240,000	\$	240,000	200,000
157 INSURANCE & TAXES	1.0	LS	\$				\$		\$	198,108	\$	237,814	
<b>TOTALS:</b>										<b>\$ 23,988,745</b>		<b>\$ 28,504,701</b>	<b>\$ 3,270,000.00</b>

Vdot R/W \$ 310,000  
 Vdot Staff \$ 1,320,000

**TOTALS: \$ 27,258,744.79 \$ 31,774,700.88**

## Attachment 1-A

### Revision to Design-Build Agreement Appendix 6 – Standards

- AASHTO A Policy on Geometric Design of Highways and Streets 6<sup>th</sup> Edition, 2011
- VDOT Road Design Manual, Vol. I, including all revisions
- VDOT Survey Manual – April 2010 Edition, Including 2011 revisions
- VDOT manual of Instructions for Material Division
- AASHTO LRFD Bridge Design Specifications 5<sup>th</sup> edition 2010, with Interim Specifications audits and VDOT modifications
- VDOT Manual of Structure and Bridge Division, Vol. V (all Current)
- AASHTO Guide for Design of Pavement Structures (Rigid Pavement and Flexible Pavement), 1993 edition
- AASHTO's Manual of Bridge evaluation, 2<sup>nd</sup> edition, 2010 and 2011
- FHWA Standard Highway signs (2004 Edition and 2012 supplemental interim resolutions)
- VDOT Guidelines for 1993 AASHTO Pavement Design, Revised – May 2003
- Special Provisions for Construction of Deep Foundation Systems
- 2011 Virginia Work Area Protection Manual
- National Electric Code (NEC)
- 2009 Manual of Uniform Traffic Control Devices (MUTCD)
- 2011 VA Supplement to 2009 MUTCD
- VDOT Traffic Engineering Design Manual 2011
- VDOT Right of Way Manual August 2011, including all revisions
- VDOT Land Use Permit Regulations March 2010
- VDOT Manual for Public Participation in Transportation Projects (Revised August 2011)
- VDOT Instructional & Information Memorandums (I&IM) All Divisions
- VDOT Road and Bridge Standards, VOL. 1 and Vol. 2 (2008) including all revisions
- VDOT Road and Bridge Specifications 2007 including all revisions
- DCR Storm-water Management Handbook
- VA Erosion and Sediment Control Handbook (Third Edition – 1992)
- VDOT Storm-water and Erosion and Sediment Control Program Manual, March 2004
- VDOT Drainage Manual July 2012
- VDOT Hydraulic Design Advisories (all current)
- VDOT CADD Manual, Version 2009
- VDOT Construction Manual, 2005 including 2008 revision
- VDOT Post Construction Manual May 2011
- VDOT Construction Inspection Manual, April 2008
- Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities 2010
- Transportation Research Board Highway Capacity Manual 2010 edition
- Mobility Management Division Memoranda

## **APPENDIX B**

[To be attached when finalized]

## **APPENDIX C**

[To be attached when finalized]

## **APPENDIX D**

[To be attached when finalized]