VDOT
Virginia Department of Transportation

Volume I – Technical Proposal

• Narratives • Schedule • Appendices

A DESIGN-BUILD PROJECT

Fall Hill Avenue Widening and Mary Washington Boulevard Extension

From: 0.12 Miles West of Gordon W. Shelton Boulevard

To: Route 1 at Mary Washington Boulevard

Fredericksburg, Virginia

State Project No.: U000-111-233

Federal Project No.: STP-5A01(181)

Contract ID No.: C00088699DB59

Date: December 12, 2013

American Infrastructure

rda

Attachment 4.0.1.1
Technical Proposal Checklist

ATTACHMENT 4.0.1.1

Fall Hill Avenue Widening and Mary Washington Boulevard Extension

TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Offerors shall furnish a copy of this Technical Proposal Checklist, with the page references added, with the Technical Proposal.

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Technical Proposal Checklist and Contents	Attachment 4.0.1.1	Section 4.0.1.1	no	Section 4.0.1.1
Acknowledgement of RFP, Revisions, and/or Addenda	Attachment 3.6 (Form C-78-RFP)	Sections 3.6, 4.0.1.1	no	Section 3.6
Letter of Submittal	NA	Sections 4.1		
Letter of Submittal on Offeror's letterhead	NA	Section 4.1.1	yes	Page 1
Offeror's official representative information	NA	Section 4.1.1	yes	Page 1
Authorized representative's original signature	NA	Section 4.1.1	yes	Page 1
Declaration of intent	NA	Section 4.1.2	yes	Page 1
120 day declaration	NA	Section 4.1.3	yes	Page 1
Point of Contact information	NA	Section 4.1.4	yes	Page 1
Principal Officer information	NA	Section 4.1.5	yes	Page 1
Final Completion Date	NA	Section 4.1.6	yes	Page 1
Proposal Payment Agreement or Waiver of Proposal Payment	Attachment 9.3.1 or 9.3.2	Section 4.1.7	no	Appendix 4.1.7
Certification Regarding Debarment Forms	Attachment 11.8.6(a) Attachment 11.8.6(b)	Section 4.1.8	no	Appendix 4.1.8
Offeror's Qualifications	NA	Section 4.2		

ATTACHMENT 4.0.1.1

Fall Hill Avenue Widening and Mary Washington Boulevard Extension

TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
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	yes	Page 2
Organizational chart with any updates since the SOQ submittal clearly identified to include Lead QA Inspector	NA	Section 4.2.2	yes	Page 2
Revised narrative when organizational chart includes updates since the SOQ submittal to include Lead QA Inspector	NA	Section 4.2.2	yes	Page 3
Design Concept	NA	Section 4.3		
Conceptual Roadway Plans and description	NA	Section 4.3.1.1	yes	Pages 4-9, 31-62
Conceptual Structural Plans and description	NA	Section 4.3.1.2	yes	Pages 9-10, 63-65
Project Approach	NA	Section 4.4		
Right of Way Acquisition / Environmental Management	NA	Section 4.4.1	yes	Pages 11-14
Utilities	NA	Section 4.4.2	yes	Pages 15-18
Quality Assurance / Quality Control (QA/QC)	NA	Section 4.4.3	yes	Pages 19-22
Construction of Project	NA	Section 4.5		
Sequence of Construction	NA	Section 4.5.2	yes	Pages 23-27
Transportation Management Plan	NA	Section 4.5.3	yes	Pages 27-29

ATTACHMENT 4.0.1.1

Fall Hill Avenue Widening and Mary Washington Boulevard Extension

TECHNICAL PROPOSAL CHECKLIST AND CONTENTS

Technical Proposal Component	Form (if any)	RFP Part 1 Cross Reference	Included within page limit?	Technical Proposal Page Reference
Disadvantaged Business Enterprises (DBE)	NA	Section 4.6		
Written statement of percent DBE participation	NA	Section 4.6	yes	Page 30
DBE subcontracting narrative	NA	Section 4.6	yes	Page 30
Proposal Schedule	NA	Section 4.7		
Proposal Schedule	NA	Section 4.7	no	Section 4.7
Proposal Schedule Narrative	NA	Section 4.7	no	Section 4.7
Proposal Schedule in electronic format (CD-ROM)	NA	Section 4.7	no	

Attachment 3.6
Form C-78-RFP

Form C-78-RFP

ATTACHMENT 3.6

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFP NO. C00088699DB59

PROJECT NO.: U000-111-233

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: August 19, 2013 (Date)
2. Cover letter of Addendum #1: November 7, 2013 (Date)
3. Cover letter of Addendum #2: November 15, 2013 (Date)

SIGNATURE

12/12/13
DATE

Aaron T. Myers, VP/GM
PRINTED NAME AND TITLE

4.1 Letter of Submittal

American Infrastructure™
301 Concourse Boulevard, Suite 300
Glen Allen, VA 23059
Phone: 804-290-8500 Fax: 804-418-7935
www.americaninfrastructure.com

December 12, 2013

Bill Arel, PE
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Technical Proposal for the Fall Hill Avenue Widening and Mary Washington Boulevard Extension Design-Build Project
State Project No.: U000-111-233
Federal Project No.: STP-5A01(181)
Contract ID Number: C00088699DB59

Dear Mr. Arel:

American Infrastructure (AI) and Rinker Design Associates, P.C. (RDA) are pleased to present our Technical Proposal to the Virginia Department of Transportation (VDOT) for the Fall Hill Avenue Widening and Mary Washington Boulevard Extension Design-Build Project (the Project).

The AI Team submits the information below as detailed in Section 4.1 of the Request for Proposals:

4.1.1 The full legal name and address of American Infrastructure – VA, Inc. (AI-VA) is as follows:
American Infrastructure – VA, Inc., 301 Concourse Boulevard, Suite 300, Glen Allen, VA 23059

4.1.2 American Infrastructure – VA, Inc. intends to enter into a contract with VDOT for the Project in accordance with the terms of the RFP.

4.1.3 The offer in the Price Proposal will remain in full force and effect for one hundred and twenty (120) days after the Technical Proposal submission date of December 12, 2013.

4.1.4 The contact information for Aaron Myers (DBPM), responsible for the oversight of the entire AI Team and the primary point of contact with VDOT is as follows:

Aaron Myers, VP/GM	804.290.8500 (Telephone)
301 Concourse Boulevard – Suite 300	804.418.7935 (Fax)
Glen Allen, VA 2305	aaron.myers@americaninfrastructure.com

4.1.5 Aaron Myers will serve as the Principal Officer for AI-VA. His contact information is as follows:

Aaron Myers, VP/GM	804.290.8500 (Telephone)
301 Concourse Boulevard – Suite 300	804.418.7935 (Fax)
Glen Allen, VA 2305	aaron.myers@americaninfrastructure.com

4.1.6 The Final Completion date of January 24, 2017 is reflected in the Proposal Schedule and meets the planned Completion Date identified by Section 2.3 of the RFP.

4.1.7 An executed Proposal Payment Agreement (Attachment 9.3.1) is included in Appendix 4.1.7.

4.1.8 Certification Regarding Debarment Forms are included in Appendix 4.1.8 for Primary Covered Transactions (Attachment 11.8.6(a)) and Lower Tier Covered Transactions (Attachment 11.8.6(b)).

4.1.9 This Technical Proposal is fully compliant with all requirements of the RFP. The proposed limits of construction are within the right-of-way limits allowed by the RFP and Addenda. The design concept does not require any Design Exception and/or Design Waivers not identified or included in the RFP or Addendum.

We appreciate your consideration of our Technical Proposal and trust your review will find our proposal is in alignment with VDOT's priorities for the Project.

Respectfully,

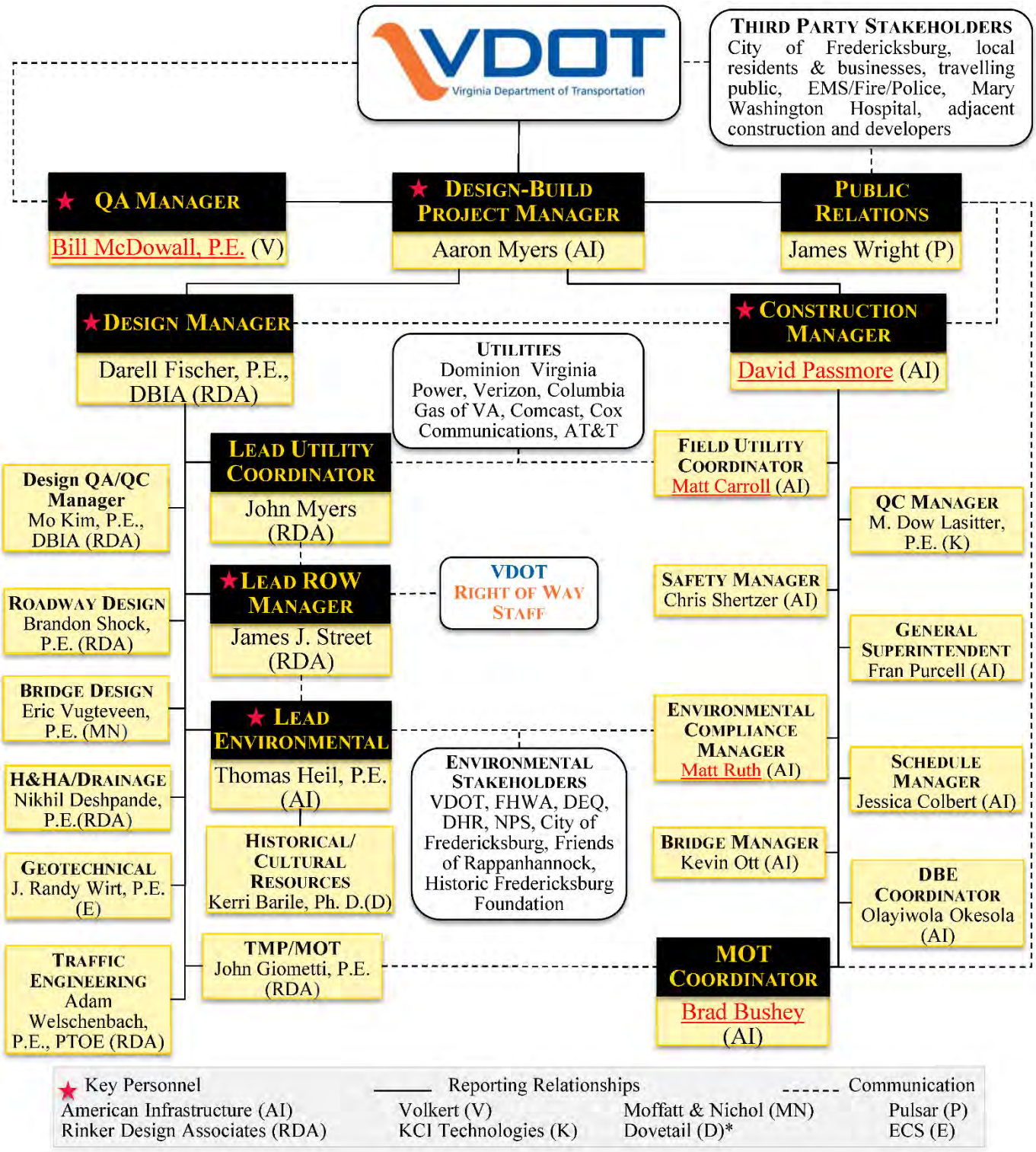
Aaron T. Myers, VP/GM
American Infrastructure – VA, Inc.

4.2 Qualifications

Key personnel changes were approved by VDOT on November 13, 2013 and other personnel changes were accepted by email on December 9, 2013. All other information from the SOQ remains true and accurate.

ORGANIZATIONAL CHART

The revised organizational chart reflects changes to two key personnel – Quality Assurance Manager and Construction Manager. In addition, three construction leads have been changed – Field Utility Coordinator, Environmental Compliance Manager, and MOT Coordinator. Changes are identified by underlined red text.



FUNCTIONAL RELATIONSHIPS AND COMMUNICATION

The individual sections of the organizational chart that have been revised are included below.

QUALITY ASSURANCE MANAGER – QAM, ***Bill McDowall, P.E.***, will lead the independent QA team and be responsible for QA inspection and testing of all materials used and work performed on the Project. He will also monitor the construction QC program and ensure all work and materials, testing, and sampling is performed in accordance with the contract requirements and the "approved for construction" plans and specifications. Mr. McDowall will report directly to our DBPM, Mr. Myers, with oversight and concurrent direct reporting to the Department and will be supported by Volkert's QA inspectors.

DESIGN MANAGER - DM, ***Darell Fischer, P.E., DBIA*** will report to Mr. Myers, DBPM, and will lead the design team to ensure the overall project design conforms to the contract documents. The AI Team has identified team leads for pertinent disciplines to provide comprehensive project management and risk mitigation expertise. The design discipline leads as well as the Lead Utility Coordinator, Lead ROW Manager, and Lead Environmental Manager will report to Mr. Fischer to ensure design critical elements are carried across all disciplines. Mr. Fischer will establish and oversee the design QA/QC program, including review of design criteria, design calculations, working plans, shop drawings, and specifications. He will also coordinate with Mr. Passmore, CM, on constructability during both design and construction phases.

CONSTRUCTION MANAGER - CM, ***David Passmore*****,** will be responsible for managing the construction process, including QC activities and will report to Mr. Myers, DBPM. Mr. Passmore will be on the project site for the duration of the construction operations, and will coordinate with DM, Mr. Fischer, for RFI's and design changes that may arise during construction. Public relations updates will be coordinated between Mr. Passmore and Mr. Wright (Pulsar) to keep project stakeholders informed about the construction impact.

Mr. Lasitter (KCI), construction quality control manager, will report to Mr. Passmore to ensure materials used and work performed meet contract requirements and "approved for construction" plans and specifications. Comprehensive construction management will be provided under Mr. Passmore's leadership. AI's General Superintendent, Schedule Manager, Safety Manager, and construction leads will all report to Mr. Passmore. Mr. Passmore is also responsible to oversee our DBE Coordinator in meeting the project goals.

LEAD ENVIRONMENTAL MANAGER – Lead Environmental Manager, ***Thomas Heil, P.E.*****,** will report to DM, Mr. Fischer. This reporting relationship will streamline review of project plans for environmental compliance and project specific commitments. His direct coordination with Mr. Passmore, CM, and organizational commitment to AI will guarantee that we surpass VDOT's expectations with respect to environmental plans and documents. Supporting Mr. Heil on cultural and historical resources will be Kerri Barile (Dovetail). Mr. Heil will coordinate directly with environmental stakeholders to efficiently manage the environmental process for the Project.

MOT Coordinator – MOT Coordinator, ***Brad Bushey*****,** will report to the CM, Mr. Passmore and coordinate with TMP/MOT design lead, Mr. Giometti, to build constructability into the final design, ensure the TMP is implemented properly, and identify any necessary adjustments. Providing Mr. Bushey's expertise during the design phase will produce a quality TMP with minimal field changes necessary. Coupled with his oversight of construction work packages, this provides continuity for implementation of the TMP.

4.3 Design Concept

The AI Team thoroughly evaluated the RFP plans to develop a roadway and structural design that efficiently and effectively meets the intention of the Project. Each design feature was assessed to determine if a better, safer, or more cost effective means of implementation could be developed. Our conceptual design discussions below examine how each of these elements were altered or affected by our design. Each of our design changes benefits the Project by reducing cost, improving safety, minimizing environmental impacts, and reducing the need for future inspection and maintenance.

Public Acceptance of the Project by local residents, businesses, and the motoring public will be fostered by our approach to sequence work to minimize construction impacts while implementing a safe work zone. For example, sequencing construction to facilitate early completion of Mary Washington Boulevard from Hospital Drive to Route 1 will provide through traffic an alternate route to Fall Hill Avenue via Cowan Boulevard. Safety improvements include shifting the bridge alignment to provide more space between travel lanes and the work area. Additional benefits of the design concept that will assist in gaining public acceptance are discussed in detail throughout this Section 4.3, and our approach to coordinating with individual stakeholders in included in Section 4.5.

DESIGN CRITERIA

In accordance with the RFP, our design concept fully complies with the "Roadway Inventory and Minimum Design Criteria" table and the Tapers and Storage Table contained in the RFP and revised by addendums. Most notably, the TC standard for Fall Hill Avenue and Mary Washington Boulevard was revised to TC-5.11 ULS which limits superelevation to a maximum of 2%.

4.3.1 CONCEPTUAL ROADWAY DESIGN

Volume II of our Technical Proposal contains the 11" x 17" graphics which illustrate our Conceptual Project Plans. To further explain our concept and each benefit to the Project, we have narratively addressed each required element (Items "a" through "h") in the RFP.

(a) GENERAL GEOMETRY

Fall Hill Avenue

The proposed Fall Hill Avenue alignment begins approximately 450' east of the intersection with Carl D. Silver Parkway and proceeds northeasterly through a proposed roundabout just west of the tie-in with the bridge over the Rappahannock Canal. Generally, 2-12' lanes in each direction will be provided along with left and right turn lanes at pre-established intersections. A shared-use path will be constructed along the north side from Gordon W. Shelton Boulevard and extend easterly to tie to the shared-use path constructed with the Rappahannock Canal Bridge project. A 5' sidewalk will be constructed along the south side of the entire length of improvements on Fall Hill Avenue. Additionally, a 5' sidewalk will be constructed from Carl D. Silver Parkway to Gordon W. Shelton Boulevard along the north side to complete the pedestrian improvement on Fall Hill Avenue. Additionally, all connecting roadways along Fall Hill Avenue meet the geometric criteria for "Side Streets" in the "Roadway Inventory and Minimum Design Criteria" table. With the exception of Frederick Place, all side road connects are in-place replacements.

Mary Washington Boulevard

New Roadway – The improvements on Mary Washington Boulevard start at the proposed roundabout and proceed south easterly on a new location paralleling the existing Dominion Virginia Power (DVP) transmission lines and the Rappahannock Canal. The roadway section consists of 2-12' lanes and a 5' sidewalk on the right, 1-16' lane on the left, and curb and gutter on both sides of the road.

Widening – At Hospital Drive, the Project begins widening the existing 2-lane section of Mary Washington to 4-lanes, 12-foot lanes (2 in each direction) along with sidewalks on both sides up to the intersection with Sam Perry Boulevard.

Mill and Overlay – From Sam Perry Boulevard to the intersection of US Route 1, Mary Washington Boulevard will be milled and overlaid and the median will be reconstructed.

US Route 1

Route 1 improvement include median reconstruction, widening, and left and right turn-lane construction in accordance with the RFP to include sidewalks and radii improvements at Mary Washington Boulevard.

Table 4.3.1 – Roadway Geometry

ROADWAY	NUMBER AND WIDTH OF LANES	WIDTHS OF SHOULDERS OR CURB & GUTTER	WIDTH OF SIDEWALKS/ SHARED USE PATHS
Fall Hill Avenue	4– 12' Lanes (2 in each direction)	Curb & Gutter	5' sidewalk 10' shared use path
Gordon W. Shelton Blvd.	4– 11' Lanes outbound 2– 12' Lanes inbound	Curb & Gutter	5' sidewalk
Briscoe Lane	30' wide throat narrows to ex. width	8' Shoulder	N/A
Hospitality Lane	1– 14' Lane 1– 22' Lane	Curb & Gutter	N/A
Noble Way	2– 20'+ Lanes	Curb & Gutter	N/A
Bragg Hill Drive	2– 12' Lanes outbound 1– 12' Lane inbound	Curb & Gutter	N/A
Frederick Place (Private)	3– 13'+ Lanes (2 outbound, 1 inbound)	Curb & Gutter	5' sidewalk
Roffman Road	2– 12' Lanes	Curb & Gutter	N/A
Wicklow Drive	2– 12' Lanes outbound 1– 12' Lane inbound	Curb & Gutter	N/A
Entrance into Ballfield Parking	3– 22' Lanes @ curb returns	Curb & Gutter	N/A
Weston Lane	2– 18' Lanes	Curb & Gutter	N/A
Crestview Way	2– 22' Lanes	Curb & Gutter	N/A
Fall Hill Office Park Entrance	2– 12' Lanes	Curb & Gutter	N/A
Forest Village Entrance	2– 12' Lanes outbound 1– 12' Lane inbound	Curb & Gutter	N/A
Mary Washington Blvd. (New Construction)	2– 12' Lanes eastbound 1– 16' Lane westbound	Curb & Gutter	5' sidewalk
Mary Washington Blvd. (Widening)	2– 12' Lanes eastbound 2– 12' Lane westbound	Curb & Gutter	5' sidewalk both sides
Mary Washington Blvd. (Mill and Overlay)	2– 12' Lanes eastbound 2– 12' Lane westbound	Curb & Gutter	5' sidewalk both sides
Hospital Drive	1– 12' Lane in each direction, 1– 12' center turn lane	Curb & Gutter	N/A
Sam Perry Boulevard	2– 22' Lanes	Curb & Gutter	N/A
US Route 1	Minimum 12' wide lanes	Curb & Gutter	N/A

(b) HORIZONTAL ALIGNMENTS

Fall Hill Avenue

Every geometric element of the design was evaluated to ensure conformance with the RFP design criteria. Improving the horizontal alignment to eliminate reverse curves was evaluated where feasible and reasonable to improve safety through the corridor. An alternative was developed that would meet TC-5.11U without reverse curves. However, the RFP was revised to require a TC-5.11ULS standard which allows for reverse curves and maintained no ROW adjustments. As a result, our conceptual horizontal alignment generally follows the RFP plan design. However, minor adjustments in horizontal features were incorporated into our design to either address RFP requirements, safety concerns, or opportunities to reduce costs. Each of these changes are within the confines of the RFP and addenda and are detailed below in Table 4.3.2.

Table 4.3.2 – Fall Hill Avenue Design Optimizations

FALL HILL DESIGN FEATURE	SOLUTION	BENEFIT
Inadequate transition length (200') to meet design speed (west of Gordon W. Shelton Blvd)	Lengthened transition from 200' to 350'.	▪ Exceeds the minimum required transition length of 320'. ▪ Meets the requirements of the RFP.
Tight workzone area at westerly approach to bridge over I-95	Revised approach curve from 5000' radius to 3500' radius.	▪ Provides 3+ additional feet of room to construct support of excavation. ▪ Improves public safety by providing 3+ additional feet. ▪ Provides a cost savings by eliminating a girder line from the bridge due to revised phasing.
Abrupt median and roadway transition at the westerly approach to the I-95 bridge	Remove angle breaks to narrow median from 16' to 4' and replace with 2000' radii.	▪ Provides a smoother transition and safer finished roadway. ▪ Exceeds taper requirements.
Retaining wall on north side of Fall Hill Ave and east side of I-95 extends into proposed MSE Wall at face of abutment	Shortened wall to allow grading between the two walls	▪ Eliminates potential conflicts between the two walls. ▪ Reduces cost.
Retaining wall along south side of Fall Hill Ave (east of I-95), between Fall Hill and Frederick Place	Eliminated retaining wall without impact to Frederick Place alignment or ROW.	▪ Reduces cost. ▪ Eliminates future maintenance.
Wetland impacts between Station 163+00 and 164+00 RT	Revised slope from a 3:1 to a 2:1.	▪ Eliminates wetland impacts at this location.

Mary Washington Boulevard

Mary Washington Boulevard lays out into three distinctly different sections. The first section is on a new location from the roundabout to Hospital Drive. Along this section, our alignment shifts to provide a more cost-effective low maintenance roadway. The next section is widening from 2 to 4-lanes from Hospital Drive to Sam Perry Boulevard. Along this section, our alignment follows the RFP. The last section is generally milling and overlay from Sam Perry Boulevard to US Route 1. Once again, our alignment follows the RFP Plan. The table below provides detailed information regarding our design features related to horizontal adjustments.

Table 4.3.3 – Mary Washington Boulevard Design Optimizations

MARY WASHINGTON DESIGN FEATURE	SOLUTION	BENEFIT
Retaining wall between Station 206+00 and 207+00 LT	Eliminated retaining wall without additional impacts to DVP	▪ Reduces cost. ▪ Eliminates the need for future maintenance.
RFP alignment impacts DVP Transmission monopole	Shift alignment toward the Rappahannock Canal to go between the two DVP monopoles	▪ Shifts away from Civil War Trenches (Site 44SP0574) ▪ Preserves the tree buffer between the utility lines and the Canal. ▪ Reduces impacts to DVP transmission lines. ▪ Maintains minimum DVP offsets. ▪ Eliminates the retaining wall between Sta 212+25 and 213+75 RT. ▪ Reduces cost and eliminates future maintenance for the retaining wall.
Intersection alignment of Hospital Drive and Mary Washington Boulevard requires a sharp curve at tie-in	Shifted alignment to miss monopole provides a nearly 90 degree intersection with Hospital Drive	▪ Improves constructability and improves construction phasing to minimize traffic impacts to emergency vehicles. ▪ Improves the intersection connection and functionality. ▪ Limits impacts to Hospital Drive (and the hospital). ▪ Eliminates the retaining wall between Sta 217+50 and 219+75 RT. ▪ Reduces cost and eliminates future maintenance.

US Route 1

US Route 1 improvements generally follow the RFP Plans to provide dual lefts from US Route 1 northbound to Mary Washington Boulevard. To provide the dual lefts, US Route 1 southbound will be widened out and transitioned back to the south of the left turn pockets. Improvements also provide for a new right in / right out entrance on Parcel 044 (Snowden Office Partnership). The only adjustments made to the US Route 1 alignment are tabulated below:

Safety Improvements
Inadequate transitions on both ends of the widening were lengthened from 245' to 320' to meet requirements and provide a safer roadway.

(c) Maximum Grades for all Segments and Connectors

The Conceptual Plan is included in Volume II of our Technical Proposal. In addition to the plan sheets, we have included profile sheets where our design differs from the RFP plan design. Our concept adjusted the profile along Fall Hill Avenue to accommodate improve MOT/sequence of construction by limiting the amount of temporary widening required. The vertical curve heading into the roundabout was improved to meet Headlight Sight Distance (HSD) which governs over Stopping Sight Distance (SSD) in this circumstance. To help compare the RFP Plan to our concept plan, *Table 4.3.4* summarizes the proposed maximum grades for each roadway versus the RFP plan and allowable maximum grades.

Table 4.3.4 Maximum Roadway Grades

Roadway	Maximum Grade (RFP Plan)	Maximum Grade (AI Concept Plan)	Maximum Grade (Allowable – Rolling Terrain)
Fall Hill Avenue	9.61%	9.80%	10%
Gordon W. Shelton Boulevard	2.02%	2.02%	11%
Briscoe Lane	2.16%	2.16%	11%
Hospitality Lane	2.00%	2.14%	11%
Noble Way	2.42%	2.00%	11%
Bragg Hill Drive	~5.08% (spline)	4.95%	11%
Frederick Place (Private)	3.12%	3.12%	11%
Roffman Road	5.27%	5.73%	11%
Wicklow Drive	3.21%	2.00%	11%
Weston Lane	2.83%	4.53%	11%
Crestview Way	6.00%	5.73%	11%
Fall Hill Office Park Entrance	11.00%	8.07%	11%
Forest Village Entrance	5.01%	8.33%	11%
Mary Washington Boulevard	4.18%	2.50%	10%
Hospital Drive	7.62%	5.10%	11%
Sam Perry Boulevard	At Grade	At Grade	11%
US Route 1	~4.80% (spline)	~4.80% (spline)	10%

(d) Typical Sections of the Roadway Segments

The pertinent typical sections to build each roadway and connection are contained in Volume II. The typical sections include roadway widths, sidewalk, shared use paths, and retaining walls. In addition, the bridge concept plans that show the typical section across the bridge over I-95.

(e) Hydraulic and Stormwater Management Design

Hydraulic Design

In accordance with the RFP, all existing pipes within the project limits have been assumed to be unserviceable and replacement systems have been designed. The drainage design is provided predominantly through closed systems. In developing the drainage concept, our team has economized the layout and constructability by aligning the design to our MOT approach.

The trunk line of the storm design along Fall Hill Avenue has been redesigned to remain on the south side of the roadway to allow its construction in Phase I of the MOT. Off-site drainage along Fall Hill is picked up

in our proposed system and conveyed to/through adequate outfalls. Drainage along Mary Washington Boulevard is also picked up in closed systems which, in many cases, combine with off-site drainage and toe of fill ditches. The drainage is then conveyed to SWM facilities and/or adequate outfalls. Similarly, drainage along US Route 1 is picked up in closed systems and conveyed to SWM facilities and/or adequate outfalls.

Stormwater Management Design

To address stormwater management needs (quantity and quality), several facilities will be designed and constructed. These facility are described based on their functionality and use in *Table 4.3.5*.

Table 4.3.5 SWM Facilities

SWM FACILITY/LOCATION	DESCRIPTION
SWMF #1 - Parcel 008 (Station 119+00 RT)	▪ Designed as an extended detention facility to provide both water quality and quantity to meet VDOT, DEQ and City of Fredericksburg criteria.
SWMF #2 – Parcel 018 (Station 142+00 RT)	▪ Will provide quantity management in order to ensure adequate outfall. Ultimately, SWMF #2 drains to the Rappahannock Canal where additional SWM is provided.
Rappahannock Canal SWMF	▪ Based on the RFP information and independent evaluation of the supporting calculations, use of the Rappahannock Canal is feasible and makes sense. ▪ The majority of the Project drains into the Canal and based on the large contributing area, the region will benefit from this facility as it will act in a regional capacity.
SWMF #3 – Parcel 038 (Station 202+00 LT)	▪ Will function as a fore bay to the Rappahannock Canal SWMF and only provide pretreatment prior to discharging the water into the Canal.
SWMF #4 – Parcel 039 (Station 209+00) –	▪ Will function as a fore bay to the Rappahannock Canal SWMF and only provide pretreatment prior to discharging the water into the Canal.
Existing Snowden Pond – Parcel 042 (Station 222+00 LT)	▪ Utilized to treat storm runoff from portions of Mary Washington Boulevard. ▪ If the capacity is overtaxed, our alternate design will diverts water into the closed system and outfall into the Canal where it will be treated in accordance with all pertinent regulations.

(f) RIGHT OF WAY LIMITS

Right of Way (ROW) deviations have been highlighted on the plans and remain unchanged except as allowed for in the RFP and addenda. Temporary construction easements, permanent easements, and utility easements will be determined during final design and are not shown in their entirety on the plans included in Volume II. Based on our design concept, the ROW acquisition required is less than the ROW shown on the RFP conceptual plans. The cost of additional ROW required based on design changes along Mary Washington Boulevard will be included in our Price Proposal, thus reducing the VDOT's ROW costs. *Table 4.3.6* provides a summary of the changes depicted on the conceptual plans.

Table 4.3.6 ROW Deviations

ROW DEVIATION	IMPACT	DESCRIPTION
Fall Hill Avenue west of Gordon W. Shelton Boulevard	Increase	Minor adjustments to correct the deficient taper along Fall Hill Avenue.
Parcel 10	No Increase	Although construction will be confined to the temporary easement defined on the RFP plans, slight impacts will occur to existing landscaping within the easement. As mitigation, impacted landscaping will be replaced.
North side of Fall Hill Avenue west of the I-95 Bridge	Decrease	A horizontal adjustment to the alignment provides additional work zone area at the bridge and smoother transitions.
South side of Fall Hill Avenue east of the I-95 Bridge	Decrease	The proposed retaining wall near Station 137+00 has been eliminated.
Mary Washington Boulevard Parcels 040, 039, 041	Increase/Decrease	Shifting the design away from the Civil War Trenches and between the two DVP transmission poles changes decreases impacts to Parcel 040 (City of Fredericksburg) and Parcel 041 (Medicorp Properties) with impacts to Parcel 039 (Snowden Commercial) increasing.

(g) Utility Impacts

Utility impacts are shown highlighted on the roadway plan sheets contained in Volume II. Impacts to two DVP monopoles on Mary Washington Boulevard were avoided by evaluating several design alternatives for the roadway, collaborating with VDOT on the potential changes, and coordinating with DVP to obtain feedback on the potential alternatives. In addition, opportunities have been identified to avoid utility impacts along the south side of Fall Hill Avenue through the use of short retaining walls. Further discussion of utility impacts and avoidance/mitigation strategies is included in Section 4.4.2.

(h) Sound Wall Locations

In accordance with the RFP and addenda, our design includes three sound walls found to be reasonable and feasible in the noise analysis included in the RFP Information Package. After award, we will prepare a final noise analysis in accordance with current criteria. If additional sound walls are found to be warranted (reasonable and feasible) and/or significant changes in the three proposed walls are required, we will work with the Department (in accordance with the RFP) to incorporate the additional features. A description of each sound wall location is included in *Table 4.3.7*.

Table 4.3.7 Noise Barrier Walls

Noise Wall Location	Description
I-95 northbound north of Fall Hill Ave	▪ The wall will tie-in to and extend from the proposed MSE wall in front of the easterly stub abutment. ▪ The location has been adjusted to accommodate the future widening of I-95.
North side of Fall Hill Ave	▪ The wall will extend from Wicklow Drive to the end of Parcel 019 (Riverview Limited Partnership).
South side of Fall Hill Ave	▪ The wall will shield the residences on Parcel 025 (NHC Partnership 4, LP).

(i) Other Key Project Features

Baseball Fields and Basketball Court – As a result of the proposed improvements, two baseball fields and one basketball court are impacted. To mitigate these impacts, one replacement baseball field will be designed and constructed along with a replacement basketball court. Our team will draw upon past experience on similar projects and strict adherence to the specifications to design and build these recreational facilities.

Recent / Similar Experience
- *Fields of Dreams*
- *Rollins Ford & Howison Homestead Parks*
- *Campus Drive Athletic Complex*

Signals – Three signalized intersections along the corridor will be impacted and will be fully replaced in accordance with the RFP. These intersection are at Route 1, Gordon W. Shelton Blvd, and Wicklow Dr.

Stone Gate relocation – The stone gate pillars associated with the Fall Hill Property (VDHR ID# 111-0149) will be impacted by construction. Specifications will be developed and approved by VDHR to protect, remove, and relocate the pillars on a suitable foundation and without damage to surrounding mature trees.

4.3.2 Conceptual Structural Design

Fall Hill Avenue Bridge over I-95

The five-span bridge structure proposed is a prestressed concrete bulb-T girder structure made continuous for live load. The continuity of the superstructure will aid in minimizing the depth of the superstructure beams. The structure has been improved by eliminating the open longitudinal deck joint between the phases of construction. By providing a jointless deck, the transverse section will include one less line of girders. Construction of the deck will be adjusted to provide a closure pour, which spans a full girder bay from the edge beam of the first stage of construction to the adjacent beam of the second phase, engaging stirrups from the beam flanges of each stage. Beam deflection will be evaluated during the design stage.

The bridge arrangement has been improved and span lengths adjusted to allow for construction of the piers and future traffic lanes while limiting impacts within the existing shoulders of I-95. The proposed substructure units will also be modified from the RFP-proposed structure by making the piers pile supported rather than drilled shaft construction. Likewise, MSE retaining walls will be utilized under semi-integral stub abutments at each end of the bridge rather than tall abutments on spread footings. The semi-integral abutments and MSE walls provide a jointless low-maintenance structure.

Eliminating Bridge Deck Joints
Moffatt & Nichol's design eliminated bridge deck joints on two current VDOT projects – Route 1 over CSX Railroad in Chesterfield County and the Lewistown Road Bridge over I-95 in Hanover County.

BR-27C railings will be used along the traffic lanes on the bridge and pedestrian fencing will be provided on each side of the bridge. A raised concrete median will be installed between lanes of traffic in opposing directions, and a raised concrete sidewalk will be constructed on the south side of the traffic lanes.

Table 4.3.8 Bridge Design Features

BRIDGE DESIGN FEATURE	BENEFIT
Eliminating the open longitudinal deck joint between phases of construction provides one less line of girders.	▪ Reduced costs. ▪ Minimized future maintenance.
Straightening the alignment simplifies using the semi-integral abutment.	▪ Reduced costs. ▪ Minimized future maintenance.
Span lengths were adjusted to accommodate pier construction and future traffic lanes.	▪ Limited impacts within the existing shoulders of I-95. ▪ Reduced impacts to the public.
Pile supported piers for the substructure.	▪ Reduce costs.
MSE retaining walls under semi-integral stub abutments.	▪ Reduced costs. ▪ Minimized future maintenance.

RETAINING WALLS

Wall types were identified with consideration of wall heights and the slope of fill behind the walls. Standard wall types such as RW-3 walls have been utilized where possible. Taller walls will be evaluated during the design phase to determine the constructability and capacity required at the location. Soldier pile walls with lagging are anticipated for the wall below the apartment complex parking lot near the roundabout. This area has the tallest retaining walls on the Project. The facing of the wall will incorporate matching aesthetic treatments to other elements within the Project as prescribed in the RFP.

Four Retaining Walls Eliminated
Reduced costs and eliminated future maintenance are the benefits of eliminating four retaining wall from the RFP design concept through shifted alignments and profile adjustments.

Table 4.3.9 Retaining Wall Location and Types

RETAINING WALL	LOCATION	TYPE
Retaining Wall 1	Station 135+72.09 to 140+48.91 LT	MSE or RW-3
Retaining Wall 2	Station 178+62.50 to 202+45.35 RT	H-Pile
Retaining Wall 3	Station 204+85.00 to 206+50.00 RT	H-pile or RW-3 with temporary sheet pile

MAJOR DRAINAGE STRUCTURES

VDOT defines major drainage structures as those structures carrying 500 cfs or greater on the 100-year storm. Although the large pipe crossing at Station 203+25 is less than 500 cfs (428 cfs), we have included it as a point of discussion. This crossing is being evaluated as either a single cell box culvert or multi-line pipe culvert crossing. The only other major drainage structure will be the Rappahannock Canal which will be used as a SWM facility and will be analyzed appropriately.

4.4 Project Approach

4.4.1 RIGHT OF WAY ACQUISITION/ENVIRONMENTAL MANAGEMENT

The AI Team fully understands and will carry out the environmental commitments that were enumerated in the EA/FONSI. These commitments encompass design, ROW acquisition, and construction. During the design phase, our environmental team will work closely with the ROW team and designers to ensure environmental commitments are maintained, impacts are minimized, and that any deviations from the environmental document are identified and vetted as early in the process as possible.

We recognize that prior to ROW Acquisition, an environmental reevaluation will be completed. Environmental and right of way tasks have been identified and accounted for in the proposal schedule. The proposal schedule includes durations to perform supplemental studies as may be necessary for alignment revisions and to allow for VDOT and permitting agency reviews, certifications, and authorizations necessary for design approvals and construction authorizations. Duration for right of way acquisition and negotiations are also integrated into the schedule. The proposal schedule shows both ROW and environmental activities on the near critical path for the Project.

RIGHT OF WAY ACQUISITION

The AI Team's approach to right-of-way (ROW) will strictly follow VDOT's policies and procedures as identified below:

- *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended (the "Uniform Act"), and Titles 25.1 and 33.1 of the 1950 Code of Virginia, as amended;
- *VDOT Right-of-Way Manual of Instructions*, the *VDOT Utilities Manual of Instructions;*
- IIM-LD-243.4;
- Chapter 12 of the *VDOT Survey Manual* for acquisition of property ;
- VDOT's Right-of-Way and Utilities Management System (RUMS)

Our VDOT certified right-of-way acquisition consultant, RDA, will coordinate all acquisition activities from their Fredericksburg Office, less than 5 minutes from the project site. At NTP, we will perform a records research to verify owner information. We will then perform title reports on all parcels anticipated to be impacted. During this same timeframe, our ROW staff will send out required owner notification letters and then contact each owner at the appropriate time. Furthermore, our ROW staff will work with our designers, surveyors and utility coordinators to expedite the ROW plans for submission to obtain approval and authorization for acquisition. As these plans are being finalized, appraisals or Basic Acquisition Reports (BARs) will be prepared. Once authorization is provided by VDOT, our team will submit negotiation packages to the Department for concurrence. Negotiations will commence. If agreement cannot be reached with any given property owner within a reasonable timeframe (45 days) then our team will recommend that a Certificate of Take (COT) be issued. We will continue to negotiate in good faith and in hopes of settling prior to condemnation.

As a means of identifying ROW progress, RDA will prepare weekly summaries of ROW activities. These reports will be provided to our team members and VDOT for review and comment. The purpose of these progress reports is multi-facetted. First and foremost, they will give a snapshot view of where we are in the process. Secondly, they will detail negotiation discussions with property owners which will facilitate required input from others. Finally, they will show a tracking timeline for each parcel to identify those parcels which have exceeded reasonable negotiation efforts and should be expedited through the COT process.

ROW and Environmental Resources – During the negotiations phase, we will be especially mindful of the historic properties. To facilitate discussions with these property owners, the ROW negotiator will take our Lead Designer to help explain the alternatives that our team investigated and why we ended up with the alignment shown. Additionally, if renderings of before and after conditions will help to facilitate understanding, our team will prepare and present these to the property owners during these initial meetings.

Although RDA's ROW staff is well versed in plan reading and explaining features to property owners, if questions arise regarding alternative designs or design adjustments answers can be provided immediately. This will save numerous back and forth conversations as well as eliminate any confusion due to conveyance of information – thereby saving time and money. ROW for parcels 026 and 027 will obtained in a permanent roadway easement rather than as fee simple ROW. This is mandated by the RFP and required due to the fact that these parcels contain Virginia Historic Landmark Commission Easements.

Avoidance, Minimization, and Changes in ROW – The AI Team has evaluated the RFP design and looked for opportunities to avoid or minimize impacts to ROW. Much of the ROW is specifically set by the RFP and addenda. Along Mary Washington Boulevard in the vicinity of Hospital Drive, the RFP provides some flexibility in the ROW. As a result, our design has shifted the alignment to avoid impacts to utilities. The changes in the ROW have been identified and depicted on our plan exhibits in Volume II. Although we believe that this shift reduces the amount of ROW needed, it shifts the needs from one owner to another. The values of these properties are being evaluated to ensure that any additional costs (if any) are accounted for in our Price Proposal.

As discussed in greater detail in Section 4.4.2 Utilities, opportunities exist to avoid some utilities and in turn reduce or eliminate ROW takes. These opportunities would require additional retaining walls and adjustment of the ROW in an area that the RFP currently precludes.

Commitments –ROW commitments regarding the treatment of historic properties include: tree removal in conformance with the requirements of the historic preservation and open space easement over the Fall Hill property, and relocation of the stone gate pillars, Additionally, as described below, there are two hold points for Environmental Reevaluations – one at ROW acquisition authorization stage and the other at authorization to begin construction stage. Our team will provide the appropriate forms (EQ-201, EQ-200, and EQ-103) and documentation at each hold point for VDOT's concurrence, acceptance and approval.

ENVIRONMENTAL MANAGEMENT

Environmental management is integrated with all phases of design and construction. Given that some alignment adjustments from the RFP design have been made, the potential for deviations from the environmental document exist. Key elements of environmental management for the Project include environmental document reevaluations and permitting; cultural and section 4(f) resources; and potential construction impacts. As the Project proceeds through each milestone, an environmental review of the design plans will be performed as part of the QA/QC program and plans will be reviewed for compliance with environmental commitments.

Prior to the initiation of construction, a meeting with the design, construction, and environmental teams will be held to review environmental permits, design plans, and environmental commitments. During construction, our environmental team will perform field inspections and environmental compliance monitoring to ensure that all construction activities are performed within the permitted areas and in compliance with environmental commitments. Where construction is adjacent to environmental resources that must remain undisturbed, orange safety fence will be placed at the limits of disturbance in order to draw attention to the area and to protect it from accidental encroachment.

Environmental Document Reevaluations – Environmental document reevaluations necessary for RW Authorization and Construction Authorization are critical milestones in the schedule. We understand that each of these milestones are "hold points" that must be completed for the Project to advance to the R/W and Construction phases. The AI Team will complete all necessary studies and documentation to allow VDOT to perform the document reevaluations and update the Environmental Certification (Form EQ-103) if necessary. Time has been built into the proposal schedule to allow for these reevaluations without delay to the Project.

Permitting and Compensatory Mitigation – The AI Team understands our responsibility to obtaining all necessary federal and state Water Quality Permits necessary for construction. Following NTP, we will begin

Wetland Impacts Minimized

Wetland impacts for the Project are anticipated at 0.25 acres and have been kept to a minimum by adjusting fill slopes and profiles.

the activities required for permitting of the Project. These activities include additional wetland/stream delineations, obtaining a jurisdictional determination from the Army Corps of Engineers, preparing the Joint Permit Application once design is advanced to a point where limits of impact are established, and obtaining the necessary federal and state water quality permits necessary for construction, and providing mitigation as required by the permitting agencies. We will initiate contact with the permitting agencies immediately following NTP and maintain communication throughout the design and permitting phase to allow for expedited processing of the required Water Quality Permits. Wetland and stream mitigation will be accomplished through the purchasing of credits.

In compliance with the RFP requirements including the Virginia Erosion and Sediment Control Law and Regulations and the VSMP Law and Regulations, our team will prepare and implement an ESC Plan and Narrative, SWPPP, and a post-construction SWM Plan. The ESC and SWM Plan Certifications will be prepared for submission to the VDOT PM to allow for processing of a VSMP Construction Permit.

Cultural Resources – A Phase I cultural resource survey was completed which identified historic resources that are currently listed on, eligible for, and potentially eligible for the National Register of Historic Places (NRHP) within the Area of Potential Effect (APE). It was determined that several properties that are eligible for listing on the NRHP may be impacted; however, impacts to these properties would not cause them to no longer be eligible. The impacts summarized in *Table 4.4.1* are generally characterized as three archaeological resources/battlefield features and one architectural resource.

Table 4.4.1 – Cultural Resource Mitigation Strategies

SITE DESCRIPTION (RISK RATING)	IMPACT	MITIGATION STRATEGY
44SP0573/111-5272 – Earthwork 3 **(Low Risk)**	Roadway improvements through the site do not impact any significant features.	▪ Adjusted the profile to reduce cut on historic properties and reduce overall ROW impacts. ▪ Monitor impacts to ensure construction activities continue to avoid the trenches and berms north and south of the roadway. ▪ Accommodate the City's interpretive signage plan. ▪ Archaeologist from Dovetail on-site.
44SP0640 – Old Fall Hill Road Bed **(Low Risk)**	Unavoidable impacts to the road bed.	▪ Accommodate the City's plans for interpretive signage.
44SP0642 – Multi-Component Site **(High Risk)**	Existing basketball court is adjacent to the site.	▪ Have Dovetail develop a treatment plan, further define the site, and collect artifacts per the MOA. ▪ Initiate treatment plan at NTP in order to expedite FHWA, VDOT and SHPO reviews. ▪ Accommodate the City's interpretive signage plan.
111-0149 – Fall Hill Property **(Medium Risk)**	Direct impacts to the stone wall entrance pillars.	▪ Relocate the pillars in accordance with the MOA requirements. ▪ Reconstruct the pillars in accordance with VDHR approved specifications on suitable foundations.
44SP0574/111-5273 – Civil War Earthwork 4/Zig-Zag Trenches 1 **(Low Risk)**	Impacts were avoided through design alternative.	▪ Shifted the alignment away from the trenches. ▪ Design ensures that all disturbances remain at least 35 feet away from the nearest trench point to the proposed improvements. ▪ Delineate and protect the site during construction.

Section 4(f) Resources –The Project will require the use of 4(f) properties (i.e. Salem Church Battlefield, Battle of Fredericksburg I, Battle of Fredericksburg II, Rappahannock Canal, Earthwork 3, Fall Hill Property, the Old Fall Hill Road Bed, and Snowden Recreation Park) which cannot be feasibly avoided. Furthermore, FHWA has determined that the uses of Salem Church Battlefield, Battle of Fredericksburg I, Battle of

Fredericksburg II, Rappahannock Canal, and Snowden Recreation Park are de minimis impacts. The AI Team will ensure that the determination of "de minimis impacts" will not be jeopardized and the protection of the sites described above is maintained.

Hazardous Materials – The Corridor Hazardous Materials Survey identified the potential for soil and/or groundwater contamination to be present within the project area. An evaluation of the data concluded that hazardous/petroleum materials are not anticipated to be encountered during construction. However, our team will monitor construction activities and respond appropriately if hazardous materials are unexpectedly encountered. Furthermore, the existing bridge is indicated to contain asbestos and lead which will require further testing, confirmation, and a removal/containment plan. Solid waste, hazardous waste, and hazardous materials removal and disposal will be managed and contained in accordance with all applicable state and federal standards and regulations. We will prepare a Spill Prevention, Control, and Countermeasures Plan as required by 40 CFR 112 for submittal to the VDOT Project Manager prior to beginning remediation.

Noise – There are three noise barrier locations that were determined to be reasonable and feasible. To determine final barrier needs and locations, our team will update/finalize the noise analysis for the corridor. The results of this analysis will be reviewed and approved by VDOT/FHWA for implementation. Minor changes in the wall heights/locations will be incorporated as part of our design and construction. Construction activities will maintain compliance with local noise ordinances.

Air Quality – Although the project area lies within the Fredericksburg region and is designated as maintenance for the 8-hour ozone standard and as an attainment area, it was found to not be regionally significant in the most recent regional conformity analysis. As a result, only qualitative Co and MSAT analyses were completed which showed no potential for violating state or national ambient air quality standards. No additional actions are anticipated to be necessary with regards to air quality.

Threatened and Endangered Species – No threatened or endangered species will be encountered within the project limits in accordance with the VDGIF and VaFWIS databases. However, there are three species (the dwarf wedgemussle, bald eagle, and green floater) that are within a two-mile radius of the Project. Based on additional investigations performed as part of the EA, it was determined that none of the adjacent three species will be adversely impacted by the Project. Our team will continue to monitor changes in the T&E Species databases and our construction activities to maintain no impact.

Groundwater – The Project is located within the Fall Zone Groundwater Area and the groundwater quality is generally characterized as good with some areas of high iron concentration. The potential for pollution is moderate to high in this area. As our team performs additional geotechnical investigations, we will also develop a monitoring program to oversee the water quality concerns in order to take corrective actions should problems occur. As a preventative measure, a Spill Prevention, Control, and Countermeasures Plans will be developed for use on the Project.

Construction Compliance –The SWPPP will outline all procedures regarding temporary and permanent erosion control including design, maintenance, and record keeping of SWPPP facilities. The SWPPP will be maintained by keeping detailed documents of inspection reports, logs of land disturbance, and up to date maps. If a deficiency is found during inspection, efforts to correct them will start immediately and be documented and recorded. Erosion control and environmental compliance, monitoring, and record keeping during construction will be conducted by certified inspectors, and includes periodic onsite reviews, pre-storm preparation, weekly and post storm event erosion and sediment control inspections and compliance audits of the construction as it progresses.

Wetland Protection
Wetlands will be flagged and orange construction fence installed and maintained to protect unaffected wetlands.

4.4.2 UTILITIES

The AI Team has developed the following strategic approach to mitigating utility coordination based on our VDOT and design-build experience on projects requiring significant utility coordination.

THE AI TEAM APPROACH TO UTILITY IMPACTS	
✓ *Provide a team of expert utility coordinators.*	✓ *Determine an appropriate location for each impacted utility.*
✓ *Coordinate early with utility companies.*	✓ *Integrate utility tasks into the project schedule.*
✓ *Avoid and minimize design impacts.*	

Provide a team of expert utility coordinators. Lead Utility Coordinator John Meyers brings 13 years of VDOT experience as the former Regional Utility Coordinator for the NOVA District. He will be assisted by Jeremy Spittle who has coordinated with DVP on several D/B projects over the last two years. Mr. Myers specializes in underground utilities and Mr. Spittle is RDA's aerial expert. In addition, RDA holds various utility contracts and is a DVP approved underground design consultant.

DVP Coordination Expertise
RDA's Jeremy Spittle successfully coordinated with DVP on the Middle Ground Boulevard Extension and Prince William Parkway Design-Build projects.

Coordinate early with utility companies. During the RFP phase, we have coordinated with all known utility owners within the project limits to ensure facilities have been properly identified and evaluated. This coordination has included meetings with each utility owner to review our proposed design and the utility owner's facilities. Through these meetings, we have gained an understanding of the existing utilities within the project limits and have identified those that must be avoided to maintain our project schedule.

Avoid and minimize design impacts. Our complete analysis of aerial and underground utilities will include plotting the existing utilities on cross sections along with all design features including drainage and retaining/sound walls. For problematic areas, test pitting will confirm exact locations. At that time, any design changes to avoid utility conflicts will be finalized.

Determine appropriate location for each impacted utility. When utilities cannot be avoided, utilization of all existing available areas will be explored before easements are considered. Vacant areas available for utility corridors will be the first area of focus to utilize the available rights of way and easements that currently exist. Once all these areas have been investigated, new easements will be defined for the remaining utility relocations. The proposed easements will be kept to a minimum and labeled by the current VDOT standards dependent upon the existing rights of the utility company.

Integrate utility tasks into the schedule. Preliminary schedule durations for coordination, adjustments, and relocations have been incorporated into the proposal schedule included in Section 4.7. The durations of these activities were obtained from the utility companies for each of activities they will perform during both the design and construction phases.

UTILITIES AVOIDED

Given the specific right-of-way restrictions, our approach to avoid utility impacts has been limited. However, our team investigated design alternatives to shift the alignment of Mary Washington Boulevard and avoid the monopole transmission towers along Mary Washington Boulevard at Hospital Drive. The final design presented in this Technical Proposal resulted from revising our preferred alignment based on the RFP Addendum and meeting with the DVP Transmission Group to discuss the alternatives. Based on the information that DVP shared with regards to our alternatives, we selected an alignment which goes between the two DVP monopole towers while maintaining horizontal clearances requested by DVP. As

Avoidance of Two DVP Monopoles on Mary Washington Boulevard
Considering three design alternatives for the roadway alignment, presenting options to VDOT, and coordinating with DVP has resulted in avoidance of two DVP Monopoles, saving a year of design and up to two years of utility relocation.

a result, impacts to DVP's two sets of transmission lines are minimized with the most expensive component of their facilities – the monopoles – avoided. The alignment still impacts the wood pole transmission line, which is unavoidable with any alternative due to location and clearance.

Other areas where utilities were avoided are minor. However, there are some areas where our team sees opportunities to construct some very short, cost effective, retaining walls that will avoid utilities (Verizon fiber, Verizon copper, Cox, Comcast, DVP distribution). These opportunities exist mainly along the south side of Fall Hill Avenue between the Fall Hill Office Park entrance and the roundabout. Short retaining walls would require adjustment to the right-of-way in order to maintain proper offsets from the sidewalk and keep the retaining wall within the right-of-way as required by the RFP.

UTILITY CONFLICTS

Based on numerous discussions and meetings with the various utility companies, we have developed an approach to relocate those utilities that remain in conflict with the design. As part of our pursuit effort, the AI Team has evaluated the conflicts for the utilities shown in the table above for initial cost responsibility (UT-9's). More importantly, we have evaluated ways to minimize how the conflicts may impact the project schedule. Preliminary durations for the activities to be performed by the utility companies have been incorporated into the proposal schedule and are summarized in *Table 4.4.2*. The utility relocations have been divided into three separate phases, which will allow assist to coordinate the relocations along with the schedule of work. See Section 4.5.1 for detailed area definitions.

Table 4.4.2 – Utility Conflicts by Location

UTILITY	AREAS 1 and 2 Fall Hill Sta 104+37.54 to 134+88.65	AREA 3 Fall Hill Sta 134+88.65 to 184+07.85	AREAS 4, 5, and 6 Mary Washington Blvd Jefferson Davis Hwy
COMCAST	No Conflicts	6137' underground 5 months design 4 months construction	No Conflicts
COX	No Conflicts	5138' underground 4 months design 4 months construction	No Conflicts
COLUMBIA GAS	No Conflicts	1192' of line 3 months design 3 months construction	513' of line 3 months design 2 months construction
DVP UNDERGROUND	782' underground line 3 months design 4 months construction	516' underground line 3 months design 3 months construction	732' underground line 3 months design 4 months construction
SANITARY SEWER	10" force main 1 months design 1 months construction	917' of 8" – 88' of 6" 2 months design 3 months construction	339' of 8" – 948' 12" SFM 2 months design 4 months construction
VERIZON SOUTH	12,234' underground line 6 months design 12 months construction	No Conflicts	No Conflicts
VERIZON VIRGINIA	No Conflicts	22,481' underground 7 months design 8 months construction	2,045' underground 3 months design 3 months construction
WATER FACILITIES	416' of 24" line 2 months design 2 months construction	1894' of 8" line 2 months design 3 months construction	481' of 12" line 2 months design 2 months construction
AERIAL POLE LINE	14 poles 4 months design 7 months construction	No Conflicts	12 poles 3 months design 6 months construction
DVP TRANSMISSION	3 wood structures to be replaced/relocated 8 months design and 6 months construction Relocations to begin following NTP and end before Mary Washington Construction		

CONFLICT MITIGATION – Strategies associated with each utility in conflict are described below:

- *Dominion Virginia Power Transmission* – Redesign the intersection of Mary Washington Boulevard and Hospital Drive to minimize impacts. Complete the design of this intersection first to allow DVP Transmission to start their relocation process following NTP.
- *Dominion Virginia Power Distribution* – For both overhead and underground facilities throughout the corridor, avoid impacts where possible. DVP exists in all three "utility relocation phases" and will be relocated accordingly to avoid schedule delays.
- *Verizon Copper* – Verizon Copper lines exist throughout the Project, and will be relocated in stages. This is especially important due to the duration of copper relocations. Two separate branches of Verizon (Verizon South and Verizon of Virginia) will require coordination.
- *Verizon Fiber Optic* – Similarly to Verizon Copper facilities, two entities of Verizon will require relocation. Fiber optic cables exist throughout the Project and will be relocated according to our "utility relocation phases." Due to fiber cables requiring replacement from splice point to splice point, care will be taken to avoid small conflicts that would require a large relocation.
- *Comcast Cable/Cox Communications* – Both entities exist along this Project and will require relocations; some underground in "phase 2," though mostly overhead. Coordination will be facilitated between Cable companies and DVP/Verizon, the owners of the overhead pole line.
- *Columbia Gas* – Columbia Gas facilities exist only on phases 2 and 3 of the utility relocation phases, but early coordination will be needed to ensure relocations occur on schedule
- *Water/Sewer* – Impacts will be confirmed with test holes and avoided where possible. We will meet early to determine any betterments that may be requested to incorporate into the plans.

UTILITY COORDINATION

Once the Project is awarded, the mitigation strategies described above will be reinforced and supplemented by our tried and true strategies described below to minimize the inherent risk that utilities present.

Early Coordination – For utilities that must be relocated, communication with the utility owners will be initiated immediately following NTP. Having already met with the utility owners during the RFP phase, our Utility Coordinator, John Myers (a former VDOT Regional Utility Coordinator), has begun developing a working relationship with the utility representatives that will facilitate good communication throughout the Project. Early coordination will inform the utility companies about potential impacts and timelines and allow early feedback to identify avoidance or minimization opportunities.

Accelerated Utility Field Inspections – Plans will be distributed to the utility companies early in the design phase, and in advance of the Utility Field Inspection (UFI) to assess the utility impacts. Similar to any VDOT project, additional utility details will be provided in the plans as necessary to ensure construction does not conflict with existing or relocated utilities. This may include depiction of existing and proposed utilities on cross sections, and supplemental utility plan sheets and details such as storm profiles with utilities depicted at critical locations. At the UFI, the Project will be formally presented and the utility companies will be engaged to assess common concerns and goals, facilitating avoidance and relocation where impacts are imminent. At the UFI, we will not only discuss the Project in depth with the utility companies, but review the proposed alignments we had developed through the test-hole analysis.

Schedule Integration – Large contributors to the schedule are the excessive workloads of the utility companies' work force. Our team's experience in utility design will help utility companies that are struggling to meet schedule by providing preliminary alignments or other design assistance. A submission schedule will be developed for Plans & Estimates

RDA Utility Design Maintains Schedule

The Prince William Parkway Design-Build project involved heavy DVP relocations. RDA designed the distribution relocations for DVP to speed up the process on the utility end. This ultimately helped the project to stay on schedule.

(P&Es) that fits the schedule while allowing for an appropriate time to acquire necessary easements.

Utility Progress Tracking – Progress with each utility owner will be tracked by our Lead Utility Coordinator (LUC) using a utility tracking matrix, which will be updated and provided to the DBPM and VDOT on a bi-weekly basis. This matrix will include and update all utility milestone events to facilitate design and relocation on a regimented schedule. Identifying utility relocation schedule impacts early will assisted in sequencing construction to minimize schedule impacts. Upon receipt of the plan and estimates, the Utility Coordinator will review the plans for accuracy, completeness, and compliance with VDOT's Right of Way and Utilities Division Manual, Utility Relocation Policies and Procedures, Land Use Permit Manual, and the City of Fredericksburg's requirements.

Continuous Communication – The key to a successful project with this many utilities is to stay in contact with each utility on a weekly and sometimes daily basis while tracking progress through the use of a coordination matrix. Maintaining constant communication with the utility companies will help to ensure they have what they need to maintain schedule. Throughout the design phase, the Utility Coordinator will hold regular meetings with the utility owners to ensure plan and estimates are developed in a timely manner, and that the relocated utilities are free of conflict from the road construction and other utilities. Final utility relocation plans, certified by the LUC, will be submitted to VDOT for approval prior to 'Authorization to Relocate' is issued to utility owners. Routine meetings with all utility owners will continue throughout the relocation phase to ensure adequate progress is being made, and to allow for continuous exchange of information between the construction team and utility owners.

UNIDENTIFIED/NON-LOCATED UTILITIES

Risk associated with unexpected or unknown utilities will be diminished by the thorough review of records by our LUC and utility consultant. These activities provide built in QA/QC measures to identify documented facilities in the corridor. Additionally, Miss Utility design tickets will be called in to have all utilities in the corridor mark their utilities accordingly. Although it is our experience that Miss Utility markings are not always accurate, it provides a third approach to identifying the potential utilities in the corridor.

Once construction begins, the focus on unknown utilities changes. We are no longer in a preventative mode. We are now in a mode to respond should unknown utilities be encountered. To assist in avoiding utilities, once again, we will call Miss Utility to provide updated markings based on the conditions at the time of construction. Especially in areas where known utilities exist, care will be taken when excavating. If an unknown utility is encountered, AI will immediately contact the AI Safety Manager, document the location, identify the utility (if possible), contact RDA, and contact the utility owner. Given RDA's experience, knowing who to call will be critical to ensure a quick resolution to a potential problem. We will then as-built the utility to determine the extent of the potential conflict. To help mitigate these rare and unavoidable situations, RDA will assign Utility Coordinator Bill Missell, P.E. from the Fredericksburg Office, just 1.7 miles from the project site, to provide on-site assistance in identifying and coordinating an unknown utility.

EXPERIENCE WITH UTILITY OWNERS AND UTILITIES

AI has been responsible for utility coordination on eight design-build projects, including the Middle Ground Boulevard Extension Design-Build project with RDA. In addition, AI's adjacent Rappahannock Canal project requires coordination with Columbia Gas, the City of Fredericksburg Public Works, DVP, Cox Communications, and Verizon. RDA's utility coordination experience includes the Stringfellow Road (Route 645) Widening Design, Route 15 PPTA, Heritage Center Parkway Design-Build, and Route 36 Improvements Design-Build projects.

Utility Betterments within Schedule

The AI/RDA Design-Build Team worked with the City of Newport News and Hampton Roads Sanitation District to add a betterment to the Middle Ground Blvd project that provides the City with a system that accommodates future growth in the area while maintaining the original project completion date.

4.4.3 Quality Assurance/Quality Control

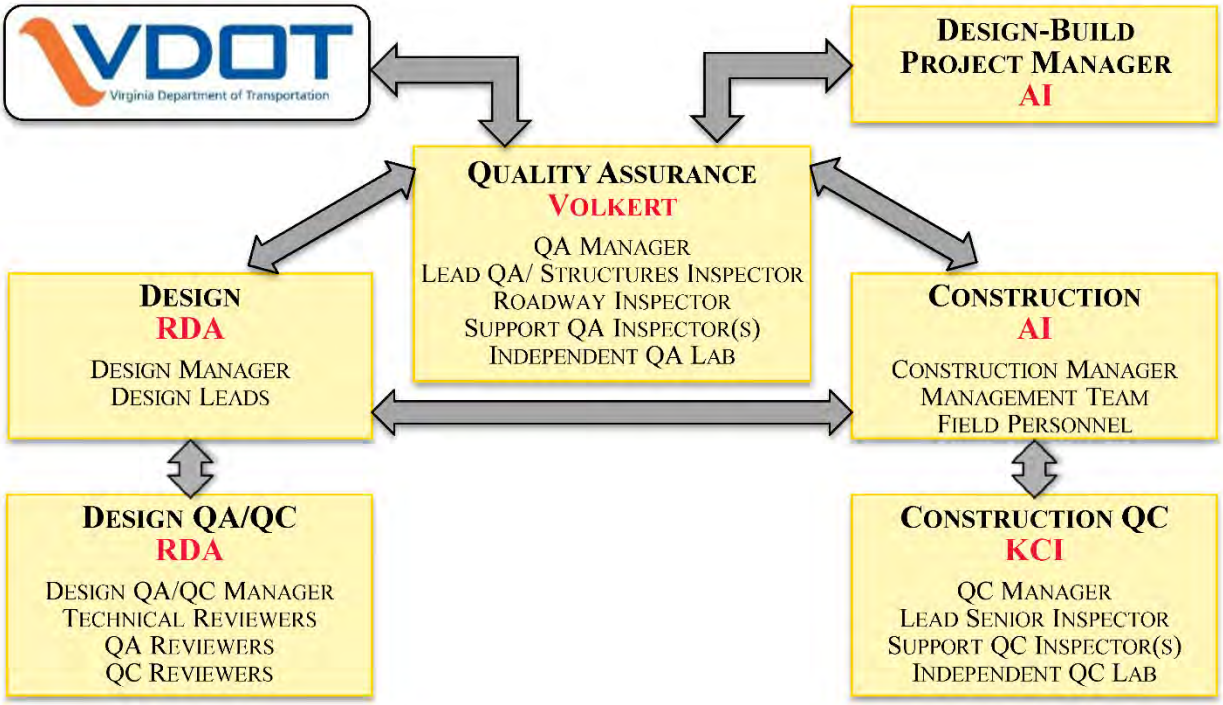
The AI Team will deliver a Project that meets or exceeds requirements through flawless execution of a QA/QC strategy that will ensure all materials and elements of the work will perform satisfactorily for the purpose intended. Volkert is providing QA services for the Project and has worked with AI and RDA on three other VDOT design-build projects, including the Tye River Bridge and Middle Ground Blvd Extension projects.

VDOT Recognition of AI's Quality of Work

"The VDOT Lynchburg District Project Management team of Frank Lukanich and Todd Bolling were impressed with the quality of work performed by AI… AI also took their time to ensure they were doing things correctly and safely even when unexpected issues arose." – Jeffrey A. Roby, P.E., VDOT, Design-Build Program Manager, Re: Tye River Bridge Design-Build Project

Quality Management Approach – A Quality Assurance/Quality Control (QA/QC) Plan will ensure the Project is designed and constructed to meet all applicable rules and regulations. The QA/QC Plan will be developed in accordance with *VDOT's Minimum Quality Control and Quality Assurance Requirements for Design Build & PPTA Projects, January 2012 (January 2012 QA/QC Guide)* and will consist of a *Quality Control Plan (QCP)* and *Quality Assurance Plan (QAP)* including design and construction activities. Any nonconformance issues will be resolved as established by the QA Auditing and Nonconformance Recovery Plan (AR Plan) which will be developed in accordance with the January 2012 QA/QC Guide. *Figure 4.4.1* Displays our QA/QC Organizational Structure for the Project.

Figure 4.4.1 – QA/QC Organizational Structure



QA/QC Communication

The QAM will provide direct and concurrent reporting to VDOT and our DBPM. The QA team will interface with both design and construction staff throughout the duration of the Project. Communication with the construction QC team on a daily basis will include discussion of upcoming work/inspections, results of sampling and testing, and address any issues that may arise. Preparatory Meetings will review any issues that need to be addressed prior to the start of upcoming work operations. Witness Points and Hold Points will be included in the construction schedule to integrate the inspection and testing points with operation planning.

STAFFING PLAN – The QA/QC team is comprised of the Design-Build Project Manager (DBPM), Quality Assurance Manager (QAM), Design Manager, Design QA/QC Manager, Construction Manager (CM), Construction QC Manager (QCM), inspection staff, testing labs, design reviewers, construction management staff, and field personnel. Their roles and responsibilities are detailed in *Table 4.4.3*. Resumes for key QA/QC staff will be included in the QA/QC Plan.

Table 4.4.3 – QA/QC Roles and Responsibilities

TEAM MEMBER	QA/QC ROLE AND RESPONSIBILITY
DBPM	Responsible for the overall project design and construction quality management and will provide direct oversight of quality assurance.
QAM	Responsible for the QA inspection and testing of all materials used and work performed on the Project, oversight of the construction QC operations, and maintenance of the Materials Notebook.
QA Inspectors	The Structures Inspector will serve as Lead QA Inspector on-site throughout the duration of construction and will be supported by the Roadway Inspector and additional inspection staff as needed. QA Inspectors will have the authority and responsibility to initiate actions to prevent the occurrence of any non-conformities as well as verify the implementation of solutions for nonconforming work.
Independent QA Lab	An AMRL certified testing lab will provide independent QA testing for materials.
DM	Responsible for overall management of the QA/QC programs for design and will be assisted by the Design QA/QC Manager.
Design QA/QC Manager	The Design QA/QC Manager will report to the DM and will oversee independent Design Quality Control processes to ensure adherence to the processes defined in the QMP.
Technical Reviewers	Technical Reviewers are senior engineers in the same discipline but not associated with the Project that review the design for technical compliance.
Design QC Reviewers	Design QC Reviewers are completely independent of the design team. Responsible for evaluation of every design element for adherence to VDOT criteria and RFP requirements.
Design QA Reviewers	Design QA Reviewers focus on compliance. They will confirm all previous comments have been adequately addressed and meet the requirements of the RFP.
CM	Responsible for ensuring the construction services provided conform to the requirements of the contract documents and appropriate rules and regulations contained therein.
Management Staff	Will support detailed construction operation planning that identifies QA/QC requirements, and coordinate with inspection staff for witness and hold points.
Field Personnel	Responsible for ensuring all work performed and materials incorporated meet VDOT standards and will coordinate daily with inspection staff for construction operations.
QC Manager	Responsible for construction inspection and sample and testing work in accordance with the Contract requirements. Responsible for the processes, methods, procedures, and documentation for delivery of QC on the Project.
QC Inspectors	The Lead/Senior QC Inspector will be dedicated to the Project for the duration and will have one or more supporting QC Inspectors and Materials Testing Technicians. Inspection staff will hold current VDOT materials certifications for the types of materials testing they are assigned to perform.
Independent QC Lab	An AMRL certified testing lab will provide independent QC testing for materials.

DESIGN QA/QC FOR MAINTENANCE OF TRAFFIC

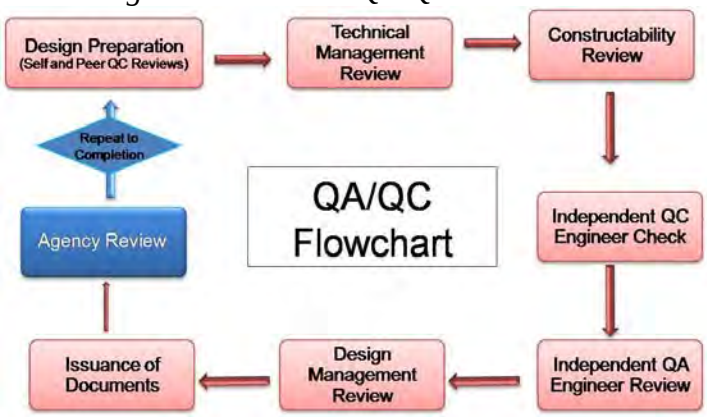
Given the extensive amount of reconstruction of Fall Hill Avenue, the curvilinear nature of the existing road as compared to the proposed road, and the corrections necessary to meet current design criteria, the Maintenance of Traffic (MOT) will be a critical element to the success of the Project. At NTP, our team will evaluate the concept

VDOT Experienced TMP/MOT Design Lead

John Giometti, P.E. is the former Culpeper District L&D Engineer and was responsible for all VDOT projects in Culpeper.

plan prepared for the Technical and Price Proposals to see if any adjustments are necessary before initiating detailed MOT design. Subsequently, each phase of the MOT development will strictly follow *VDOT's January 2012 QA/QC Guide* and RDA's QA/QC procedures shown in *Figure 4.4.2* and described in the narrative below. John Giometti, P.E., our TMP/MOT design lead, will follow the phasing schemes to develop the Design Preparation for each phase of the MOT.

Figure 4.4.2 RDA's QA/QC Procedures



Design Preparation for Phase 1 MOT

Phase 1 of the MOT provides temporary widening to the north along a majority of Fall Hill Avenue. The Design Preparation for this phase will require close attention to be paid to areas where the existing pavement crosses over the proposed pavement and the temporary widening must shift accordingly. Temporary drainage may be required to avoid trapping water in pockets created by pavement transitions and varying grades and cross slopes. Additionally, if the cross-over or transition areas are significant enough, transition profiles will be developed along with temporary cross sections. Once design of the pavement widening for Phase 1 is complete, Mr. Giometti and his staff will design the traffic control devices in accordance with the Virginia WAPM and MUTCD. The spacing of traffic controls devices will be established based on the design speed or the posted speed at a minimum. A narrative describing the Phase I MOT approach will also be developed.

RDA's QA/QC Procedures

RDA will follow the QA/QC procedures listed below once Design Preparation for an MOT phase complete.

1. ***Design Preparation (Self and Peer QA Reviews)*** – Mr. Giometti and his team will prepare the design for each phase of MOT. He will perform a QC review of his MOT team's work and will incorporate any changes to finalize the plans and calculations for the Technical Management Review.
2. ***Technical Management Review*** – A Senior Engineer, Mr. William Missell, P.E., who is in the same office but not directly involved with the Project, will perform this review. He will review the plans and calculations in accordance with VDOT's criteria following the LD-436 checklist.
3. ***Constructability Review*** – A team of AI construction staff and RDA engineers will perform this review in a collaborative effort to evaluate the MOT to ensure that the design aligns with the means and methods anticipated by AI.
4. ***Independent QC Engineer Check*** – Mr. Erik Shively, P.E., PTOE will thoroughly evaluate the MOT plan. His focus will be on safety to ensure the traffic control devices are properly shown, protect the work zones, and establish a clear message to the traveling public.
5. ***Independent QA Engineer Review*** – Mr. Mo Kim, P.E., DBIA, will perform the QA Engineer review focusing on overall compliance with the RFP and VDOT specs. He will ensure that all previous comments have been incorporated or adequately addressed as to why they were not incorporated.
6. ***Design Management Review*** – Mr. Darell Fischer will perform the final review of the design. If there are still unresolved comments or issues within the review process, Mr. Fischer will make the final determination for implementation.
7. ***Issuance of Documents*** – Documents that have completed RDA's review process will be issued for external review.

After each review, Mr. Giometti's team will incorporate any comments into the plans before the next review. While the QA/QC review process is ongoing for one phase of the MOT, the next phase will be designed and the process will be repeated in order to expedite design.

CONSTRUCTION QA/QC FOR MAINTENANCE OF TRAFFIC

We share VDOT's goal to minimize the impacts that construction of the Project and our means and methods will have on the travelling public. Proper implementation of construction phasing and maintaining traffic throughout construction is an important aspect of the Project. Maintaining traffic safely for local businesses, residents, and those accessing the Central Park shopping center is complicated by roadway widening where the design crosses the existing roadway in multiple locations and grade changes occur at multiple access points. In this heavily travelled corridor, proper implementation of a well-designed MOT plan is the first line of defense to minimize risk to the public, construction staff, our team, and ultimately VDOT.

MOT Inspection Experience
KCI is providing MOT Inspection services on the I-95 Bridge Rehabilitation project through downtown Richmond. KCI's Lead QC Inspector is responsible for review of the in-place MOT barriers, signals, coordinating and organizing the State Police presence and performing rolling lane closures.

The Construction Quality Control Plan (QCP) will be developed in accordance with all requirements and submitted for approval prior to commencement of construction to prevent deficiencies and non-conforming work. MOT design, planning, implementation, and maintenance will all be integrated in our QA/QC program. Construction QA/QC for MOT will follow the process described below:

1. Constructability Reviews will be held with the CM and MOT Coordinator to optimize phasing that will minimize impacts to traffic and best suit construction.
2. As a Hold Point in the schedule prior to initial MOT implementation, a Preparatory Meeting will be held with the construction team, QAM, and VDOT to:
   - Review Site Specific Safety as well as review specifications.
   - Review supervisor and crew certifications to make confirm all staff is properly certified in the Virginia State Traffic Control Technicians and/or Supervisor (ATSSA training) or, at a minimum, the VDOT's Intermediate or Advanced Work Zone Traffic Control Training
   - Review MOT Inspection checklists for installation and maintenance of traffic patterns.
   - Confirm the MOT design documents have been approved.
   - Confirm the public outreach line of communication to VDOT TOC by the on-site staff has been assigned and is being properly conducted.
   - Confirm submittal and approval of C-25 Source of Material for all temporary and permanent MOT materials.
3. Inspection checklists will be developed for lane closures and will be filled out by KCI's QC inspectors for the following items: Ground Mounted Signs, Portable Signs, Type III Barricades, Temp Pavement markings and markers, Group II Channelizing Devices, Arrow Boards, Portable Changeable Message Signs, and Temp Concrete Barrier.
4. QC Inspections will include daily maintenance by AI's MOT Coordinator and daily compliance checks by KCI's QC Inspector. Any deficiencies will be immediately corrected. QA will verify that the quality control functions are occurring as required and will complete/document formal inspections a minimum of weekly.
   - All deficiencies will be logged by the QC team and provided to the QAM.
   - Any deficiencies identified will be corrected immediately and coordinated with AI's Superintendent.
   - The QAM will provide VDOT with a copy of all inspections and logs.

4.5 Construction of Project

4.5.1 Sequence of Construction

The AI Team's construction phasing and sequence of activities were developed to minimize the overall duration of construction and provide schedule flexibility should any delays be encountered in a particular area of the Project. The construction phasing and proposal schedule account for geotechnical constraints, environmental impacts, right of way acquisition, and government approvals.

Aggressive schedule management and partnering with project stakeholders have proven to be successful strategies for anticipating and mitigating potential delays and expediting construction schedules, as evidenced by AI's early delivery of the Richmond Airport Connector Road and Tye River Bridge Design-Build projects two months and seven months ahead of schedule, respectively. The AI approach to partnering is to move from a process of *stakeholder coordination* to one of *partner collaboration*. Partnering success requires a true team approach with each stakeholder putting the needs of the Project ahead of any one individual's interests and fosters an atmosphere of transparency, creativity, innovation, and collaboration.

Communication is Key to Success

"One of the keys to the project's success was the open communication between VDOT and the AI Team. Regular project meetings between VDOT's design and construction staff with AI helped ensure resolution of issues in a timely fashion." – Jeffrey A. Roby, P.E., VDOT, Design-Build Program Manager, Re: Tye River Bridge Design-Build Project

Approach to Construction Phasing

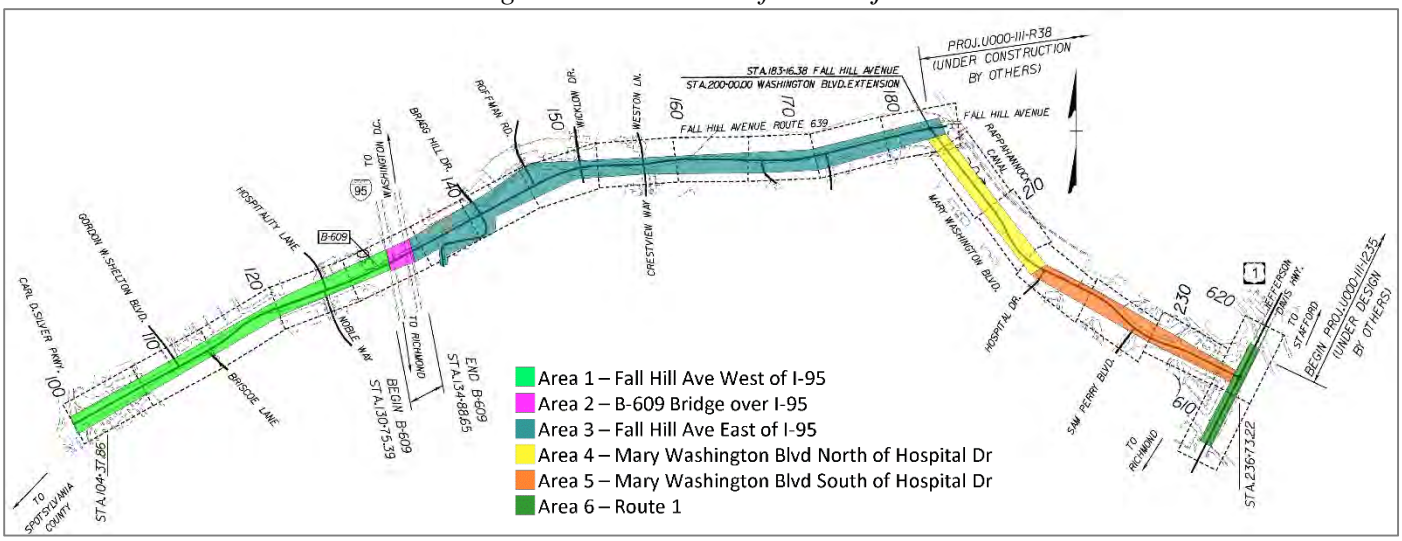
The construction phasing was developed by optimizing the design to minimize impacts to the public and limiting the cost of temporary measures for construction. Continuous access will be provided to both residential and commercial properties, with particular sensitivity to maintaining access to Mary Washington Hospital entrance for emergency vehicles. Limiting traffic pattern changes will help the public to safely navigate the construction zone. Maintaining uninterrupted access requires temporary paving in some areas due to the alignment of the existing and proposed roadway, as well as grade differences. By taking into account the vertical and horizontal alignment of the existing roadway, we will builds as much of the new roadway as possible while utilizing the existing roadway to limit the need for temporary pavement and shoring between phases.

Geotechnical constraints, including unsuitable soils, have been accounted for in the sequence of construction and proposal schedule. To mitigate potential schedule delays associated with unsuitable soils, a strategy for improving soil conditions will be established by our geotechnical engineer prior to the commencement of construction. Considerations for soil remediation will include mechanical drying, installation of geotextile fabrics, lime stabilization, and removal and replacement with suitable material. Unsuitable soils are anticipated to be encountered along the Fall Hill Avenue corridor and along Mary Washington Boulevard north of Hospital Drive based on the GDR.

Areas of the Project

When evaluating construction phasing, the AI Team separated the Project into six areas which are identified in *Figure 4.5.1 – Areas of the Project*. The areas were selected to provide the most flexibility for phasing construction and maintaining traffic. Aside from the final tie in points between areas, each area can be built independently of one another while traffic is maintained per the phasing in that area. Phasing construction independently in each of these areas minimizes the potential delays to construction should one area experience unexpected delays (whether in right of way, permitting, or utility relocation) and ensures the other areas will be able to progress as planned. However, our intention is to optimize the construction of each area with one another in order to maximize efficiency and compress the project schedule. Potential staging and storage areas have been identified on Fall Hill Avenue and will be negotiated with private land owners or the City of Fredericksburg following the processes outlined in VDOT's Road and Bridge specifications and the AI Team will obtain any necessary permits outside of the project permits.

Figure 4.5.1 – Areas of the Project



Area 1 – Fall Hill Avenue West of I-95: The key to construction of the area between Carl D. Silver Parkway and I-95 will be maintaining good traffic flow at both the Carl D. Silver (goes to Central Park) and Gordon W. Shelton (goes to Wegmans) intersections. Access will be maintained for residents off of Briscoe Lane and for the car dealerships off of Noble Way.

Areas 2 – Bridge B-609 over I-95: The key to this area is MOT on I-95 while constructing the new Fall Hill Avenue Bridge over I-95 and demolishing the existing bridge. This area also includes construction of the potential noise wall on the East side of I-95.

Area 3 – Fall Hill Avenue East of I-95: Key to the work on Fall Hill Avenue East of I-95 including the roundabout at Mary Washington Blvd is maintaining access to the various residential and commercial areas. Major access points to be maintained include Frederick Place, Bragg Hill Drive, Roffman Road, Wicklow Drive, and the businesses between Roffman Road and Wicklow Drive (7-11 and other building), Crestview Way, Weston Lane, Fall Hill Professional Park, and Forrest Village. Other unique features of the Project in this area include the retaining wall from approximately station 135+00 to 140+40, the retaining wall at the roundabout on the corner of the parking lot for Forrest Village, the potential noise barrier just east of Wicklow Dr., the relocation of the basketball courts, baseball field and parking lot at Snowden Recreational Park and the relocation of the historic stone gate and **walls.**

Area 4 – Mary Washington Boulevard North of Hospital Drive: While MOT is not a major concern, the area on Mary Washington Blvd from the roundabout with Fall Hill to Hospital Drive area presents utility, geotechnical, and environmental challenges. Coordination is required with DVP for the transmission lines. Excavation work includes cuts up to 15’ and fills of up to 8’ and retaining walls will be utilized to protect the historical Civil War Trenches.

Area 5 – Mary Washington Boulevard South of Hospital Drive: Keys to the construction of the area on Mary Washington Boulevard from Hospital Drive to Jefferson Davis Highway include maintaining access to Hospital Drive and Sam Perry Boulevard, as well as construction at the intersection with Route 1. Construction of the new eastbound lanes between Hospital Drive and Sam Perry Boulevard will be completed with minimal traffic impacts, while the median reconstruction and mill and overlay of existing pavements will require maintenance of traffic.

Area 6 – Route 1: MOT will be the major focus for the work to be completed on Jefferson Davis Highway (Route 1). Construction includes widening the existing roadway, a new entrance to an office park, installation of new drainage runs, median reconstruction and mill and overlay of existing pavements.

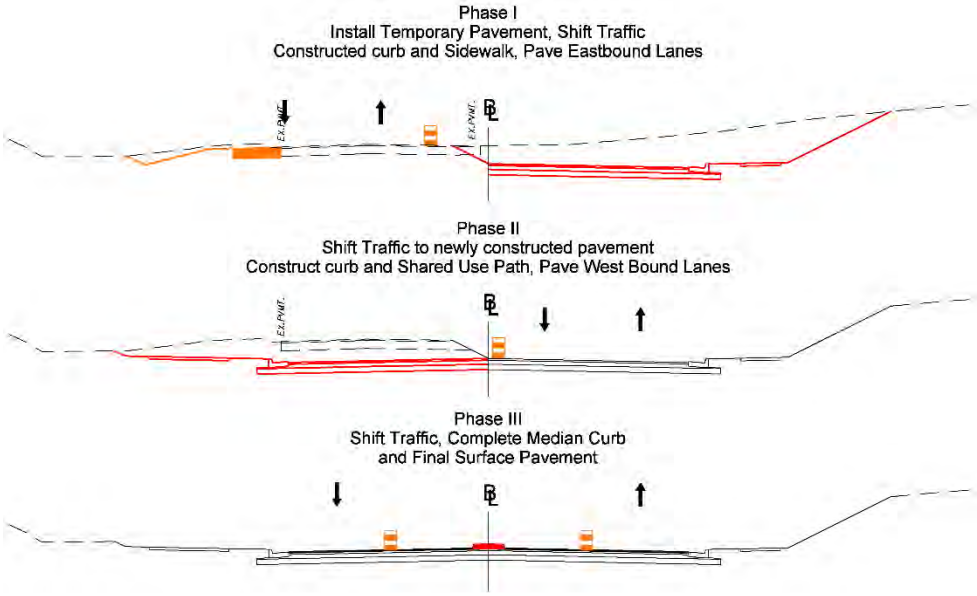
SEQUENCE OF ACTIVITIES

Fall Hill Avenue Phasing – When evaluating the phasing for the construction to be completed along the Fall Hill corridor, the AI Team considered constructing the roadway in two-phases, where the median would be constructed as a part of each phase; and in three-phases, where the median is constructed as its own phase after the pavement sections are built to grade. After evaluating both approaches, we decided that a three phased approach improved access for local residents and businesses and provided cost and schedule advantages. Although there is another phase of traffic control involved in this approach, the best overall price will be provided by avoiding potential SOE or temporary retaining structures for grade changes between phases. Typical sections for the three-phased MOT approach are shown in *Figure 4.5.2*.

Benefits of Three-Phased MOT Approach

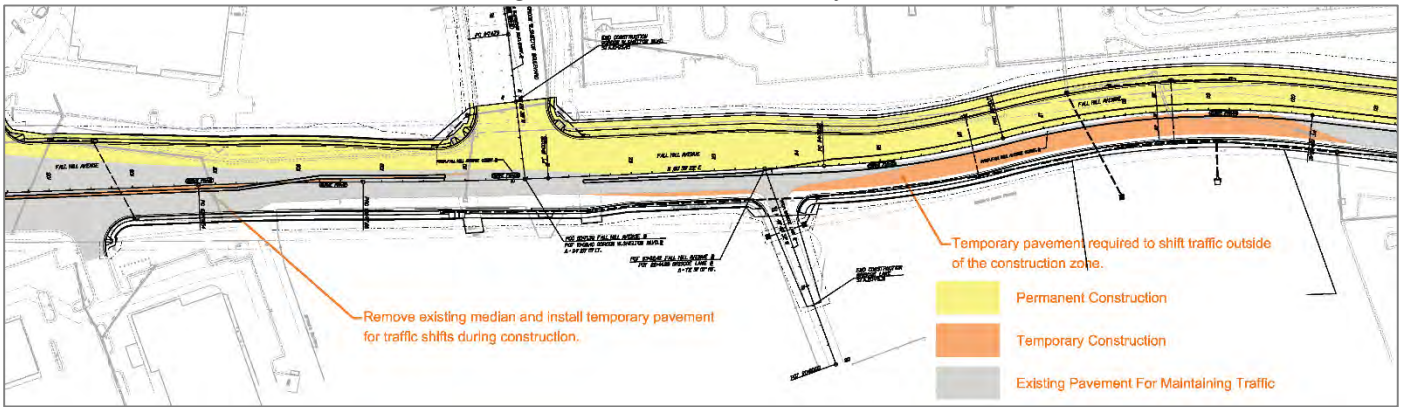
- *Improves entrance access along the roadway.*
- *Reduces temporary pavement required.*
- *Reduces the amount traffic is pushed from the baseline by 3'.*
- *Compresses schedule by eliminating forming of the curb line adjacent to traffic.*
- *Eliminates the jack and bore through this section of roadway.*

Figure 4.5.2 – Fall Hill Avenue Construction Phasing Typical Sections



Area 1 – Phase 1 will require installing temporary paving on the south side of Fall Hill between Briscoe Lane and Station 120+50. Once temporary paving is completed, temporary MOT will be installed to shift traffic to the south and complete the north side of proposed roadwork. A minimum of 11' wide lanes will be maintained in each direction. A portion of this phase can be seen in *Figure 4.5.3*.

Figure 4.5.3 – MOT West of I-95

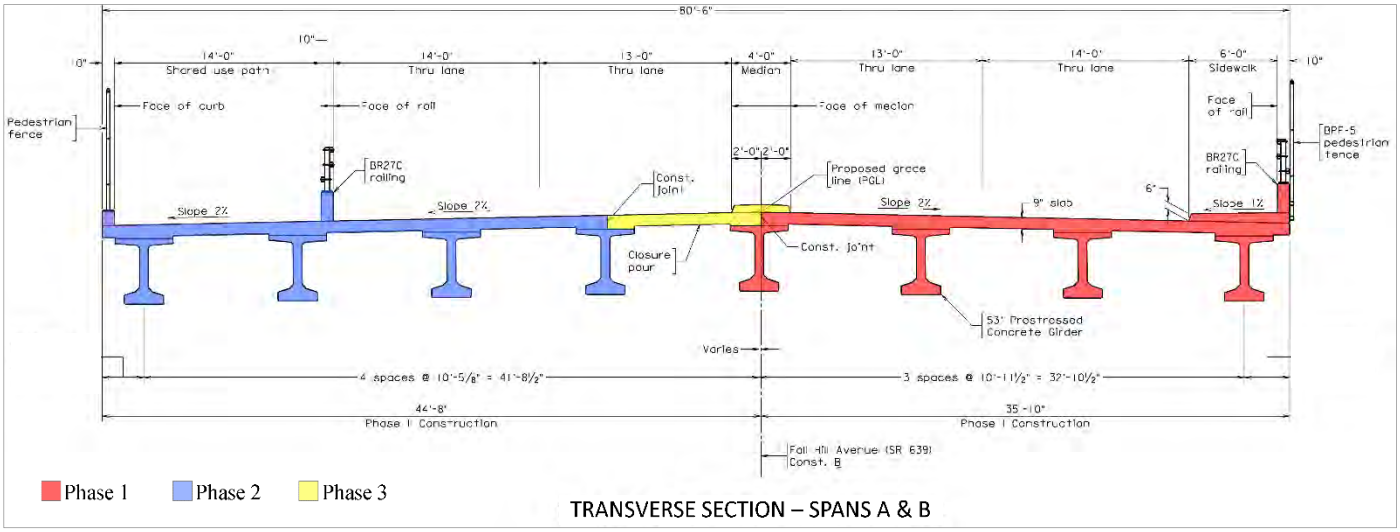


Upon the completion of Phase 1, temporary pavement markings and MOT devices will be installed to shift traffic to the newly completed section of roadway on the north side of Fall Hill while the south side of Fall Hill is constructed. Once the pavement sections are complete, MOT will then be installed for Phase 3. This will involve pushing traffic to the outside lanes in each direction while the final median is constructed. Construction during this phase will have minimal impacts on the public other than access for construction traffic to the workzone. Once the median is constructed the roadway will be final paved and striped.

Area 2 – When developing our approach to construct the bridge, we evaluated the design to decrease the overall cost of the bridge and also improve constructability. Construction of the new Fall Hill Bridge over I-95 will also be completed in three major phases. The new bridge will be built to the south of the existing bridge in Phase 1. After completion of the Phase 1 portion of the bridge, Phase 2 will begin with shifting traffic onto the newly built structure, followed by the demolition of the existing structure. The new structure will then be built on the north side leaving out a section for the closure pour. Phase 3 will then consist of the closure pour and construction of the median on the bridge. Phases of bridge construction are illustrated in *Figure 4.5.4*.

Safety Benefits
A slight shift in alignment created more space between phases of bridge construction, provided additional space for installation of SOE, and created more space between traffic and the workzone.

Figure 4.5.4 – Construction Phasing for the Bridge over I-95



Area 3 – The sequence of construction in this area is similar to Area 1. Phase 1 will install temporary pavement on the north side of Fall Hill Avenue from approximately station 153+00 to 181+00. The width of temporary paving needed through this area varies from 5' to 27'. While some of the temporary paving is needed because of the horizontal alignment of the existing compared to the proposed roadway, a significant amount of temporary paving is required due to significant changes in the vertical alignment between the proposed and existing roads to provide enough horizontal separation between traffic and the work area in Phase 1. Once the temporary paving is installed, traffic will be shifted to the north while the south side of the proposed roadway is constructed. After all of Phase 1 is complete, Phase 2 will shift traffic to the newly constructed lanes on the south side of the road while the north side of road is completed. Phase 3 will involve the final construction of the median as well as placement of the final course of asphalt and pavement markings.

Storm Drain Location Change Improves Phasing
The storm drain trunk line was moved to the south side of the roadway between station 163+00 and 181+00 to improve phasing by constructing the storm drain away from traffic during Phase 1.

Mary Washington Boulevard Phasing

Area 4 – Area 4 will be strategically constructed to coincide with other areas since it does not require phased construction. For example, excavation of the abutments for the bridge construction in both phases will generate a significant amount of dirt. Should the fills along Fall Hill Avenue already be complete, the excess cut could be utilized to complete the fills in Area 4.

Area 5 – Area 5 requires phased construction to accommodate existing traffic. Phase 1 will construct the new eastbound lanes of Mary Washington Blvd between Hospital Dr and Sam Perry Blvd. This can be done without any significant changes to traffic on existing Mary Washington Blvd. Phase 2 construction will consist of the median reconstruction that is needed between Sam Perry Blvd and Jefferson Davis Hwy and will involve the closure of the inside lanes of Mary Washington Blvd. Mill and overlay and final paving of Mary Washington Boulevard will follow and be completed during non-peak traffic hours.

Route 1 Phasing – Work in Area 6 will also be completed in two major phases. Phase 1 will include the widening of Route 1 along the south bound lanes, construction of all drainage along Route 1, and the construction of the new entrance at approximately Station 610+00. After the widening has been completed, Phase 2 will involve the median reconstruction and mill and overlay/final paving. Median reconstruction will be completed using temporary lane closures as allowed by the specification and wedges will be installed and maintained as required to protect traffic from grade differentials during construction.

PUBLIC SAFETY

An effective Public Safety Plan begins with development of an extensive and effective TMP Plan for implementation. The best way to avoid traffic incidents is to effectively follow the TMP plan and limit traffic disruptions through the work zone. It is important to keep the public aware of any changes in traffic patterns and have all necessary traffic control devices set up in the appropriate locations so that they are clearly marked. The AI Team approach to stakeholder coordination is described in detail in Section 4.5.2.

4.5.2 TRANSPORTATION MANAGEMENT PLAN

Impacts to traffic based on AI's means and methods for constructing the Project have been defined for each area of the Project and are summarized in *Table 4.5.1*. Traffic will be maintained through all phases of construction, with the majority of traffic disruptions occurring during traffic switches, girder erection, and final paving. These operations will be performed at night and any temporary closures will be picked up before peak traffic hours. The public will be notified in advance of any traffic impacts and updated as construction progresses. TMP/MOT Coordinator, John Giometti, P.E. will work hand-in-hand with AI's MOT Coordinator, Brad Bushey to ensure the design reflects construction implementation methods and the approved plans are implemented safely.

MAINTENANCE OF TRAFFIC AND CONSTRUCTION IMPACTS

I-95 – Closures on I-95 will be communicated to both the Fredericksburg District Communications Office, as well as the Northern and Central Regional Communications Office and will be coordinated with other projects, as required. All lane closures will occur within the allowable hours defined in the RFP and portable changeable message signs will be used in advance of the work. Support of the Virginia State Police will be requested to assist with single, double, and full lane closures of I-95.

During Phase 1, barrier service will be required along the existing shoulders for construction of the new substructure. Rolling closures of I-95 will occur at night for girder erection. Lane closures will be required for underdeck protection installation and overhang forming; deck pours for access; removal of underdeck protection and stripping of overhangs; and Phase 1 bridge inspection.

During Phase 2, shoulder closures will be required for demolition of the existing substructure (maximum of 120 days in aggregate). Lane closures are anticipated for demolition of the superstructure; underdeck protection installation and overhang forming; deck pours for access; removal of underdeck protection and stripping of overhangs; and Phase 2 bridge inspection.

Fall Hill – One lane of traffic will be maintained in each direction at all times and lane widths will be minimized to 11' in each direction. Access to side roads and businesses will be maintained at all times. The work zone will be delineated using group 2 devices (barrels). Concrete Barrier with necessary impact attenuators will be utilized at bridge approaches to protect traffic from SOE between phases, as well as on the Phase 2 bridge deck. Wedges will be maintained as required for grade changes between phases. Although our TMP plan does not include the use of any detours, signage suggesting alternate routes will be posted to help accommodate regular commuters through the area that prefer to avoid the work zone.

Holiday Season Shutdown
AI coordinated a holiday season shutdown at the request of the City of Fredericksburg on the Rappahannock Canal Bridge Project. We recognize the increased traffic to the Central Park shopping center and will minimize construction operations to improve congestion on the Fall Hill Ave corridor.

Mary Washington Boulevard – One lane of traffic must be maintained in each direction at all times on Mary Washington Boulevard. Lanes will be maintained at their existing widths and group 2 barrels will delineate traffic from the work zone. Wedges will be installed and maintained to protect traffic from drop offs as required. Off-peak work will be utilized for mill and overlay operations as well as the work at intersections with Route 1, and may be utilized at Hospital Drive and Sam Perry Boulevard.

Route 1 – Widening and median construction will require temporary lane closures on Route 1. Wedges will be installed at the completion of each shift as required to protect from drop offs. Work that involves full lane closures will be completed during allowable off-peak hours. Lane closures will not occur concurrently with closures on I-95, and an effective communication plan will quickly and safely remove lane closures in the event of an accident on I-95. The plan will include stockpiling stone to construction wedges as needed so the pattern can be safely removed and will not be delayed by waiting for delivery of material.

Table 4.5.1 – MOT Impacts

OPERATION	Reduced Lane Width	Group 2 Devices	Concrete Barrier	Extended Shoulder Closure	Single Lane Closure	Double Lane Closure	Full Closure	State Police	PCMS
I-95									
1. Phase 1 Substructure Construction			✓						
2. Erect Girders		✓			✓		✓	✓	✓
3. Form Overhangs		✓			✓	✓		✓	✓
4. Install Underdeck Protection		✓			✓	✓		✓	✓
5. Concrete Deck Pours		✓			✓			✓	✓
6. Demo Existing Superstructure		✓			✓	✓		✓	✓
7. Demo Existing Substructure			✓	✓					✓
8. Bridge Inspections		✓			✓	✓		✓	✓
Route 1									
1. Widening		✓			✓				
2. Median Construction		✓			✓				
3. Mill and Overlay / Surface Asphalt		✓			✓				
Fall Hill Ave									
1. Roadway Construction	✓	✓							
2. Phased Bridge Construction	✓	✓	✓						
Mary Washington Blvd									
1. Roadway Construction		✓			✓				

STAKEHOLDER IMPACTS

Our CM and PR Manager will work collaboratively to communicate impacts to stakeholders and will ensure inquiries and public comments are tracked and responded to within an approved turnaround time. The coordination means identified in *Table 4.5.2 – Stakeholder Coordination* will reduce impacts and address the unique concerns of each stakeholder. Upon award and throughout construction, our approach will evolve to accommodate specific stakeholder needs, provide solutions to concerns, and communicating effectively. Accurate and timely information will be disseminated to the public, including a schedule of anticipated traffic impacts provided to each impacted stakeholder prior to implementation of traffic patterns.

Table 4.5.2 – Stakeholder Coordination

STAKEHOLDER	COMMUNICATION STRATEGIES	BENEFITS
VDOT	▪ Proactively notify VDOT of construction traffic impacts and work closely with the NRO TOC, CRO TOC, and the Fredericksburg District to keep notifications updated. ▪ Update and assist with the Lane Closure and Maintenance System.	▪ Increased awareness of significant impacts including lane closures and traffic switched. ▪ Improved public perception.
City of Fredericksburg	▪ Include the City of Fredericksburg Public Works Director, Doug Fawcett, as an active member of our coordination team to be included in planning sessions and have input into the schedule for construction operations that will impact the City. ▪ Work cooperatively with the City to address impacts on local businesses and property owners, as well as public safety.	▪ Input from the City into the construction schedule to avoid significant impacts when possible. ▪ Improved public perception of the Project.
Local Residents, Businesses, and the Travelling Public	▪ Communicate and coordinate traffic management plans with local businesses, adjacent residents, and neighborhood associations prior to implementing traffic changes. ▪ Utilize message boards and other means to notify property owners and the traveling public of changes in traffic patterns prior to changes being implemented. ▪ Provide additional signage to inform the public about alternative routes (i.e. Cowen Blvd) and alleviate some traffic on Fall Hill Avenue. ▪ Host "Pardon Our Dust" meetings to provide an additional outreach method for property owners and the general public to obtain progress information. ▪ Update the project website, distribute informative outreach materials, meet with stakeholders, broadcast emails, and make social media announcements.	▪ Advanced notice of impacts to the public. ▪ Understanding of direct construction impacts for each individual stakeholder. ▪ Improved community awareness of construction progress. ▪ Reduced traffic on Fall Hill Avenue based on alternate route availability.
EMS/Fire/ Police and Mary Washington Hospital	▪ Organize Incident Management forums to ensure responders understand alternate routes to avoid construction work zones. ▪ Develop a Traffic Incident Management guidebook that includes contact information for the AI Team, VDOT, the City of Fredericksburg, Mary Washington Hospital, and emergency services. ▪ Provide notification prior to changes in traffic patterns.	▪ Informed emergency responders. ▪ Accurate contact information for emergency situations. ▪ Improved public safety.

Proven Success Coordinating Complex Projects with Numerous Stakeholders

"This project (B26 Hampton Blvd) serves not only the citizens and businesses of Norfolk but also the Norfolk Naval Base, the largest naval complex in the world, and the Virginia Port Authority, the third largest port on the east coast. The dynamics of a major roadway construction project impacting such vital project stakeholders requires continuous partnering, open communications, flexibility and innovation. American Infrastructure has focused on all of these key components to ensure customer satisfactions from day one of this project." – Heather L. Robinson, P.E., City of Norfolk Department of Public Works, Re: B26 Hampton Boulevard Project

4.6 Disadvantaged Business Enterprises

DISADVANTAGED BUSINESS ENTERPRISES

COMMITMENT TO DBE PARTICIPATION GOAL

The AI Team is committed to achieving a fifteen percent (15%) DBE participation goal for the entire value of the contract. The following DBE subcontracting narrative outlines the procedures to achieve this goal for design and construction.

DBE SUBCONTRACTING NARRATIVE

AI is consistent in meeting and exceeding DBE participation goals. In selecting subconsultants, the AI Team has chosen two DBE firms **– Dovetail Cultural Resource Group I, Inc.** for historical/cultural resources and **Pulsar Advertising, Inc**. for public relations knowing that they are qualified and skilled and to assist in achieving the Project goal of fifteen percent (15%).

AI will be utilizing their standard DBE subcontracting plan for the Project to facilitate meeting the DBE. A summary of the plan is provided below specifying the means of soliciting DBE firms during the pre-construction phase. Our SWaM/DBE Coordinator will be responsible for assisting our estimating department in the solicitation of DBE firms and the compliance to the DBE goals and standards set forth by the Commonwealth.

Overview – For each project with contract-mandated DBE requirements, AI will:

- Determine items which may be subcontracted and quantify based on estimated dollar amounts.
- Identify a pool of DBE subcontractors/suppliers certified by the Owner/governing agency.
- Validate the qualifications and assess the expertise of certified DBE subcontractors/suppliers to determine if they are capable of performing the scopes of work identified in the contract.
- Direct and assist certified and capable DBE subcontractors/suppliers to complete the AI subcontractor pre-qualification process if they are not already prequalified through previous projects with AI.
- Solicit price/scope quotes from certified and capable DBE subcontractors/ suppliers while determining AI pre-qualification status.
- Document the DBE solicitation process for Good Faith purposes including all modes of communication such as phone, fax, email, visits and pre-bid solicitation meetings.
- The project's Lead Estimator, in cooperation with the SWaM/DBE Coordinator, is responsible for:
  - Ensuring that DBE participation is solicited, recorded and documented in accordance with AI Minority/DBE Compliance and Utilization Policy defined policies and procedures.
  - Investigating all contract provisions to identify all requirements to satisfy Municipal, County, State or Federal obligations, including training and reporting..
  - Ensuring AI's commitment to proactively utilizing certified DBEs and to using all reasonable efforts to meet or exceed mandated DBE requirements is upheld.

DBE Solicitation – AI's Estimating Team solicits price/scope quotes from certified and capable DBE subcontractors/suppliers while determining jurisdictional pre-qualification status. Certified and capable DBE subcontractors/suppliers will be identified through searching DBE Directory web sites, attending project pre-bid meeting, and mass advertisements. The following elements will be included in the solicitation, or in any advertisement placed as a general solicitation to DBEs:

- The company name, address, telephone number, fax number and email address.
- The project location and a description of the work for which the bid is being solicited.
- Our FTP Site for Subcontractors to view plans and specifications.
- The name of the Lead Estimator and SWaM/DBE Coordinator who will be available to answer questions about the Project.
- How to respond to the solicitation.
- The date, time, and location where bids are to be submitted.

4.7 Proposal Schedule

4.7.1 Proposal Schedule

The Proposal Schedule is attached as Exhibit 4.7.1 following this narrative. Included in this submission is a CD which contains a backup file (.XER) of the Proposal Schedule. The schedule was created using Primavera v6.2.1. Also provided are the layout files correlating to the Exhibits which can be imported into Primavera for review purposes. The scheduling settings used in Primavera along with a list of Acronym Definitions used in the schedule are provided in the Key Assumptions portion of the following schedule narrative.

4.7.2 Proposal Schedule Narrative

The AI Team has thoroughly evaluated the Project RFP documents, performed site visits of the existing interchange, attended pre-proposal meetings, and performed internal brainstorming sessions to fully assess the associated design, right-of-way impacts, utility relocations, construction, geotechnical constraints and environmental challenges. While performing these activities, we paid special attention to the VDOT stated schedule milestones included in Section 2.3, specifically final completion of the Project on January 24, 2017. This narrative explains how the AI Team plans to maximize the benefits of the Design-Build delivery method to mitigate risks of future uncertainties, manage the environmental requirements, minimize impacts to the travelling public, and deliver the Project on schedule.

Overall Sequencing

The baseline plan integrates all design disciplines into a Work Breakdown Structure (WBS) that addresses the milestones of the Fall Hill Avenue Widening and Mary Washington Boulevard Extension Design-Build Project. This WBS, found in Exhibit 4.7.3, reflects the AI Team's approach to dividing the Project into six independent construction areas. Phasing for each of these areas is broken down within each individual area since the phasing varies between areas. Additionally, within these six areas AI will utilize multiple crews within each discipline to expedite the work progress. The AI Team has defined the following Area and Phase breakdowns:

Area & MOT Phasing

Pre-Construction Activities: This section of the schedule includes all of the non-construction activities and it is broken up into the following 9 sub-sections:

1. *Project Milestones* – This section encompasses the key milestones for the Project.
2. *Project Management* – This section includes general submittals that are required. It also includes coordination with public and private utilities such as Dominion VA Power, Comcast, Verizon and the City of Fredericksburg.
3. *Scope Validation Period* – This section contains the activities that make up scope validation.
4. *Design* – This section captures activities associated with Design, and Enabling Work. These tasks must take place for construction to proceed. The Design activities have been grouped into Work Packages which mirror the expected Design Packages that will be submitted for VDOT's approval. Although the goal of the "over-the-shoulder" review process is to minimize review cycles, for most design packages, AI included two review cycles in the schedule. Thorough coordination with reviewing parties may allow the second cycle to be eliminated or review time to be reduced, which would shorten the duration of the design phase.
5. *Public Involvement* – This section includes activities that effect the public.
6. *Permits / Environmental* – This section contains the activities for the entire permitting process.
7. *Right-of-Way* – This section encompasses the activities associated with the planning, approval and acquisition of affected properties.
8. *Utility Adjustments* – This section includes all of the activities that involve the actual relocation of the affected utilities.

9. *Procurement* – This section captures activities associated with Contract Submittals and Construction Working Drawings. It also includes the activities to procure vendors and materials.

Area 1 – Fall Hill Avenue (104+37.86 to 130+75.39): This area consists of all work on Fall Hill Avenue, and any side roads, west of bridge B-609 (over I-95). Work in this area is broken down into three phases. Additionally, within the phases, work is broken down into the work groupings Traffic Control, Erosion Control and Roadway (as applicable).

- Phase 1 – Temporary paving will be installed on the south side of Fall Hill Ave. between Briscoe Lane and station 120+50. Once this is complete, traffic will be shifted to the south, and the northern portion of the roadway will be constructed.
- Phase 2 – Traffic is shifted to the just completed northern portion of the roadway and the south side is constructed.
- Phase 3 – Traffic is pushed to the outside lanes, and the final median is constructed.

Area 2 – Bridge B-609 (Fall Hill Ave. over I-95): This area includes bridge B-609, Fall Hill Avenue over I-95 as well as the Noise Barrier along I-95 NB. Work in this area is broken down into three phases. Additionally, within the phases, work is broken down into the work groupings Traffic Control, Substructure, Superstructure and Noise Barrier Walls (as applicable).

- Phase 1 – The new bridge will be built to the south of the existing bridge.
- Phase 2 – Traffic is shifted onto the new structure, the existing structure is demolished, and the northern portion of the bridge is constructed.
- Phase 3 – Traffic is shifted to the outside lanes and the median is constructed.

Area 3 – Fall Hill Avenue (134+88.65 to 184+07.85): This area consists of all work on Fall Hill Avenue, and any side roads, east of bridge B-609 (over I-95). Work in this area is broken down into three phases. Additionally, within the phases, work is broken down into the work groupings Traffic Control, Erosion Control, Roadway, Retaining Walls and Noise Barrier Walls (as applicable).

- Phase 1 – Temporary paving will be installed on the north side of Fall Hill Ave. between stations 153+00 and 181+00. Once this is complete, traffic will be shifted to the north, and the southern portion of the roadway will be constructed.
- Phase 2 – Traffic is shifted to the just completed southern portion of the roadway and the north side is constructed.
- Phase 3 – Traffic is pushed to the outside lanes, and the final median is constructed.

Area 4 – Mary Washington Boulevard (202+22 to 216+00): This area is the entire new portion of Mary Washington Boulevard. There is no phasing in this area. Work is broken down into the work groupings Erosion Control, Roadway and Retaining Walls (as applicable).

Area 5 – Mary Washington Boulevard (216+00 to 236+74): This area consists of the existing Mary Washington Boulevard. Work in this area is broken down into 2 phases.

- Phase 1 – Construct new eastbound lanes between Hospital Drive and Sam Perry Boulevard.
- Phase 2 – Close inside lanes and reconstruct the median.

Area 6 – Jefferson Davis Highway (Route 1): This area includes all of the work required to perform on Jefferson Davis Highway (Route 1). Work in this area is broken down into 2 phases:

- Phase 1 – Widen the southbound lanes, perform all drainage and construct new entrance at station 610+00.
- Phase 2 – Reconstruct the median.

Entire Project: This section of the schedule includes the milling, final paving and project finishes for the entire project.

Critical Activities and Potential Constraints

A schedule layout showing only near critical activities is provided in Exhibit 4.7.2. Near critical activities were defined as having less than twenty days float. As anticipated, the greatest schedule risk and constraints are utility relocations and ROW clearances.

The construction of the proposed bridge, and demolition of the existing bridge are also very close to the critical path. For that reason, bridge construction will commence as early as possible.

Proposed Means and Methods

The success of a project is measured by a number of different factors. One very important factor is the efficiency and speed in which the work can be done – our Project Schedule. AI schedule's work by taking into account certain possibilities in hopes that they do not become eventualities. In preparing for and developing this Technical Proposal, a significant amount of work has already been performed. The level of effort put into analyzing the Project and developing the design is necessary not only procure the Project but also to jump start our schedule once NTP is provided.

Various contributing factors were evaluated for each area of the Project. Focused attention was applied in the areas of public impact, environmental protection, and schedule acceleration. By breaking the Project into Areas, as previously described, the schedule of each area could be assessed in terms of traffic management, environmental concerns, and operation flow. Many areas of the Project have sub-areas and sub-phasing that are a direct result of these assessments. The ultimate goal is to have consistent work flow without delays through the Project.

The AI Team has taken into account the requirements of the Article 6 of the General Conditions of Contract (Part 4) when developing the WBS list of activities. Upon award, a cost and resource loaded project schedule will be provided by the AI Team within the timeframe required in the RFP and will be maintained by our Schedule Manager. The following narrative is a discussion of the design and construction process, the key elements to maintaining our schedule, and a breakdown of the schedule components.

Design Overview

Although the official kickoff to our schedule is NTP, our team understands the importance of hitting the ground running. Therefore, we intend to utilize the time between Notice of Intent to Award and NTP to advance those elements of work that can be advanced and to establish all of our controls in executing the work according to our schedule. To expedite schedule during the design phase, the design will be organized into sub packages: 1) Right-of-Way; 2) Utility Field Inspection Plans; 3) Erosion and Sediment Control Phase 1 Plans; 4) Grading, Drainage, and Retaining Wall Plans; 5) In-plan Utilities; 6) Transportation Management Plan and MOT Plans; 7) Bridge TS&L Plan; 8) Complete Bridge Design Plans.

The design will be developed in a systematic and logical manner. Design-Build projects succeed by designing in a layering approach. Typically, the first layer after supplemental surveys and utility designations/locations will be an approved E&S plan to allow MOT and demolition operations to begin. Perimeter controls will be designed to function throughout all phases of construction where feasible. In order to realistically accommodate this approach, the SWM design will need to be substantially addressed. In several areas of the Project, the E&S operations cannot proceed without appropriate MOT Controls. MOT design will require sufficient detail to establish proper controls. Since the project overlays existing roadways, MOT will need to be approved prior to implementation of the E&S or G&D plan at those locations. The second layer will be Grading and Drainage (G&D) design. This will be our detailed design up to finished grade including pavement design.

Simultaneously, we will develop our in-plan utility relocations design. These designs will continually integrate updated information from other disciplines/designs but will be developed as a separate package to

facilitate review and construction once approved. Proactively coordination with the local municipalities during the Design process will assist in preventing delay or impacts.

Also building upon the G&D design will be the Lighting, Signing and Marking (LSM) plan. Although construction of these elements cannot be completed until the final pavement section design is established, having them completed and approved removes any concerns or potential schedule conflicts associated with these elements. In addition, these elements tend to have longer lead times for submittals and fabrication. Early approval of this package will allow other preconstruction tasks to commence such that construction can take place as soon as the final pavement section design is approved.

The next set of documents is for the design of bridge B-609 for Fall Hill Avenue over I-95. This will be developed in two packages: TS&L and final design. There may be an opportunity to accelerate if the foundation design package can be submitted as a separate package after approval of the TS&L. By developing the plans from the ground up rather than from the top down, construction can begin prior to the final approval of the superstructure plan.

COST & SCHEDULE SAVING DESIGN

The AI Team has completed our analysis and has determined the most economical designs in schedule, construction cost, and long-term maintenance cost. One key feature of our design concept that saves both cost and schedule as compared to the RFP Plans is the alignment of Mary Washington Blvd. near the intersection of Hospital Drive. The roadway has been aligned in a manner that will miss the Dominion Virginia Power monopoles in the area. The RFP plans showed the proposed roadway conflicting with one of these poles. The proposed alignment would not require the relocation of any monopoles resulting in significant savings and avoid a relocation that could take in excess of two years. The proposed alignment at this location also removes the need for multiple retaining walls in the area which again is a significant cost and schedule savings.

The Fall Hill Avenue Bridge over I-95 has also been designed with the intent of reducing both schedule and costs. The alignment of the bridge was adjusted slightly which allowed us to drop one girder line from the RFP plans. Our proposed design also differs from the RFP plans in that the shelf abutments supported on H-Piles with MSE walls were used instead of tall abutments, and foundations supported by H-Pile were used at the piers instead of drilled shafts. Each of these design optimizations allows for a quicker build-out of the bridge, which is necessary to meet the project completion date.

Right-of-Way: Given the uncertain nature of right-of-way negotiations, especially relocations, we have allotted time in our schedule to absorb some of this risk. Right-of-way activities do not currently show on the critical path, however it is near the critical path with the *Receiving Right-of-Way Clearances* activity only having 4 days of float. Because of this risk, a major focus will be placed on the right-of-way process from the time of notice of intent to award.

Environmental Compliance: As design progresses and the final impacts to environmental resources are realized, coordination with external agencies for review, approval and permitting will be finalized. Our design concept has less impact to historic properties near along Mary Washington Blvd which are considered an environmental resource, and only impacts approximately 0.25 acres of wetlands. We believe the environmental advantages of our design which minimize environmental impacts will make the approval/permitting process easier and more palatable.

Hazardous Materials Services: The potential exists for encountering hazardous materials during demolition of the existing structure. As described in the RFP, the Potential Environmental Hazards associated with this project include asbestos and lead-based paint on the existing steel girders. Our schedule takes into account the steps necessary to properly test for and abate the hazardous materials that are found in association with the demolition of the existing bridge.

Utilities: Utilities along the Project are characterized as in-plan and private. In-plan utilities include water and sewer adjustments or relocations. As these services are prepared and constructed by our team, we generally control their impact on our schedule. However, private utilities are under no obligation to expedite. Fortunately, we have excellent relationships with the utility companies affected by this Project and anticipate a cooperative attitude. In the proposal schedule we have separated the most critical relocations into its own activities. The relocation of Verizon lines are key to being able to proceed with the work throughout the Project, most notably Area 3. The relocation of Dominion Virginia Power transmission lines are key to being able to proceed with the work in Area 4. AI's design is able to avoid monopole transmission towers along Mary Washington Blvd which could have had a much greater impact on the project schedule and cost.

CONSTRUCTION

The construction team will work closely with the design team to monitor progress of Right-of-Way Acquisitions and Design Approvals. Regular Coordination meetings will allow the construction team to proactively monitor which project areas will become available first.

In general, we intend to focus on preconstruction activities necessary to access and begin the construction of the bridge foundations. The bridge construction is near to the critical path, and the earlier the Phase 1 bridge foundations can begin, the less likely the bridge will impact the project's critical path. Our team also intends to identify and focus early on areas where construction may be able to begin prior to the relocation of utilities being completed.

Another focus for the construction team will be the demolition operations associated with the existing bridge. These operations present many risks such as worker safety, public safety, and schedule risk. AI will maximize its planning and quality control efforts to optimize these operations in all phases.

SCHEDULE MANAGEMENT

The Project Schedule will be utilized not only for management of the project sequencing and duration, but also as a key tool in team development and coordination. The visual representation of the Project will provide a method for key stakeholders to initiate "make certain" checklists to identify key tasks to be done by accountable parties. Similarly, the schedule will provide a long-term look ahead to plan for design workshops, over-the-shoulder reviews, and design-build coordination meetings. These meetings will contribute to timely constructability reviews and intermediate feedback from VDOT through over-the-shoulder review meetings. The AI Team will also hold formal partnering meetings on a quarterly basis for issue resolution, follow-up, and look-ahead reviews of upcoming work and potential "rocks-in-the-road", allowing ample time to develop a mitigation plan if necessary. Further, AI's construction team will be able to streamline the development of operation based work packages from the project schedule. These work packages will include short-term scheduling, QA/QC coordination, and any methods of addressing the remaining constraints. As our standard schedule management process, the Project Schedule will be the driving force behind all long-term and short-term planning to provide the opportunity to recognize and mitigate risks as early as possible in the Project.

CALENDARS

Based on past experiences with construction scheduling, the AI Team has utilized four calendars for the purposes of the Proposal Schedule. All calendars take State Holidays and AI Employee Holidays into account. Upon award of the contract, these calendars would be further tailored to the specific restrictions of each traffic area per the contract documents and any operation-specific considerations.

Base 5-day Calendar with Holidays – This calendar is a base calendar showing work taking place five days per week every week except where restricted by standard State Holidays and AI Employee Holidays. AI's durations during the construction phases are based on getting five days of production per week. If weather impacts the schedule Monday through Friday, Saturdays would be utilized to recover the lost weather days.

7-day Review/Cure – This calendar allows work to take place every day of the year. However, it has only been applied to activities such as submittal reviews and concrete curing periods where the durations are primarily based on calendar days instead of working days.

Paving Calendar – This calendar is similar to the 5-day calendar which shows work taking place five days per week every week except where restricted by standard State Holidays and AI Employee Holidays. The only difference is that no work is performed during the months of December, January, and February. This calendar is used for any activity where there is asphalt paving.

Deck Calendar – This calendar is identical to the 5-day calendar which shows work taking place five days per week every week except where restricted by standard State Holidays and AI Employee Holidays. This calendar is used for any deck or deck closure pours.

SCHEDULE SETTINGS & ACRONYMS

Scheduling/Leveling Settings:

General

Scheduling	Yes
Leveling	No
Ignore relationships to and from other projects	No
Make open-ended activities critical	No
Use Expected Finish Dates	Yes
Schedule automatically when a change affects dates	No
Level resources during scheduling	No
Recalculate assignment costs after scheduling	No
When scheduling progressed activities use	Retained Logic
Calculate start-to-start lag from	Early Start
Define critical activities as Total Float less than or equal to	0
Compute Total Float as	Finish Float
Calculate float based on finish date of	Each project
Calendar for scheduling Relationship Lag	Predecessor Activity Calendar

Advanced

Calculate multiple float path	No

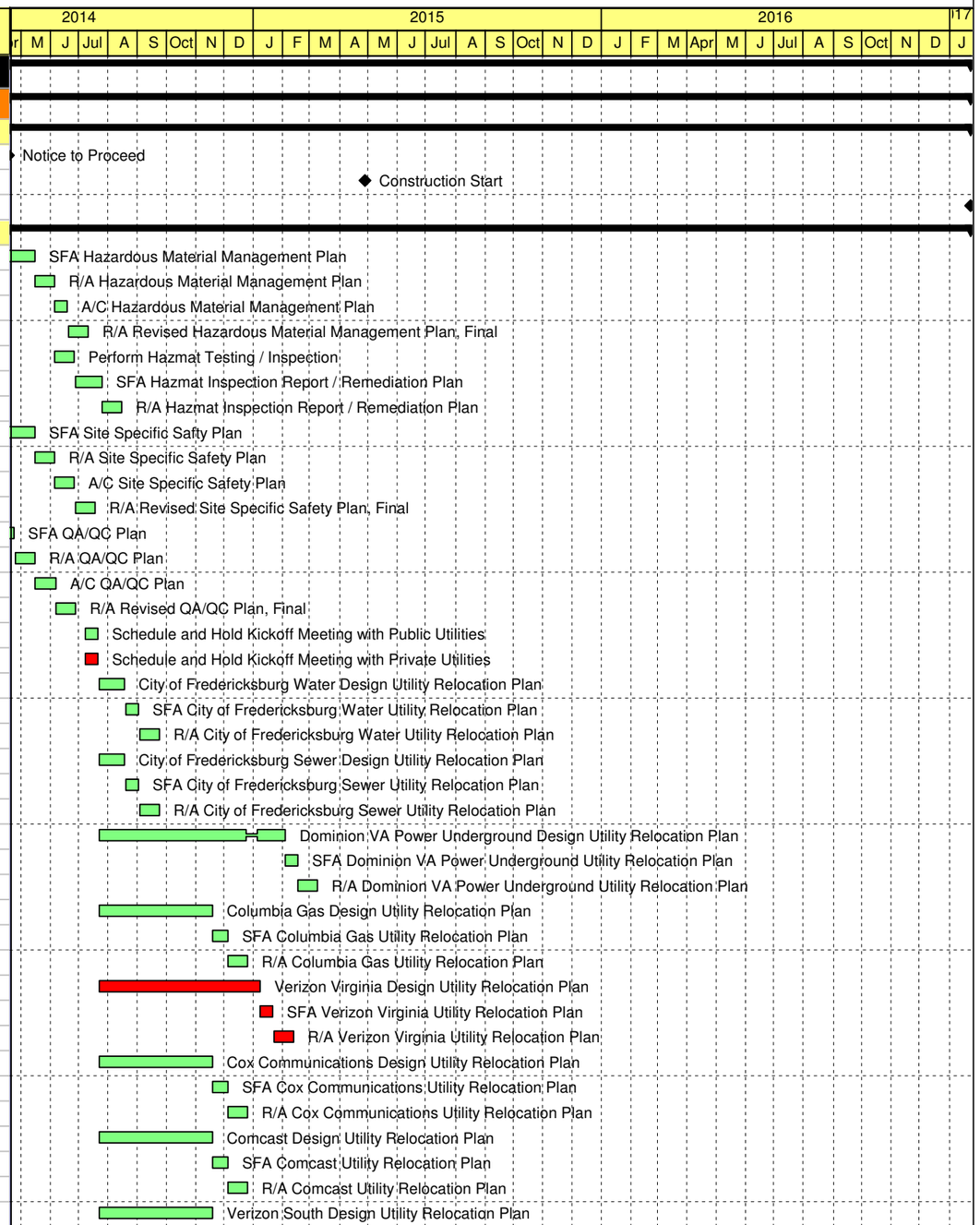
Acronyms:

SFA	Submit for Approval
R/A	Review and Approve
A/C	Additions and Corrections
MOT	Maintenance of Traffic
F/R/P	Form/Reinforce/Pour
F/R	Form/Reinforce
SOE	Support of Excavation
FAB/DEL	Fabricate & Deliver

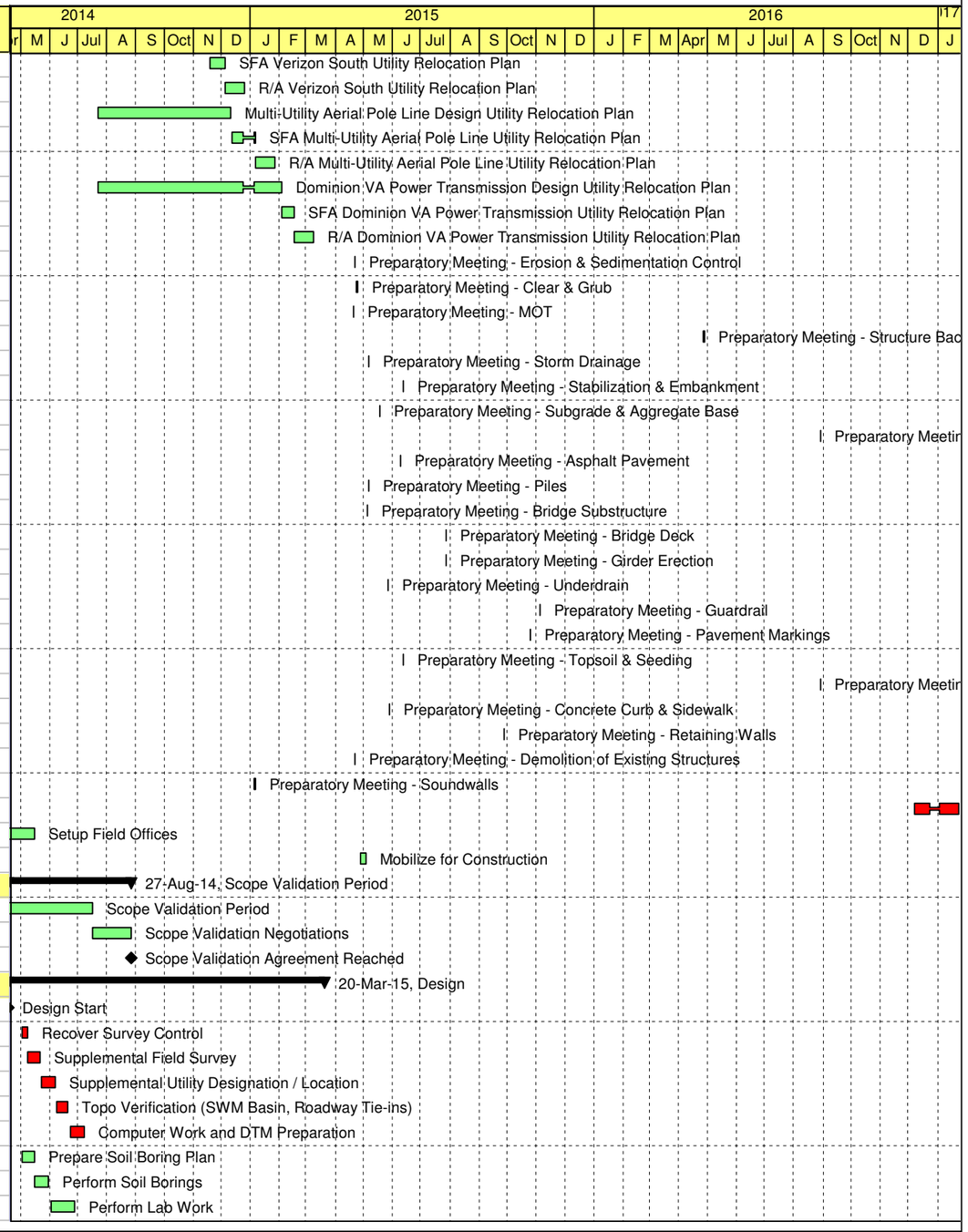
EXHIBIT 4.7.1

PROPOSAL SCHEDULE

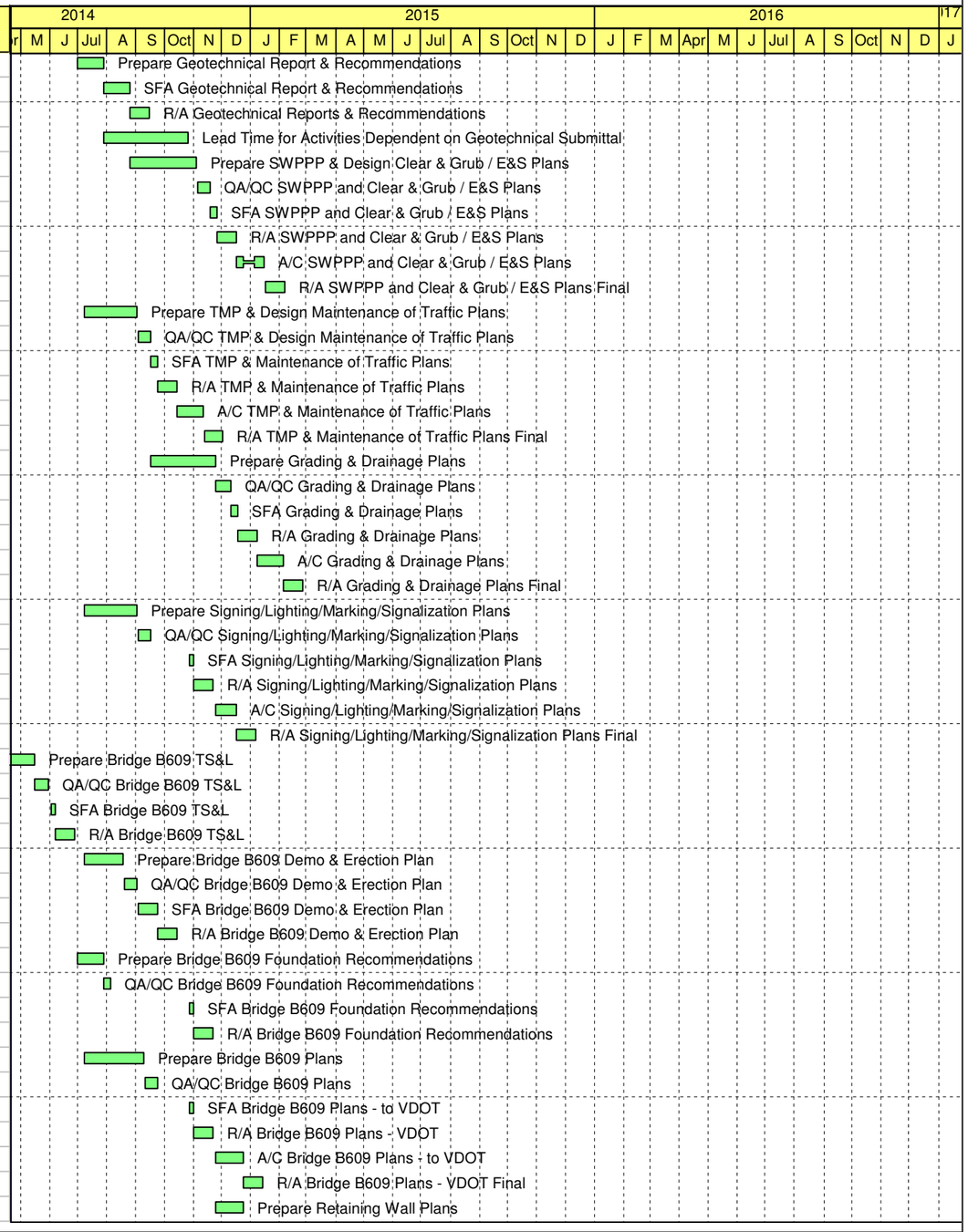
Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
Fall Hill Ave. Widening & Mary Washington Blvd. Ex...		711	1	18-Apr-14	23-Jan-17	
Pre-Construction Activities		711	1	18-Apr-14	23-Jan-17	
Project Milestones		711	1	18-Apr-14	23-Jan-17	
G010000	Notice to Proceed	0	0	18-Apr-14		Fall Hill 7-Day Calendar
G010010	Construction Start	0	4	28-Apr-15		Fall Hill 5-Day Calendar
G019999	Project Completion	0	1		23-Jan-17	Fall Hill 5-Day Calendar
Project Management		711	1	18-Apr-14	23-Jan-17	
G020100	SFA Hazardous Material Management Plan	20	181	18-Apr-14	15-May-14	Fall Hill 5-Day Calendar
G020110	R/A Hazardous Material Management Plan	21	271	16-May-14	05-Jun-14	Fall Hill 7-Day Calendar
G020120	A/C Hazardous Material Management Plan	10	200	06-Jun-14	19-Jun-14	Fall Hill 5-Day Calendar
G020130	R/A Revised Hazardous Material Management Plan, Final	21	297	20-Jun-14	10-Jul-14	Fall Hill 7-Day Calendar
G020140	Perform Hazmat Testing / Inspection	15	182	06-Jun-14	26-Jun-14	Fall Hill 5-Day Calendar
G020150	SFA Hazmat Inspection Report / Remediation Plan	20	182	27-Jun-14	25-Jul-14	Fall Hill 5-Day Calendar
G020160	R/A Hazmat Inspection Report / Remediation Plan	21	270	26-Jul-14	15-Aug-14	Fall Hill 7-Day Calendar
G020200	SFA Site Specific Safty Plan	20	194	18-Apr-14	15-May-14	Fall Hill 5-Day Calendar
G020210	R/A Site Specific Safety Plan	21	290	16-May-14	05-Jun-14	Fall Hill 7-Day Calendar
G020220	A/C Site Specific Safety Plan	15	195	06-Jun-14	26-Jun-14	Fall Hill 5-Day Calendar
G020230	R/A Revised Site Specific Safety Plan, Final	21	290	27-Jun-14	17-Jul-14	Fall Hill 7-Day Calendar
G020300	SFA QA/QC Plan	5	209	18-Apr-14	24-Apr-14	Fall Hill 5-Day Calendar
G020310	R/A QA/QC Plan	21	311	25-Apr-14	15-May-14	Fall Hill 7-Day Calendar
G020320	A/C QA/QC Plan	15	209	16-May-14	06-Jun-14	Fall Hill 5-Day Calendar
G020330	R/A Revised QA/QC Plan, Final	21	310	07-Jun-14	27-Jun-14	Fall Hill 7-Day Calendar
G021000	Schedule and Hold Kickoff Meeting with Public Utilities	10	115	08-Jul-14	21-Jul-14	Fall Hill 5-Day Calendar
G021010	Schedule and Hold Kickoff Meeting with Private Utilities	10	0	08-Jul-14	21-Jul-14	Fall Hill 5-Day Calendar
G021100	City of Fredericksburg Water Design Utility Relocation Plan	20	188	22-Jul-14	18-Aug-14	Fall Hill 5-Day Calendar
G021110	SFA City of Fredericksburg Water Utility Relocation Plan	10	188	19-Aug-14	02-Sep-14	Fall Hill 5-Day Calendar
G021120	R/A City of Fredericksburg Water Utility Relocation Plan	21	278	03-Sep-14	23-Sep-14	Fall Hill 7-Day Calendar
G021130	City of Fredericksburg Sewer Design Utility Relocation Plan	20	188	22-Jul-14	18-Aug-14	Fall Hill 5-Day Calendar
G021140	SFA City of Fredericksburg Sewer Utility Relocation Plan	10	188	19-Aug-14	02-Sep-14	Fall Hill 5-Day Calendar
G021150	R/A City of Fredericksburg Sewer Utility Relocation Plan	21	278	03-Sep-14	23-Sep-14	Fall Hill 7-Day Calendar
G021160	Dominion VA Power Underground Design Utility Relocation...	130	103	22-Jul-14	02-Feb-15	Fall Hill 5-Day Calendar
G021170	SFA Dominion VA Power Underground Utility Relocation Plan	10	103	03-Feb-15	16-Feb-15	Fall Hill 5-Day Calendar
G021180	R/A Dominion VA Power Underground Utility Relocation Plan	21	147	17-Feb-15	09-Mar-15	Fall Hill 7-Day Calendar
G021190	Columbia Gas Design Utility Relocation Plan	85	109	22-Jul-14	18-Nov-14	Fall Hill 5-Day Calendar
G021200	SFA Columbia Gas Utility Relocation Plan	10	109	19-Nov-14	04-Dec-14	Fall Hill 5-Day Calendar
G021210	R/A Columbia Gas Utility Relocation Plan	21	164	05-Dec-14	25-Dec-14	Fall Hill 7-Day Calendar
G021220	Verizon Virginia Design Utility Relocation Plan	170	0	22-Jul-14	07-Jan-15	Fall Hill 7-Day Calendar
G021230	SFA Verizon Virginia Utility Relocation Plan	10	0	08-Jan-15	21-Jan-15	Fall Hill 5-Day Calendar
G021240	R/A Verizon Virginia Utility Relocation Plan	21	0	22-Jan-15	11-Feb-15	Fall Hill 7-Day Calendar
G021250	Cox Communications Design Utility Relocation Plan	85	98	22-Jul-14	18-Nov-14	Fall Hill 5-Day Calendar
G021260	SFA Cox Communications Utility Relocation Plan	10	98	19-Nov-14	04-Dec-14	Fall Hill 5-Day Calendar
G021270	R/A Cox Communications Utility Relocation Plan	21	147	05-Dec-14	25-Dec-14	Fall Hill 7-Day Calendar
G021280	Comcast Design Utility Relocation Plan	85	98	22-Jul-14	18-Nov-14	Fall Hill 5-Day Calendar
G021290	SFA Comcast Utility Relocation Plan	10	98	19-Nov-14	04-Dec-14	Fall Hill 5-Day Calendar
G021300	R/A Comcast Utility Relocation Plan	21	147	05-Dec-14	25-Dec-14	Fall Hill 7-Day Calendar
G021310	Verizon South Design Utility Relocation Plan	85	185	22-Jul-14	18-Nov-14	Fall Hill 5-Day Calendar



Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
G021320	SFA Verizon South Utility Relocation Plan	10	185	19-Nov-14	04-Dec-14	Fall Hill 5-Day Calendar
G021330	R/A Verizon South Utility Relocation Plan	21	272	05-Dec-14	25-Dec-14	Fall Hill 7-Day Calendar
G021340	Multi-Utility Aerial Pole Line Design Utility Relocation Plan	100	115	22-Jul-14	11-Dec-14	Fall Hill 5-Day Calendar
G021350	SFA Multi-Utility Aerial Pole Line Utility Relocation Plan	10	115	12-Dec-14	05-Jan-15	Fall Hill 5-Day Calendar
G021360	R/A Multi-Utility Aerial Pole Line Utility Relocation Plan	21	162	06-Jan-15	26-Jan-15	Fall Hill 7-Day Calendar
G021370	Dominion VA Power Transmission Design Utility Relocation...	130	86	22-Jul-14	02-Feb-15	Fall Hill 5-Day Calendar
G021380	SFA Dominion VA Power Transmission Utility Relocation Pl...	10	86	03-Feb-15	16-Feb-15	Fall Hill 5-Day Calendar
G021390	R/A Dominion VA Power Transmission Utility Relocation Plan	21	121	17-Feb-15	09-Mar-15	Fall Hill 7-Day Calendar
G022000	Preparatory Meeting - Erosion & Sedimentation Control	1	146	22-Apr-15	22-Apr-15	Fall Hill 5-Day Calendar
G022010	Preparatory Meeting - Clear & Grub	1	103	24-Apr-15	24-Apr-15	Fall Hill 5-Day Calendar
G022020	Preparatory Meeting - MOT	1	4	20-Apr-15	20-Apr-15	Fall Hill 5-Day Calendar
G022030	Preparatory Meeting - Structure Backfill	1	20	27-Apr-16	27-Apr-16	Fall Hill 5-Day Calendar
G022040	Preparatory Meeting - Storm Drainage	1	172	06-May-15	06-May-15	Fall Hill 5-Day Calendar
G022050	Preparatory Meeting - Stabilization & Embankment	1	115	12-Jun-15	12-Jun-15	Fall Hill 5-Day Calendar
G022060	Preparatory Meeting - Subgrade & Aggregate Base	1	110	18-May-15	18-May-15	Fall Hill 5-Day Calendar
G022070	Preparatory Meeting - Signalization	1	45	29-Aug-16	29-Aug-16	Fall Hill 5-Day Calendar
G022080	Preparatory Meeting - Asphalt Pavement	1	107	09-Jun-15	09-Jun-15	Fall Hill 5-Day Calendar
G022090	Preparatory Meeting - Piles	1	4	07-May-15	07-May-15	Fall Hill 5-Day Calendar
G022100	Preparatory Meeting - Bridge Substructure	1	4	05-May-15	05-May-15	Fall Hill 5-Day Calendar
G022110	Preparatory Meeting - Bridge Deck	1	5	28-Jul-15	28-Jul-15	Fall Hill 5-Day Calendar
G022120	Preparatory Meeting - Girder Erection	1	5	28-Jul-15	28-Jul-15	Fall Hill 5-Day Calendar
G022130	Preparatory Meeting - Underdrain	1	109	27-May-15	27-May-15	Fall Hill 5-Day Calendar
G022140	Preparatory Meeting - Guardrail	1	114	05-Nov-15	05-Nov-15	Fall Hill 5-Day Calendar
G022150	Preparatory Meeting - Pavement Markings	1	265	26-Oct-15	26-Oct-15	Fall Hill 5-Day Calendar
G022160	Preparatory Meeting - Topsoil & Seeding	1	115	12-Jun-15	12-Jun-15	Fall Hill 5-Day Calendar
G022170	Preparatory Meeting - Signage	1	60	29-Aug-16	29-Aug-16	Fall Hill 5-Day Calendar
G022180	Preparatory Meeting - Concrete Curb & Sidewalk	1	109	29-May-15	29-May-15	Fall Hill 5-Day Calendar
G022190	Preparatory Meeting - Retaining Walls	1	16	28-Sep-15	28-Sep-15	Fall Hill 5-Day Calendar
G022200	Preparatory Meeting - Demolition of Existing Structures	1	4	22-Apr-15	22-Apr-15	Fall Hill 5-Day Calendar
G022210	Preparatory Meeting - Soundwalls	1	282	05-Jan-15	05-Jan-15	Fall Hill 5-Day Calendar
G029997	Punchlist / De-mobilization	27	1	08-Dec-16	23-Jan-17	Fall Hill 5-Day Calendar
G029998	Setup Field Offices	20	239	18-Apr-14	15-May-14	Fall Hill 5-Day Calendar
G029999	Mobilize for Construction	5	4	28-Apr-15	04-May-15	Fall Hill 5-Day Calendar
Scope Validation Period		92	168	18-Apr-14	27-Aug-14	
GO30010	Scope Validation Period	90	249	18-Apr-14	16-Jul-14	Fall Hill 7-Day Calendar
GO30020	Scope Validation Negotiations	30	167	17-Jul-14	27-Aug-14	Fall Hill 5-Day Calendar
GO30030	Scope Validation Agreement Reached	0	167		27-Aug-14	Fall Hill 5-Day Calendar
Design		230	482	18-Apr-14	20-Mar-15	
GO40010	Design Start	0	24	18-Apr-14		Fall Hill 5-Day Calendar
GO40020	Recover Survey Control	5	0	02-May-14	08-May-14	Fall Hill 5-Day Calendar
GO40030	Supplemental Field Survey	10	0	09-May-14	22-May-14	Fall Hill 5-Day Calendar
GO40040	Supplemental Utility Designation / Location	10	0	23-May-14	06-Jun-14	Fall Hill 5-Day Calendar
GO40050	Topo Verification (SWM Basin, Roadway Tie-ins)	10	0	09-Jun-14	20-Jun-14	Fall Hill 5-Day Calendar
GO40060	Computer Work and DTM Preparation	10	0	23-Jun-14	07-Jul-14	Fall Hill 5-Day Calendar
GO40100	Prepare Soil Boring Plan	10	14	02-May-14	15-May-14	Fall Hill 5-Day Calendar
GO40110	Perform Soil Borings	10	14	16-May-14	30-May-14	Fall Hill 5-Day Calendar
GO40120	Perform Lab Work	20	14	02-Jun-14	27-Jun-14	Fall Hill 5-Day Calendar



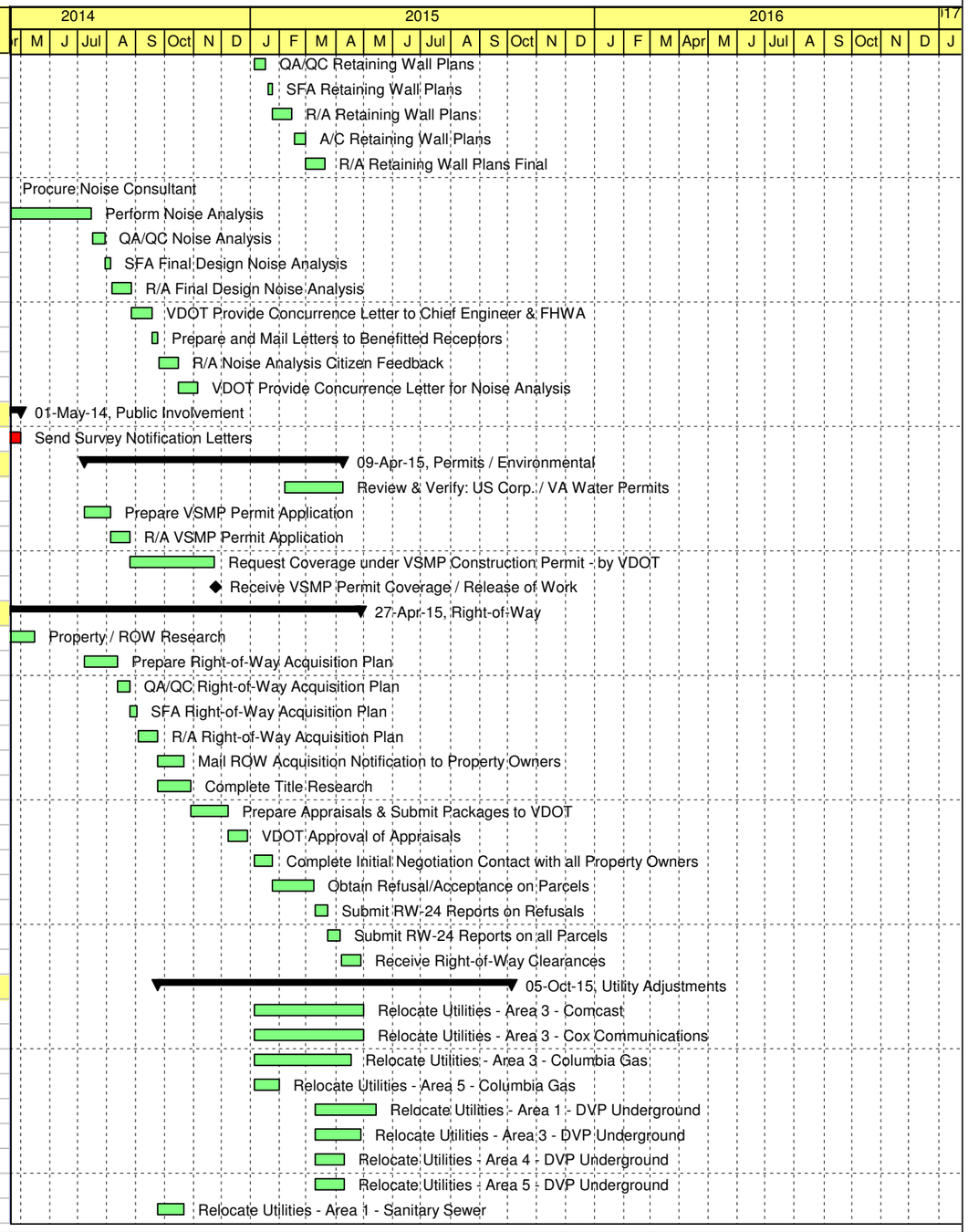
Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
GO40130	Prepare Geotechnical Report & Recommendations	20	14	30-Jun-14	28-Jul-14	Fall Hill 5-Day Calendar
GO40140	SFA Geotechnical Report & Recommendations	20	14	29-Jul-14	25-Aug-14	Fall Hill 5-Day Calendar
GO40150	R/A Geotechnical Reports & Recommendations	21	143	26-Aug-14	15-Sep-14	Fall Hill 7-Day Calendar
GO40160	Lead Time for Activities Dependent on Geotechnical Submi...	90	18	29-Jul-14	26-Oct-14	Fall Hill 7-Day Calendar
GO40200	Prepare SWPPP & Design Clear & Grub / E&S Plans	50	19	26-Aug-14	04-Nov-14	Fall Hill 5-Day Calendar
GO40205	QA/QC SWPPP and Clear & Grub / E&S Plans	10	19	05-Nov-14	18-Nov-14	Fall Hill 5-Day Calendar
GO40210	SFA SWPPP and Clear & Grub / E&S Plans	5	19	19-Nov-14	25-Nov-14	Fall Hill 5-Day Calendar
GO40220	R/A SWPPP and Clear & Grub / E&S Plans	21	33	26-Nov-14	16-Dec-14	Fall Hill 7-Day Calendar
GO40230	A/C SWPPP and Clear & Grub / E&S Plans	15	16	17-Dec-14	15-Jan-15	Fall Hill 5-Day Calendar
GO40240	R/A SWPPP and Clear & Grub / E&S Plans Final	21	24	16-Jan-15	05-Feb-15	Fall Hill 7-Day Calendar
GO40300	Prepare TMP & Design Maintenance of Traffic Plans	40	84	08-Jul-14	02-Sep-14	Fall Hill 5-Day Calendar
GO40305	QA/QC TMP & Design Maintenance of Traffic Plans	10	84	03-Sep-14	16-Sep-14	Fall Hill 5-Day Calendar
GO40310	SFA TMP & Maintenance of Traffic Plans	5	84	17-Sep-14	23-Sep-14	Fall Hill 5-Day Calendar
GO40320	R/A TMP & Maintenance of Traffic Plans	21	131	24-Sep-14	14-Oct-14	Fall Hill 7-Day Calendar
GO40330	A/C TMP & Maintenance of Traffic Plans	20	84	15-Oct-14	11-Nov-14	Fall Hill 5-Day Calendar
GO40340	R/A TMP & Maintenance of Traffic Plans Final	21	131	12-Nov-14	02-Dec-14	Fall Hill 7-Day Calendar
GO40400	Prepare Grading & Drainage Plans	50	94	16-Sep-14	24-Nov-14	Fall Hill 5-Day Calendar
GO40405	QA/QC Grading & Drainage Plans	10	94	25-Nov-14	10-Dec-14	Fall Hill 5-Day Calendar
GO40410	SFA Grading & Drainage Plans	5	94	11-Dec-14	17-Dec-14	Fall Hill 5-Day Calendar
GO40420	R/A Grading & Drainage Plans	21	141	18-Dec-14	07-Jan-15	Fall Hill 7-Day Calendar
GO40430	A/C Grading & Drainage Plans	20	100	08-Jan-15	04-Feb-15	Fall Hill 5-Day Calendar
GO40440	R/A Grading & Drainage Plans Final	21	141	05-Feb-15	25-Feb-15	Fall Hill 7-Day Calendar
GO40500	Prepare Signing/Lighting/Marking/Signalization Plans	40	343	08-Jul-14	02-Sep-14	Fall Hill 5-Day Calendar
GO40505	QA/QC Signing/Lighting/Marking/Signalization Plans	10	343	03-Sep-14	16-Sep-14	Fall Hill 5-Day Calendar
GO40510	SFA Signing/Lighting/Marking/Signalization Plans	5	315	27-Oct-14	31-Oct-14	Fall Hill 5-Day Calendar
GO40520	R/A Signing/Lighting/Marking/Signalization Plans	21	471	01-Nov-14	21-Nov-14	Fall Hill 7-Day Calendar
GO40530	A/C Signing/Lighting/Marking/Signalization Plans	15	315	24-Nov-14	16-Dec-14	Fall Hill 5-Day Calendar
GO40540	R/A Signing/Lighting/Marking/Signalization Plans Final	21	467	17-Dec-14	06-Jan-15	Fall Hill 7-Day Calendar
GO41010	Prepare Bridge B609 TS&L	20	42	18-Apr-14	15-May-14	Fall Hill 5-Day Calendar
GO41020	QA/QC Bridge B609 TS&L	10	42	16-May-14	30-May-14	Fall Hill 5-Day Calendar
GO41030	SFA Bridge B609 TS&L	5	42	02-Jun-14	06-Jun-14	Fall Hill 5-Day Calendar
GO41040	R/A Bridge B609 TS&L	21	61	07-Jun-14	27-Jun-14	Fall Hill 7-Day Calendar
GO41100	Prepare Bridge B609 Demo & Erection Plan	30	42	08-Jul-14	18-Aug-14	Fall Hill 5-Day Calendar
GO41110	QA/QC Bridge B609 Demo & Erection Plan	10	42	19-Aug-14	02-Sep-14	Fall Hill 5-Day Calendar
GO41120	SFA Bridge B609 Demo & Erection Plan	15	42	03-Sep-14	23-Sep-14	Fall Hill 5-Day Calendar
GO41130	R/A Bridge B609 Demo & Erection Plan	21	58	24-Sep-14	14-Oct-14	Fall Hill 7-Day Calendar
GO41200	Prepare Bridge B609 Foundation Recommendations	20	72	30-Jun-14	28-Jul-14	Fall Hill 5-Day Calendar
GO41205	QA/QC Bridge B609 Foundation Recommendations	5	72	29-Jul-14	04-Aug-14	Fall Hill 5-Day Calendar
GO41210	SFA Bridge B609 Foundation Recommendations	5	14	27-Oct-14	31-Oct-14	Fall Hill 5-Day Calendar
GO41220	R/A Bridge B609 Foundation Recommendations	21	20	01-Nov-14	21-Nov-14	Fall Hill 7-Day Calendar
GO41300	Prepare Bridge B609 Plans	45	37	08-Jul-14	09-Sep-14	Fall Hill 5-Day Calendar
GO41305	QA/QC Bridge B609 Plans	10	37	10-Sep-14	23-Sep-14	Fall Hill 5-Day Calendar
GO41310	SFA Bridge B609 Plans - to VDOT	5	14	27-Oct-14	31-Oct-14	Fall Hill 5-Day Calendar
GO41320	R/A Bridge B609 Plans - VDOT	21	20	01-Nov-14	21-Nov-14	Fall Hill 7-Day Calendar
GO41330	A/C Bridge B609 Plans - to VDOT	20	12	24-Nov-14	23-Dec-14	Fall Hill 5-Day Calendar
GO41340	R/A Bridge B609 Plans - VDOT Final	21	104	24-Dec-14	13-Jan-15	Fall Hill 7-Day Calendar
GO41400	Prepare Retaining Wall Plans	20	103	25-Nov-14	24-Dec-14	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
GO41410	QA/QC Retaining Wall Plans	10	103	05-Jan-15	16-Jan-15	Fall Hill 5-Day Calendar
GO41420	SFA Retaining Wall Plans	5	103	19-Jan-15	23-Jan-15	Fall Hill 5-Day Calendar
GO41430	R/A Retaining Wall Plans	21	146	24-Jan-15	13-Feb-15	Fall Hill 7-Day Calendar
GO41440	A/C Retaining Wall Plans	10	102	16-Feb-15	27-Feb-15	Fall Hill 5-Day Calendar
GO41450	R/A Retaining Wall Plans Final	21	146	28-Feb-15	20-Mar-15	Fall Hill 7-Day Calendar
GO42000	Procure Noise Consultant	1	238	18-Apr-14	18-Apr-14	Fall Hill 5-Day Calendar
GO42010	Perform Noise Analysis	60	238	21-Apr-14	15-Jul-14	Fall Hill 5-Day Calendar
GO42015	QA/QC Noise Analysis	10	238	16-Jul-14	29-Jul-14	Fall Hill 5-Day Calendar
GO42020	SFA Final Design Noise Analysis	5	238	30-Jul-14	05-Aug-14	Fall Hill 5-Day Calendar
GO42030	R/A Final Design Noise Analysis	21	350	06-Aug-14	26-Aug-14	Fall Hill 7-Day Calendar
GO42040	VDOT Provide Concurrence Letter to Chief Engineer & FH...	15	238	27-Aug-14	17-Sep-14	Fall Hill 5-Day Calendar
GO42050	Prepare and Mail Letters to Benefitted Receptors	5	238	18-Sep-14	24-Sep-14	Fall Hill 5-Day Calendar
GO42060	R/A Noise Analysis Citizen Feedback	21	350	25-Sep-14	15-Oct-14	Fall Hill 7-Day Calendar
GO42070	VDOT Provide Concurrence Letter for Noise Analysis	15	548	16-Oct-14	05-Nov-14	Fall Hill 5-Day Calendar
Public Involvement		10	0	18-Apr-14	01-May-14	
GO50010	Send Survey Notification Letters	10	0	18-Apr-14	01-May-14	Fall Hill 5-Day Calendar
Permits / Environmental		189	16	08-Jul-14	09-Apr-15	
GO60000	Review & Verify: US Corp. / VA Water Permits	45	16	06-Feb-15	09-Apr-15	Fall Hill 5-Day Calendar
GO60010	Prepare VSMP Permit Application	20	19	08-Jul-14	04-Aug-14	Fall Hill 5-Day Calendar
GO60020	R/A VSMP Permit Application	21	28	05-Aug-14	25-Aug-14	Fall Hill 7-Day Calendar
GO60030	Request Coverage under VSMP Construction Permit - by V...	90	28	26-Aug-14	23-Nov-14	Fall Hill 7-Day Calendar
GO60040	Receive VSMP Permit Coverage / Release of Work	0	106		24-Nov-14	Fall Hill 5-Day Calendar
Right-of-Way		256	4	18-Apr-14	27-Apr-15	
G070010	Property / ROW Research	20	43	18-Apr-14	15-May-14	Fall Hill 5-Day Calendar
G070020	Prepare Right-of-Way Acquisition Plan	25	8	08-Jul-14	11-Aug-14	Fall Hill 5-Day Calendar
G070025	QA/QC Right-of-Way Acquisition Plan	10	8	12-Aug-14	25-Aug-14	Fall Hill 5-Day Calendar
G070030	SFA Right-of-Way Acquisition Plan	5	8	26-Aug-14	02-Sep-14	Fall Hill 5-Day Calendar
G070040	R/A Right-of-Way Acquisition Plan	21	12	03-Sep-14	23-Sep-14	Fall Hill 7-Day Calendar
G070060	Mail ROW Acquisition Notification to Property Owners	20	48	24-Sep-14	21-Oct-14	Fall Hill 5-Day Calendar
G070070	Complete Title Research	25	8	24-Sep-14	28-Oct-14	Fall Hill 5-Day Calendar
G070080	Prepare Appraisals & Submit Packages to VDOT	40	11	29-Oct-14	07-Dec-14	Fall Hill 7-Day Calendar
G070090	VDOT Approval of Appraisals	21	11	08-Dec-14	28-Dec-14	Fall Hill 7-Day Calendar
G070100	Complete Initial Negotiation Contact with all Property Owners	15	4	05-Jan-15	23-Jan-15	Fall Hill 5-Day Calendar
G070110	Obtain Refusal/Acceptance on Parcels	45	6	24-Jan-15	09-Mar-15	Fall Hill 7-Day Calendar
G070120	Submit RW-24 Reports on Refusals	10	4	10-Mar-15	23-Mar-15	Fall Hill 5-Day Calendar
G070130	Submit RW-24 Reports on all Parcels	10	4	24-Mar-15	06-Apr-15	Fall Hill 5-Day Calendar
G070140	Receive Right-of-Way Clearances	15	4	07-Apr-15	27-Apr-15	Fall Hill 5-Day Calendar
Utility Adjustments		261	227	24-Sep-14	05-Oct-15	
G080010	Relocate Utilities - Area 3 - Comcast	85	99	05-Jan-15	01-May-15	Fall Hill 5-Day Calendar
G080020	Relocate Utilities - Area 3 - Cox Communications	85	99	05-Jan-15	01-May-15	Fall Hill 5-Day Calendar
G080030	Relocate Utilities - Area 3 - Columbia Gas	75	109	05-Jan-15	17-Apr-15	Fall Hill 5-Day Calendar
G080040	Relocate Utilities - Area 5 - Columbia Gas	20	322	05-Jan-15	30-Jan-15	Fall Hill 5-Day Calendar
G080050	Relocate Utilities - Area 1 - DVP Underground	47	177	10-Mar-15	13-May-15	Fall Hill 5-Day Calendar
G080060	Relocate Utilities - Area 3 - DVP Underground	35	103	10-Mar-15	27-Apr-15	Fall Hill 5-Day Calendar
G080070	Relocate Utilities - Area 4 - DVP Underground	24	191	10-Mar-15	10-Apr-15	Fall Hill 5-Day Calendar
G080080	Relocate Utilities - Area 5 - DVP Underground	24	272	10-Mar-15	10-Apr-15	Fall Hill 5-Day Calendar
G080090	Relocate Utilities - Area 1 - Sanitary Sewer	20	314	24-Sep-14	21-Oct-14	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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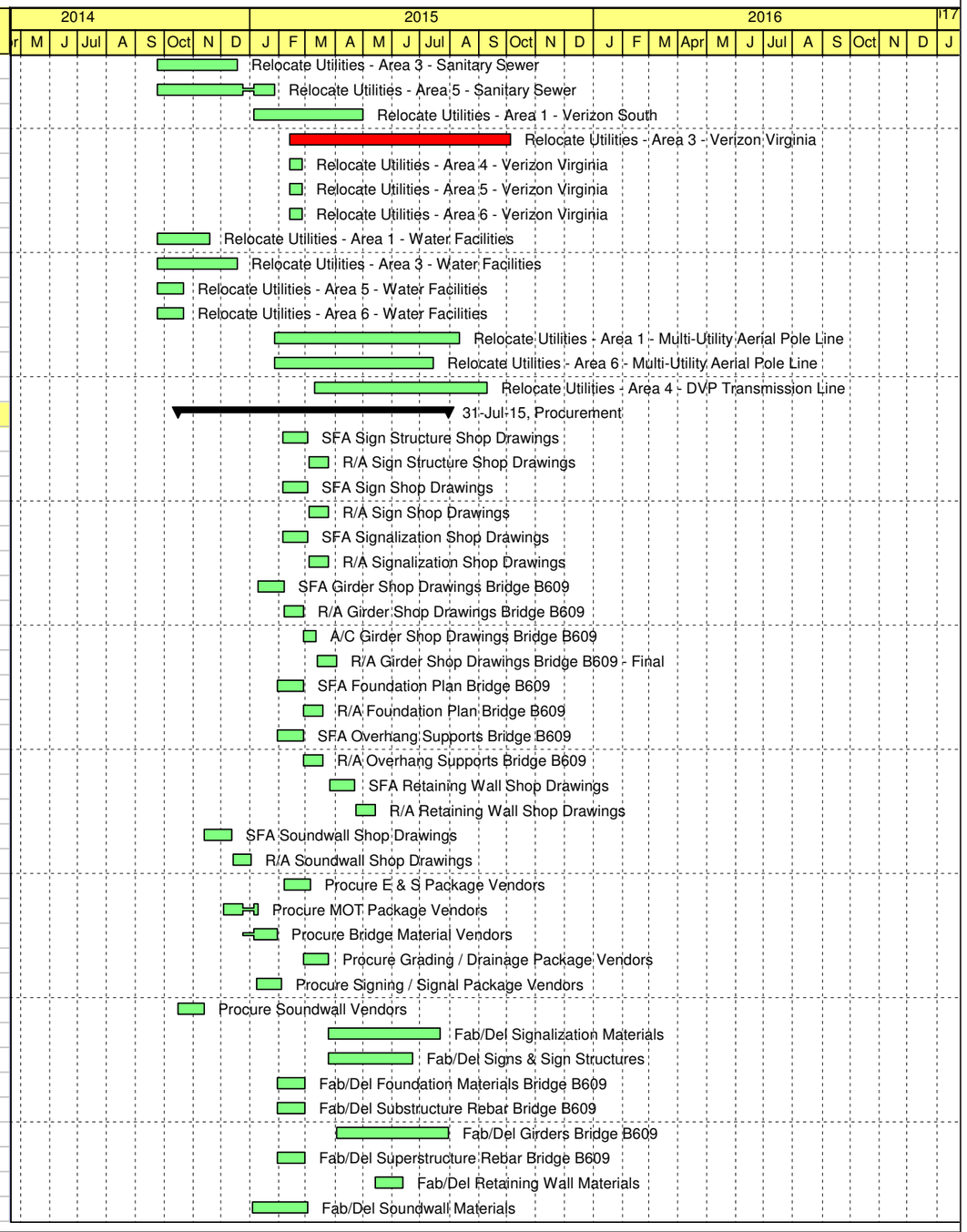
TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
G080100	Relocate Utilities - Area 3 - Sanitary Sewer	60	188	24-Sep-14	18-Dec-14	Fall Hill 5-Day Calendar
G080110	Relocate Utilities - Area 5 - Sanitary Sewer	80	326	24-Sep-14	26-Jan-15	Fall Hill 5-Day Calendar
G080120	Relocate Utilities - Area 1 - Verizon South	85	185	05-Jan-15	01-May-15	Fall Hill 5-Day Calendar
G080130	Relocate Utilities - Area 3 - Verizon Virginia	165	0	12-Feb-15	05-Oct-15	Fall Hill 5-Day Calendar
G080140	Relocate Utilities - Area 4 - Verizon Virginia	10	223	12-Feb-15	25-Feb-15	Fall Hill 5-Day Calendar
G080150	Relocate Utilities - Area 5 - Verizon Virginia	10	304	12-Feb-15	25-Feb-15	Fall Hill 5-Day Calendar
G080160	Relocate Utilities - Area 6 - Verizon Virginia	10	372	12-Feb-15	25-Feb-15	Fall Hill 5-Day Calendar
G080170	Relocate Utilities - Area 1 - Water Facilities	40	294	24-Sep-14	18-Nov-14	Fall Hill 5-Day Calendar
G080180	Relocate Utilities - Area 3 - Water Facilities	60	188	24-Sep-14	18-Dec-14	Fall Hill 5-Day Calendar
G080190	Relocate Utilities - Area 5 - Water Facilities	20	386	24-Sep-14	21-Oct-14	Fall Hill 5-Day Calendar
G080200	Relocate Utilities - Area 6 - Water Facilities	20	454	24-Sep-14	21-Oct-14	Fall Hill 5-Day Calendar
G080210	Relocate Utilities - Area 1 - Multi-Utility Aerial Pole Line	140	114	27-Jan-15	12-Aug-15	Fall Hill 5-Day Calendar
G080220	Relocate Utilities - Area 6 - Multi-Utility Aerial Pole Line	120	274	27-Jan-15	15-Jul-15	Fall Hill 5-Day Calendar
G080230	Relocate Utilities - Area 4 - DVP Transmission Line	130	85	10-Mar-15	10-Sep-15	Fall Hill 5-Day Calendar
Procurement		199	342	16-Oct-14	31-Jul-15	
G090010	SFA Sign Structure Shop Drawings	20	358	04-Feb-15	03-Mar-15	Fall Hill 5-Day Calendar
G090020	R/A Sign Structure Shop Drawings	21	519	04-Mar-15	24-Mar-15	Fall Hill 7-Day Calendar
G090030	SFA Sign Shop Drawings	20	358	04-Feb-15	03-Mar-15	Fall Hill 5-Day Calendar
G090040	R/A Sign Shop Drawings	21	519	04-Mar-15	24-Mar-15	Fall Hill 7-Day Calendar
G090100	SFA Signalization Shop Drawings	20	322	04-Feb-15	03-Mar-15	Fall Hill 5-Day Calendar
G090110	R/A Signalization Shop Drawings	21	468	04-Mar-15	24-Mar-15	Fall Hill 7-Day Calendar
G091000	SFA Girder Shop Drawings Bridge B609	20	12	09-Jan-15	05-Feb-15	Fall Hill 5-Day Calendar
G091010	R/A Girder Shop Drawings Bridge B609	21	18	06-Feb-15	26-Feb-15	Fall Hill 7-Day Calendar
G091020	A/C Girder Shop Drawings Bridge B609	10	12	27-Feb-15	12-Mar-15	Fall Hill 5-Day Calendar
G091030	R/A Girder Shop Drawings Bridge B609 - Final	21	18	13-Mar-15	02-Apr-15	Fall Hill 7-Day Calendar
G091100	SFA Foundation Plan Bridge B609	20	36	30-Jan-15	26-Feb-15	Fall Hill 5-Day Calendar
G091110	R/A Foundation Plan Bridge B609	21	52	27-Feb-15	19-Mar-15	Fall Hill 7-Day Calendar
G091150	SFA Overhang Supports Bridge B609	20	95	30-Jan-15	26-Feb-15	Fall Hill 5-Day Calendar
G091160	R/A Overhang Supports Bridge B609	21	137	27-Feb-15	19-Mar-15	Fall Hill 7-Day Calendar
G092000	SFA Retaining Wall Shop Drawings	20	99	26-Mar-15	22-Apr-15	Fall Hill 5-Day Calendar
G092010	R/A Retaining Wall Shop Drawings	21	144	23-Apr-15	13-May-15	Fall Hill 7-Day Calendar
G092020	SFA Soundwall Shop Drawings	20	238	13-Nov-14	12-Dec-14	Fall Hill 5-Day Calendar
G092030	R/A Soundwall Shop Drawings	21	352	13-Dec-14	02-Jan-15	Fall Hill 7-Day Calendar
G095000	Procure E & S Package Vendors	20	190	06-Feb-15	05-Mar-15	Fall Hill 5-Day Calendar
G095010	Procure MOT Package Vendors	20	86	03-Dec-14	08-Jan-15	Fall Hill 5-Day Calendar
G095020	Procure Bridge Material Vendors	20	12	24-Dec-14	29-Jan-15	Fall Hill 5-Day Calendar
G095030	Procure Grading / Drainage Package Vendors	20	99	26-Feb-15	25-Mar-15	Fall Hill 5-Day Calendar
G095040	Procure Signing / Signal Package Vendors	20	322	07-Jan-15	03-Feb-15	Fall Hill 5-Day Calendar
G095050	Procure Soundwall Vendors	20	238	16-Oct-14	12-Nov-14	Fall Hill 5-Day Calendar
G096000	Fab/Del Signalization Materials	120	468	25-Mar-15	22-Jul-15	Fall Hill 7-Day Calendar
G096010	Fab/Del Signs & Sign Structures	90	519	25-Mar-15	22-Jun-15	Fall Hill 7-Day Calendar
G096100	Fab/Del Foundation Materials Bridge B609	30	89	30-Jan-15	28-Feb-15	Fall Hill 7-Day Calendar
G096110	Fab/Del Substructure Rebar Bridge B609	30	130	30-Jan-15	28-Feb-15	Fall Hill 7-Day Calendar
G096120	Fab/Del Girders Bridge B609	120	18	03-Apr-15	31-Jul-15	Fall Hill 7-Day Calendar
G096130	Fab/Del Superstructure Rebar Bridge B609	30	185	30-Jan-15	28-Feb-15	Fall Hill 7-Day Calendar
G096200	Fab/Del Retaining Wall Materials	30	144	14-May-15	12-Jun-15	Fall Hill 7-Day Calendar
G096210	Fab/Del Soundwall Materials	60	352	03-Jan-15	03-Mar-15	Fall Hill 7-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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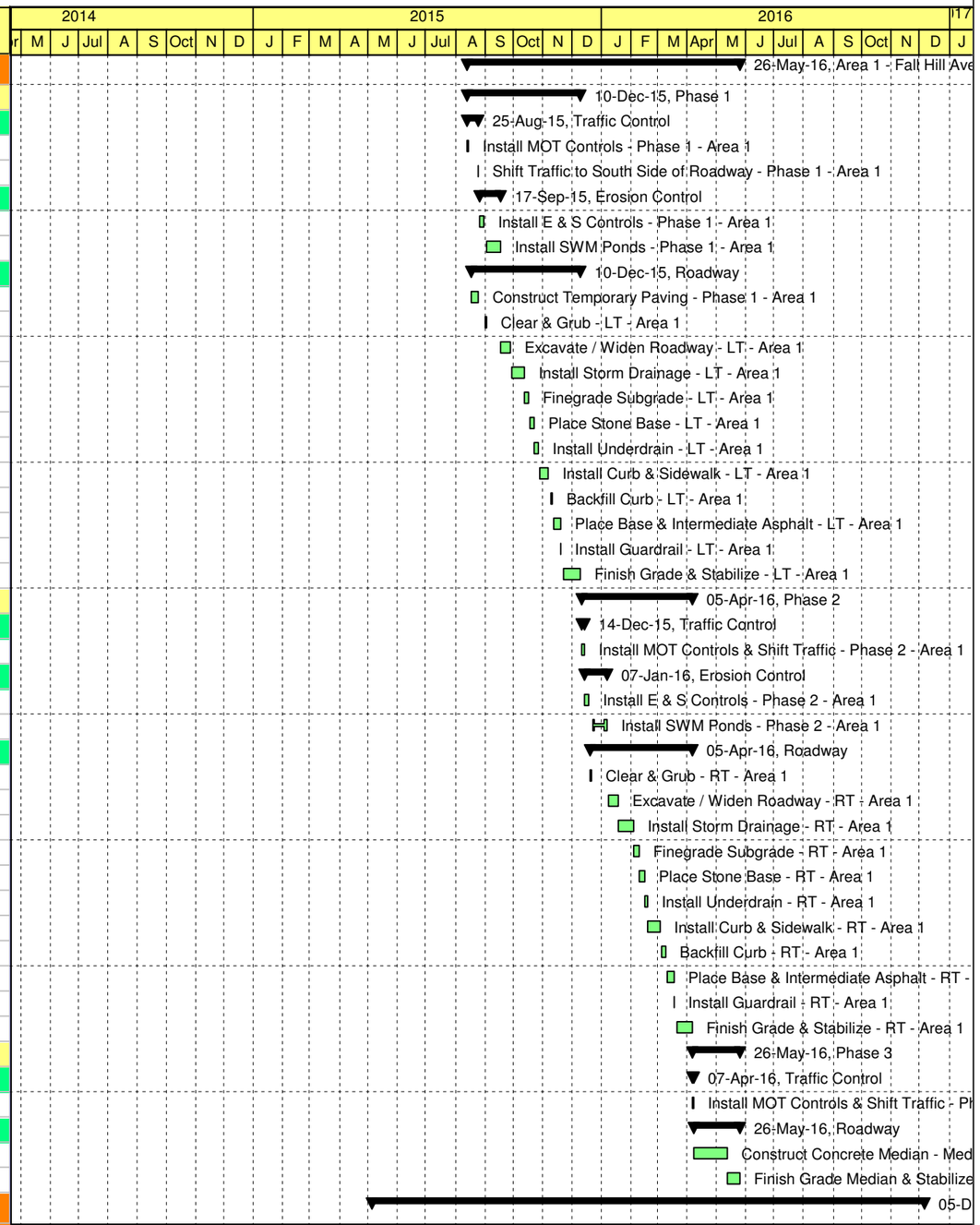
TASK filter: All Activities

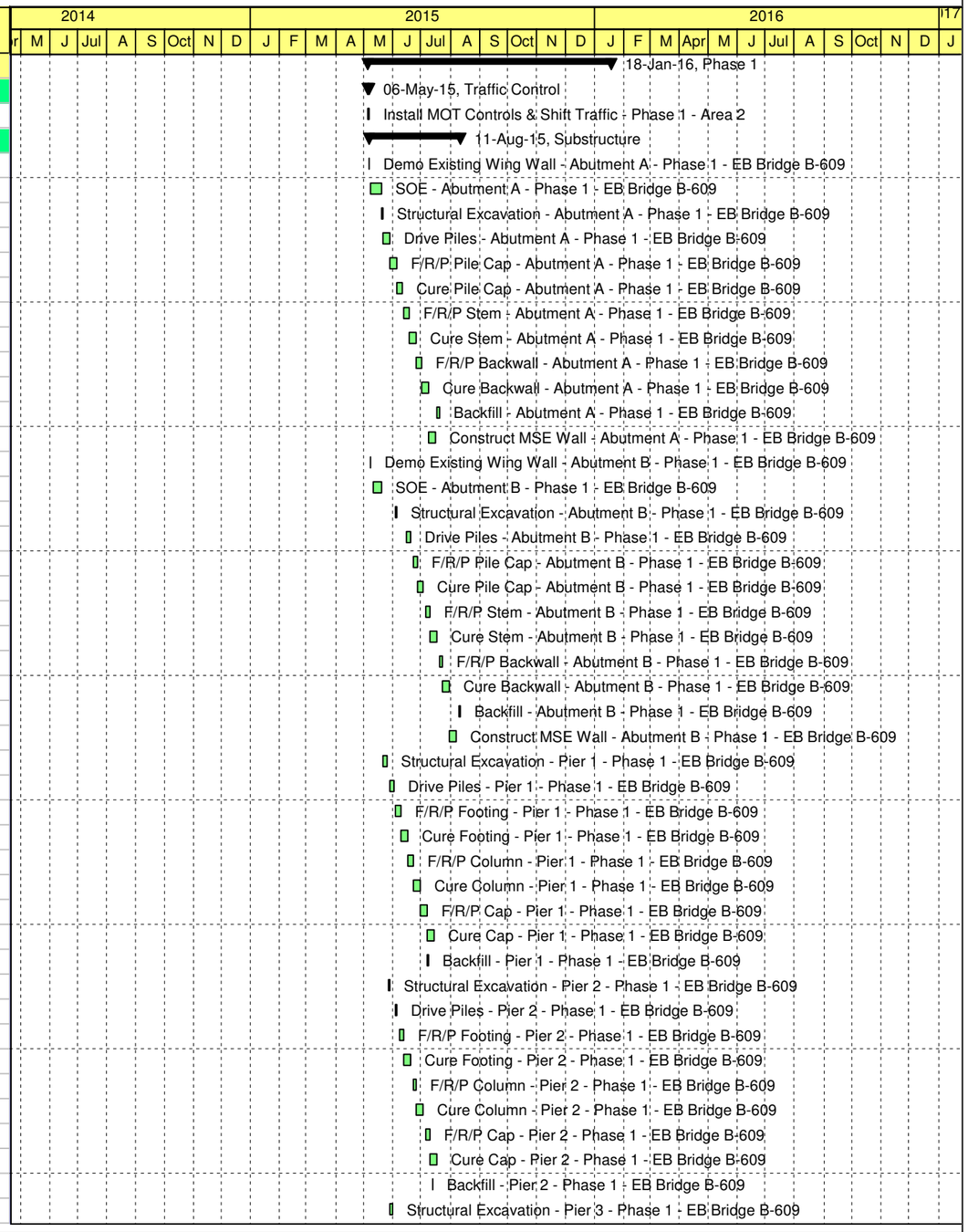
Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
Area 1 - Fall Hill Avenue (104+37.86 to 130+75.39)		206	117	13-Aug-15	26-May-16	
Phase 1		86	120	13-Aug-15	10-Dec-15	
Traffic Control		9	123	13-Aug-15	25-Aug-15	
CAAT010	Install MOT Controls - Phase 1 - Area 1	2	114	13-Aug-15	14-Aug-15	Fall Hill 5-Day Calendar
CAAT020	Shift Traffic to South Side of Roadway - Phase 1 - Area 1	1	114	25-Aug-15	25-Aug-15	Fall Hill 5-Day Calendar
Erosion Control		17	122	26-Aug-15	17-Sep-15	
CAAE010	Install E & S Controls - Phase 1 - Area 1	4	114	26-Aug-15	31-Aug-15	Fall Hill 5-Day Calendar
CAAE020	Install SWM Ponds - Phase 1 - Area 1	10	114	03-Sep-15	17-Sep-15	Fall Hill 5-Day Calendar
Roadway		84	120	17-Aug-15	10-Dec-15	
CAAR010	Construct Temporary Paving - Phase 1 - Area 1	6	114	17-Aug-15	24-Aug-15	Fall Hill 5-Day Calendar
CAAR020	Clear & Grub - LT - Area 1	2	114	01-Sep-15	02-Sep-15	Fall Hill 5-Day Calendar
CAAR030	Excavate / Widen Roadway - LT - Area 1	7	114	18-Sep-15	28-Sep-15	Fall Hill 5-Day Calendar
CAAR040	Install Storm Drainage - LT - Area 1	10	114	29-Sep-15	12-Oct-15	Fall Hill 5-Day Calendar
CAAR050	Finegrade Subgrade - LT - Area 1	4	114	13-Oct-15	16-Oct-15	Fall Hill 5-Day Calendar
CAAR060	Place Stone Base - LT - Area 1	4	114	19-Oct-15	22-Oct-15	Fall Hill 5-Day Calendar
CAAR070	Install Underdrain - LT - Area 1	3	114	23-Oct-15	27-Oct-15	Fall Hill 5-Day Calendar
CAAR080	Install Curb & Sidewalk - LT - Area 1	8	114	28-Oct-15	06-Nov-15	Fall Hill 5-Day Calendar
CAAR090	Backfill Curb - LT - Area 1	3	114	09-Nov-15	11-Nov-15	Fall Hill 5-Day Calendar
CAAR100	Place Base & Intermediate Asphalt - LT - Area 1	6	55	12-Nov-15	19-Nov-15	Fall Hill Asphalt Calendar
CAAR110	Install Guardrail - LT - Area 1	1	114	20-Nov-15	20-Nov-15	Fall Hill 5-Day Calendar
CAAR120	Finish Grade & Stabilize - LT - Area 1	12	114	23-Nov-15	10-Dec-15	Fall Hill 5-Day Calendar
Phase 2		83	117	11-Dec-15	05-Apr-16	
Traffic Control		2	121	11-Dec-15	14-Dec-15	
CABT010	Install MOT Controls & Shift Traffic - Phase 2 - Area 1	2	114	11-Dec-15	14-Dec-15	Fall Hill 5-Day Calendar
Erosion Control		18	115	15-Dec-15	07-Jan-16	
CABE010	Install E & S Controls - Phase 2 - Area 1	4	114	15-Dec-15	18-Dec-15	Fall Hill 5-Day Calendar
CABE020	Install SWM Ponds - Phase 2 - Area 1	6	114	23-Dec-15	07-Jan-16	Fall Hill 5-Day Calendar
Roadway		77	117	21-Dec-15	05-Apr-16	
CABR010	Clear & Grub - RT - Area 1	2	114	21-Dec-15	22-Dec-15	Fall Hill 5-Day Calendar
CABR020	Excavate / Widen Roadway - RT - Area 1	7	114	08-Jan-16	18-Jan-16	Fall Hill 5-Day Calendar
CABR030	Install Storm Drainage - RT - Area 1	12	114	19-Jan-16	03-Feb-16	Fall Hill 5-Day Calendar
CABR040	Finegrade Subgrade - RT - Area 1	4	114	04-Feb-16	09-Feb-16	Fall Hill 5-Day Calendar
CABR050	Place Stone Base - RT - Area 1	4	114	10-Feb-16	15-Feb-16	Fall Hill 5-Day Calendar
CABR060	Install Underdrain - RT - Area 1	3	114	16-Feb-16	18-Feb-16	Fall Hill 5-Day Calendar
CABR070	Install Curb & Sidewalk - RT - Area 1	10	114	19-Feb-16	03-Mar-16	Fall Hill 5-Day Calendar
CABR080	Backfill Curb - RT - Area 1	4	114	04-Mar-16	09-Mar-16	Fall Hill 5-Day Calendar
CABR090	Place Base & Intermediate Asphalt - RT - Area 1	6	114	10-Mar-16	17-Mar-16	Fall Hill Asphalt Calendar
CABR100	Install Guardrail - RT - Area 1	1	114	18-Mar-16	18-Mar-16	Fall Hill 5-Day Calendar
CABR110	Finish Grade & Stabilize - RT - Area 1	12	114	21-Mar-16	05-Apr-16	Fall Hill 5-Day Calendar
Phase 3		37	117	06-Apr-16	26-May-16	
Traffic Control		2	117	06-Apr-16	07-Apr-16	
CACT010	Install MOT Controls & Shift Traffic - Phase 3 - Area 1	2	114	06-Apr-16	07-Apr-16	Fall Hill 5-Day Calendar
Roadway		35	117	08-Apr-16	26-May-16	
CACR010	Construct Concrete Median - Median - Area 1	25	114	08-Apr-16	12-May-16	Fall Hill 5-Day Calendar
CACR020	Finish Grade Median & Stabilize - Median - Area 1	10	114	13-May-16	26-May-16	Fall Hill 5-Day Calendar
Area 2 - Bridge B-609 (Fall Hill Ave. over I-95)		415	36	05-May-15	05-Dec-16	



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
Phase 1		185	4	05-May-15	18-Jan-16	
Traffic Control		2	4	05-May-15	06-May-15	
CBAT010	Install MOT Controls & Shift Traffic - Phase 1 - Area 2	2	4	05-May-15	06-May-15	Fall Hill 5-Day Calendar
Substructure		69	11	07-May-15	11-Aug-15	
CBAA005	Demo Existing Wing Wall - Abutment A - Phase 1 - EB Brid...	1	4	07-May-15	07-May-15	Fall Hill 5-Day Calendar
CBAA007	SOE - Abutment A - Phase 1 - EB Bridge B-609	8	4	08-May-15	19-May-15	Fall Hill 5-Day Calendar
CBAA008	Structural Excavation - Abutment A - Phase 1 - EB Bridge ...	2	4	20-May-15	21-May-15	Fall Hill 5-Day Calendar
CBAA010	Drive Piles - Abutment A - Phase 1 - EB Bridge B-609	4	4	22-May-15	28-May-15	Fall Hill 5-Day Calendar
CBAA020	F/R/P Pile Cap - Abutment A - Phase 1 - EB Bridge B-609	5	20	29-May-15	04-Jun-15	Fall Hill 5-Day Calendar
CBAA030	Cure Pile Cap - Abutment A - Phase 1 - EB Bridge B-609	7	31	05-Jun-15	11-Jun-15	Fall Hill 7-Day Calendar
CBAA040	F/R/P Stem - Abutment A - Phase 1 - EB Bridge B-609	5	20	12-Jun-15	18-Jun-15	Fall Hill 5-Day Calendar
CBAA050	Cure Stem - Abutment A - Phase 1 - EB Bridge B-609	7	31	19-Jun-15	25-Jun-15	Fall Hill 7-Day Calendar
CBAA060	F/R/P Backwall - Abutment A - Phase 1 - EB Bridge B-609	4	20	26-Jun-15	01-Jul-15	Fall Hill 5-Day Calendar
CBAA070	Cure Backwall - Abutment A - Phase 1 - EB Bridge B-609	7	29	02-Jul-15	08-Jul-15	Fall Hill 7-Day Calendar
CBAA080	Backfill - Abutment A - Phase 1 - EB Bridge B-609	2	21	17-Jul-15	20-Jul-15	Fall Hill 5-Day Calendar
CBAA090	Construct MSE Wall - Abutment A - Phase 1 - EB Bridge B-...	6	21	09-Jul-15	16-Jul-15	Fall Hill 5-Day Calendar
CBAA102	Demo Existing Wing Wall - Abutment B - Phase 1 - EB Brid...	1	19	08-May-15	08-May-15	Fall Hill 5-Day Calendar
CBAA105	SOE - Abutment B - Phase 1 - EB Bridge B-609	8	19	11-May-15	20-May-15	Fall Hill 5-Day Calendar
CBAA108	Structural Excavation - Abutment B - Phase 1 - EB Bridge ...	2	10	04-Jun-15	05-Jun-15	Fall Hill 5-Day Calendar
CBAA109	Drive Piles - Abutment B - Phase 1 - EB Bridge B-609	4	4	16-Jun-15	19-Jun-15	Fall Hill 5-Day Calendar
CBAA110	F/R/P Pile Cap - Abutment B - Phase 1 - EB Bridge B-609	5	4	22-Jun-15	26-Jun-15	Fall Hill 5-Day Calendar
CBAA120	Cure Pile Cap - Abutment B - Phase 1 - EB Bridge B-609	7	9	27-Jun-15	03-Jul-15	Fall Hill 7-Day Calendar
CBAA130	F/R/P Stem - Abutment B - Phase 1 - EB Bridge B-609	5	5	06-Jul-15	10-Jul-15	Fall Hill 5-Day Calendar
CBAA140	Cure Stem - Abutment B - Phase 1 - EB Bridge B-609	7	9	11-Jul-15	17-Jul-15	Fall Hill 7-Day Calendar
CBAA150	F/R/P Backwall - Abutment B - Phase 1 - EB Bridge B-609	4	5	20-Jul-15	23-Jul-15	Fall Hill 5-Day Calendar
CBAA160	Cure Backwall - Abutment B - Phase 1 - EB Bridge B-609	7	7	24-Jul-15	30-Jul-15	Fall Hill 7-Day Calendar
CBAA170	Backfill - Abutment B - Phase 1 - EB Bridge B-609	2	5	10-Aug-15	11-Aug-15	Fall Hill 5-Day Calendar
CBAA180	Construct MSE Wall - Abutment B - Phase 1 - EB Bridge B-...	6	5	31-Jul-15	07-Aug-15	Fall Hill 5-Day Calendar
CBAA200	Structural Excavation - Pier 1 - Phase 1 - EB Bridge B-609	2	6	22-May-15	26-May-15	Fall Hill 5-Day Calendar
CBAA205	Drive Piles - Pier 1 - Phase 1 - EB Bridge B-609	3	4	29-May-15	02-Jun-15	Fall Hill 5-Day Calendar
CBAA210	F/R/P Footing - Pier 1 - Phase 1 - EB Bridge B-609	5	25	03-Jun-15	09-Jun-15	Fall Hill 5-Day Calendar
CBAA220	Cure Footing - Pier 1 - Phase 1 - EB Bridge B-609	7	36	10-Jun-15	16-Jun-15	Fall Hill 7-Day Calendar
CBAA230	F/R/P Column - Pier 1 - Phase 1 - EB Bridge B-609	4	25	17-Jun-15	22-Jun-15	Fall Hill 5-Day Calendar
CBAA240	Cure Column - Pier 1 - Phase 1 - EB Bridge B-609	7	36	23-Jun-15	29-Jun-15	Fall Hill 7-Day Calendar
CBAA250	F/R/P Cap - Pier 1 - Phase 1 - EB Bridge B-609	5	25	30-Jun-15	07-Jul-15	Fall Hill 5-Day Calendar
CBAA260	Cure Cap - Pier 1 - Phase 1 - EB Bridge B-609	7	35	08-Jul-15	14-Jul-15	Fall Hill 7-Day Calendar
CBAA270	Backfill - Pier 1 - Phase 1 - EB Bridge B-609	1	29	08-Jul-15	08-Jul-15	Fall Hill 5-Day Calendar
CBAA300	Structural Excavation - Pier 2 - Phase 1 - EB Bridge B-609	2	7	27-May-15	28-May-15	Fall Hill 5-Day Calendar
CBAA305	Drive Piles - Pier 2 - Phase 1 - EB Bridge B-609	3	4	03-Jun-15	05-Jun-15	Fall Hill 5-Day Calendar
CBAA310	F/R/P Footing - Pier 2 - Phase 1 - EB Bridge B-609	5	22	08-Jun-15	12-Jun-15	Fall Hill 5-Day Calendar
CBAA320	Cure Footing - Pier 2 - Phase 1 - EB Bridge B-609	7	33	13-Jun-15	19-Jun-15	Fall Hill 7-Day Calendar
CBAA330	F/R/P Column - Pier 2 - Phase 1 - EB Bridge B-609	4	22	22-Jun-15	25-Jun-15	Fall Hill 5-Day Calendar
CBAA340	Cure Column - Pier 2 - Phase 1 - EB Bridge B-609	7	33	26-Jun-15	02-Jul-15	Fall Hill 7-Day Calendar
CBAA350	F/R/P Cap - Pier 2 - Phase 1 - EB Bridge B-609	5	22	06-Jul-15	10-Jul-15	Fall Hill 5-Day Calendar
CBAA360	Cure Cap - Pier 2 - Phase 1 - EB Bridge B-609	7	32	11-Jul-15	17-Jul-15	Fall Hill 7-Day Calendar
CBAA370	Backfill - Pier 2 - Phase 1 - EB Bridge B-609	1	28	13-Jul-15	13-Jul-15	Fall Hill 5-Day Calendar
CBAA400	Structural Excavation - Pier 3 - Phase 1 - EB Bridge B-609	2	8	29-May-15	01-Jun-15	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CBAA405	Drive Piles - Pier 3 - Phase 1 - EB Bridge B-609	3	4	08-Jun-15	10-Jun-15	Fall Hill 5-Day Calendar
CBAA410	F/R/P Footing - Pier 3 - Phase 1 - EB Bridge B-609	5	19	11-Jun-15	17-Jun-15	Fall Hill 5-Day Calendar
CBAA420	Cure Footing - Pier 3 - Phase 1 - EB Bridge B-609	7	28	18-Jun-15	24-Jun-15	Fall Hill 7-Day Calendar
CBAA430	F/R/P Column - Pier 3 - Phase 1 - EB Bridge B-609	4	19	25-Jun-15	30-Jun-15	Fall Hill 5-Day Calendar
CBAA440	Cure Column - Pier 3 - Phase 1 - EB Bridge B-609	7	28	01-Jul-15	07-Jul-15	Fall Hill 7-Day Calendar
CBAA450	F/R/P Cap - Pier 3 - Phase 1 - EB Bridge B-609	5	20	08-Jul-15	14-Jul-15	Fall Hill 5-Day Calendar
CBAA460	Cure Cap - Pier 3 - Phase 1 - EB Bridge B-609	7	28	15-Jul-15	21-Jul-15	Fall Hill 7-Day Calendar
CBAA470	Backfill - Pier 3 - Phase 1 - EB Bridge B-609	1	28	15-Jul-15	15-Jul-15	Fall Hill 5-Day Calendar
CBAA500	Structural Excavation - Pier 4 - Phase 1 - EB Bridge B-609	2	9	02-Jun-15	03-Jun-15	Fall Hill 5-Day Calendar
CBAA505	Drive Piles - Pier 4 - Phase 1 - EB Bridge B-609	3	4	11-Jun-15	15-Jun-15	Fall Hill 5-Day Calendar
CBAA510	F/R/P Footing - Pier 4 - Phase 1 - EB Bridge B-609	5	16	16-Jun-15	22-Jun-15	Fall Hill 5-Day Calendar
CBAA520	Cure Footing - Pier 4 - Phase 1 - EB Bridge B-609	7	23	23-Jun-15	29-Jun-15	Fall Hill 7-Day Calendar
CBAA530	F/R/P Column - Pier 4 - Phase 1 - EB Bridge B-609	4	16	30-Jun-15	06-Jul-15	Fall Hill 5-Day Calendar
CBAA540	Cure Column - Pier 4 - Phase 1 - EB Bridge B-609	7	22	07-Jul-15	13-Jul-15	Fall Hill 7-Day Calendar
CBAA550	F/R/P Cap - Pier 4 - Phase 1 - EB Bridge B-609	5	16	14-Jul-15	20-Jul-15	Fall Hill 5-Day Calendar
CBAA560	Cure Cap - Pier 4 - Phase 1 - EB Bridge B-609	7	22	21-Jul-15	27-Jul-15	Fall Hill 7-Day Calendar
CBAA570	Backfill - Pier 4 - Phase 1 - EB Bridge B-609	1	26	21-Jul-15	21-Jul-15	Fall Hill 5-Day Calendar
Superstructure		114	4	12-Aug-15	18-Jan-16	
CBAB010	Erect Beams - Span a - Phase 1 - EB Bridge B-609	2	5	12-Aug-15	13-Aug-15	Fall Hill 5-Day Calendar
CBAB020	Erect Beams - Span b - Phase 1 - EB Bridge B-609	2	5	14-Aug-15	17-Aug-15	Fall Hill 5-Day Calendar
CBAB030	Erect Beams - Span c - Phase 1 - EB Bridge B-609	2	5	18-Aug-15	19-Aug-15	Fall Hill 5-Day Calendar
CBAB040	Erect Beams - Span d - Phase 1 - EB Bridge B-609	2	5	20-Aug-15	21-Aug-15	Fall Hill 5-Day Calendar
CBAB050	Erect Beams - Span e - Phase 1 - EB Bridge B-609	2	5	24-Aug-15	25-Aug-15	Fall Hill 5-Day Calendar
CBAB060	F/R/P End Closure - East - Phase 1 - EB Bridge B-609	5	5	26-Aug-15	01-Sep-15	Fall Hill 5-Day Calendar
CBAB070	Cure End Closure - East - Phase 1 - EB Bridge B-609	7	8	02-Sep-15	08-Sep-15	Fall Hill 7-Day Calendar
CBAB080	F/R/P End Closure - West - Phase 1 - EB Bridge B-609	5	5	26-Aug-15	01-Sep-15	Fall Hill 5-Day Calendar
CBAB090	Cure End Closure - West - Phase 1 - EB Bridge B-609	7	8	02-Sep-15	08-Sep-15	Fall Hill 7-Day Calendar
CBAB100	Install Expansion Dam - East - Phase 1 - EB Bridge B-609	3	6	09-Sep-15	11-Sep-15	Fall Hill 5-Day Calendar
CBAB110	Install Expansion Dam - West - Phase 1 - EB Bridge B-609	3	6	09-Sep-15	11-Sep-15	Fall Hill 5-Day Calendar
CBAB120	F/R Deck - Span a - Phase 1 - EB Bridge B-609	8	6	14-Sep-15	23-Sep-15	Fall Hill 5-Day Calendar
CBAB130	F/R Deck - Span b - Phase 1 - EB Bridge B-609	8	6	24-Sep-15	05-Oct-15	Fall Hill 5-Day Calendar
CBAB140	F/R Deck - Span c - Phase 1 - EB Bridge B-609	8	6	06-Oct-15	15-Oct-15	Fall Hill 5-Day Calendar
CBAB150	F/R Deck - Span d - Phase 1 - EB Bridge B-609	8	6	16-Oct-15	27-Oct-15	Fall Hill 5-Day Calendar
CBAB160	F/R Deck - Span e - Phase 1 - EB Bridge B-609	8	6	28-Oct-15	06-Nov-15	Fall Hill 5-Day Calendar
CBAB170	F/R Closure Diaphragms - Spans a - b - Phase 1 - EB Brid...	3	27	06-Oct-15	08-Oct-15	Fall Hill 5-Day Calendar
CBAB180	F/R Closure Diaphragms - Spans b - c - Phase 1 - EB Bridg...	3	20	16-Oct-15	20-Oct-15	Fall Hill 5-Day Calendar
CBAB190	F/R Closure Diaphragms - Spans c - d - Phase 1 - EB Bridg...	3	13	28-Oct-15	30-Oct-15	Fall Hill 5-Day Calendar
CBAB200	F/R Closure Diaphragms - Spans d - e - Phase 1 - EB Brid...	3	6	09-Nov-15	11-Nov-15	Fall Hill 5-Day Calendar
CBAB210	Pour Deck - Span a - Phase 1 - EB Bridge B-609	1	27	09-Oct-15	09-Oct-15	Fall Hill Deck Calendar
CBAB220	Pour Deck - Span b - Phase 1 - EB Bridge B-609	1	20	21-Oct-15	21-Oct-15	Fall Hill Deck Calendar
CBAB230	Pour Deck - Span c - Phase 1 - EB Bridge B-609	1	13	02-Nov-15	02-Nov-15	Fall Hill Deck Calendar
CBAB240	Pour Deck - Span d - Phase 1 - EB Bridge B-609	1	6	12-Nov-15	12-Nov-15	Fall Hill Deck Calendar
CBAB250	Pour Deck - Span e - Phase 1 - EB Bridge B-609	1	6	13-Nov-15	13-Nov-15	Fall Hill Deck Calendar
CBAB260	Cure Deck - Span a - Phase 1 - EB Bridge B-609	7	45	10-Oct-15	16-Oct-15	Fall Hill 7-Day Calendar
CBAB270	Cure Deck - Span b - Phase 1 - EB Bridge B-609	7	33	22-Oct-15	28-Oct-15	Fall Hill 7-Day Calendar
CBAB280	Cure Deck - Span c - Phase 1 - EB Bridge B-609	7	21	03-Nov-15	09-Nov-15	Fall Hill 7-Day Calendar
CBAB290	Cure Deck - Span d - Phase 1 - EB Bridge B-609	7	11	13-Nov-15	19-Nov-15	Fall Hill 7-Day Calendar

Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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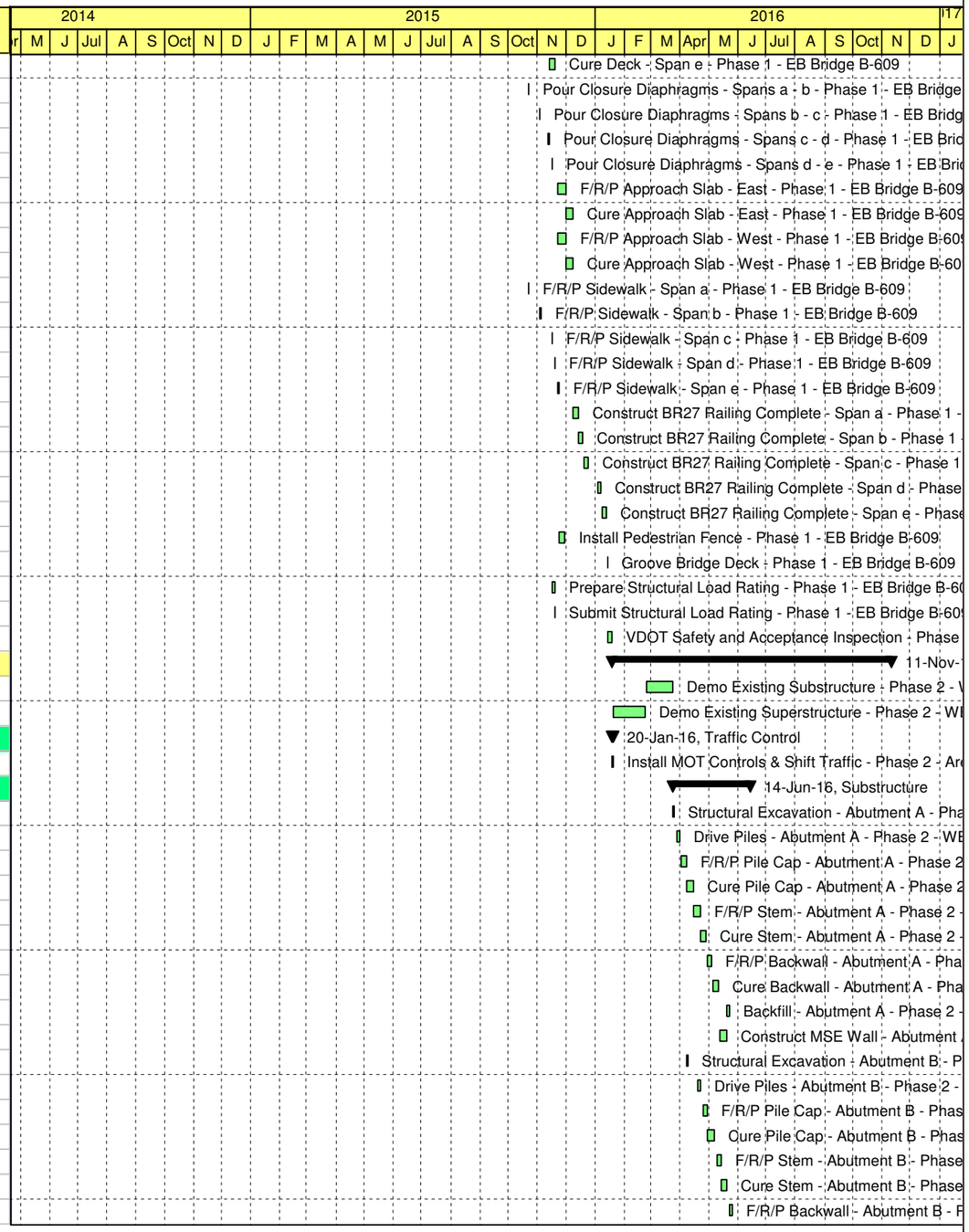
TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CBAB300	Cure Deck - Span e - Phase 1 - EB Bridge B-609	7	10	14-Nov-15	20-Nov-15	Fall Hill 7-Day Calendar
CBAB310	Pour Closure Diaphragms - Spans a - b - Phase 1 - EB Brid...	1	25	22-Oct-15	22-Oct-15	Fall Hill Deck Calendar
CBAB320	Pour Closure Diaphragms - Spans b - c - Phase 1 - EB Brid...	1	17	03-Nov-15	03-Nov-15	Fall Hill Deck Calendar
CBAB330	Pour Closure Diaphragms - Spans c - d - Phase 1 - EB Brid...	1	9	13-Nov-15	13-Nov-15	Fall Hill Deck Calendar
CBAB340	Pour Closure Diaphragms - Spans d - e - Phase 1 - EB Brid...	1	8	16-Nov-15	16-Nov-15	Fall Hill Deck Calendar
CBAB350	F/R/P Approach Slab - East - Phase 1 - EB Bridge B-609	5	4	23-Nov-15	01-Dec-15	Fall Hill 5-Day Calendar
CBAB360	Cure Approach Slab - East - Phase 1 - EB Bridge B-609	7	6	02-Dec-15	08-Dec-15	Fall Hill 7-Day Calendar
CBAB370	F/R/P Approach Slab - West - Phase 1 - EB Bridge B-609	5	20	23-Nov-15	01-Dec-15	Fall Hill 5-Day Calendar
CBAB380	Cure Approach Slab - West - Phase 1 - EB Bridge B-609	7	36	02-Dec-15	08-Dec-15	Fall Hill 7-Day Calendar
CBAB390	F/R/P Sidewalk - Span a - Phase 1 - EB Bridge B-609	1	34	23-Oct-15	23-Oct-15	Fall Hill 5-Day Calendar
CBAB400	F/R/P Sidewalk - Span b - Phase 1 - EB Bridge B-609	1	30	04-Nov-15	04-Nov-15	Fall Hill 5-Day Calendar
CBAB410	F/R/P Sidewalk - Span c - Phase 1 - EB Bridge B-609	1	26	16-Nov-15	16-Nov-15	Fall Hill 5-Day Calendar
CBAB420	F/R/P Sidewalk - Span d - Phase 1 - EB Bridge B-609	1	26	20-Nov-15	20-Nov-15	Fall Hill 5-Day Calendar
CBAB430	F/R/P Sidewalk - Span e - Phase 1 - EB Bridge B-609	1	29	23-Nov-15	23-Nov-15	Fall Hill 5-Day Calendar
CBAB440	Construct BR27 Railing Complete - Span a - Phase 1 - EB ...	4	4	09-Dec-15	14-Dec-15	Fall Hill 5-Day Calendar
CBAB450	Construct BR27 Railing Complete - Span b - Phase 1 - EB ...	4	4	15-Dec-15	18-Dec-15	Fall Hill 5-Day Calendar
CBAB460	Construct BR27 Railing Complete - Span c - Phase 1 - EB ...	4	4	21-Dec-15	24-Dec-15	Fall Hill 5-Day Calendar
CBAB470	Construct BR27 Railing Complete - Span d - Phase 1 - EB ...	4	4	04-Jan-16	07-Jan-16	Fall Hill 5-Day Calendar
CBAB480	Construct BR27 Railing Complete - Span e - Phase 1 - EB ...	4	4	08-Jan-16	13-Jan-16	Fall Hill 5-Day Calendar
CBAB490	Install Pedestrian Fence - Phase 1 - EB Bridge B-609	3	30	24-Nov-15	30-Nov-15	Fall Hill 5-Day Calendar
CBAB500	Groove Bridge Deck - Phase 1 - EB Bridge B-609	1	4	14-Jan-16	14-Jan-16	Fall Hill 5-Day Calendar
CBAB510	Prepare Structural Load Rating - Phase 1 - EB Bridge B-609	3	37	17-Nov-15	19-Nov-15	Fall Hill 5-Day Calendar
CBAB520	Submit Structural Load Rating - Phase 1 - EB Bridge B-609	1	37	20-Nov-15	20-Nov-15	Fall Hill 5-Day Calendar
CBAB530	VDOT Safety and Acceptance Inspection - Phase 1 - EB Br...	2	4	15-Jan-16	18-Jan-16	Fall Hill 5-Day Calendar
Phase 2		214	5	19-Jan-16	11-Nov-16	
CBBA000	Demo Existing Substructure - Phase 2 - WB Bridge B-609	21	4	24-Feb-16	23-Mar-16	Fall Hill 5-Day Calendar
CBBB000	Demo Existing Superstructure - Phase 2 - WB Bridge B-609	24	4	21-Jan-16	23-Feb-16	Fall Hill 5-Day Calendar
Traffic Control		2	4	19-Jan-16	20-Jan-16	
CBBT010	Install MOT Controls & Shift Traffic - Phase 2 - Area 2	2	4	19-Jan-16	20-Jan-16	Fall Hill 5-Day Calendar
Substructure		59	111	24-Mar-16	14-Jun-16	
CBBA005	Structural Excavation - Abutment A - Phase 2 - WB Bridge ...	2	4	24-Mar-16	25-Mar-16	Fall Hill 5-Day Calendar
CBBA010	Drive Piles - Abutment A - Phase 2 - WB Bridge B-609	4	4	28-Mar-16	31-Mar-16	Fall Hill 5-Day Calendar
CBBA020	F/R/P Pile Cap - Abutment A - Phase 2 - WB Bridge B-609	5	20	01-Apr-16	07-Apr-16	Fall Hill 5-Day Calendar
CBBA030	Cure Pile Cap - Abutment A - Phase 2 - WB Bridge B-609	7	28	08-Apr-16	14-Apr-16	Fall Hill 7-Day Calendar
CBBA040	F/R/P Stem - Abutment A - Phase 2 - WB Bridge B-609	5	20	15-Apr-16	21-Apr-16	Fall Hill 5-Day Calendar
CBBA050	Cure Stem - Abutment A - Phase 2 - WB Bridge B-609	7	28	22-Apr-16	28-Apr-16	Fall Hill 7-Day Calendar
CBBA060	F/R/P Backwall - Abutment A - Phase 2 - WB Bridge B-609	4	20	29-Apr-16	04-May-16	Fall Hill 5-Day Calendar
CBBA070	Cure Backwall - Abutment A - Phase 2 - WB Bridge B-609	7	29	05-May-16	11-May-16	Fall Hill 7-Day Calendar
CBBA080	Backfill - Abutment A - Phase 2 - WB Bridge B-609	2	20	20-May-16	23-May-16	Fall Hill 5-Day Calendar
CBBA090	Construct MSE Wall - Abutment A - Phase 2 - WB Bridge B...	6	20	12-May-16	19-May-16	Fall Hill 5-Day Calendar
CBBA105	Structural Excavation - Abutment B - Phase 2 - WB Bridge ...	2	10	07-Apr-16	08-Apr-16	Fall Hill 5-Day Calendar
CBBA110	Drive Piles - Abutment B - Phase 2 - WB Bridge B-609	4	4	19-Apr-16	22-Apr-16	Fall Hill 5-Day Calendar
CBBA120	F/R/P Pile Cap - Abutment B - Phase 2 - WB Bridge B-609	5	4	25-Apr-16	29-Apr-16	Fall Hill 5-Day Calendar
CBBA130	Cure Pile Cap - Abutment B - Phase 2 - WB Bridge B-609	7	6	30-Apr-16	06-May-16	Fall Hill 7-Day Calendar
CBBA140	F/R/P Stem - Abutment B - Phase 2 - WB Bridge B-609	5	4	09-May-16	13-May-16	Fall Hill 5-Day Calendar
CBBA150	Cure Stem - Abutment B - Phase 2 - WB Bridge B-609	7	6	14-May-16	20-May-16	Fall Hill 7-Day Calendar
CBBA160	F/R/P Backwall - Abutment B - Phase 2 - WB Bridge B-609	4	4	23-May-16	26-May-16	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CBBA170	Cure Backwall - Abutment B - Phase 2 - WB Bridge B-609	7	7	27-May-16	02-Jun-16	Fall Hill 7-Day Calendar
CBBA180	Backfill - Abutment B - Phase 2 - WB Bridge B-609	2	5	13-Jun-16	14-Jun-16	Fall Hill 5-Day Calendar
CBBA190	Construct MSE Wall - Abutment B - Phase 2 - WB Bridge B...	6	5	03-Jun-16	10-Jun-16	Fall Hill 5-Day Calendar
CBBA200	Structural Excavation - Pier 1 - Phase 2 - WB Bridge B-609	2	6	28-Mar-16	29-Mar-16	Fall Hill 5-Day Calendar
CBBA205	Drive Piles - Pier 1 - Phase 2 - WB Bridge B-609	3	4	01-Apr-16	05-Apr-16	Fall Hill 5-Day Calendar
CBBA210	F/R/P Footing - Pier 1 - Phase 2 - WB Bridge B-609	5	25	06-Apr-16	12-Apr-16	Fall Hill 5-Day Calendar
CBBA220	Cure Footing - Pier 1 - Phase 2 - WB Bridge B-609	7	35	13-Apr-16	19-Apr-16	Fall Hill 7-Day Calendar
CBBA230	F/R/P Column - Pier 1 - Phase 2 - WB Bridge B-609	4	25	20-Apr-16	25-Apr-16	Fall Hill 5-Day Calendar
CBBA240	Cure Column - Pier 1 - Phase 2 - WB Bridge B-609	7	36	26-Apr-16	02-May-16	Fall Hill 7-Day Calendar
CBBA250	F/R/P Cap - Pier 1 - Phase 2 - WB Bridge B-609	5	25	03-May-16	09-May-16	Fall Hill 5-Day Calendar
CBBA260	Cure Cap - Pier 1 - Phase 2 - WB Bridge B-609	7	36	10-May-16	16-May-16	Fall Hill 7-Day Calendar
CBBA270	Backfill - Pier 1 - Phase 2 - WB Bridge B-609	1	29	10-May-16	10-May-16	Fall Hill 5-Day Calendar
CBBA280	Pier Protection Barrier - Pier 1 - Phase 2 - WB Bridge B-609	6	127	11-May-16	18-May-16	Fall Hill 5-Day Calendar
CBBA300	Structural Excavation - Pier 2 - Phase 2 - WB Bridge B-609	2	7	30-Mar-16	31-Mar-16	Fall Hill 5-Day Calendar
CBBA305	Drive Piles - Pier 2 - Phase 2 - WB Bridge B-609	3	4	06-Apr-16	08-Apr-16	Fall Hill 5-Day Calendar
CBBA310	F/R/P Footing - Pier 2 - Phase 2 - WB Bridge B-609	5	22	11-Apr-16	15-Apr-16	Fall Hill 5-Day Calendar
CBBA320	Cure Footing - Pier 2 - Phase 2 - WB Bridge B-609	7	32	16-Apr-16	22-Apr-16	Fall Hill 7-Day Calendar
CBBA330	F/R/P Column - Pier 2 - Phase 2 - WB Bridge B-609	4	22	25-Apr-16	28-Apr-16	Fall Hill 5-Day Calendar
CBBA340	Cure Column - Pier 2 - Phase 2 - WB Bridge B-609	7	33	29-Apr-16	05-May-16	Fall Hill 7-Day Calendar
CBBA350	F/R/P Cap - Pier 2 - Phase 2 - WB Bridge B-609	5	22	06-May-16	12-May-16	Fall Hill 5-Day Calendar
CBBA360	Cure Cap - Pier 2 - Phase 2 - WB Bridge B-609	7	33	13-May-16	19-May-16	Fall Hill 7-Day Calendar
CBBA370	Backfill - Pier 2 - Phase 2 - WB Bridge B-609	1	28	13-May-16	13-May-16	Fall Hill 5-Day Calendar
CBBA380	Pier Protection Barrier - Pier 2 - Phase 2 - WB Bridge B-609	6	124	16-May-16	23-May-16	Fall Hill 5-Day Calendar
CBBA400	Structural Excavation - Pier 3 - Phase 2 - WB Bridge B-609	2	8	01-Apr-16	04-Apr-16	Fall Hill 5-Day Calendar
CBBA405	Drive Piles - Pier 3 - Phase 2 - WB Bridge B-609	3	4	11-Apr-16	13-Apr-16	Fall Hill 5-Day Calendar
CBBA410	F/R/P Footing - Pier 3 - Phase 2 - WB Bridge B-609	5	19	14-Apr-16	20-Apr-16	Fall Hill 5-Day Calendar
CBBA420	Cure Footing - Pier 3 - Phase 2 - WB Bridge B-609	7	27	21-Apr-16	27-Apr-16	Fall Hill 7-Day Calendar
CBBA430	F/R/P Column - Pier 3 - Phase 2 - WB Bridge B-609	4	19	28-Apr-16	03-May-16	Fall Hill 5-Day Calendar
CBBA440	Cure Column - Pier 3 - Phase 2 - WB Bridge B-609	7	28	04-May-16	10-May-16	Fall Hill 7-Day Calendar
CBBA450	F/R/P Cap - Pier 3 - Phase 2 - WB Bridge B-609	5	19	11-May-16	17-May-16	Fall Hill 5-Day Calendar
CBBA460	Cure Cap - Pier 3 - Phase 2 - WB Bridge B-609	7	28	18-May-16	24-May-16	Fall Hill 7-Day Calendar
CBBA470	Backfill - Pier 3 - Phase 2 - WB Bridge B-609	1	27	18-May-16	18-May-16	Fall Hill 5-Day Calendar
CBBA480	Pier Protection Barrier - Pier 3 - Phase 2 - WB Bridge B-609	6	121	19-May-16	26-May-16	Fall Hill 5-Day Calendar
CBBA500	Structural Excavation - Pier 4 - Phase 2 - WB Bridge B-609	2	9	05-Apr-16	06-Apr-16	Fall Hill 5-Day Calendar
CBBA505	Drive Piles - Pier 4 - Phase 2 - WB Bridge B-609	3	4	14-Apr-16	18-Apr-16	Fall Hill 5-Day Calendar
CBBA510	F/R/P Footing - Pier 4 - Phase 2 - WB Bridge B-609	5	16	19-Apr-16	25-Apr-16	Fall Hill 5-Day Calendar
CBBA520	Cure Footing - Pier 4 - Phase 2 - WB Bridge B-609	7	22	26-Apr-16	02-May-16	Fall Hill 7-Day Calendar
CBBA530	F/R/P Column - Pier 4 - Phase 2 - WB Bridge B-609	4	16	03-May-16	06-May-16	Fall Hill 5-Day Calendar
CBBA540	Cure Column - Pier 4 - Phase 2 - WB Bridge B-609	7	25	07-May-16	13-May-16	Fall Hill 7-Day Calendar
CBBA550	F/R/P Cap - Pier 4 - Phase 2 - WB Bridge B-609	5	16	16-May-16	20-May-16	Fall Hill 5-Day Calendar
CBBA560	Cure Cap - Pier 4 - Phase 2 - WB Bridge B-609	7	25	21-May-16	27-May-16	Fall Hill 7-Day Calendar
CBBA570	Backfill - Pier 4 - Phase 2 - WB Bridge B-609	1	26	23-May-16	23-May-16	Fall Hill 5-Day Calendar
CBBA580	Pier Protection Barrier - Pier 4 - Phase 2 - WB Bridge B-609	6	118	24-May-16	01-Jun-16	Fall Hill 5-Day Calendar
Superstructure		108	5	15-Jun-16	11-Nov-16	
CBBB010	Erect Beams - Span a - Phase 2 - WB Bridge B-609	2	5	15-Jun-16	16-Jun-16	Fall Hill 5-Day Calendar
CBBB020	Erect Beams - Span b - Phase 2 - WB Bridge B-609	2	5	17-Jun-16	20-Jun-16	Fall Hill 5-Day Calendar
CBBB030	Erect Beams - Span c - Phase 2 - WB Bridge B-609	2	5	21-Jun-16	22-Jun-16	Fall Hill 5-Day Calendar

Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CBBB040	Erect Beams - Span d - Phase 2 - WB Bridge B-609	2	5	23-Jun-16	24-Jun-16	Fall Hill 5-Day Calendar
CBBB050	Erect Beams - Span e - Phase 2 - WB Bridge B-609	2	5	27-Jun-16	28-Jun-16	Fall Hill 5-Day Calendar
CBBB060	F/R/P End Closure - East - Phase 2 - WB Bridge B-609	5	5	29-Jun-16	06-Jul-16	Fall Hill 5-Day Calendar
CBBB070	Cure End Closure - East - Phase 2 - WB Bridge B-609	7	7	07-Jul-16	13-Jul-16	Fall Hill 7-Day Calendar
CBBB080	F/R/P End Closure - West - Phase 2 - WB Bridge B-609	5	5	29-Jun-16	06-Jul-16	Fall Hill 5-Day Calendar
CBBB090	Cure End Closure - West - Phase 2 - WB Bridge B-609	7	7	07-Jul-16	13-Jul-16	Fall Hill 7-Day Calendar
CBBB100	Install Expansion Dam - East - Phase 2 - WB Bridge B-609	3	5	14-Jul-16	18-Jul-16	Fall Hill 5-Day Calendar
CBBB110	Install Expansion Dam - West - Phase 2 - WB Bridge B-609	3	5	14-Jul-16	18-Jul-16	Fall Hill 5-Day Calendar
CBBB120	F/R Deck - Span a - Phase 2 - WB Bridge B-609	8	5	19-Jul-16	28-Jul-16	Fall Hill 5-Day Calendar
CBBB130	F/R Deck - Span b - Phase 2 - WB Bridge B-609	8	5	29-Jul-16	09-Aug-16	Fall Hill 5-Day Calendar
CBBB140	F/R Deck - Span c - Phase 2 - WB Bridge B-609	8	5	10-Aug-16	19-Aug-16	Fall Hill 5-Day Calendar
CBBB150	F/R Deck - Span d - Phase 2 - WB Bridge B-609	8	5	22-Aug-16	31-Aug-16	Fall Hill 5-Day Calendar
CBBB160	F/R Deck - Span e - Phase 2 - WB Bridge B-609	8	5	01-Sep-16	13-Sep-16	Fall Hill 5-Day Calendar
CBBB170	F/R Closure Diaphragms - Spans a - b - Phase 2 - WB Brid...	3	26	10-Aug-16	12-Aug-16	Fall Hill 5-Day Calendar
CBBB180	F/R Closure Diaphragms - Spans b - c - Phase 2 - WB Brid...	3	19	22-Aug-16	24-Aug-16	Fall Hill 5-Day Calendar
CBBB190	F/R Closure Diaphragms - Spans c - d - Phase 2 - WB Brid...	3	12	01-Sep-16	06-Sep-16	Fall Hill 5-Day Calendar
CBBB200	F/R Closure Diaphragms - Spans d - e - Phase 2 - WB Brid...	3	5	14-Sep-16	16-Sep-16	Fall Hill 5-Day Calendar
CBBB210	Pour Deck - Span a - Phase 2 - WB Bridge B-609	1	26	15-Aug-16	15-Aug-16	Fall Hill Deck Calendar
CBBB220	Pour Deck - Span b - Phase 2 - WB Bridge B-609	1	19	25-Aug-16	25-Aug-16	Fall Hill Deck Calendar
CBBB230	Pour Deck - Span c - Phase 2 - WB Bridge B-609	1	12	07-Sep-16	07-Sep-16	Fall Hill Deck Calendar
CBBB240	Pour Deck - Span d - Phase 2 - WB Bridge B-609	1	5	19-Sep-16	19-Sep-16	Fall Hill Deck Calendar
CBBB250	Pour Deck - Span e - Phase 2 - WB Bridge B-609	1	5	20-Sep-16	20-Sep-16	Fall Hill Deck Calendar
CBBB260	Cure Deck - Span a - Phase 2 - WB Bridge B-609	7	43	16-Aug-16	22-Aug-16	Fall Hill 7-Day Calendar
CBBB270	Cure Deck - Span b - Phase 2 - WB Bridge B-609	7	33	26-Aug-16	01-Sep-16	Fall Hill 7-Day Calendar
CBBB280	Cure Deck - Span c - Phase 2 - WB Bridge B-609	7	20	08-Sep-16	14-Sep-16	Fall Hill 7-Day Calendar
CBBB290	Cure Deck - Span d - Phase 2 - WB Bridge B-609	7	8	20-Sep-16	26-Sep-16	Fall Hill 7-Day Calendar
CBBB300	Cure Deck - Span e - Phase 2 - WB Bridge B-609	7	7	21-Sep-16	27-Sep-16	Fall Hill 7-Day Calendar
CBBB310	Pour Closure Diaphragms - Spans a - b - Phase 2 - WB Bri...	1	36	26-Aug-16	26-Aug-16	Fall Hill Deck Calendar
CBBB320	Pour Closure Diaphragms - Spans b - c - Phase 2 - WB Bri...	1	32	08-Sep-16	08-Sep-16	Fall Hill Deck Calendar
CBBB330	Pour Closure Diaphragms - Spans c - d - Phase 2 - WB Bri...	1	28	20-Sep-16	20-Sep-16	Fall Hill Deck Calendar
CBBB340	Pour Closure Diaphragms - Spans d - e - Phase 2 - WB Bri...	1	31	21-Sep-16	21-Sep-16	Fall Hill Deck Calendar
CBBB350	Pour Deck Closure - Phase 2 - WB Bridge B-609	2	20	28-Sep-16	29-Sep-16	Fall Hill Deck Calendar
CBBB360	Cure Deck Closure - Phase 2 - WB Bridge B-609	7	28	30-Sep-16	06-Oct-16	Fall Hill 7-Day Calendar
CBBB370	F/R/P Approach Slab - East - Phase 2 - WB Bridge B-609	5	5	28-Sep-16	04-Oct-16	Fall Hill 5-Day Calendar
CBBB380	Cure Approach Slab - East - Phase 2 - WB Bridge B-609	7	7	05-Oct-16	11-Oct-16	Fall Hill 7-Day Calendar
CBBB390	F/R/P Approach Slab - West - Phase 2 - WB Bridge B-609	5	21	28-Sep-16	04-Oct-16	Fall Hill 5-Day Calendar
CBBB400	Cure Approach Slab - West - Phase 2 - WB Bridge B-609	7	29	05-Oct-16	11-Oct-16	Fall Hill 7-Day Calendar
CBBB410	Construct Concrete Curb with Fence - Span a - Phase 2 - ...	1	20	07-Oct-16	07-Oct-16	Fall Hill 5-Day Calendar
CBBB420	Construct Concrete Curb with Fence - Span b - Phase 2 - ...	1	20	10-Oct-16	10-Oct-16	Fall Hill 5-Day Calendar
CBBB430	Construct Concrete Curb with Fence - Span c - Phase 2 - ...	1	20	11-Oct-16	11-Oct-16	Fall Hill 5-Day Calendar
CBBB440	Construct Concrete Curb with Fence - Span d - Phase 2 - ...	1	20	12-Oct-16	12-Oct-16	Fall Hill 5-Day Calendar
CBBB450	Construct Concrete Curb with Fence - Span e - Phase 2 - ...	1	20	13-Oct-16	13-Oct-16	Fall Hill 5-Day Calendar
CBBB460	Install Pedestrian Fence - Phase 2 - WB Bridge B-609	3	20	14-Oct-16	18-Oct-16	Fall Hill 5-Day Calendar
CBBB470	Construct BR27 Railing Complete - Span a - Phase 2 - WB...	4	5	12-Oct-16	17-Oct-16	Fall Hill 5-Day Calendar
CBBB480	Construct BR27 Railing Complete - Span b - Phase 2 - WB...	4	5	18-Oct-16	21-Oct-16	Fall Hill 5-Day Calendar
CBBB490	Construct BR27 Railing Complete - Span c - Phase 2 - WB ...	4	5	24-Oct-16	27-Oct-16	Fall Hill 5-Day Calendar
CBBB500	Construct BR27 Railing Complete - Span d - Phase 2 - WB...	4	5	28-Oct-16	02-Nov-16	Fall Hill 5-Day Calendar

Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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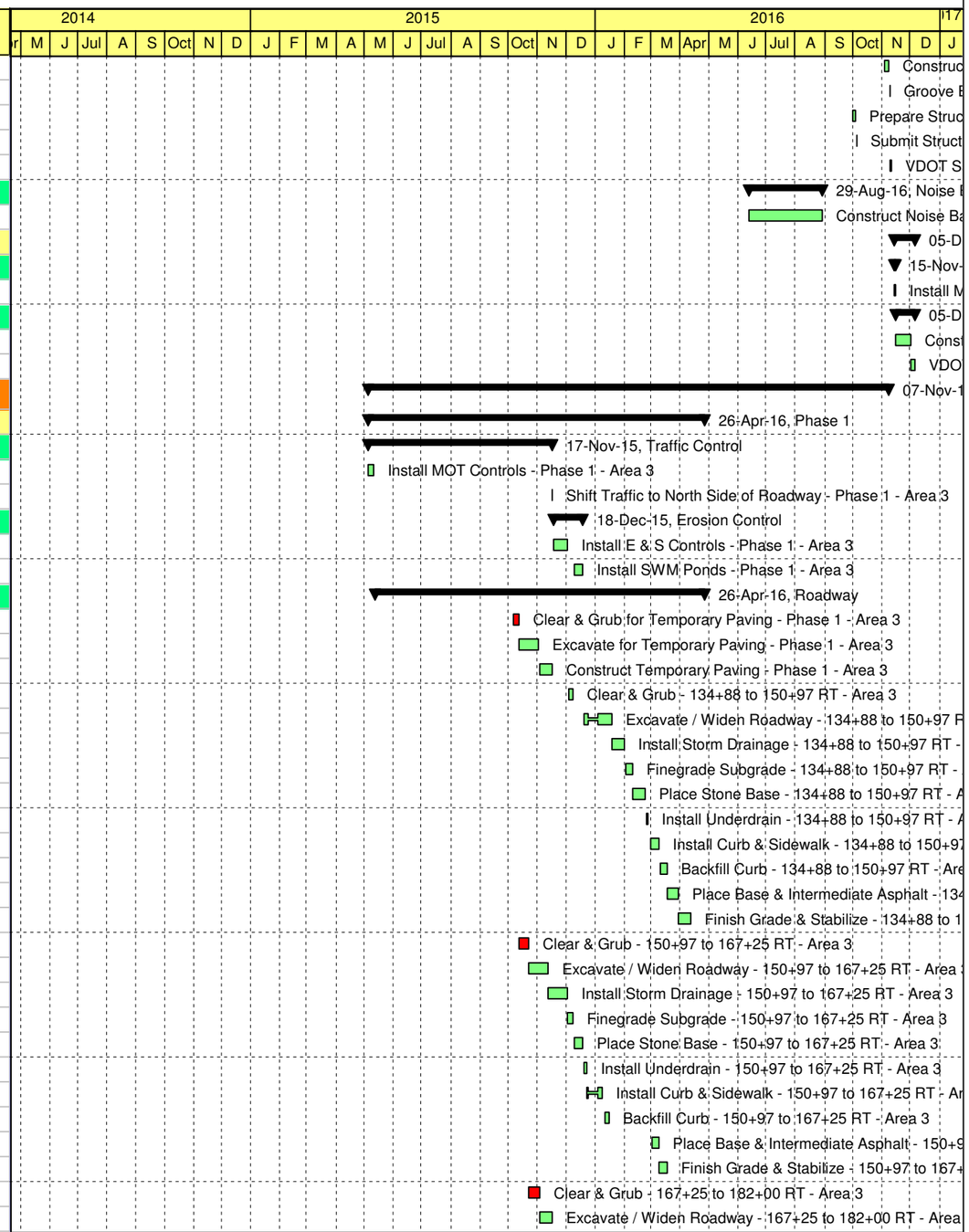
TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CBBB510	Construct BR27 Railing Complete - Span e - Phase 2 - WB...	4	5	03-Nov-16	08-Nov-16	Fall Hill 5-Day Calendar
CBBB520	Groove Bridge Deck - Phase 2 - WB Bridge B-609	1	5	09-Nov-16	09-Nov-16	Fall Hill 5-Day Calendar
CBBB530	Prepare Structural Load Rating - Phase 2 - WB Bridge B-609	3	32	30-Sep-16	04-Oct-16	Fall Hill 5-Day Calendar
CBBB540	Submit Structural Load Rating - Phase 2 - WB Bridge B-609	1	32	05-Oct-16	05-Oct-16	Fall Hill 5-Day Calendar
CBBB550	VDOT Safety and Acceptance Inspection - Phase 2 - WB B...	2	5	10-Nov-16	11-Nov-16	Fall Hill 5-Day Calendar
Noise Barrier Walls		56	59	13-Jun-16	29-Aug-16	
CBBS010	Construct Noise Barrier Wall 1 - 2501+42 to 2506+98 I-95 -...	55	58	13-Jun-16	29-Aug-16	Fall Hill 5-Day Calendar
Phase 3		16	36	14-Nov-16	05-Dec-16	
Traffic Control		2	5	14-Nov-16	15-Nov-16	
CBCT010	Install MOT Controls & Shift Traffic - Phase 3 - Area 2	2	5	14-Nov-16	15-Nov-16	Fall Hill 5-Day Calendar
Superstructure		14	36	16-Nov-16	05-Dec-16	
CBCB010	Construct Median - Bridge B-609	10	5	16-Nov-16	01-Dec-16	Fall Hill 5-Day Calendar
CBCB020	VDOT Safety and Acceptance Inspection - Final - Phase 3 -...	2	30	02-Dec-16	05-Dec-16	Fall Hill 5-Day Calendar
Area 3 - Fall Hill Avenue (134+88.65 to 184+07.85)		395	0	05-May-15	07-Nov-16	
Phase 1		256	31	05-May-15	26-Apr-16	
Traffic Control		141	12	05-May-15	17-Nov-15	
CCAT010	Install MOT Controls - Phase 1 - Area 3	5	98	05-May-15	11-May-15	Fall Hill 5-Day Calendar
CCAT020	Shift Traffic to North Side of Roadway - Phase 1 - Area 3	1	10	17-Nov-15	17-Nov-15	Fall Hill 5-Day Calendar
Erosion Control		23	16	18-Nov-15	18-Dec-15	
CCAE010	Install E & S Controls - Phase 1 - Area 3	10	10	18-Nov-15	03-Dec-15	Fall Hill 5-Day Calendar
CCAE020	Install SWM Ponds - Phase 1 - Area 3	7	10	10-Dec-15	18-Dec-15	Fall Hill 5-Day Calendar
Roadway		251	31	12-May-15	26-Apr-16	
CCAR000	Clear & Grub for Temporary Paving - Phase 1 - Area 3	5	0	06-Oct-15	12-Oct-15	Fall Hill 5-Day Calendar
CCAR003	Excavate for Temporary Paving - Phase 1 - Area 3	15	10	13-Oct-15	02-Nov-15	Fall Hill 5-Day Calendar
CCAR005	Construct Temporary Paving - Phase 1 - Area 3	10	10	03-Nov-15	16-Nov-15	Fall Hill 5-Day Calendar
CCAR010	Clear & Grub - 134+88 to 150+97 RT - Area 3	4	10	04-Dec-15	09-Dec-15	Fall Hill 5-Day Calendar
CCAR020	Excavate / Widen Roadway - 134+88 to 150+97 RT - Area 3	15	10	21-Dec-15	18-Jan-16	Fall Hill 5-Day Calendar
CCAR030	Install Storm Drainage - 134+88 to 150+97 RT - Area 3	10	10	19-Jan-16	01-Feb-16	Fall Hill 5-Day Calendar
CCAR040	Finegrade Subgrade - 134+88 to 150+97 RT - Area 3	6	10	02-Feb-16	09-Feb-16	Fall Hill 5-Day Calendar
CCAR050	Place Stone Base - 134+88 to 150+97 RT - Area 3	10	10	10-Feb-16	23-Feb-16	Fall Hill 5-Day Calendar
CCAR060	Install Underdrain - 134+88 to 150+97 RT - Area 3	3	10	24-Feb-16	26-Feb-16	Fall Hill 5-Day Calendar
CCAR070	Install Curb & Sidewalk - 134+88 to 150+97 RT - Area 3	8	10	29-Feb-16	09-Mar-16	Fall Hill 5-Day Calendar
CCAR080	Backfill Curb - 134+88 to 150+97 RT - Area 3	6	10	10-Mar-16	17-Mar-16	Fall Hill 5-Day Calendar
CCAR090	Place Base & Intermediate Asphalt - 134+88 to 150+97 RT ...	8	10	18-Mar-16	29-Mar-16	Fall Hill Asphalt Calendar
CCAR110	Finish Grade & Stabilize - 134+88 to 150+97 RT - Area 3	10	10	30-Mar-16	12-Apr-16	Fall Hill 5-Day Calendar
CCAR300	Clear & Grub - 150+97 to 167+25 RT - Area 3	8	0	13-Oct-15	22-Oct-15	Fall Hill 5-Day Calendar
CCAR310	Excavate / Widen Roadway - 150+97 to 167+25 RT - Area 3	15	50	23-Oct-15	12-Nov-15	Fall Hill 5-Day Calendar
CCAR320	Install Storm Drainage - 150+97 to 167+25 RT - Area 3	12	50	13-Nov-15	02-Dec-15	Fall Hill 5-Day Calendar
CCAR330	Finegrade Subgrade - 150+97 to 167+25 RT - Area 3	5	58	03-Dec-15	09-Dec-15	Fall Hill 5-Day Calendar
CCAR340	Place Stone Base - 150+97 to 167+25 RT - Area 3	7	58	10-Dec-15	18-Dec-15	Fall Hill 5-Day Calendar
CCAR350	Install Underdrain - 150+97 to 167+25 RT - Area 3	3	58	21-Dec-15	23-Dec-15	Fall Hill 5-Day Calendar
CCAR360	Install Curb & Sidewalk - 150+97 to 167+25 RT - Area 3	6	58	24-Dec-15	08-Jan-16	Fall Hill 5-Day Calendar
CCAR370	Backfill Curb - 150+97 to 167+25 RT - Area 3	5	58	11-Jan-16	15-Jan-16	Fall Hill 5-Day Calendar
CCAR380	Place Base & Intermediate Asphalt - 150+97 to 167+25 RT ...	6	27	01-Mar-16	08-Mar-16	Fall Hill Asphalt Calendar
CCAR400	Finish Grade & Stabilize - 150+97 to 167+25 RT - Area 3	8	27	09-Mar-16	18-Mar-16	Fall Hill 5-Day Calendar
CCAR500	Clear & Grub - 167+25 to 182+00 RT - Area 3	8	0	23-Oct-15	03-Nov-15	Fall Hill 5-Day Calendar
CCAR510	Excavate / Widen Roadway - 167+25 to 182+00 RT - Area 3	10	54	04-Nov-15	17-Nov-15	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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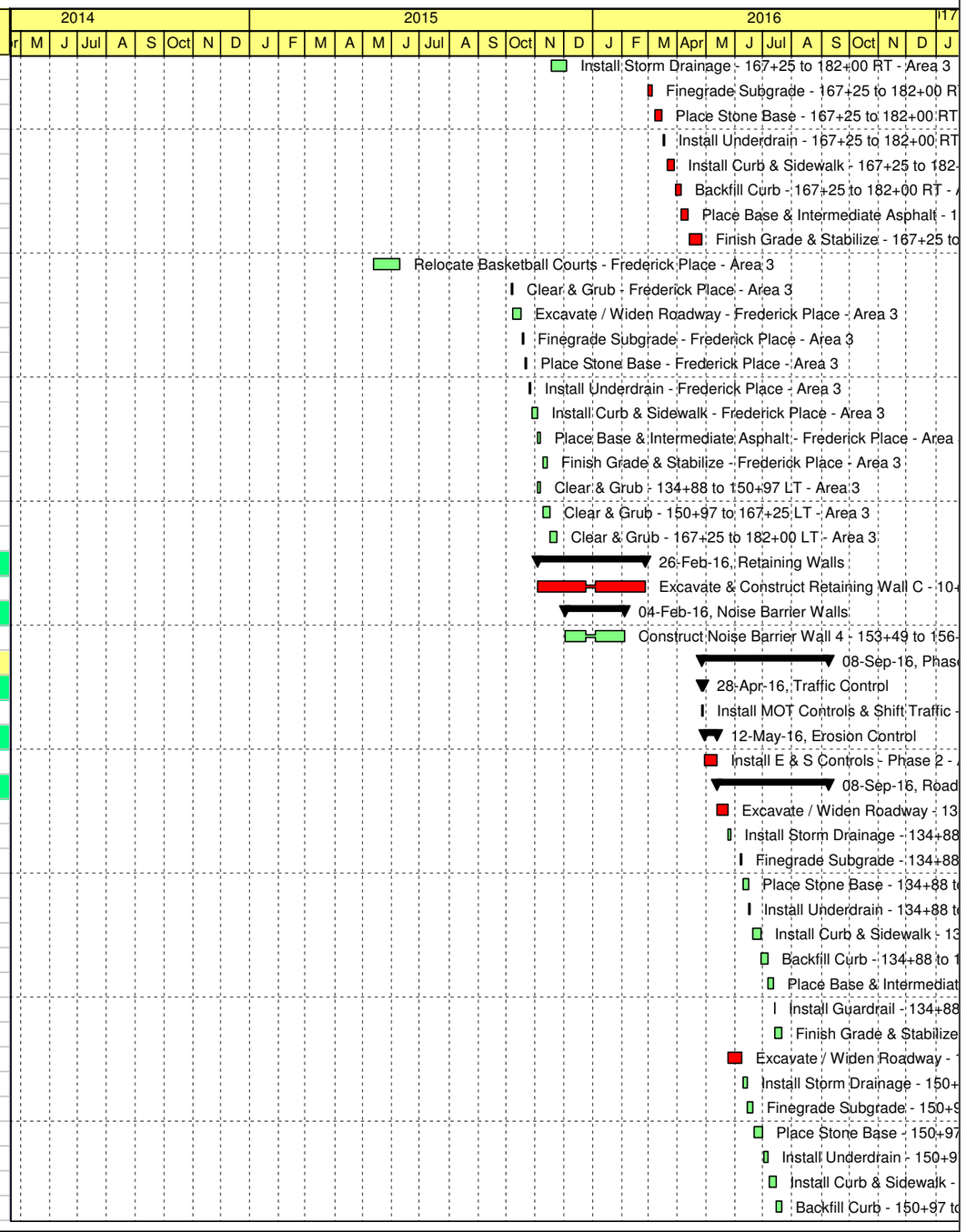
TASK filter: All Activities

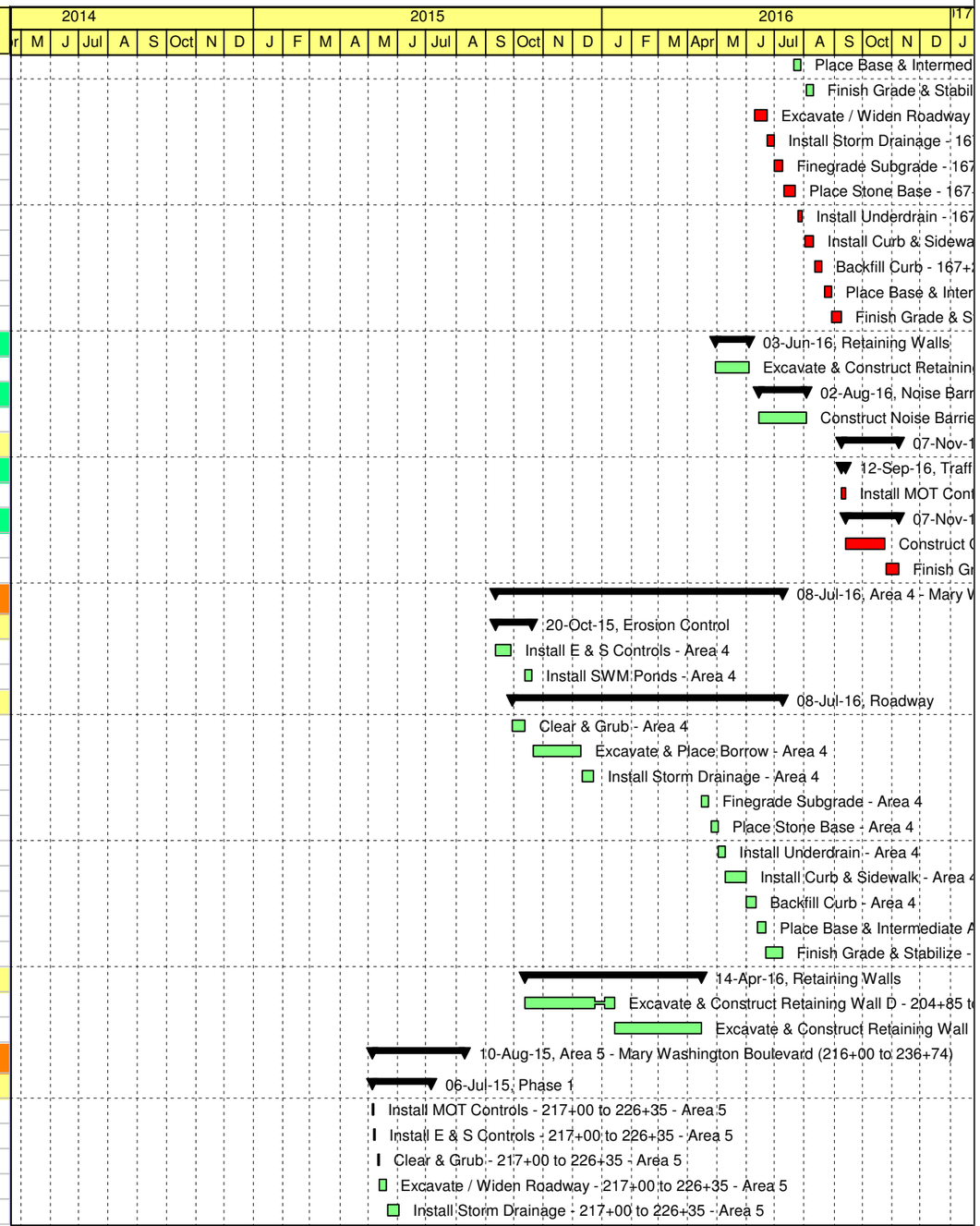
Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CCAR520	Install Storm Drainage - 167+25 to 182+00 RT - Area 3	11	54	18-Nov-15	04-Dec-15	Fall Hill 5-Day Calendar
CCAR530	Finegrade Subgrade - 167+25 to 182+00 RT - Area 3	5	0	29-Feb-16	04-Mar-16	Fall Hill 5-Day Calendar
CCAR540	Place Stone Base - 167+25 to 182+00 RT - Area 3	7	0	07-Mar-16	15-Mar-16	Fall Hill 5-Day Calendar
CCAR550	Install Underdrain - 167+25 to 182+00 RT - Area 3	3	0	16-Mar-16	18-Mar-16	Fall Hill 5-Day Calendar
CCAR560	Install Curb & Sidewalk - 167+25 to 182+00 RT - Area 3	6	0	21-Mar-16	28-Mar-16	Fall Hill 5-Day Calendar
CCAR570	Backfill Curb - 167+25 to 182+00 RT - Area 3	5	0	29-Mar-16	04-Apr-16	Fall Hill 5-Day Calendar
CCAR580	Place Base & Intermediate Asphalt - 167+25 to 182+00 RT ...	6	0	05-Apr-16	12-Apr-16	Fall Hill Asphalt Calendar
CCAR600	Finish Grade & Stabilize - 167+25 to 182+00 RT - Area 3	10	0	13-Apr-16	26-Apr-16	Fall Hill 5-Day Calendar
CCAR700	Relocate Basketball Courts - Frederick Place - Area 3	20	98	12-May-15	09-Jun-15	Fall Hill 5-Day Calendar
CCAR710	Clear & Grub - Frederick Place - Area 3	2	14	06-Oct-15	07-Oct-15	Fall Hill 5-Day Calendar
CCAR720	Excavate / Widen Roadway - Frederick Place - Area 3	7	14	08-Oct-15	16-Oct-15	Fall Hill 5-Day Calendar
CCAR740	Finegrade Subgrade - Frederick Place - Area 3	2	14	19-Oct-15	20-Oct-15	Fall Hill 5-Day Calendar
CCAR750	Place Stone Base - Frederick Place - Area 3	3	14	21-Oct-15	23-Oct-15	Fall Hill 5-Day Calendar
CCAR760	Install Underdrain - Frederick Place - Area 3	2	14	26-Oct-15	27-Oct-15	Fall Hill 5-Day Calendar
CCAR770	Install Curb & Sidewalk - Frederick Place - Area 3	5	14	28-Oct-15	03-Nov-15	Fall Hill 5-Day Calendar
CCAR780	Place Base & Intermediate Asphalt - Frederick Place - Area 3	3	14	04-Nov-15	06-Nov-15	Fall Hill Asphalt Calendar
CCAR790	Finish Grade & Stabilize - Frederick Place - Area 3	5	22	09-Nov-15	13-Nov-15	Fall Hill 5-Day Calendar
CCBR010	Clear & Grub - 134+88 to 150+97 LT - Area 3	3	126	04-Nov-15	06-Nov-15	Fall Hill 5-Day Calendar
CCBR300	Clear & Grub - 150+97 to 167+25 LT - Area 3	6	128	09-Nov-15	16-Nov-15	Fall Hill 5-Day Calendar
CCBR500	Clear & Grub - 167+25 to 182+00 LT - Area 3	6	132	17-Nov-15	24-Nov-15	Fall Hill 5-Day Calendar
Retaining Walls		83	0	04-Nov-15	26-Feb-16	
CCAW0·	Excavate & Construct Retaining Wall C - 10+00 to 15+31 R...	75	0	04-Nov-15	26-Feb-16	Fall Hill 5-Day Calendar
Noise Barrier Walls		46	50	03-Dec-15	04-Feb-16	
CCAS010	Construct Noise Barrier Wall 4 - 153+49 to 156+00 LT - Ar...	40	50	03-Dec-15	04-Feb-16	Fall Hill 5-Day Calendar
Phase 2		97	0	27-Apr-16	08-Sep-16	
Traffic Control		2	0	27-Apr-16	28-Apr-16	
CCBT010	Install MOT Controls & Shift Traffic - Phase 2 - Area 3	2	0	27-Apr-16	28-Apr-16	Fall Hill 5-Day Calendar
Erosion Control		10	0	29-Apr-16	12-May-16	
CCBE010	Install E & S Controls - Phase 2 - Area 3	10	0	29-Apr-16	12-May-16	Fall Hill 5-Day Calendar
Roadway		85	0	13-May-16	08-Sep-16	
CCBR020	Excavate / Widen Roadway - 134+88 to 150+97 LT - Area 3	8	0	13-May-16	24-May-16	Fall Hill 5-Day Calendar
CCBR030	Install Storm Drainage - 134+88 to 150+97 LT - Area 3	3	39	25-May-16	27-May-16	Fall Hill 5-Day Calendar
CCBR040	Finegrade Subgrade - 134+88 to 150+97 LT - Area 3	3	35	06-Jun-16	08-Jun-16	Fall Hill 5-Day Calendar
CCBR050	Place Stone Base - 134+88 to 150+97 LT - Area 3	5	35	09-Jun-16	15-Jun-16	Fall Hill 5-Day Calendar
CCBR060	Install Underdrain - 134+88 to 150+97 LT - Area 3	2	35	16-Jun-16	17-Jun-16	Fall Hill 5-Day Calendar
CCBR070	Install Curb & Sidewalk - 134+88 to 150+97 LT - Area 3	7	35	20-Jun-16	28-Jun-16	Fall Hill 5-Day Calendar
CCBR080	Backfill Curb - 134+88 to 150+97 LT - Area 3	4	35	29-Jun-16	05-Jul-16	Fall Hill 5-Day Calendar
CCBR090	Place Base & Intermediate Asphalt - 134+88 to 150+97 LT ...	5	35	06-Jul-16	12-Jul-16	Fall Hill Asphalt Calendar
CCBR100	Install Guardrail - 134+88 to 150+97 LT - Area 3	1	35	13-Jul-16	13-Jul-16	Fall Hill 5-Day Calendar
CCBR110	Finish Grade & Stabilize - 134+88 to 150+97 LT - Area 3	5	35	14-Jul-16	20-Jul-16	Fall Hill 5-Day Calendar
CCBR310	Excavate / Widen Roadway - 150+97 to 167+25 LT - Area 3	10	0	25-May-16	08-Jun-16	Fall Hill 5-Day Calendar
CCBR320	Install Storm Drainage - 150+97 to 167+25 LT - Area 3	3	20	09-Jun-16	13-Jun-16	Fall Hill 5-Day Calendar
CCBR330	Finegrade Subgrade - 150+97 to 167+25 LT - Area 3	5	23	14-Jun-16	20-Jun-16	Fall Hill 5-Day Calendar
CCBR340	Place Stone Base - 150+97 to 167+25 LT - Area 3	8	23	21-Jun-16	30-Jun-16	Fall Hill 5-Day Calendar
CCBR350	Install Underdrain - 150+97 to 167+25 LT - Area 3	3	23	01-Jul-16	06-Jul-16	Fall Hill 5-Day Calendar
CCBR360	Install Curb & Sidewalk - 150+97 to 167+25 LT - Area 3	6	23	07-Jul-16	14-Jul-16	Fall Hill 5-Day Calendar
CCBR370	Backfill Curb - 150+97 to 167+25 LT - Area 3	4	23	15-Jul-16	20-Jul-16	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CCBR380	Place Base & Intermediate Asphalt - 150+97 to 167+25 LT ...	6	23	21-Jul-16	28-Jul-16	Fall Hill Asphalt Calendar
CCBR400	Finish Grade & Stabilize - 150+97 to 167+25 LT - Area 3	6	20	03-Aug-16	10-Aug-16	Fall Hill 5-Day Calendar
CCBR510	Excavate / Widen Roadway - 167+25 to 182+00 LT - Area 3	10	0	09-Jun-16	22-Jun-16	Fall Hill 5-Day Calendar
CCBR520	Install Storm Drainage - 167+25 to 182+00 LT - Area 3	5	0	23-Jun-16	29-Jun-16	Fall Hill 5-Day Calendar
CCBR530	Finegrade Subgrade - 167+25 to 182+00 LT - Area 3	6	0	30-Jun-16	08-Jul-16	Fall Hill 5-Day Calendar
CCBR540	Place Stone Base - 167+25 to 182+00 LT - Area 3	10	0	11-Jul-16	22-Jul-16	Fall Hill 5-Day Calendar
CCBR550	Install Underdrain - 167+25 to 182+00 LT - Area 3	5	0	25-Jul-16	29-Jul-16	Fall Hill 5-Day Calendar
CCBR560	Install Curb & Sidewalk - 167+25 to 182+00 LT - Area 3	8	0	01-Aug-16	10-Aug-16	Fall Hill 5-Day Calendar
CCBR570	Backfill Curb - 167+25 to 182+00 LT - Area 3	7	0	11-Aug-16	19-Aug-16	Fall Hill 5-Day Calendar
CCBR580	Place Base & Intermediate Asphalt - 167+25 to 182+00 LT ...	6	0	22-Aug-16	29-Aug-16	Fall Hill Asphalt Calendar
CCBR600	Finish Grade & Stabilize - 167+25 to 182+00 LT - Area 3	7	0	30-Aug-16	08-Sep-16	Fall Hill 5-Day Calendar
Retaining Walls		26	36	29-Apr-16	03-Jun-16	
CCBW0	Excavate & Construct Retaining Wall A - 135+72 to 140+49...	25	35	29-Apr-16	03-Jun-16	Fall Hill 5-Day Calendar
Noise Barrier Walls		36	20	14-Jun-16	02-Aug-16	
CCBS010	Construct Noise Barrier Wall 3 - 151+30 to 153+00 LT - Ar...	35	20	14-Jun-16	02-Aug-16	Fall Hill 5-Day Calendar
Phase 3		42	0	09-Sep-16	07-Nov-16	
Traffic Control		2	0	09-Sep-16	12-Sep-16	
CCCT010	Install MOT Controls & Shift Traffic - Phase 3 - Area 3	2	0	09-Sep-16	12-Sep-16	Fall Hill 5-Day Calendar
Roadway		40	0	13-Sep-16	07-Nov-16	
CCCR010	Construct Concrete Median - Median - Area 3	30	0	13-Sep-16	24-Oct-16	Fall Hill 5-Day Calendar
CCCR020	Finish Grade Median & Stabilize - Median - Area 3	10	0	25-Oct-16	07-Nov-16	Fall Hill 5-Day Calendar
Area 4 - Mary Washington Boulevard (202+22 to 216+...		216	86	11-Sep-15	08-Jul-16	
Erosion Control		28	169	11-Sep-15	20-Oct-15	
CDE0010	Install E & S Controls - Area 4	12	85	11-Sep-15	28-Sep-15	Fall Hill 5-Day Calendar
CDE0020	Install SWM Ponds - Area 4	6	160	13-Oct-15	20-Oct-15	Fall Hill 5-Day Calendar
Roadway		204	86	29-Sep-15	08-Jul-16	
CDR0010	Clear & Grub - Area 4	10	85	29-Sep-15	12-Oct-15	Fall Hill 5-Day Calendar
CDR0020	Excavate & Place Borrow - Area 4	35	160	21-Oct-15	10-Dec-15	Fall Hill 5-Day Calendar
CDR0030	Install Storm Drainage - Area 4	9	160	11-Dec-15	23-Dec-15	Fall Hill 5-Day Calendar
CDR0040	Finegrade Subgrade - Area 4	6	85	15-Apr-16	22-Apr-16	Fall Hill 5-Day Calendar
CDR0050	Place Stone Base - Area 4	6	85	25-Apr-16	02-May-16	Fall Hill 5-Day Calendar
CDR0060	Install Underdrain - Area 4	5	85	03-May-16	09-May-16	Fall Hill 5-Day Calendar
CDR0070	Install Curb & Sidewalk - Area 4	15	85	10-May-16	31-May-16	Fall Hill 5-Day Calendar
CDR0080	Backfill Curb - Area 4	8	85	01-Jun-16	10-Jun-16	Fall Hill 5-Day Calendar
CDR0090	Place Base & Intermediate Asphalt - Area 4	7	85	13-Jun-16	21-Jun-16	Fall Hill Asphalt Calendar
CDR0110	Finish Grade & Stabilize - Area 4	12	85	22-Jun-16	08-Jul-16	Fall Hill 5-Day Calendar
Retaining Walls		133	87	13-Oct-15	14-Apr-16	
CDW0010	Excavate & Construct Retaining Wall D - 204+85 to 206+5...	60	85	13-Oct-15	14-Jan-16	Fall Hill 5-Day Calendar
CDW0020	Excavate & Construct Retaining Wall E - 211+41 to 213+37...	65	85	15-Jan-16	14-Apr-16	Fall Hill 5-Day Calendar
Area 5 - Mary Washington Boulevard (216+00 to 236+...		70	267	05-May-15	10-Aug-15	
Phase 1		45	267	05-May-15	06-Jul-15	
CEA0003	Install MOT Controls - 217+00 to 226+35 - Area 5	2	256	05-May-15	06-May-15	Fall Hill 5-Day Calendar
CEA0007	Install E & S Controls - 217+00 to 226+35 - Area 5	2	256	07-May-15	08-May-15	Fall Hill 5-Day Calendar
CEA0010	Clear & Grub - 217+00 to 226+35 - Area 5	2	256	11-May-15	12-May-15	Fall Hill 5-Day Calendar
CEA0020	Excavate / Widen Roadway - 217+00 to 226+35 - Area 5	6	256	13-May-15	20-May-15	Fall Hill 5-Day Calendar
CEA0030	Install Storm Drainage - 217+00 to 226+35 - Area 5	8	256	21-May-15	02-Jun-15	Fall Hill 5-Day Calendar



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
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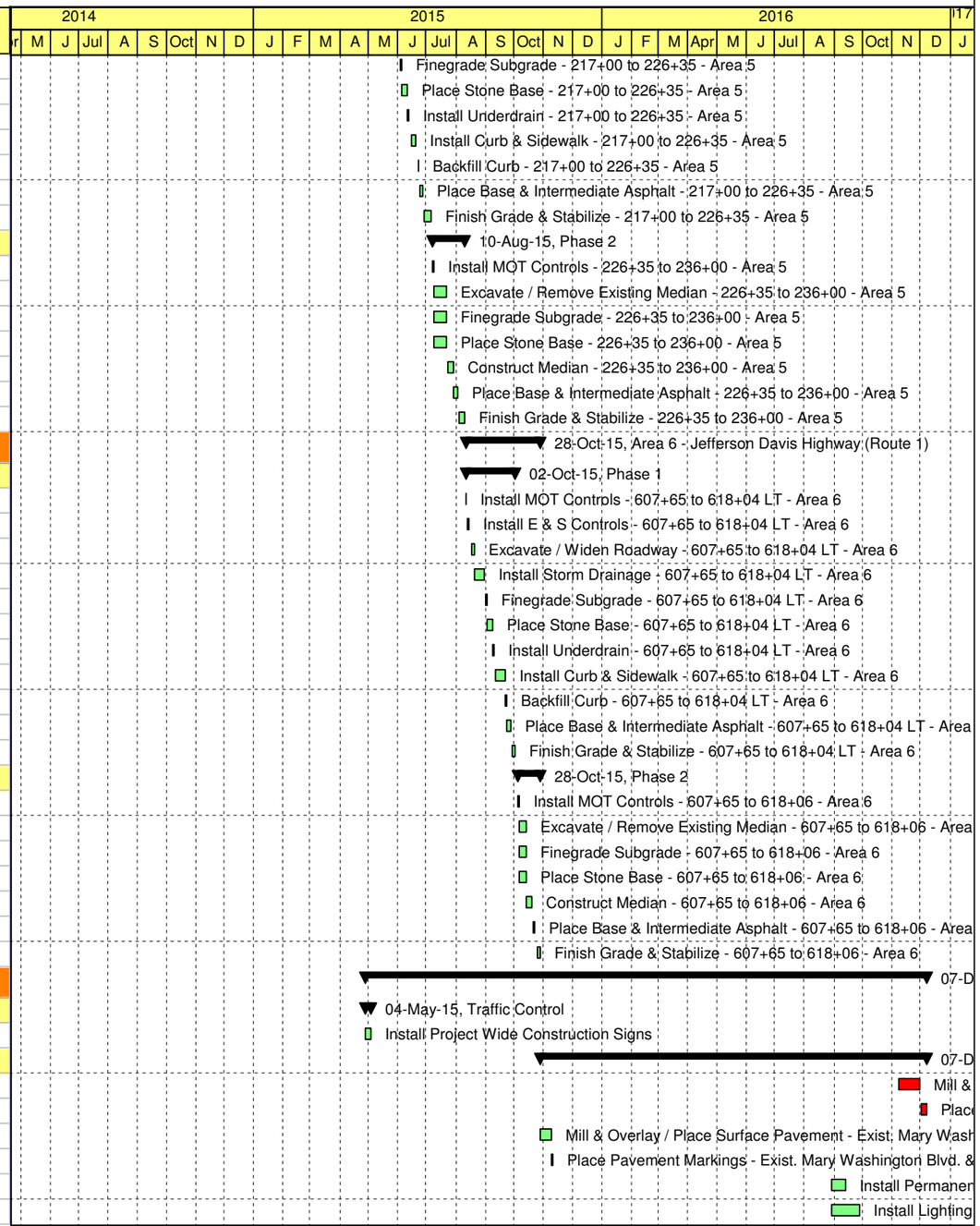
TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CEA0040	Finegrade Subgrade - 217+00 to 226+35 - Area 5	2	256	03-Jun-15	04-Jun-15	Fall Hill 5-Day Calendar
CEA0050	Place Stone Base - 217+00 to 226+35 - Area 5	4	256	05-Jun-15	10-Jun-15	Fall Hill 5-Day Calendar
CEA0060	Install Underdrain - 217+00 to 226+35 - Area 5	2	256	11-Jun-15	12-Jun-15	Fall Hill 5-Day Calendar
CEA0070	Install Curb & Sidewalk - 217+00 to 226+35 - Area 5	5	256	15-Jun-15	19-Jun-15	Fall Hill 5-Day Calendar
CEA0080	Backfill Curb - 217+00 to 226+35 - Area 5	2	256	22-Jun-15	23-Jun-15	Fall Hill 5-Day Calendar
CEA0090	Place Base & Intermediate Asphalt - 217+00 to 226+35 - Ar...	3	197	24-Jun-15	26-Jun-15	Fall Hill Asphalt Calendar
CEA0100	Finish Grade & Stabilize - 217+00 to 226+35 - Area 5	5	256	29-Jun-15	06-Jul-15	Fall Hill 5-Day Calendar
Phase 2		25	267	07-Jul-15	10-Aug-15	
CEB0005	Install MOT Controls - 226+35 to 236+00 - Area 5	2	256	07-Jul-15	08-Jul-15	Fall Hill 5-Day Calendar
CEB0010	Excavate / Remove Existing Median - 226+35 to 236+00 - ...	10	256	09-Jul-15	22-Jul-15	Fall Hill 5-Day Calendar
CEB0020	Finegrade Subgrade - 226+35 to 236+00 - Area 5	10	256	09-Jul-15	22-Jul-15	Fall Hill 5-Day Calendar
CEB0030	Place Stone Base - 226+35 to 236+00 - Area 5	10	256	09-Jul-15	22-Jul-15	Fall Hill 5-Day Calendar
CEB0040	Construct Median - 226+35 to 236+00 - Area 5	5	256	23-Jul-15	29-Jul-15	Fall Hill 5-Day Calendar
CEB0050	Place Base & Intermediate Asphalt - 226+35 to 236+00 - Ar...	3	197	30-Jul-15	03-Aug-15	Fall Hill Asphalt Calendar
CEB0060	Finish Grade & Stabilize - 226+35 to 236+00 - Area 5	5	256	04-Aug-15	10-Aug-15	Fall Hill 5-Day Calendar
Area 6 - Jefferson Davis Highway (Route 1)		57	275	11-Aug-15	28-Oct-15	
Phase 1		39	267	11-Aug-15	02-Oct-15	
CFA0003	Install MOT Controls - 607+65 to 618+04 LT - Area 6	2	256	11-Aug-15	12-Aug-15	Fall Hill 5-Day Calendar
CFA0007	Install E & S Controls - 607+65 to 618+04 LT - Area 6	2	256	13-Aug-15	14-Aug-15	Fall Hill 5-Day Calendar
CFA0010	Excavate / Widen Roadway - 607+65 to 618+04 LT - Area 6	4	256	17-Aug-15	20-Aug-15	Fall Hill 5-Day Calendar
CFA0020	Install Storm Drainage - 607+65 to 618+04 LT - Area 6	7	256	21-Aug-15	31-Aug-15	Fall Hill 5-Day Calendar
CFA0030	Finegrade Subgrade - 607+65 to 618+04 LT - Area 6	2	256	01-Sep-15	02-Sep-15	Fall Hill 5-Day Calendar
CFA0040	Place Stone Base - 607+65 to 618+04 LT - Area 6	3	256	03-Sep-15	08-Sep-15	Fall Hill 5-Day Calendar
CFA0050	Install Underdrain - 607+65 to 618+04 LT - Area 6	2	256	09-Sep-15	10-Sep-15	Fall Hill 5-Day Calendar
CFA0060	Install Curb & Sidewalk - 607+65 to 618+04 LT - Area 6	7	256	11-Sep-15	21-Sep-15	Fall Hill 5-Day Calendar
CFA0070	Backfill Curb - 607+65 to 618+04 LT - Area 6	2	256	22-Sep-15	23-Sep-15	Fall Hill 5-Day Calendar
CFA0080	Place Base & Intermediate Asphalt - 607+65 to 618+04 LT ...	3	197	24-Sep-15	28-Sep-15	Fall Hill Asphalt Calendar
CFA0090	Finish Grade & Stabilize - 607+65 to 618+04 LT - Area 6	4	256	29-Sep-15	02-Oct-15	Fall Hill 5-Day Calendar
Phase 2		18	275	05-Oct-15	28-Oct-15	
CFB0005	Install MOT Controls - 607+65 to 618+06 - Area 6	2	256	05-Oct-15	06-Oct-15	Fall Hill 5-Day Calendar
CFB0010	Excavate / Remove Existing Median - 607+65 to 618+06 - ...	5	256	07-Oct-15	13-Oct-15	Fall Hill 5-Day Calendar
CFB0020	Finegrade Subgrade - 607+65 to 618+06 - Area 6	5	256	07-Oct-15	13-Oct-15	Fall Hill 5-Day Calendar
CFB0030	Place Stone Base - 607+65 to 618+06 - Area 6	5	256	07-Oct-15	13-Oct-15	Fall Hill 5-Day Calendar
CFB0040	Construct Median - 607+65 to 618+06 - Area 6	5	256	14-Oct-15	20-Oct-15	Fall Hill 5-Day Calendar
CFB0050	Place Base & Intermediate Asphalt - 607+65 to 618+06 - Ar...	3	197	21-Oct-15	23-Oct-15	Fall Hill Asphalt Calendar
CFB0060	Finish Grade & Stabilize - 607+65 to 618+06 - Area 6	3	264	26-Oct-15	28-Oct-15	Fall Hill 5-Day Calendar
Entire Project		422	34	28-Apr-15	07-Dec-16	
Traffic Control		5	4	28-Apr-15	04-May-15	
CGT0010	Install Project Wide Construction Signs	5	4	28-Apr-15	04-May-15	Fall Hill 5-Day Calendar
Roadway		290	34	29-Oct-15	07-Dec-16	
CGR0010	Mill & Overlay / Place Surface Pavement - Fall Hill Ave. & ...	15	0	08-Nov-16	30-Nov-16	Fall Hill Asphalt Calendar
CGR0020	Place Pavement Markings - Fall Hill Ave. & Mary Washingt...	5	1	01-Dec-16	07-Dec-16	Fall Hill 5-Day Calendar
CGR0110	Mill & Overlay / Place Surface Pavement - Exist. Mary Was...	8	205	29-Oct-15	09-Nov-15	Fall Hill Asphalt Calendar
CGR0120	Place Pavement Markings - Exist. Mary Washington Blvd. ...	2	295	10-Nov-15	11-Nov-15	Fall Hill 5-Day Calendar
CGR1000	Install Permanent Signs - Entire Project	10	60	30-Aug-16	13-Sep-16	Fall Hill 5-Day Calendar
CGR1010	Install Lighting - Entrie Project	20	50	30-Aug-16	27-Sep-16	Fall Hill 5-Day Calendar



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TASK filter: All Activities

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish	Calendar
CGR1020	Install Permanent Signalization - Entire Project	25	45	30-Aug-16	04-Oct-16	Fall Hill 5-Day Calendar

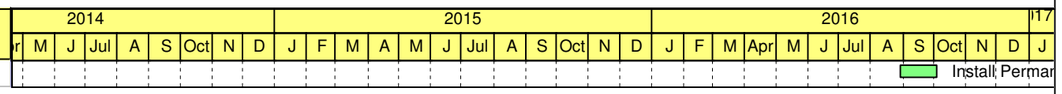


EXHIBIT 4.7.2

NEAR CRITICAL ACTIVITIES

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
Fall Hill Ave. Widening & Mary Washington Blvd. Extension		711	1	18-Apr-14	23-Jan-17
Pre-Construction Activities		711	1	18-Apr-14	23-Jan-17
Project Milestones		711	1	18-Apr-14	23-Jan-17
G010000	Notice to Proceed	0	0	18-Apr-14	
G010010	Construction Start	0	4	28-Apr-15	
G019999	Project Completion	0	1		23-Jan-17
Project Management		656	1	08-Jul-14	23-Jan-17
G021010	Schedule and Hold Kickoff Meeting with Private Utilities	10	0	08-Jul-14	21-Jul-14
G021220	Verizon Virginia Design Utility Relocation Plan	170	0	22-Jul-14	07-Jan-15
G021230	SFA Verizon Virginia Utility Relocation Plan	10	0	08-Jan-15	21-Jan-15
G021240	R/A Verizon Virginia Utility Relocation Plan	21	0	22-Jan-15	11-Feb-15
G022020	Preparatory Meeting - MOT	1	4	20-Apr-15	20-Apr-15
G022030	Preparatory Meeting - Structure Backfill	1	20	27-Apr-16	27-Apr-16
G022090	Preparatory Meeting - Piles	1	4	07-May-15	07-May-15
G022100	Preparatory Meeting - Bridge Substructure	1	4	05-May-15	05-May-15
G022110	Preparatory Meeting - Bridge Deck	1	5	28-Jul-15	28-Jul-15
G022120	Preparatory Meeting - Girder Erection	1	5	28-Jul-15	28-Jul-15
G022190	Preparatory Meeting - Retaining Walls	1	16	28-Sep-15	28-Sep-15
G022200	Preparatory Meeting - Demolition of Existing Structures	1	4	22-Apr-15	22-Apr-15
G029997	Punchlist / De-mobilization	27	1	08-Dec-16	23-Jan-17
G029999	Mobilize for Construction	5	4	28-Apr-15	04-May-15
Design		174	16	02-May-14	15-Jan-15
GO40020	Recover Survey Control	5	0	02-May-14	08-May-14
GO40030	Supplemental Field Survey	10	0	09-May-14	22-May-14
GO40040	Supplemental Utility Designation / Location	10	0	23-May-14	06-Jun-14
GO40050	Topo Verification (SWM Basin, Roadway Tie-ins)	10	0	09-Jun-14	20-Jun-14
GO40060	Computer Work and DTM Preparation	10	0	23-Jun-14	07-Jul-14
GO40100	Prepare Soil Boring Plan	10	14	02-May-14	15-May-14
GO40110	Perform Soil Borings	10	14	16-May-14	30-May-14
GO40120	Perform Lab Work	20	14	02-Jun-14	27-Jun-14
GO40130	Prepare Geotechnical Report & Recommendations	20	14	30-Jun-14	28-Jul-14
GO40140	SFA Geotechnical Report & Recommendations	20	14	29-Jul-14	25-Aug-14
GO40160	Lead Time for Activities Dependent on Geotechnical Submittal	90	18	29-Jul-14	26-Oct-14
GO40200	Prepare SWPPP & Design Clear & Grub / E&S Plans	50	19	26-Aug-14	04-Nov-14
GO40205	QA/QC SWPPP and Clear & Grub / E&S Plans	10	19	05-Nov-14	18-Nov-14
GO40210	SFA SWPPP and Clear & Grub / E&S Plans	5	19	19-Nov-14	25-Nov-14
GO40230	A/C SWPPP and Clear & Grub / E&S Plans	15	16	17-Dec-14	15-Jan-15
GO41210	SFA Bridge B609 Foundation Recommendations	5	14	27-Oct-14	31-Oct-14
GO41220	R/A Bridge B609 Foundation Recommendations	21	20	01-Nov-14	21-Nov-14
GO41310	SFA Bridge B609 Plans - to VDOT	5	14	27-Oct-14	31-Oct-14
GO41320	R/A Bridge B609 Plans - VDOT	21	20	01-Nov-14	21-Nov-14
GO41330	A/C Bridge B609 Plans - to VDOT	20	12	24-Nov-14	23-Dec-14
Public Involvement		10	0	18-Apr-14	01-May-14
GO50010	Send Survey Notification Letters	10	0	18-Apr-14	01-May-14
Permits / Environmental		189	16	08-Jul-14	09-Apr-15
GO60000	Review & Verify: US Corp. / VA Water Permits	45	16	06-Feb-15	09-Apr-15

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
GO60010	Prepare VSMP Permit Application	20	19	08-Jul-14	04-Aug-14
Right-of-Way		201	4	08-Jul-14	27-Apr-15
G070020	Prepare Right-of-Way Acquisition Plan	25	8	08-Jul-14	11-Aug-14
G070025	QA/QC Right-of-Way Acquisition Plan	10	8	12-Aug-14	25-Aug-14
G070030	SFA Right-of-Way Acquisition Plan	5	8	26-Aug-14	02-Sep-14
G070040	R/A Right-of-Way Acquisition Plan	21	12	03-Sep-14	23-Sep-14
G070070	Complete Title Research	25	8	24-Sep-14	28-Oct-14
G070080	Prepare Appraisals & Submit Packages to VDOT	40	11	29-Oct-14	07-Dec-14
G070090	VDOT Approval of Appraisals	21	11	08-Dec-14	28-Dec-14
G070100	Complete Initial Negotiation Contact with all Property Owners	15	4	05-Jan-15	23-Jan-15
G070110	Obtain Refusal/Acceptance on Parcels	45	6	24-Jan-15	09-Mar-15
G070120	Submit RW-24 Reports on Refusals	10	4	10-Mar-15	23-Mar-15
G070130	Submit RW-24 Reports on all Parcels	10	4	24-Mar-15	06-Apr-15
G070140	Receive Right-of-Way Clearances	15	4	07-Apr-15	27-Apr-15
Utility Adjustments		168	0	12-Feb-15	05-Oct-15
G080130	Relocate Utilities - Area 3 - Verizon Virginia	165	0	12-Feb-15	05-Oct-15
Procurement		152	12	24-Dec-14	31-Jul-15
G091000	SFA Girder Shop Drawings Bridge B609	20	12	09-Jan-15	05-Feb-15
G091010	R/A Girder Shop Drawings Bridge B609	21	18	06-Feb-15	26-Feb-15
G091020	A/C Girder Shop Drawings Bridge B609	10	12	27-Feb-15	12-Mar-15
G091030	R/A Girder Shop Drawings Bridge B609 - Final	21	18	13-Mar-15	02-Apr-15
G095020	Procure Bridge Material Vendors	20	12	24-Dec-14	29-Jan-15
G096120	Fab/Del Girders Bridge B609	120	18	03-Apr-15	31-Jul-15
Area 2 - Bridge B-609 (Fall Hill Ave. over I-95)		413	5	05-May-15	01-Dec-16
Phase 1		185	4	05-May-15	18-Jan-16
Traffic Control		2	4	05-May-15	06-May-15
CBAT010	Install MOT Controls & Shift Traffic - Phase 1 - Area 2	2	4	05-May-15	06-May-15
Substructure		69	5	07-May-15	11-Aug-15
CBAA005	Demo Existing Wing Wall - Abutment A - Phase 1 - EB Bridge B-609	1	4	07-May-15	07-May-15
CBAA007	SOE - Abutment A - Phase 1 - EB Bridge B-609	8	4	08-May-15	19-May-15
CBAA008	Structural Excavation - Abutment A - Phase 1 - EB Bridge B-609	2	4	20-May-15	21-May-15
CBAA010	Drive Piles - Abutment A - Phase 1 - EB Bridge B-609	4	4	22-May-15	28-May-15
CBAA020	F/R/P Pile Cap - Abutment A - Phase 1 - EB Bridge B-609	5	20	29-May-15	04-Jun-15
CBAA040	F/R/P Stem - Abutment A - Phase 1 - EB Bridge B-609	5	20	12-Jun-15	18-Jun-15
CBAA060	F/R/P Backwall - Abutment A - Phase 1 - EB Bridge B-609	4	20	26-Jun-15	01-Jul-15
CBAA102	Demo Existing Wing Wall - Abutment B - Phase 1 - EB Bridge B-609	1	19	08-May-15	08-May-15
CBAA105	SOE - Abutment B - Phase 1 - EB Bridge B-609	8	19	11-May-15	20-May-15
CBAA108	Structural Excavation - Abutment B - Phase 1 - EB Bridge B-609	2	10	04-Jun-15	05-Jun-15
CBAA109	Drive Piles - Abutment B - Phase 1 - EB Bridge B-609	4	4	16-Jun-15	19-Jun-15
CBAA110	F/R/P Pile Cap - Abutment B - Phase 1 - EB Bridge B-609	5	4	22-Jun-15	26-Jun-15
CBAA120	Cure Pile Cap - Abutment B - Phase 1 - EB Bridge B-609	7	9	27-Jun-15	03-Jul-15
CBAA130	F/R/P Stem - Abutment B - Phase 1 - EB Bridge B-609	5	5	06-Jul-15	10-Jul-15
CBAA140	Cure Stem - Abutment B - Phase 1 - EB Bridge B-609	7	9	11-Jul-15	17-Jul-15
CBAA150	F/R/P Backwall - Abutment B - Phase 1 - EB Bridge B-609	4	5	20-Jul-15	23-Jul-15
CBAA160	Cure Backwall - Abutment B - Phase 1 - EB Bridge B-609	7	7	24-Jul-15	30-Jul-15
CBAA170	Backfill - Abutment B - Phase 1 - EB Bridge B-609	2	5	10-Aug-15	11-Aug-15
CBAA180	Construct MSE Wall - Abutment B - Phase 1 - EB Bridge B-609	6	5	31-Jul-15	07-Aug-15

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
CBAA200	Structural Excavation - Pier 1 - Phase 1 - EB Bridge B-609	2	6	22-May-15	26-May-15
CBAA205	Drive Piles - Pier 1 - Phase 1 - EB Bridge B-609	3	4	29-May-15	02-Jun-15
CBAA300	Structural Excavation - Pier 2 - Phase 1 - EB Bridge B-609	2	7	27-May-15	28-May-15
CBAA305	Drive Piles - Pier 2 - Phase 1 - EB Bridge B-609	3	4	03-Jun-15	05-Jun-15
CBAA400	Structural Excavation - Pier 3 - Phase 1 - EB Bridge B-609	2	8	29-May-15	01-Jun-15
CBAA405	Drive Piles - Pier 3 - Phase 1 - EB Bridge B-609	3	4	08-Jun-15	10-Jun-15
CBAA410	F/R/P Footing - Pier 3 - Phase 1 - EB Bridge B-609	5	19	11-Jun-15	17-Jun-15
CBAA430	F/R/P Column - Pier 3 - Phase 1 - EB Bridge B-609	4	19	25-Jun-15	30-Jun-15
CBAA450	F/R/P Cap - Pier 3 - Phase 1 - EB Bridge B-609	5	20	08-Jul-15	14-Jul-15
CBAA500	Structural Excavation - Pier 4 - Phase 1 - EB Bridge B-609	2	9	02-Jun-15	03-Jun-15
CBAA505	Drive Piles - Pier 4 - Phase 1 - EB Bridge B-609	3	4	11-Jun-15	15-Jun-15
CBAA510	F/R/P Footing - Pier 4 - Phase 1 - EB Bridge B-609	5	16	16-Jun-15	22-Jun-15
CBAA530	F/R/P Column - Pier 4 - Phase 1 - EB Bridge B-609	4	16	30-Jun-15	06-Jul-15
CBAA550	F/R/P Cap - Pier 4 - Phase 1 - EB Bridge B-609	5	16	14-Jul-15	20-Jul-15
Superstructure		114	4	12-Aug-15	18-Jan-16
CBAB010	Erect Beams - Span a - Phase 1 - EB Bridge B-609	2	5	12-Aug-15	13-Aug-15
CBAB020	Erect Beams - Span b - Phase 1 - EB Bridge B-609	2	5	14-Aug-15	17-Aug-15
CBAB030	Erect Beams - Span c - Phase 1 - EB Bridge B-609	2	5	18-Aug-15	19-Aug-15
CBAB040	Erect Beams - Span d - Phase 1 - EB Bridge B-609	2	5	20-Aug-15	21-Aug-15
CBAB050	Erect Beams - Span e - Phase 1 - EB Bridge B-609	2	5	24-Aug-15	25-Aug-15
CBAB060	F/R/P End Closure - East - Phase 1 - EB Bridge B-609	5	5	26-Aug-15	01-Sep-15
CBAB070	Cure End Closure - East - Phase 1 - EB Bridge B-609	7	8	02-Sep-15	08-Sep-15
CBAB080	F/R/P End Closure - West - Phase 1 - EB Bridge B-609	5	5	26-Aug-15	01-Sep-15
CBAB090	Cure End Closure - West - Phase 1 - EB Bridge B-609	7	8	02-Sep-15	08-Sep-15
CBAB100	Install Expansion Dam - East - Phase 1 - EB Bridge B-609	3	6	09-Sep-15	11-Sep-15
CBAB110	Install Expansion Dam - West - Phase 1 - EB Bridge B-609	3	6	09-Sep-15	11-Sep-15
CBAB120	F/R Deck - Span a - Phase 1 - EB Bridge B-609	8	6	14-Sep-15	23-Sep-15
CBAB130	F/R Deck - Span b - Phase 1 - EB Bridge B-609	8	6	24-Sep-15	05-Oct-15
CBAB140	F/R Deck - Span c - Phase 1 - EB Bridge B-609	8	6	06-Oct-15	15-Oct-15
CBAB150	F/R Deck - Span d - Phase 1 - EB Bridge B-609	8	6	16-Oct-15	27-Oct-15
CBAB160	F/R Deck - Span e - Phase 1 - EB Bridge B-609	8	6	28-Oct-15	06-Nov-15
CBAB180	F/R Closure Diaphragms - Spans b - c - Phase 1 - EB Bridge B-609	3	20	16-Oct-15	20-Oct-15
CBAB190	F/R Closure Diaphragms - Spans c - d - Phase 1 - EB Bridge B-609	3	13	28-Oct-15	30-Oct-15
CBAB200	F/R Closure Diaphragms - Spans d - e - Phase 1 - EB Bridge B-609	3	6	09-Nov-15	11-Nov-15
CBAB220	Pour Deck - Span b - Phase 1 - EB Bridge B-609	1	20	21-Oct-15	21-Oct-15
CBAB230	Pour Deck - Span c - Phase 1 - EB Bridge B-609	1	13	02-Nov-15	02-Nov-15
CBAB240	Pour Deck - Span d - Phase 1 - EB Bridge B-609	1	6	12-Nov-15	12-Nov-15
CBAB250	Pour Deck - Span e - Phase 1 - EB Bridge B-609	1	6	13-Nov-15	13-Nov-15
CBAB290	Cure Deck - Span d - Phase 1 - EB Bridge B-609	7	11	13-Nov-15	19-Nov-15
CBAB300	Cure Deck - Span e - Phase 1 - EB Bridge B-609	7	10	14-Nov-15	20-Nov-15
CBAB320	Pour Closure Diaphragms - Spans b - c - Phase 1 - EB Bridge B-609	1	17	03-Nov-15	03-Nov-15
CBAB330	Pour Closure Diaphragms - Spans c - d - Phase 1 - EB Bridge B-609	1	9	13-Nov-15	13-Nov-15
CBAB340	Pour Closure Diaphragms - Spans d - e - Phase 1 - EB Bridge B-609	1	8	16-Nov-15	16-Nov-15
CBAB350	F/R/P Approach Slab - East - Phase 1 - EB Bridge B-609	5	4	23-Nov-15	01-Dec-15
CBAB360	Cure Approach Slab - East - Phase 1 - EB Bridge B-609	7	6	02-Dec-15	08-Dec-15
CBAB370	F/R/P Approach Slab - West - Phase 1 - EB Bridge B-609	5	20	23-Nov-15	01-Dec-15
CBAB440	Construct BR27 Railing Complete - Span a - Phase 1 - EB Bridge B...	4	4	09-Dec-15	14-Dec-15

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
CBAB450	Construct BR27 Railing Complete - Span b - Phase 1 - EB Bridge B...	4	4	15-Dec-15	18-Dec-15
CBAB460	Construct BR27 Railing Complete - Span c - Phase 1 - EB Bridge B...	4	4	21-Dec-15	24-Dec-15
CBAB470	Construct BR27 Railing Complete - Span d - Phase 1 - EB Bridge B...	4	4	04-Jan-16	07-Jan-16
CBAB480	Construct BR27 Railing Complete - Span e - Phase 1 - EB Bridge B...	4	4	08-Jan-16	13-Jan-16
CBAB500	Groove Bridge Deck - Phase 1 - EB Bridge B-609	1	4	14-Jan-16	14-Jan-16
CBAB530	VDOT Safety and Acceptance Inspection - Phase 1 - EB Bridge B-609	2	4	15-Jan-16	18-Jan-16
Phase 2		214	5	19-Jan-16	11-Nov-16
CBBA000	Demo Existing Substructure - Phase 2 - WB Bridge B-609	21	4	24-Feb-16	23-Mar-16
CBBB000	Demo Existing Superstructure - Phase 2 - WB Bridge B-609	24	4	21-Jan-16	23-Feb-16
Traffic Control		2	4	19-Jan-16	20-Jan-16
CBBT010	Install MOT Controls & Shift Traffic - Phase 2 - Area 2	2	4	19-Jan-16	20-Jan-16
Substructure		59	5	24-Mar-16	14-Jun-16
CBBA005	Structural Excavation - Abutment A - Phase 2 - WB Bridge B-609	2	4	24-Mar-16	25-Mar-16
CBBA010	Drive Piles - Abutment A - Phase 2 - WB Bridge B-609	4	4	28-Mar-16	31-Mar-16
CBBA020	F/R/P Pile Cap - Abutment A - Phase 2 - WB Bridge B-609	5	20	01-Apr-16	07-Apr-16
CBBA040	F/R/P Stem - Abutment A - Phase 2 - WB Bridge B-609	5	20	15-Apr-16	21-Apr-16
CBBA060	F/R/P Backwall - Abutment A - Phase 2 - WB Bridge B-609	4	20	29-Apr-16	04-May-16
CBBA080	Backfill - Abutment A - Phase 2 - WB Bridge B-609	2	20	20-May-16	23-May-16
CBBA090	Construct MSE Wall - Abutment A - Phase 2 - WB Bridge B-609	6	20	12-May-16	19-May-16
CBBA105	Structural Excavation - Abutment B - Phase 2 - WB Bridge B-609	2	10	07-Apr-16	08-Apr-16
CBBA110	Drive Piles - Abutment B - Phase 2 - WB Bridge B-609	4	4	19-Apr-16	22-Apr-16
CBBA120	F/R/P Pile Cap - Abutment B - Phase 2 - WB Bridge B-609	5	4	25-Apr-16	29-Apr-16
CBBA130	Cure Pile Cap - Abutment B - Phase 2 - WB Bridge B-609	7	6	30-Apr-16	06-May-16
CBBA140	F/R/P Stem - Abutment B - Phase 2 - WB Bridge B-609	5	4	09-May-16	13-May-16
CBBA150	Cure Stem - Abutment B - Phase 2 - WB Bridge B-609	7	6	14-May-16	20-May-16
CBBA160	F/R/P Backwall - Abutment B - Phase 2 - WB Bridge B-609	4	4	23-May-16	26-May-16
CBBA170	Cure Backwall - Abutment B - Phase 2 - WB Bridge B-609	7	7	27-May-16	02-Jun-16
CBBA180	Backfill - Abutment B - Phase 2 - WB Bridge B-609	2	5	13-Jun-16	14-Jun-16
CBBA190	Construct MSE Wall - Abutment B - Phase 2 - WB Bridge B-609	6	5	03-Jun-16	10-Jun-16
CBBA200	Structural Excavation - Pier 1 - Phase 2 - WB Bridge B-609	2	6	28-Mar-16	29-Mar-16
CBBA205	Drive Piles - Pier 1 - Phase 2 - WB Bridge B-609	3	4	01-Apr-16	05-Apr-16
CBBA300	Structural Excavation - Pier 2 - Phase 2 - WB Bridge B-609	2	7	30-Mar-16	31-Mar-16
CBBA305	Drive Piles - Pier 2 - Phase 2 - WB Bridge B-609	3	4	06-Apr-16	08-Apr-16
CBBA400	Structural Excavation - Pier 3 - Phase 2 - WB Bridge B-609	2	8	01-Apr-16	04-Apr-16
CBBA405	Drive Piles - Pier 3 - Phase 2 - WB Bridge B-609	3	4	11-Apr-16	13-Apr-16
CBBA410	F/R/P Footing - Pier 3 - Phase 2 - WB Bridge B-609	5	19	14-Apr-16	20-Apr-16
CBBA430	F/R/P Column - Pier 3 - Phase 2 - WB Bridge B-609	4	19	28-Apr-16	03-May-16
CBBA450	F/R/P Cap - Pier 3 - Phase 2 - WB Bridge B-609	5	19	11-May-16	17-May-16
CBBA500	Structural Excavation - Pier 4 - Phase 2 - WB Bridge B-609	2	9	05-Apr-16	06-Apr-16
CBBA505	Drive Piles - Pier 4 - Phase 2 - WB Bridge B-609	3	4	14-Apr-16	18-Apr-16
CBBA510	F/R/P Footing - Pier 4 - Phase 2 - WB Bridge B-609	5	16	19-Apr-16	25-Apr-16
CBBA530	F/R/P Column - Pier 4 - Phase 2 - WB Bridge B-609	4	16	03-May-16	06-May-16
CBBA550	F/R/P Cap - Pier 4 - Phase 2 - WB Bridge B-609	5	16	16-May-16	20-May-16
Superstructure		108	5	15-Jun-16	11-Nov-16
CBBB010	Erect Beams - Span a - Phase 2 - WB Bridge B-609	2	5	15-Jun-16	16-Jun-16
CBBB020	Erect Beams - Span b - Phase 2 - WB Bridge B-609	2	5	17-Jun-16	20-Jun-16
CBBB030	Erect Beams - Span c - Phase 2 - WB Bridge B-609	2	5	21-Jun-16	22-Jun-16

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
CBBB040	Erect Beams - Span d - Phase 2 - WB Bridge B-609	2	5	23-Jun-16	24-Jun-16
CBBB050	Erect Beams - Span e - Phase 2 - WB Bridge B-609	2	5	27-Jun-16	28-Jun-16
CBBB060	F/R/P End Closure - East - Phase 2 - WB Bridge B-609	5	5	29-Jun-16	06-Jul-16
CBBB070	Cure End Closure - East - Phase 2 - WB Bridge B-609	7	7	07-Jul-16	13-Jul-16
CBBB080	F/R/P End Closure - West - Phase 2 - WB Bridge B-609	5	5	29-Jun-16	06-Jul-16
CBBB090	Cure End Closure - West - Phase 2 - WB Bridge B-609	7	7	07-Jul-16	13-Jul-16
CBBB100	Install Expansion Dam - East - Phase 2 - WB Bridge B-609	3	5	14-Jul-16	18-Jul-16
CBBB110	Install Expansion Dam - West - Phase 2 - WB Bridge B-609	3	5	14-Jul-16	18-Jul-16
CBBB120	F/R Deck - Span a - Phase 2 - WB Bridge B-609	8	5	19-Jul-16	28-Jul-16
CBBB130	F/R Deck - Span b - Phase 2 - WB Bridge B-609	8	5	29-Jul-16	09-Aug-16
CBBB140	F/R Deck - Span c - Phase 2 - WB Bridge B-609	8	5	10-Aug-16	19-Aug-16
CBBB150	F/R Deck - Span d - Phase 2 - WB Bridge B-609	8	5	22-Aug-16	31-Aug-16
CBBB160	F/R Deck - Span e - Phase 2 - WB Bridge B-609	8	5	01-Sep-16	13-Sep-16
CBBB180	F/R Closure Diaphragms - Spans b - c - Phase 2 - WB Bridge B-609	3	19	22-Aug-16	24-Aug-16
CBBB190	F/R Closure Diaphragms - Spans c - d - Phase 2 - WB Bridge B-609	3	12	01-Sep-16	06-Sep-16
CBBB200	F/R Closure Diaphragms - Spans d - e - Phase 2 - WB Bridge B-609	3	5	14-Sep-16	16-Sep-16
CBBB220	Pour Deck - Span b - Phase 2 - WB Bridge B-609	1	19	25-Aug-16	25-Aug-16
CBBB230	Pour Deck - Span c - Phase 2 - WB Bridge B-609	1	12	07-Sep-16	07-Sep-16
CBBB240	Pour Deck - Span d - Phase 2 - WB Bridge B-609	1	5	19-Sep-16	19-Sep-16
CBBB250	Pour Deck - Span e - Phase 2 - WB Bridge B-609	1	5	20-Sep-16	20-Sep-16
CBBB280	Cure Deck - Span c - Phase 2 - WB Bridge B-609	7	20	08-Sep-16	14-Sep-16
CBBB290	Cure Deck - Span d - Phase 2 - WB Bridge B-609	7	8	20-Sep-16	26-Sep-16
CBBB300	Cure Deck - Span e - Phase 2 - WB Bridge B-609	7	7	21-Sep-16	27-Sep-16
CBBB350	Pour Deck Closure - Phase 2 - WB Bridge B-609	2	20	28-Sep-16	29-Sep-16
CBBB370	F/R/P Approach Slab - East - Phase 2 - WB Bridge B-609	5	5	28-Sep-16	04-Oct-16
CBBB380	Cure Approach Slab - East - Phase 2 - WB Bridge B-609	7	7	05-Oct-16	11-Oct-16
CBBB410	Construct Concrete Curb with Fence - Span a - Phase 2 - WB Bridg...	1	20	07-Oct-16	07-Oct-16
CBBB420	Construct Concrete Curb with Fence - Span b - Phase 2 - WB Bridg...	1	20	10-Oct-16	10-Oct-16
CBBB430	Construct Concrete Curb with Fence - Span c - Phase 2 - WB Bridg...	1	20	11-Oct-16	11-Oct-16
CBBB440	Construct Concrete Curb with Fence - Span d - Phase 2 - WB Bridg...	1	20	12-Oct-16	12-Oct-16
CBBB450	Construct Concrete Curb with Fence - Span e - Phase 2 - WB Bridg...	1	20	13-Oct-16	13-Oct-16
CBBB460	Install Pedestrian Fence - Phase 2 - WB Bridge B-609	3	20	14-Oct-16	18-Oct-16
CBBB470	Construct BR27 Railing Complete - Span a - Phase 2 - WB Bridge ...	4	5	12-Oct-16	17-Oct-16
CBBB480	Construct BR27 Railing Complete - Span b - Phase 2 - WB Bridge ...	4	5	18-Oct-16	21-Oct-16
CBBB490	Construct BR27 Railing Complete - Span c - Phase 2 - WB Bridge ...	4	5	24-Oct-16	27-Oct-16
CBBB500	Construct BR27 Railing Complete - Span d - Phase 2 - WB Bridge ...	4	5	28-Oct-16	02-Nov-16
CBBB510	Construct BR27 Railing Complete - Span e - Phase 2 - WB Bridge ...	4	5	03-Nov-16	08-Nov-16
CBBB520	Groove Bridge Deck - Phase 2 - WB Bridge B-609	1	5	09-Nov-16	09-Nov-16
CBBB550	VDOT Safety and Acceptance Inspection - Phase 2 - WB Bridge B-...	2	5	10-Nov-16	11-Nov-16
Phase 3		14	5	14-Nov-16	01-Dec-16
Traffic Control		2	5	14-Nov-16	15-Nov-16
CBCT010	Install MOT Controls & Shift Traffic - Phase 3 - Area 2	2	5	14-Nov-16	15-Nov-16
Superstructure		12	5	16-Nov-16	01-Dec-16
CBCB010	Construct Median - Bridge B-609	10	5	16-Nov-16	01-Dec-16
Area 3 - Fall Hill Avenue (134+88.65 to 184+07.85)		285	0	06-Oct-15	07-Nov-16
Phase 1		146	0	06-Oct-15	26-Apr-16
Traffic Control		1	12	17-Nov-15	17-Nov-15

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
CCAT020	Shift Traffic to North Side of Roadway - Phase 1 - Area 3	1	10	17-Nov-15	17-Nov-15
Erosion Control		23	16	18-Nov-15	18-Dec-15
CCAE010	Install E & S Controls - Phase 1 - Area 3	10	10	18-Nov-15	03-Dec-15
CCAE020	Install SWM Ponds - Phase 1 - Area 3	7	10	10-Dec-15	18-Dec-15
Roadway		146	0	06-Oct-15	26-Apr-16
CCAR000	Clear & Grub for Temporary Paving - Phase 1 - Area 3	5	0	06-Oct-15	12-Oct-15
CCAR003	Excavate for Temporary Paving - Phase 1 - Area 3	15	10	13-Oct-15	02-Nov-15
CCAR005	Construct Temporary Paving - Phase 1 - Area 3	10	10	03-Nov-15	16-Nov-15
CCAR010	Clear & Grub - 134+88 to 150+97 RT - Area 3	4	10	04-Dec-15	09-Dec-15
CCAR020	Excavate / Widen Roadway - 134+88 to 150+97 RT - Area 3	15	10	21-Dec-15	18-Jan-16
CCAR030	Install Storm Drainage - 134+88 to 150+97 RT - Area 3	10	10	19-Jan-16	01-Feb-16
CCAR040	Finegrade Subgrade - 134+88 to 150+97 RT - Area 3	6	10	02-Feb-16	09-Feb-16
CCAR050	Place Stone Base - 134+88 to 150+97 RT - Area 3	10	10	10-Feb-16	23-Feb-16
CCAR060	Install Underdrain - 134+88 to 150+97 RT - Area 3	3	10	24-Feb-16	26-Feb-16
CCAR070	Install Curb & Sidewalk - 134+88 to 150+97 RT - Area 3	8	10	29-Feb-16	09-Mar-16
CCAR080	Backfill Curb - 134+88 to 150+97 RT - Area 3	6	10	10-Mar-16	17-Mar-16
CCAR090	Place Base & Intermediate Asphalt - 134+88 to 150+97 RT - Area 3	8	10	18-Mar-16	29-Mar-16
CCAR110	Finish Grade & Stabilize - 134+88 to 150+97 RT - Area 3	10	10	30-Mar-16	12-Apr-16
CCAR300	Clear & Grub - 150+97 to 167+25 RT - Area 3	8	0	13-Oct-15	22-Oct-15
CCAR500	Clear & Grub - 167+25 to 182+00 RT - Area 3	8	0	23-Oct-15	03-Nov-15
CCAR530	Finegrade Subgrade - 167+25 to 182+00 RT - Area 3	5	0	29-Feb-16	04-Mar-16
CCAR540	Place Stone Base - 167+25 to 182+00 RT - Area 3	7	0	07-Mar-16	15-Mar-16
CCAR550	Install Underdrain - 167+25 to 182+00 RT - Area 3	3	0	16-Mar-16	18-Mar-16
CCAR560	Install Curb & Sidewalk - 167+25 to 182+00 RT - Area 3	6	0	21-Mar-16	28-Mar-16
CCAR570	Backfill Curb - 167+25 to 182+00 RT - Area 3	5	0	29-Mar-16	04-Apr-16
CCAR580	Place Base & Intermediate Asphalt - 167+25 to 182+00 RT - Area 3	6	0	05-Apr-16	12-Apr-16
CCAR600	Finish Grade & Stabilize - 167+25 to 182+00 RT - Area 3	10	0	13-Apr-16	26-Apr-16
CCAR710	Clear & Grub - Frederick Place - Area 3	2	14	06-Oct-15	07-Oct-15
CCAR720	Excavate / Widen Roadway - Frederick Place - Area 3	7	14	08-Oct-15	16-Oct-15
CCAR740	Finegrade Subgrade - Frederick Place - Area 3	2	14	19-Oct-15	20-Oct-15
CCAR750	Place Stone Base - Frederick Place - Area 3	3	14	21-Oct-15	23-Oct-15
CCAR760	Install Underdrain - Frederick Place - Area 3	2	14	26-Oct-15	27-Oct-15
CCAR770	Install Curb & Sidewalk - Frederick Place - Area 3	5	14	28-Oct-15	03-Nov-15
CCAR780	Place Base & Intermediate Asphalt - Frederick Place - Area 3	3	14	04-Nov-15	06-Nov-15
Retaining Walls		83	0	04-Nov-15	26-Feb-16
CCAW0[illegible]	Excavate & Construct Retaining Wall C - 10+00 to 15+31 RT - Area...	75	0	04-Nov-15	26-Feb-16
Phase 2		97	0	27-Apr-16	08-Sep-16
Traffic Control		2	0	27-Apr-16	28-Apr-16
CCBT010	Install MOT Controls & Shift Traffic - Phase 2 - Area 3	2	0	27-Apr-16	28-Apr-16
Erosion Control		10	0	29-Apr-16	12-May-16
CCBE010	Install E & S Controls - Phase 2 - Area 3	10	0	29-Apr-16	12-May-16
Roadway		85	0	13-May-16	08-Sep-16
CCBR020	Excavate / Widen Roadway - 134+88 to 150+97 LT - Area 3	8	0	13-May-16	24-May-16
CCBR310	Excavate / Widen Roadway - 150+97 to 167+25 LT - Area 3	10	0	25-May-16	08-Jun-16
CCBR320	Install Storm Drainage - 150+97 to 167+25 LT - Area 3	3	20	09-Jun-16	13-Jun-16
CCBR400	Finish Grade & Stabilize - 150+97 to 167+25 LT - Area 3	6	20	03-Aug-16	10-Aug-16
CCBR510	Excavate / Widen Roadway - 167+25 to 182+00 LT - Area 3	10	0	09-Jun-16	22-Jun-16

Activity ID	Activity Name	Original Duration	Total Float	Start	Finish
CCBR520	Install Storm Drainage - 167+25 to 182+00 LT - Area 3	5	0	23-Jun-16	29-Jun-16
CCBR530	Finegrade Subgrade - 167+25 to 182+00 LT - Area 3	6	0	30-Jun-16	08-Jul-16
CCBR540	Place Stone Base - 167+25 to 182+00 LT - Area 3	10	0	11-Jul-16	22-Jul-16
CCBR550	Install Underdrain - 167+25 to 182+00 LT - Area 3	5	0	25-Jul-16	29-Jul-16
CCBR560	Install Curb & Sidewalk - 167+25 to 182+00 LT - Area 3	8	0	01-Aug-16	10-Aug-16
CCBR570	Backfill Curb - 167+25 to 182+00 LT - Area 3	7	0	11-Aug-16	19-Aug-16
CCBR580	Place Base & Intermediate Asphalt - 167+25 to 182+00 LT - Area 3	6	0	22-Aug-16	29-Aug-16
CCBR600	Finish Grade & Stabilize - 167+25 to 182+00 LT - Area 3	7	0	30-Aug-16	08-Sep-16
Noise Barrier Walls		36	20	14-Jun-16	02-Aug-16
CCBS010	Construct Noise Barrier Wall 3 - 151+30 to 153+00 LT - Area 3	35	20	14-Jun-16	02-Aug-16
Phase 3		42	0	09-Sep-16	07-Nov-16
Traffic Control		2	0	09-Sep-16	12-Sep-16
CCCT010	Install MOT Controls & Shift Traffic - Phase 3 - Area 3	2	0	09-Sep-16	12-Sep-16
Roadway		40	0	13-Sep-16	07-Nov-16
CCCR010	Construct Concrete Median - Median - Area 3	30	0	13-Sep-16	24-Oct-16
CCCR020	Finish Grade Median & Stabilize - Median - Area 3	10	0	25-Oct-16	07-Nov-16
Entire Project		422	1	28-Apr-15	07-Dec-16
Traffic Control		5	4	28-Apr-15	04-May-15
CGT0010	Install Project Wide Construction Signs	5	4	28-Apr-15	04-May-15
Roadway		22	1	08-Nov-16	07-Dec-16
CGR0010	Mill & Overlay / Place Surface Pavement - Fall Hill Ave. & Mary Wa...	15	0	08-Nov-16	30-Nov-16
CGR0020	Place Pavement Markings - Fall Hill Ave. & Mary Washington Blvd. ...	5	1	01-Dec-16	07-Dec-16

EXHIBIT 4.7.3

WORK BREAKDOWN STRUCTURE

WBS Code	WBS Name	Start	Finish	Total Activities
C00088699DB59	Fall Hill Ave. Widening & Mary Washington Blvd. Extension	18-Apr-14	23-Jan-17	637
C00088699DB59.GO	Pre-Construction Activities	18-Apr-14	23-Jan-17	223
C00088699DB59.GO.1	Project Milestones	18-Apr-14	23-Jan-17	3
C00088699DB59.GO.2	Project Management	18-Apr-14	23-Jan-17	72
C00088699DB59.GO.3	Scope Validation Period	18-Apr-14	27-Aug-14	3
C00088699DB59.GO.4	Design	18-Apr-14	20-Mar-15	70
C00088699DB59.GO.5	Public Involvement	18-Apr-14	01-May-14	1
C00088699DB59.GO.6	Permits / Environmental	08-Jul-14	09-Apr-15	5
C00088699DB59.GO.7	Right-of-Way	18-Apr-14	27-Apr-15	14
C00088699DB59.GO.8	Utility Adjustments	24-Sep-14	05-Oct-15	23
C00088699DB59.GO.9	Procurement	16-Oct-14	31-Jul-15	32
C00088699DB59.CA	Area 1 - Fall Hill Avenue (104+37.86 to 130+75.39)	13-Aug-15	26-May-16	33
C00088699DB59.CA.A	Phase 1	13-Aug-15	10-Dec-15	16
C00088699DB59.CA.A.T	Traffic Control	13-Aug-15	25-Aug-15	2
C00088699DB59.CA.A.E	Erosion Control	26-Aug-15	17-Sep-15	2
C00088699DB59.CA.A.R	Roadway	17-Aug-15	10-Dec-15	12
C00088699DB59.CA.B	Phase 2	11-Dec-15	05-Apr-16	14
C00088699DB59.CA.B.T	Traffic Control	11-Dec-15	14-Dec-15	1
C00088699DB59.CA.B.E	Erosion Control	15-Dec-15	07-Jan-16	2
C00088699DB59.CA.B.R	Roadway	21-Dec-15	05-Apr-16	11
C00088699DB59.CA.C	Phase 3	06-Apr-16	26-May-16	3
C00088699DB59.CA.C.T	Traffic Control	06-Apr-16	07-Apr-16	1
C00088699DB59.CA.C.R	Roadway	08-Apr-16	26-May-16	2
C00088699DB59.CB	Area 2 - Bridge B-609 (Fall Hill Ave. over I-95)	05-May-15	05-Dec-16	236
C00088699DB59.CB.A	Phase 1	05-May-15	18-Jan-16	114
C00088699DB59.CB.A.T	Traffic Control	05-May-15	06-May-15	1
C00088699DB59.CB.A.A	Substructure	07-May-15	11-Aug-15	60
C00088699DB59.CB.A.B	Superstructure	12-Aug-15	18-Jan-16	53
C00088699DB59.CB.B	Phase 2	19-Jan-16	11-Nov-16	119
C00088699DB59.CB.B.T	Traffic Control	19-Jan-16	20-Jan-16	1
C00088699DB59.CB.B.A	Substructure	24-Mar-16	14-Jun-16	60
C00088699DB59.CB.B.B	Superstructure	15-Jun-16	11-Nov-16	55
C00088699DB59.CB.B.S	Noise Barrier Walls	13-Jun-16	29-Aug-16	1
C00088699DB59.CB.C	Phase 3	14-Nov-16	05-Dec-16	3
C00088699DB59.CB.C.T	Traffic Control	14-Nov-16	15-Nov-16	1
C00088699DB59.CB.C.B	Superstructure	16-Nov-16	05-Dec-16	2
C00088699DB59.CC	Area 3 - Fall Hill Avenue (134+88.65 to 184+07.85)	05-May-15	07-Nov-16	86
C00088699DB59.CC.A	Phase 1	05-May-15	26-Apr-16	51
C00088699DB59.CC.A.T	Traffic Control	05-May-15	17-Nov-15	2
C00088699DB59.CC.A.E	Erosion Control	18-Nov-15	18-Dec-15	2
C00088699DB59.CC.A.R	Roadway	12-May-15	26-Apr-16	45
C00088699DB59.CC.A.W	Retaining Walls	04-Nov-15	26-Feb-16	1
C00088699DB59.CC.A.S	Noise Barrier Walls	03-Dec-15	04-Feb-16	1
C00088699DB59.CC.B	Phase 2	27-Apr-16	08-Sep-16	32
C00088699DB59.CC.B.T	Traffic Control	27-Apr-16	28-Apr-16	1
C00088699DB59.CC.B.E	Erosion Control	29-Apr-16	12-May-16	1
C00088699DB59.CC.B.R	Roadway	13-May-16	08-Sep-16	28
C00088699DB59.CC.B.W	Retaining Walls	29-Apr-16	03-Jun-16	1
C00088699DB59.CC.B.S	Noise Barrier Walls	14-Jun-16	02-Aug-16	1
C00088699DB59.CC.C	Phase 3	09-Sep-16	07-Nov-16	3
C00088699DB59.CC.C.T	Traffic Control	09-Sep-16	12-Sep-16	1
C00088699DB59.CC.C.R	Roadway	13-Sep-16	07-Nov-16	2
C00088699DB59.CD	Area 4 - Mary Washington Boulevard (202+22 to 216+00)	11-Sep-15	08-Jul-16	14
C00088699DB59.CD.E	Erosion Control	11-Sep-15	20-Oct-15	2

WBS Code	WBS Name	Start	Finish	Total Activities
C00088699DB59.CD.R	Roadway	29-Sep-15	08-Jul-16	10
C00088699DB59.CD.W	Retaining Walls	13-Oct-15	14-Apr-16	2
C00088699DB59.CE	Area 5 - Mary Washington Boulevard (216+00 to 236+74)	05-May-15	10-Aug-15	19
C00088699DB59.CE.A	Phase 1	05-May-15	06-Jul-15	12
C00088699DB59.CE.B	Phase 2	07-Jul-15	10-Aug-15	7
C00088699DB59.CF	Area 6 - Jefferson Davis Highway (Route 1)	11-Aug-15	28-Oct-15	18
C00088699DB59.CF.A	Phase 1	11-Aug-15	02-Oct-15	11
C00088699DB59.CF.B	Phase 2	05-Oct-15	28-Oct-15	7
C00088699DB59.CG	Entire Project	28-Apr-15	07-Dec-16	8
C00088699DB59.CG.T	Traffic Control	28-Apr-15	04-May-15	1
C00088699DB59.CG.R	Roadway	29-Oct-15	07-Dec-16	7

Appendix 4.1.7
Proposal Payment Agreement

ATTACHMENT 9.3.1
PROPOSAL PAYMENT AGREEMENT

THIS PROPOSAL PAYMENT AGREEMENT (this "Agreement") is made and entered into as of this 12 day of December, 2013, by and between the Virginia Department of Transportation ("VDOT"), and American Infrastructure-VA, Inc. ("Offeror").

WITNESSETH:

WHEREAS, Offeror is one of the entities who submitted Statements of Qualifications ("SOQs"), to the Virginia Department of Transportation ("VDOT), pursuant to VDOT's April 8, 2013 Request for Qualifications ("RFQ") and was invited to submit proposals in response to a Request for Proposals ("RFP") for the Fall Hill Avenue Widening and Mary Washington Boulevard Extension, Project No. U000-111-233 ("Project"), under a design-build contract with VDOT ("Design-Build Contract"); and

WHEREAS, as part of the procurement process for the Project, Offeror has already provided and/or furnished to VDOT, and may continue to provide and/or furnish to VDOT, certain intellectual property, materials, information and ideas, including, but not limited to, such matters that are: (a) conveyed verbally and in writing during proprietary meetings or interviews; and (b) contained in, related to or associated with Offeror's proposal, including, but not limited to, written correspondence, designs, drawings, plans, exhibits, photographs, reports, printed material, tapes, electronic disks, or other graphic and visual aids (collectively "Offeror's Intellectual Property"); and

WHEREAS, VDOT is willing to provide a payment to Offeror, subject to the express conditions stated in this Agreement, to obtain certain rights in Offeror's Intellectual Property, provided that Offeror submits a proposal that VDOT determines to be responsive to the RFP ("Offeror's Proposal"), and either (a) Offeror is not awarded the Design-Build Contract; or (b) VDOT cancels the procurement or decides not to award the Design-Build Contract to any Offeror; and

WHEREAS, Offeror wishes to receive the payment offered by VDOT, in exchange for granting VDOT the rights set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth in this Agreement and other good and valuable consideration, the receipt and adequacy of which are acknowledged by the parties, the parties agree as follows:

1. VDOT's Rights in Offeror's Intellectual Property. Offeror hereby conveys to VDOT all rights, title and interest, free and clear of all liens, claims and encumbrances, in Offeror's Intellectual Property, which includes, without restriction or limitation, the right of VDOT, and anyone contracting with VDOT, to incorporate any ideas or information from Offeror's Intellectual Property into: (a) the Design-Build Contract and the Project; (b) any other contract awarded in reference to the Project; or (c) any subsequent procurement by VDOT. In receiving all rights, title and interest in Offeror's Intellectual Property, VDOT is deemed to own all intellectual property rights, copyrights, patents, trade secrets, trademarks, and service marks in Offeror's Intellectual Property, and Offeror agrees that it shall, at the request of VDOT, execute all papers and perform all other acts that may be necessary to ensure that VDOT's rights, title and interest in Offeror's Intellectual Property are protected. The rights conferred herein to VDOT include, without limitation, VDOT's ability to use Offeror's Intellectual Property without the obligation to notify or seek permission from Offeror.

2. Exclusions from Offeror's Intellectual Property. Notwithstanding Section 1 above, it is understood and agreed that Offeror's Intellectual Property is not intended to include, and Offeror does not convey any rights to, the Escrow Proposal Documents submitted by Offeror in accordance with the RFP.

3. Proposal Payment. VDOT agrees to pay Offeror the lump sum amount of forty thousand and 00/100 Dollars ($40,000.00) ("Proposal Payment"), which payment constitutes payment in full to Offeror for the conveyance of Offeror's Intellectual Property to VDOT in accordance with this Agreement. Payment of the Proposal Payment is conditioned upon: (a) Offeror's Proposal being, in the sole discretion of VDOT, responsive to the RFP; (b) Offeror complying with all other terms and conditions of this Agreement; and (c) either (i) Offeror is not awarded the Design-Build Contract, or (ii) VDOT cancels the procurement or decides not to award the Design-Build Contract to any Offeror.

4. Payment Due Date. Subject to the conditions set forth in this Agreement, VDOT will make payment of the Proposal Payment to the Offeror within forty-five (45) days after the later of: (a) notice from VDOT that it has awarded the Design-Build Contract to another Offeror; or (b) notice from VDOT that the procurement for the Project has been cancelled and that there will be no Contract Award.

5. Effective Date of this Agreement. The rights and obligations of VDOT and Offeror under this Agreement, including VDOT's ownership rights in Offeror's Intellectual Property, vests upon the date that Offeror's Proposal is submitted to VDOT. Notwithstanding the above, if Offeror's Proposal is determined by VDOT, in its sole discretion, to be nonresponsive to the RFP, then Offeror is deemed to have waived its right to obtain the Proposal Payment, and VDOT shall have no obligations under this Agreement.

6. Indemnity. Subject to the limitation contained below, Offeror shall, at its own expense, indemnify, protect and hold harmless VDOT and its agents, directors, officers, employees, representatives and contractors from all claims, costs, expenses, liabilities, demands, or suits at law or equity ("Claims") of, by or in favor of or awarded to any third party arising in whole or in part from: (a) the negligence or wilful misconduct of Offeror or any of its agents, officers, employees, representatives or subcontractors; or (b) breach of any of Offeror's obligations under this Agreement, including its representation and warranty under Section 8 hereof. This indemnity shall not apply with respect to any Claims caused by or resulting from the sole negligence or wilful misconduct of VDOT, or its agents, directors, officers, employees, representatives or contractors.

7. Assignment. Offeror shall not assign this Agreement, without VDOT's prior written consent, which consent may be given or withheld in VDOT's sole discretion. Any assignment of this Agreement without such consent shall be null and void.

8. Authority to Enter into this Agreement. By executing this Agreement, Offeror specifically represents and warrants that it has the authority to convey to VDOT all rights, title, and interest in Offeror's Intellectual Property, including, but not limited to, those any rights that might have been vested in team members, subcontractors, consultants or anyone else who may have contributed to the development of Offeror's Intellectual Property, free and clear of all liens, claims and encumbrances.

9. Miscellaneous.

a. Offeror and VDOT agree that Offeror, its team members, and their respective employees are not agents of VDOT as a result of this Agreement.

b. Any capitalized term used herein but not otherwise defined shall have the meanings set forth in the RFP.

c. This Agreement, together with the RFP, embodies the entire agreement of the parties with respect to the subject matter hereof. There are no promises, terms, conditions, or obligations other than those contained herein or in the RFP, and this Agreement shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto.

d. It is understood and agreed by the parties hereto that if any part, term, or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the Commonwealth of Virginia, validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provisions to be invalid.

e. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

IN WITNESS WHEREOF, this Agreement has been executed and delivered as of the day and year first above written.

VIRGINIA DEPARTMENT OF TRANSPORTATION

By: _____

Name: _____

Title: _____

AMERICAN INFRASTRUCTURE-VA, INC.

By: _____

Name: Aaron T. Myers

Title: VP/GM

Appendix 4.1.8
Debarment Forms

ATTACHMENT 11.8.6(a)
CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: U000-111-233

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.

12/12/13 — Date

VP/GM — Title

Signature

American Infrastructure-VA, Inc.
Name of Firm

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

Project No.: U000-111-233

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] 10/25/13 General Manager / Principal
Signature Date Title

Rinker Design Associates, P.C.
Name of Firm

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

Project No.: U000-111-233

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	12/10/13 Date	Richmond Business Unit Leader Title

Moffatt & Nichol, Inc.
Name of Firm

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

Project No.: U000-111-233

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.

Dennis C. Mowrer 10-7-13 Senior Vice President

Signature Date Title

Volkert, Inc.
Name of Firm

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

Project No.: U000-111-233

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	Title
[signature]	18 NOV 2013	PRESIDENT

DOVETAIL CULTURAL RESOURCE GROUP
Name of Firm

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

Project No.: U000-111-233

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.

J. Randy Wirt — VICE PRESIDENT

Signature Date Title

ECS MID-ATLANTIC, LLC

Name of Firm

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

Project No.: U000-111-233

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] 11/18/13 VICE PRESIDENT

Signature Date Title

KCI Technologies, Inc.
Name of Firm

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

Project No.: U000-111-233

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] 11/19/13 PARTNER

Signature Date Title

Pulsar Advertising, Inc.

Name of Firm

American Infrastructure-VA, Inc.
301 Concourse Blvd.
Suite 300
Glen Allen, VA 23059
804-290-8500

Rinker Design Associates, P.C.
301 Concourse Blvd.
Suite 120
Glen Allen, VA 23059
804-612-0665

VDOT
Virginia Department of Transportation

Volume II – Technical Proposal
Design Concept Graphics

A DESIGN-BUILD PROJECT

Fall Hill Avenue Widening and Mary Washington Boulevard Extension

From: 0.12 Miles West of Gordon W. Shelton Boulevard

To: Route 1 at Mary Washington Boulevard

Fredericksburg, Virginia

State Project No.: U000-111-233

Federal Project No.: STP-5A01(181)

Contract ID No.: C00088699DB59

Date: December 12, 2013

American Infrastructure

rda

4.3.1
Conceptual Roadway Plans

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YY
DESIGNED BY ZZZ

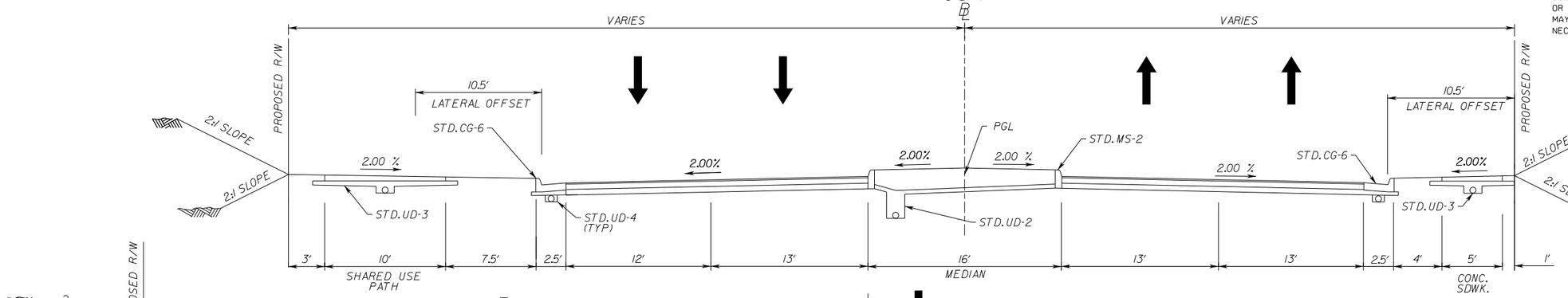
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	2A

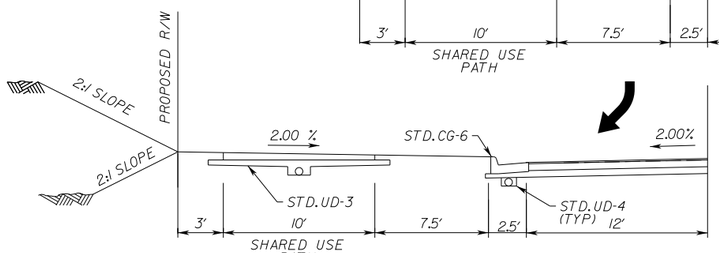
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

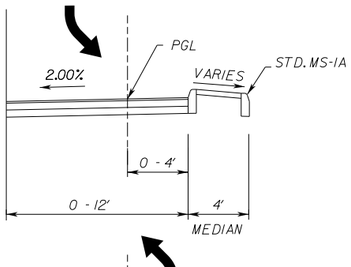
TYPICAL SECTIONS

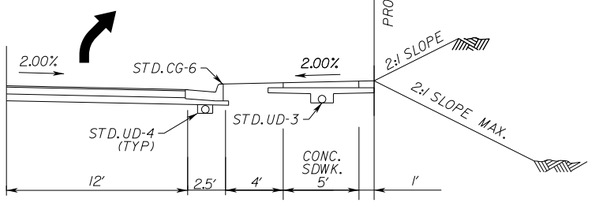
NOT TO SCALE

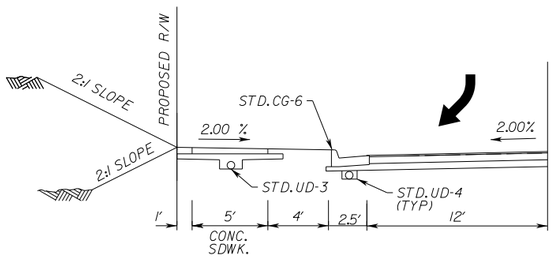
FALL HILL AVENUE
GS-7

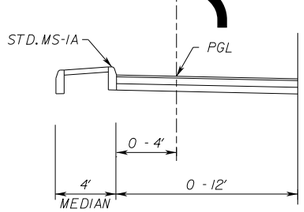


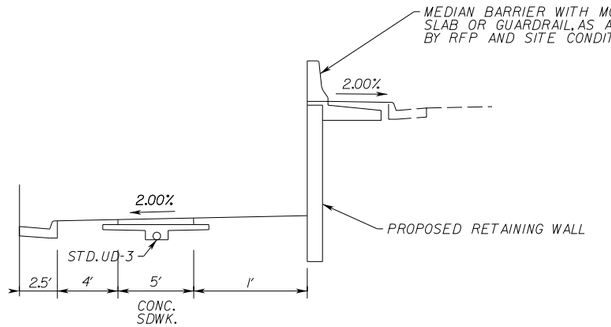


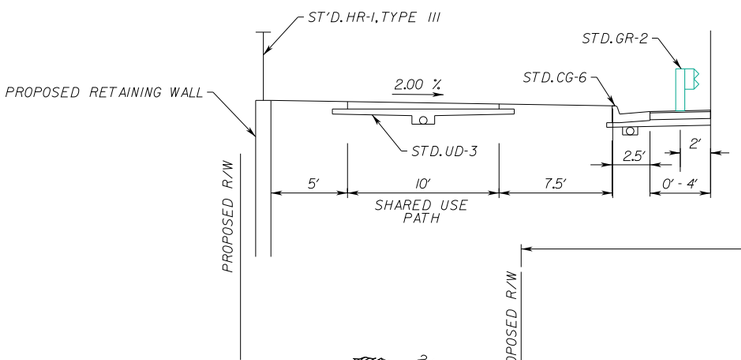


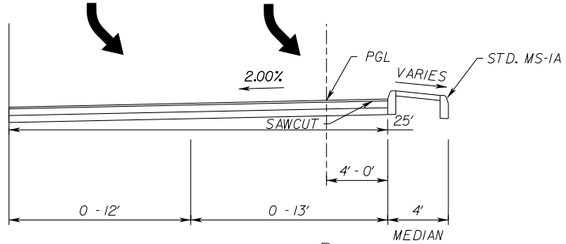


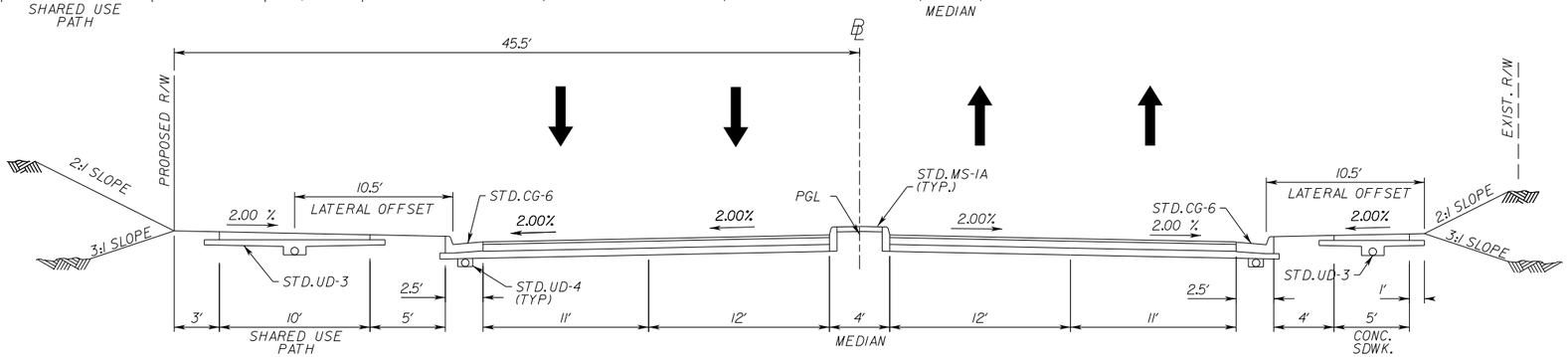












Notes:
1. The minimum length for turn lanes and tapers shall be as defined in the RFP.
2. The minimum pavement section shall be as defined in the RFP.
3. Mill and overlay and full depth paving locations are shown on the conceptual plans.
4. The elements of the typical sections are representative to the project, see the concept plans for stations, offsets, and turning lane locations.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	2A

10:40:00 AM $USER#

12/11/2013

N:\Richmond Marketing\2013\13068 - Fall Hill Avenue (AI-VA)\Proposal\Technical Proposal\Exhibits\Typicals.dgn

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

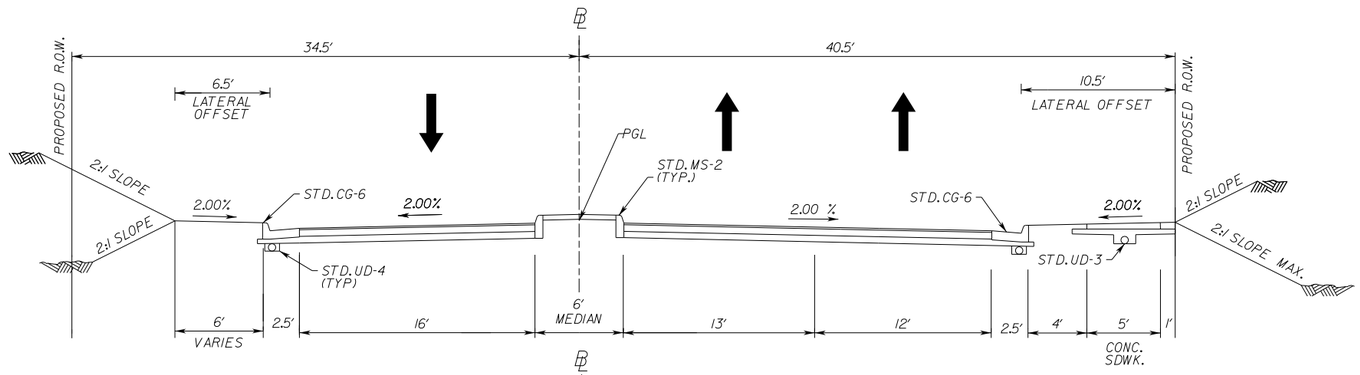
TYPICAL SECTIONS

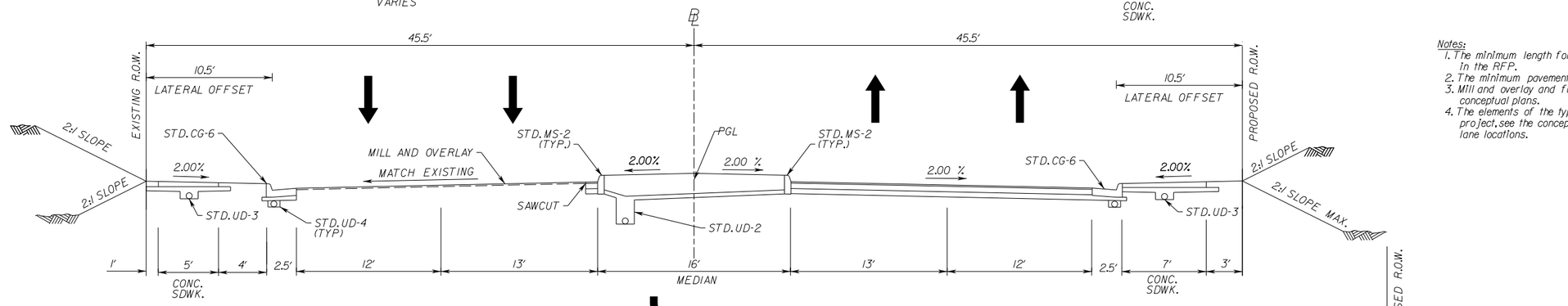
NOT TO SCALE

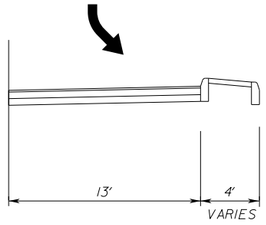
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	2B

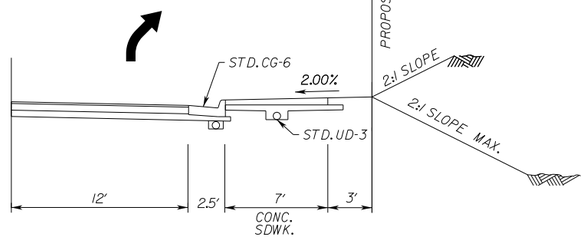
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

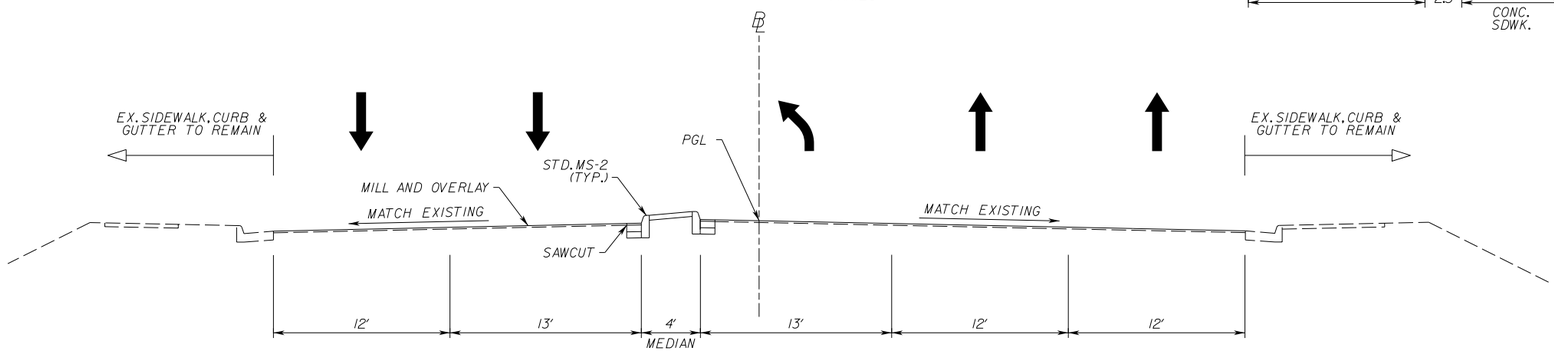
MARY WASHINGTON BLVD. GS-7



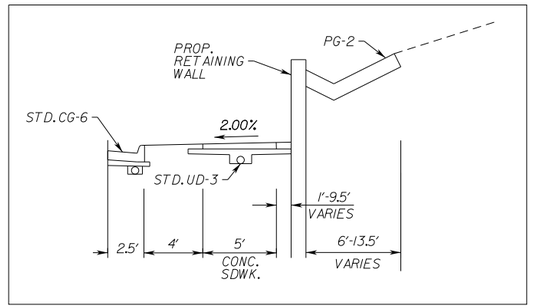








WALL DETAIL



Notes:
1. The minimum length for turn lanes and tapers shall be as defined in the RFP.
2. The minimum pavement section shall be as defined in the RFP.
3. Mill and overlay and full depth paving locations are shown on the conceptual plans.
4. The elements of the typical sections are representative to the project, see the concept plans for stations, offsets, and turning lane locations.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	2B

10/30/17 AM $USER$

12/11/2013 N:\Richmond Marketing\2013\13068 - Fall Hill Avenue (AI-VA)\Proposal\Technical Proposal\Exhibits\Typicals.dgn

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

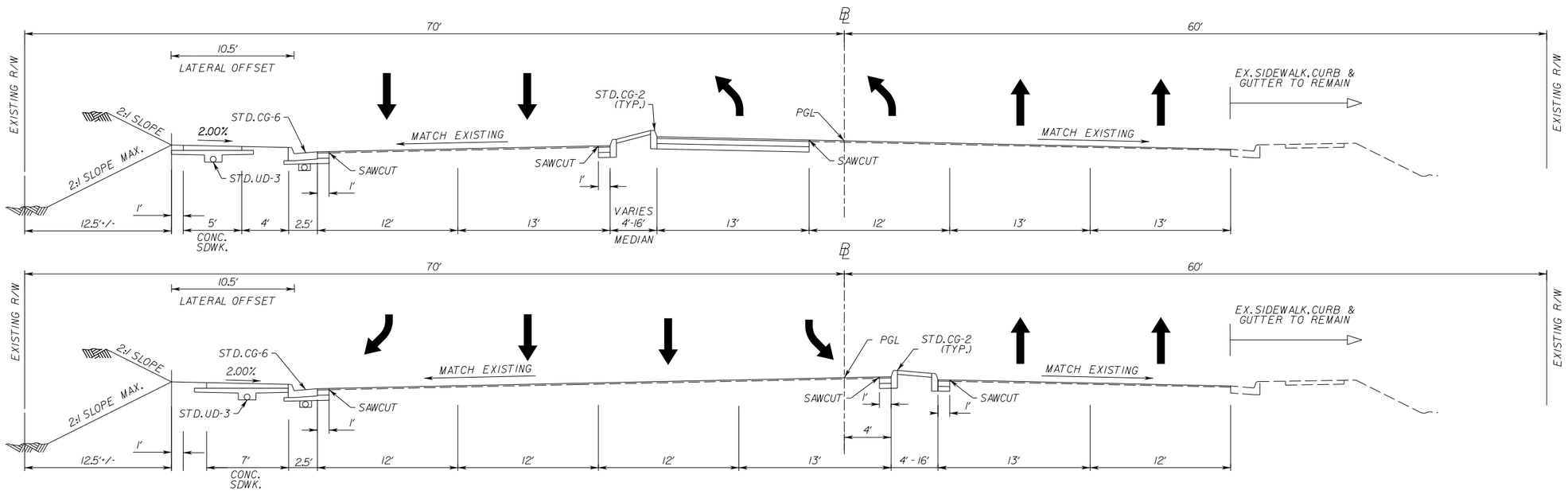
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	2C

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

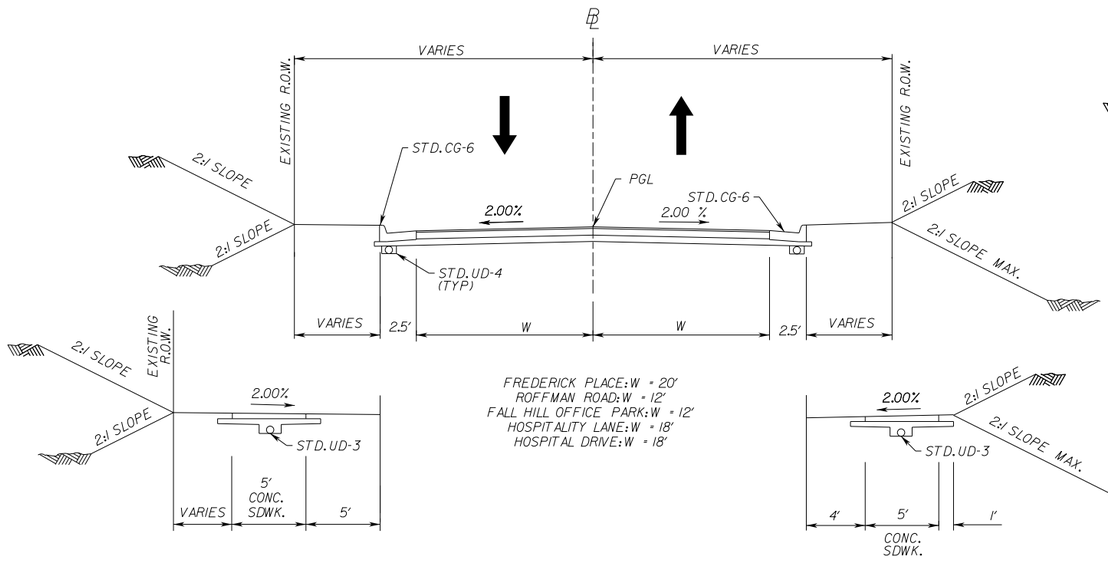
TYPICAL SECTIONS

NOT TO SCALE

JEFFERSON DAVIS HIGHWAY (US RT.1)
GS-5

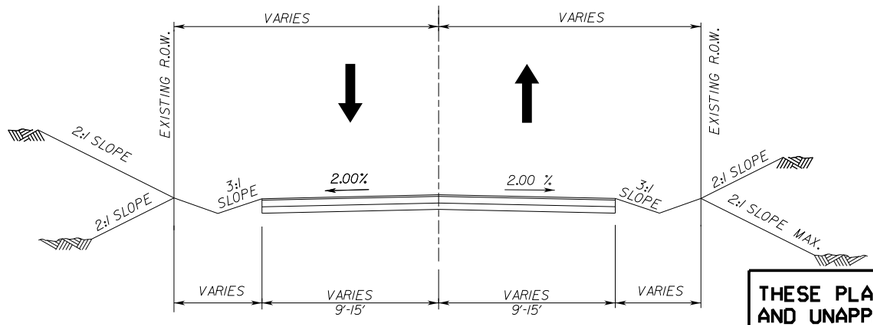


FREDERICK PLACE (PRIVATE RD.)
ROFFMAN ROAD (GS-8)
FALL HILL OFFICE PARK (PRIVATE ENTRANCE)
HOSPITALITY LANE (PRIVATE RD.)
HOSPITAL DRIVE (GS-8)



FREDERICK PLACE: W = 20'
ROFFMAN ROAD: W = 12'
FALL HILL OFFICE PARK: W = 12'
HOSPITALITY LANE: W = 18'
HOSPITAL DRIVE: W = 18'

BRISCOE LANE
GS-9



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American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	2C

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12/11/2013

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

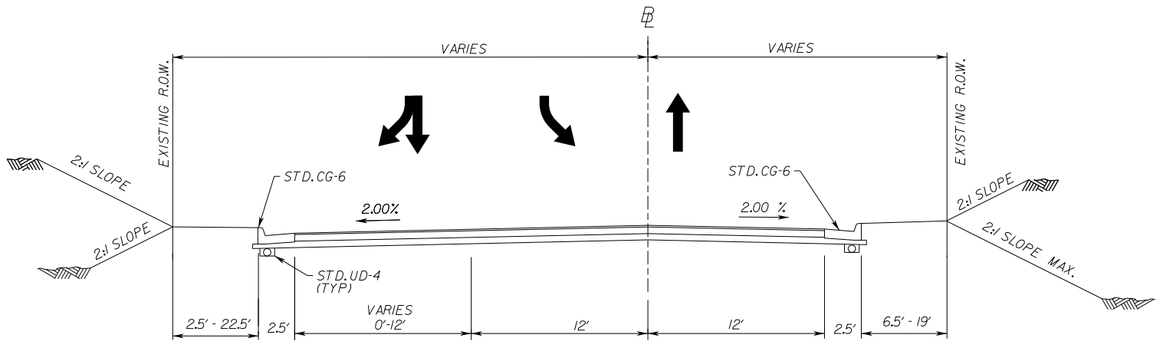
TYPICAL SECTIONS

NOT TO SCALE

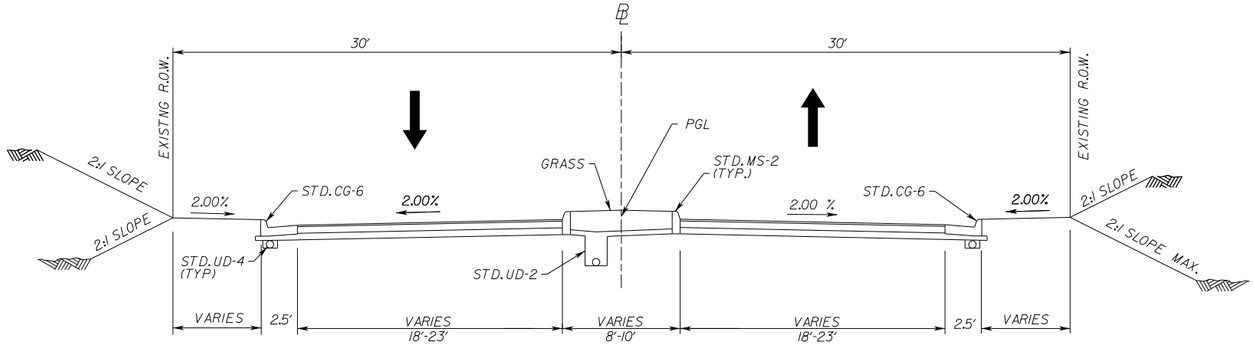
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	2D

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

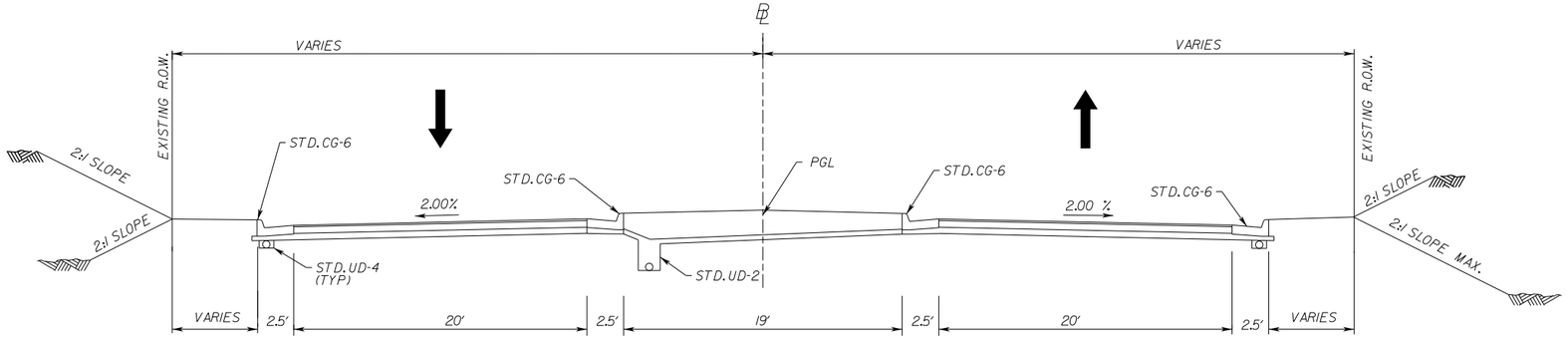
BRAGG HILL DRIVE AND WICKLOW DRIVE
GS-8



CRESTVIEW WAY AND WESTON LANE
PRIVATE ROAD



SAM PERRY BLVD.
PRIVATE ROAD



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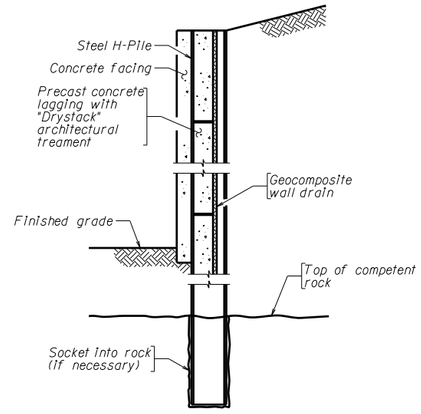
WALL DETAIL



H-PILE RETAINING WALL SECTION

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	2D

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	3

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

UTILITY OWNERS

Water & Sewer
City of Fredericksburg
Department of Public Works
715 Princess Anne Street
Fredericksburg, Virginia 22404
Adam McManama 504-372-1110

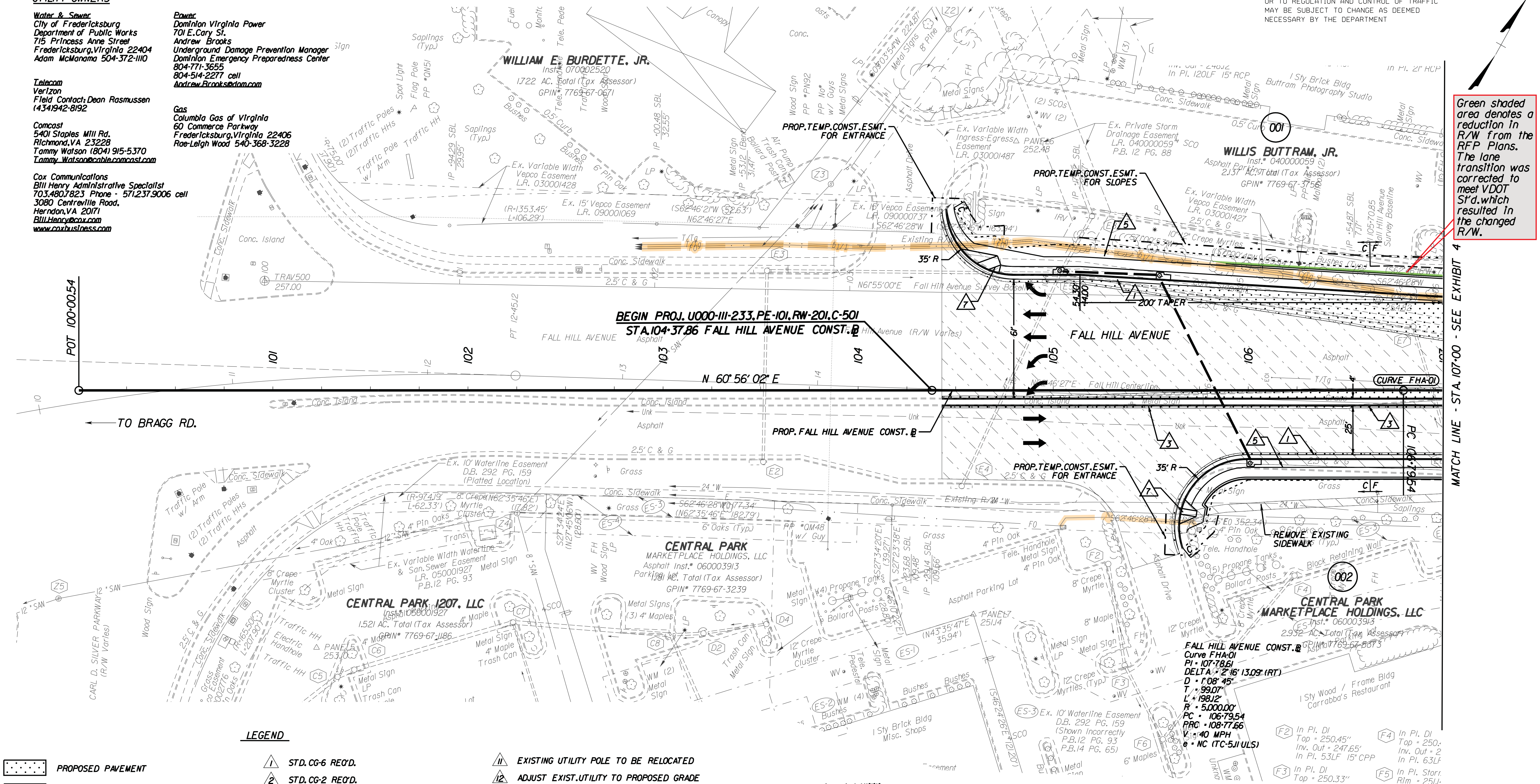
Telecom
Verizon
Field Contact: Dean Rasmussen
(434)942-8192

Comcast
5401 Staples Mill Rd.
Richmond, VA 23228
Tammy Watson (804) 915-5370
Tammy_Watson@cable.comcast.com

Cox Communications
Bill Henry Administrative Specialist
703.480.7823 Phone - 571.237.9006 cell
3080 Centreville Road,
Herndon, VA 20171
Bill.Henry@cox.com
www.coxbusiness.com

Power
Dominion Virginia Power
701 E.Cary St.
Andrew Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804-771-3655
804-514-2277 cell
Andrew.Brooks@dom.com

Gas
Columbia Gas of Virginia
60 Commerce Parkway
Fredericksburg, Virginia 22406
Rae-Leigh Wood 540-368-3228



LEGEND

(dotted)	PROPOSED PAVEMENT
(hatched)	MILL AND OVERLAY/BUILD UP
(cross-hatched)	DEMOLITION OF PAVEMENT
(hatched)	OBSCURING OF PAVEMENT

C ---- DENOTES CONSTRUCTION LIMITS IN CUTS
F ---- DENOTES CONSTRUCTION LIMITS IN FILLS
NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE R11 REQ'D.
9. STD. CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

Symbol	Utility
T/Tg	Telephone
FO	Fiber Optic
E	Electric
	Power Pole
24"W	Water
	Fire Hydrant
CATV	Cable TV
8"SAN	Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
rda Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	3

$USER$ 10:03:44 AM
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

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TAPER LENGTH/STORAGE LENGTH FOR EB LEFT TURNS SHALL BE ADJUSTED TO ACCOMODATE A PEDESTRIAN CROSSING ACROSS THE WEST LEG OF THE INTERSECTINON. CROSSWALK CONFIGURATION TO BE COORDINATED WITH CITY OF FREDERICKSBURG AND VDOT.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 PE-101, RW-201, C-501	4

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

Red shaded area depicts additional R/W needed by the AI Team Concept Plan. The lane transition was corrected to meet VDOT St'd. which resulted in the changed R/W.

Curve GWS-01
PI = 12+01.52
DELTA = 6°07'17.00" (LT)
D = 11°27'33"
T = 26.74'
L = 53.42'
R = 500.00'
PC = 11+74.79
PT = 12+28.21

PT 12+28.21
PC 11+74.79
PROP. GORDON W. SHELTON BLVD. CONST. -B
CURVE GWS-01
GORDON W. SHELTON BOULEVARD
GORDON W. SHELTON BLVD. CONST. -B
END CONSTRUCTION GORDON W. SHELTON BLVD. STA 10+93.45
PT 111+00.02
PRC 108+77.66
CURVE FHA-02
CURVE FHA-01
PROP. FALL HILL AVENUE CONST. -B
FALL HILL AVENUE
MATCH LINE - STA 107+00 - SEE EXHIBIT 3
MATCH LINE - STA 114+00 - SEE EXHIBIT 5

001 WILLIS BUTTRAM, JR.
Inst.# 040000059
2.137 AC. Total (Tax Assessor)
GPIN# 7769-67-3758

002 CENTRAL PARK MARKETPLACE HOLDINGS, LLC
Inst.# 060003915
2.932 AC. Total (Tax Assessor)
10' Waterline Easement D.B. 298 PG. 342

003 CELEBRATE VIRGINIA SOUTH, LLC
D.B. 344, PG. 356
1.24 AC. Total (Tax Assessor)
GPIN# 7769-67-6831

005 SOUTHWEST PNC, LLC
Inst.# 080002554
1.297 AC. Total (Tax Assessor)
T.M. 312-2-1001
1 Sty Brick Bldg

006 CARL D. SILVER HOLDING COMPANY, LLC
Inst.# 080001768 Pin Oak
14.954 AC. Total (Tax Assessor)
GPIN# 7769-78-2467

007 NELSON A. GRAVES JR. AND JOYCE D. GRAVES
D.B. 199, PG. 474
(SPOTSYLVANIA COUNTY)
34.731 AC. Total (Tax Assessor)

008 GLORIA B. WHITTAKER, CAROL B. COLEMAN AND BONNIE B. CARTER
D.B. 208, PG. 100
21.1851 AC. Total (Tax Assessor)

Ex. 15' Vepco Easement L.R. 070000426
Ex. 20' Vepco Easement L.R. 080001128
Ex. Variable Width Vepco Easement L.R. 030001427
Ex. Permanent Traffic Signal Aerial Easement L.R. 090002572
Ex. 10' Waterline Easement L.R. 080000118 P.B. 15 PG. 148
Ex. 10' Waterline Easement L.R. 090000566 P.B. 16 PG. 18
Ex. 10' Coxcom Easement
Ex. 10' Waterline Easement D.B. 298 PG. 342

PROP. TEMP. CONST. ESMT. FOR SLOPES
PROP. R/W
PROP. PERM. DRAIN. ESMT
PROP. TEMP. CONST. ESMT.
POC 110+71.39 FALL HILL AVENUE -B
POT 10+09.40 GORDON W. SHELTON BLVD. -B
Δ = 94°25'15" LT.
POT 113+62.42 FALL HILL AVENUE -B
POT 22+44.99 BRISCOE LANE -B
Δ = 72°31'07" RT.

FALL HILL AVENUE CONST. -B
Curve FHA-01
PI = 107+78.61
DELTA = 2°16'13.09" (RT)
D = 1°08'45"
T = 99.07'
L = 198.12'
R = 5,000.00'
PRC = 108+77.66
PT = 109+88.86
V = 40 MPH
e = NC (TC-5.11 ULS)

FALL HILL AVENUE CONST. -B
Curve FHA-02
PI = 109+88.86
DELTA = 2°32'53.09" (LT)
D = 1°08'45"
T = 111.20'
L = 222.36'
R = 5,000.00'
PRC = 108+77.66
PT = 111+00.02
V = 40 MPH
e = NC (TC-5.11 ULS)

Fall Hill Centerline
Δ = 0°47'45" Lt.
D = 0°30'55"
T = 77.22'
L = 154.44'
R = 11119.11'
PC 17+71.95
PI 18+49.18
PT 19+26.40

PC 19+26.40
PT 19+26.40
Fall Hill Centerline

CG-9D REQ'D. W = 16'

Fall Hill Avenue Survey Baseline
Brisbane Lane Survey Baseline

Impacted Utilities
T/Tg Telephone
FO Fiber Optic
E Electric
Power Pole
24" W Water
Fire Hydrant
CATV Cable TV
8" SAN Sanitary Sewer

PROPOSED PAVEMENT
MILL AND OVERLAY/BUILD UP
DEMOLITION OF PAVEMENT
OBSCURING OF PAVEMENT
C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
F __ DENOTES CONSTRUCTION LIMITS IN FILLS
NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

LEGEND

1 STD. CG-6 REQ'D.
2 STD. CG-2 REQ'D.
3 STD. MS-1A REQ'D.
4 STD. MS-2 REQ'D.
5 PROP. 5' CONC. SIDEWALK
6 PROP. 10' SHARED USE PATH
7 STD. CG-12, TYPE A REQ'D.
8 STD. CG-12, TYPE RII REQ'D.
9 STD. CG-12, TYPE RI2 REQ'D.
10 EXIST. PIPE TO BE REMOVED/ABANDONED
11 EXISTING UTILITY POLE TO BE RELOCATED
12 ADJUST EXIST. UTILITY TO PROPOSED GRADE
13 PROP. RETAINING WALL
14 STD. MB-2 REQ'D.
15 STD. GR-2 REQ'D.
16 STD. GR-9 REQ'D.
17 STD. CG-12, TYPE B REQ'D.
18 STD. CG-12, TYPE C REQ'D.
19 STD. CG-7 REQ'D.
20 STD. CG-3 REQ'D

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	4

12/11/2013
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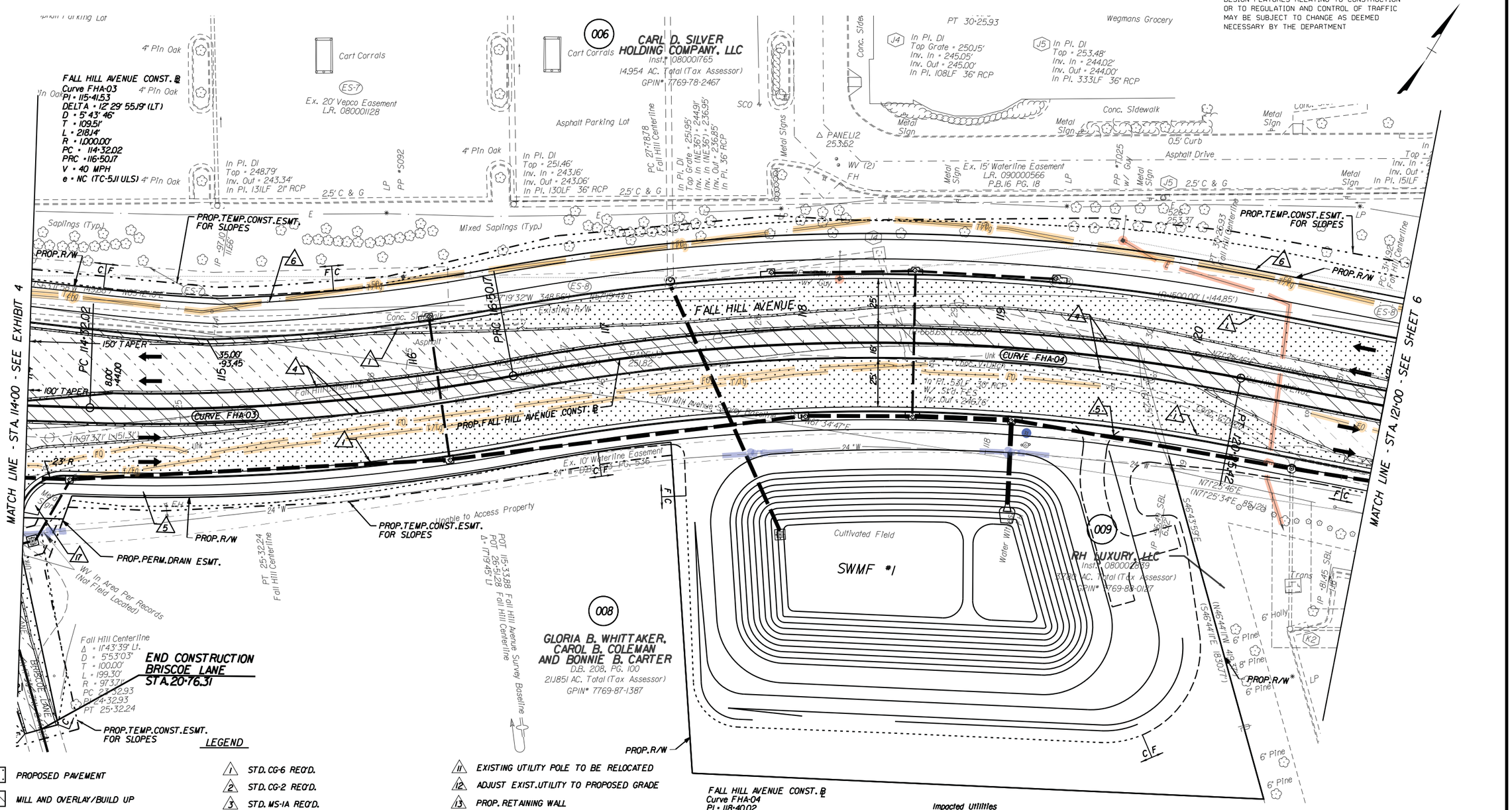
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	5

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PROPOSED PAVEMENT
MILL AND OVERLAY/BUILD UP
DEMOLITION OF PAVEMENT
OBSCURING OF PAVEMENT
C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
F ___ DENOTES CONSTRUCTION LIMITS IN FILLS
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15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

FALL HILL AVENUE CONST. ℄
Curve FHA-04
PI = 118+40.02
DELTA = 21° 30' 01.9" (RT)
D = 5° 43' 46"
T = 189.86'
L = 375.25'
R = 1,000.00'
PRC = 116+50.17
PT = 120+25.42
V = 40 MPH
e = NC (TC-5.11 ULS)

Impacted Utilities
T/Tg Telephone
FO Fiber Optic
E Electric
Power Pole
24" W Water
Fire Hydrant
CATV Cable TV
8" SAN Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	5

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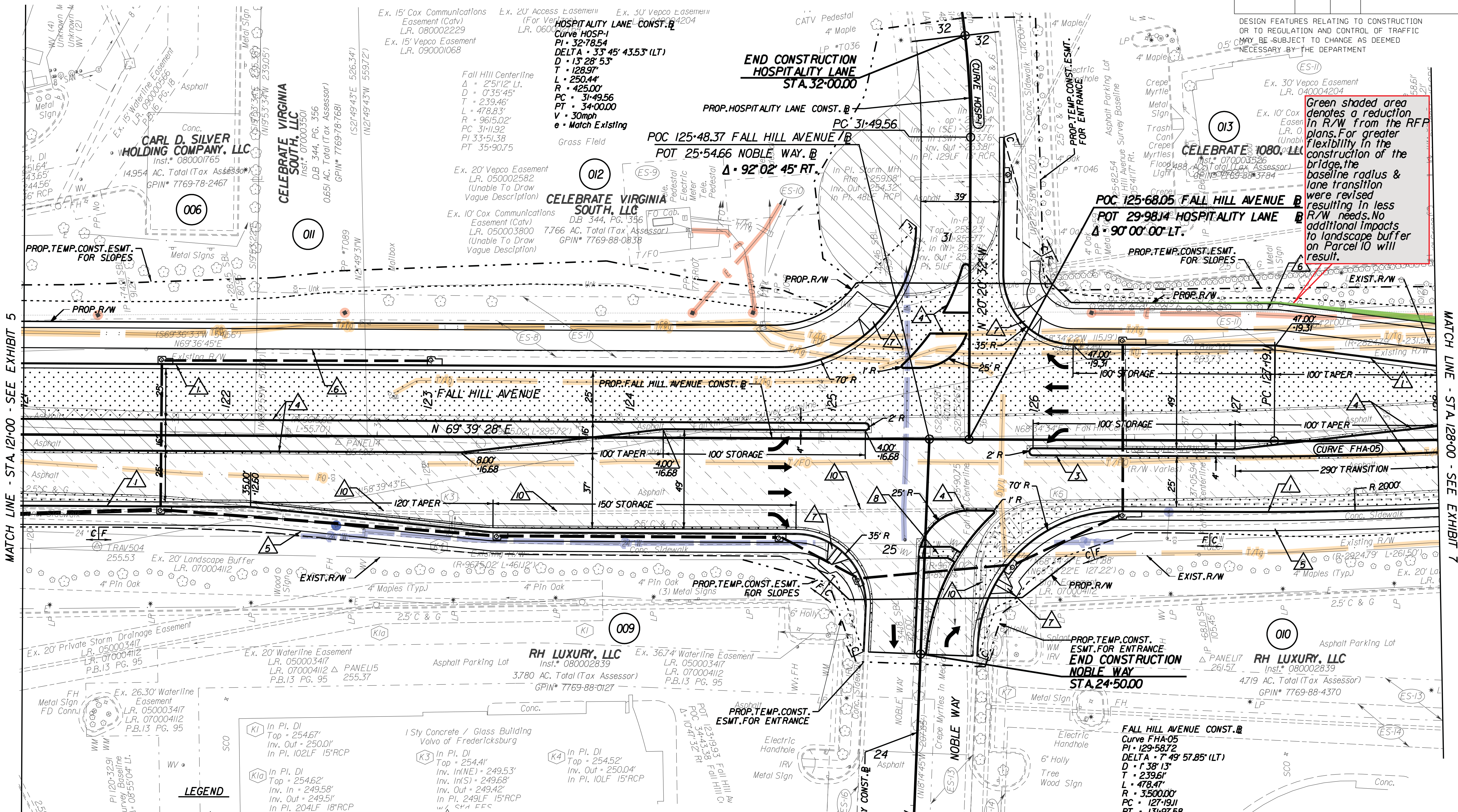
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	6

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

Symbol	Description
(dotted box)	PROPOSED PAVEMENT
(hatched box)	MILL AND OVERLAY/BUILD UP
(cross-hatched box)	DEMOLITION OF PAVEMENT
(hatched box)	OBSCURING OF PAVEMENT
C	DENOTES CONSTRUCTION LIMITS IN CUTS
F	DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE R11 REQ'D.
9. STD. CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	6

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LIMITED ACCESS HIGHWAY By Resolution of Highway Commission dated 10-4-56

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501 B-609	7

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

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Green shaded area denotes a reduction in R/W from the RFP Plans. For greater flexibility in the construction of the bridge, the baseline radius & lane transition were revised resulting in less R/W needs. No additional impacts to the landscape buffer on Parcel 10 will result.

013
CELEBRATE 1080, LLC
Inst.# 070003526
2.488 AC. Total (Tax Assessor)
GPIN# 7769-88-3784

010
RH LUXURY, LLC
Inst.# 080002839
4.719 AC. Total (Tax Assessor)
GPIN# 7769-88-4370

014
WEYMOUTH, LLC
Inst.# 010001358
0.710 AC. Total (Tax Assessor)
GPIN# 7769-98-1732

BEGIN B-609
STA. 130+75.39

END B-609
STA. 134+88.65

B-609

FALL HILL AVENUE CONST. B
Curve FHA-05
PI = 129+58.72
DELTA = 7° 49' 57.85" (LT)
D = 1° 38' 13"
T = 239.61'
L = 478.47'
R = 3,500.00'
PC = 127+19.11
PT = 131+97.58
V = 40 MPH
e = NC (TC-5.11 ULS)

MATCH LINE - STA. 128+00 - SEE EXHIBIT 6

MATCH LINE - STA. 135+00 - SEE EXHIBIT 8

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
- F __ DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT · DOT · DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT · DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. FOA-2, TYPE I
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24"W — Water
- Fire Hydrant
- CATV — Cable TV
- 8"SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	7

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

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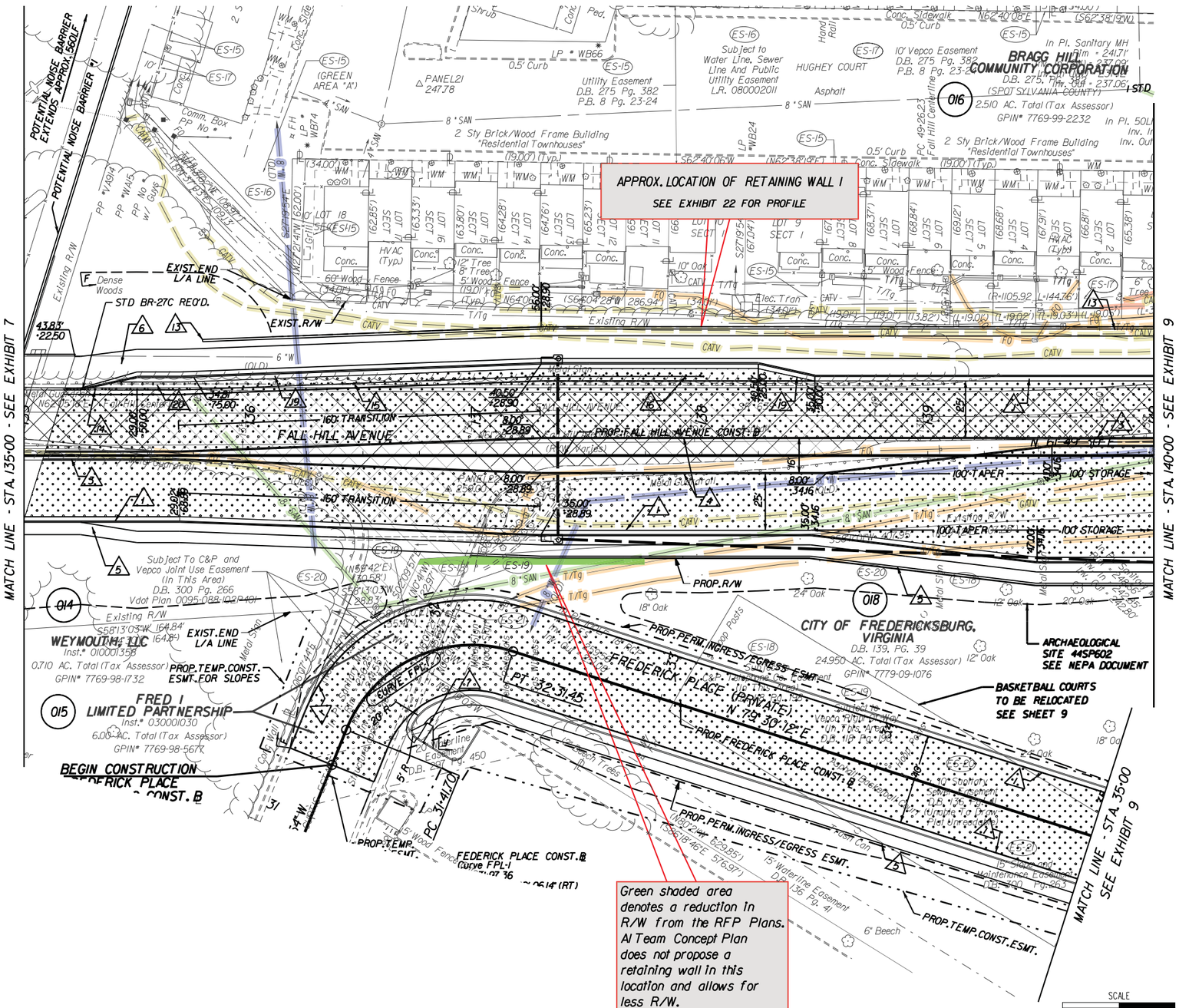
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501 B-609	8

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT

C _ _ _ DENOTES CONSTRUCTION LIMITS IN CUTS
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18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D.

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

American Infrastructure

rda Rinker Design Associates

The AI Team Concept Plan

	PROJECT	SHEET NO.
	U000-111-233	8

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	9

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

017
BRAGG HILL COMMUNITY CORPORATION
D.B. 299, PG. 409
1.730 AC. Total (Tax Assessor)
(SPOTSYLVANIA COUNTY)
GPIN# 7769-99-4573
(Pool Area - 16,578 s.f.)

016
BRAGG HILL COMMUNITY CORPORATION
D.B. 275, PG. 382
(SPOTSYLVANIA COUNTY)
2.510 AC. Total
(Tax Assessor)
GPIN# 7769-99-2232
(Green Area "E")

PROP.TEMP.CONST.ESMT. FOR SLOPES

MATCH LINE STA. 41+00 - SEE EXHIBIT 9B

MATCH LINE - STA. 140+00 - SEE EXHIBIT 8

MATCH LINE - STA. 146+00 - SEE EXHIBIT 10

MATCH LINE - STA. 35+00 SEE EXHIBIT 8

PC 40+71.44

PT 36+87.43

PC 35+16.64

BRAGG HILL DRIVE

FALL HILL AVENUE

EXIST.R/W

PROP.R/W

PROP.TEMP.CONST.ESMT. FOR SLOPES

PROP.BRAGG HILL DRIVE CONST.B

PROP.FALL HILL AVENUE CONST.B

FREDERICK PLACE (PRIVATE)

PROP.FREDERICK PLACE CONST.B

CURVE FPL-2

100' STORAGE

100' TAPER

35.00' 80.32

47.00' 80.32

8.00' 51.19

N 6° 49' 30" E

N 29° 13' 27" W

N 43° 49' 25" E

N 48° 26' 02" E

N 43° 48' 08" E

S 50° 24' 48" W

PROP.PERM. INGRESS/EGRESS ESMT.

PROP.PERM.DRAIN ESMT.

PROP.PERM.INGRESS/EGRESS ESMT.

PROP.TEMP.CONST.ESMT. FOR SLOPES

PROP.PERM. DRAINAGE ESMT.

POT 141+03.91 FALL HILL AVENUE CONST.B
POT 37+73.31 FREDERICK PLACE CONST.B
POT 40+00.00 BRAGG HILL DRIVE CONST.B
Δ = 91° 02' 57" LT.

SWMF #2

Curve BHDR-1
PI = 40+96.43
DELTA = 14° 34' 43.52" (LT)
D = 38° 11' 50"
T = 19.19'
L = 38.17'
R = 150.00'
PC = 40+71.44
PT = 41+09.60
V = 20 MPH
e = NC (TC-5.11 ULS)

FREDERICK PLACE CONST.B
Curve FPL-2
PI = 36+42.18
DELTA = 108° 43' 39.54" (LT)
D = 63° 39' 43"
T = 125.54'
L = 170.79'
R = 90.00'
PC = 35+16.64
PT = 36+87.43
V = 15 mph
e = 2% (TC-5.11 ULS)
Lr = 52'
Lt = 52'

018
CITY OF FREDERICKSBURG, VIRGINIA
D.B. 139, PG. 39
24.950 AC. Total (Tax Assessor)
GPIN# 7779-09-1076

RELOCATE BASKETBALL COURTS CONTACT CITY OF FREDERICKSBURG PARKS DEPT.

Hoop Posts

PANEL26 248.43
PANEL24 247.53
PANEL25 247.53

Fall Hill Centerline
Fall Hill Avenue Survey Baseline
Existing R/W
Asphalt
Grass
Dense Woods
Fall Hill Avenue Sanitary Sewer Easement Line

LEGEND

1	STD. CG-6 REQ'D.	13	PROP. RETAINING WALL
2	STD. CG-2 REQ'D.	14	STD. MB-? REQ'D.
3	STD. MS-1A REQ'D.	15	STD. GR-2 REQ'D.
4	STD. MS-2 REQ'D.	16	STD. GR-9 REQ'D.
5	PROP. 5' CONC. SIDEWALK	17	STD. CG-12, TYPE B REQ'D.
6	PROP. 10' SHARED USE PATH	18	STD. CG-12, TYPE C REQ'D.
7	STD. CG-12, TYPE A REQ'D.	19	STD. CG-7 REQ'D.
8	STD. CG-12, TYPE RII REQ'D.	20	STD. CG-3 REQ'D
9	STD. CG-12, TYPE RI2 REQ'D.		
10	EXIST. PIPE TO BE REMOVED/ABANDONED		
11	EXISTING UTILITY POLE TO BE RELOCATED		
12	ADJUST EXIST. UTILITY TO PROPOSED GRADE		

PROPOSED PAVEMENT
MILL AND OVERLAY/BUILD UP
DEMOLITION OF PAVEMENT
OBSCURING OF PAVEMENT

C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
F ___ DENOTES CONSTRUCTION LIMITS IN FILLS
NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
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Impacted Utilities

T/Tg	Telephone
FO	Fiber Optic
E	Electric
	Power Pole
24" W	Water
	Fire Hydrant
CATV	Cable TV
8" SAN	Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
rda Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	9

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

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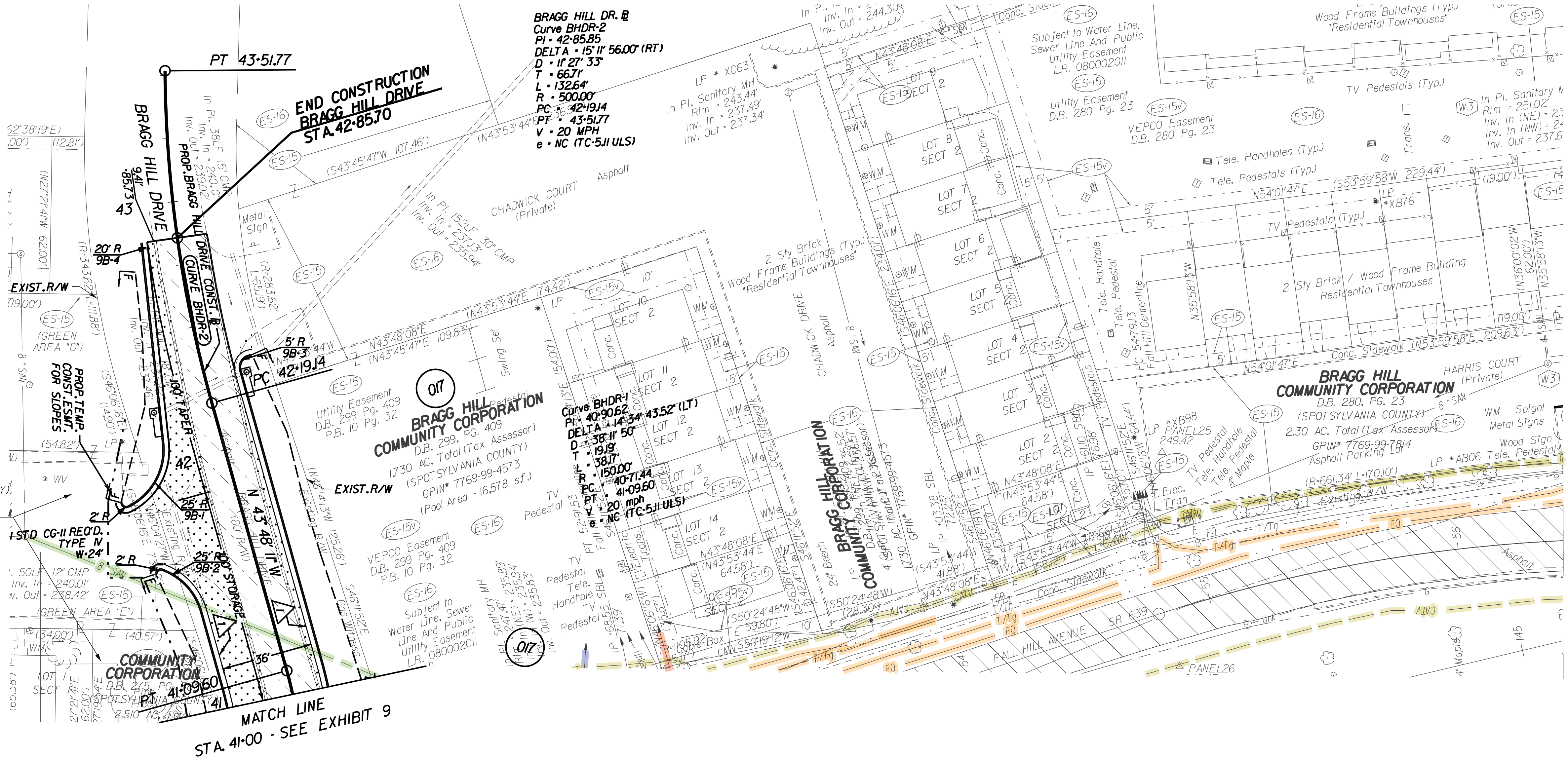
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	9B

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
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2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE R11 REQ'D.
9. STD. CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
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18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure | Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	9B

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	10

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

018 **BRAGG HILL COMMUNITY CORPORATION**
D.B. 280, PG. 23
(SPOTSYLVANIA COUNTY)
2.30 AC. Total (Tax Assessor)
GPIN* 7769-99-7814

END CONSTRUCTION
ROFFMAN ROAD
STA. 52+25.00

ROFFMAN ROAD
PROP. ROFFMAN ROAD CONST. ℄

ANDY & RAY, LLC
Inst.# 010002080
0.430 AC. Total (Tax Assessor)
0.480 AC. Total (Actual)
GPIN* 7779-09-0637

TRUSTEES OF TOWER OF DELIVERANCE CHURCH
D.B. 319, PG. 481
1 Sty Brick Building
0.880 AC. Total (Tax Assessor)
0.921 AC. Total (Actual)
GPIN* 7779-09-1760

TRUSTEES OF TOWER OF DELIVERANCE CHURCH
D.B. 319, PG. 481
0.380 AC. Total (Tax Assessor)
0.327 AC. Total (Actual)
GPIN* 7779-09-0557

TRUSTEES OF TOWER OF DELIVERANCE CHURCH
Inst.# 070000599
0.10 AC. Total (Tax Assessor)
0.107 AC. Total (Actual)
GPIN* 7779-09-2750

G & G PARTNERS
D.B. [illegible] PG. [illegible]
0.37 AC. Total (Tax Assessor)
0.375 AC. Total (Actual)
GPIN* 7779-09-3730

020

019
RIVERVIEW LIMITED PARTNERSHIP
3 Sty Brick Residential Apartments
D.B. 265, PG. 88
4.80 AC. Total (Tax Assessor)
4.695 AC. Total (Actual)
GPIN* 7870-00-5063

CITY OF FREDERICKSBURG, VIRGINIA
D.B. 139, PG. 39
24.950 AC. Total (Tax Assessor)
GPIN* 7779-09-1076

Impacted Utilities
- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

MAINTAIN EXISTING PAVEMENT AS ACCESS

PROP. TEMP. CONST. ESMT. FOR SLOPES

MATCH LINE - STA. 146+00 - SEE EXHIBIT 9

MATCH LINE - STA. 62+50 - SEE EXHIBIT 10C

MATCH LINE - STA. 152+50 - SEE EXHIBIT 11

FALL HILL AVENUE

PROP. FALL HILL AVENUE CONST. ℄

POT 146+55.26 FALL HILL AVENUE CONST. ℄
POT 49+99.89 ROFFMAN ROAD CONST. ℄
Δ = 90° 25' 51" LT.

POC 150+97.07 FALL HILL AVENUE CONST. ℄
POC 61+37.45 WICKLOW DRIVE CONST. ℄
Δ = 90° 00' 00" LT.

POT 60+00.00

FALL HILL AVENUE CONST. ℄
Curve FHA-06 Ballfield
PI = 150+38.42
DELTA = 27° 54' 39.85" (RT)
D = 4° 38' 08"
T = 307.15'
L = 602.11'
R = 1,236.00'
PC = 147+31.27
PT = 153+33.38
V = 40 mph
e = 2% (TC-5.11 ULS)
Lr = 77'
Lt = 77'

PI 150+65.03
Fall Hill Avenue Survey Baseline
Δ = 05°25'46" Lt.

POTENTIAL NOISE BARRIER APPROX. 1719 LF

RELOCATED ASPHALT PARKING AREA

RELOCATE BASKETBALL COURTS CONTACT CITY OF FREDERICKSBURG PARKS DEPT.

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
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6. PROP. 10' SHARED USE PATH
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8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
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17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

RELOCATE GRASS SURFACE BALLFIELD TO SAME DIMENSIONS. REUSE FENCING AND GRANDSTANDS. IF POSSIBLE.

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	10

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	10A

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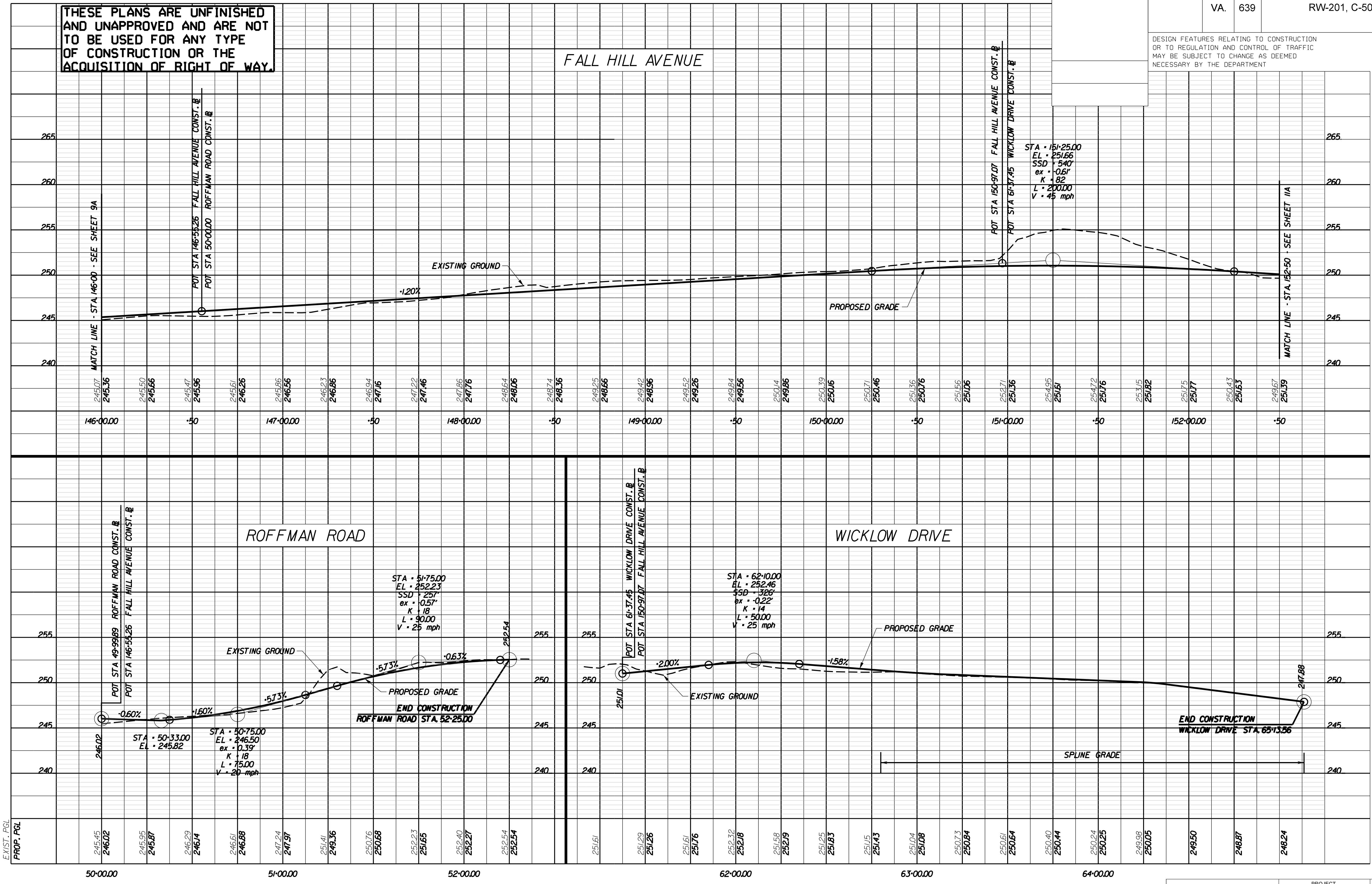

PROJECT	SHEET NO.
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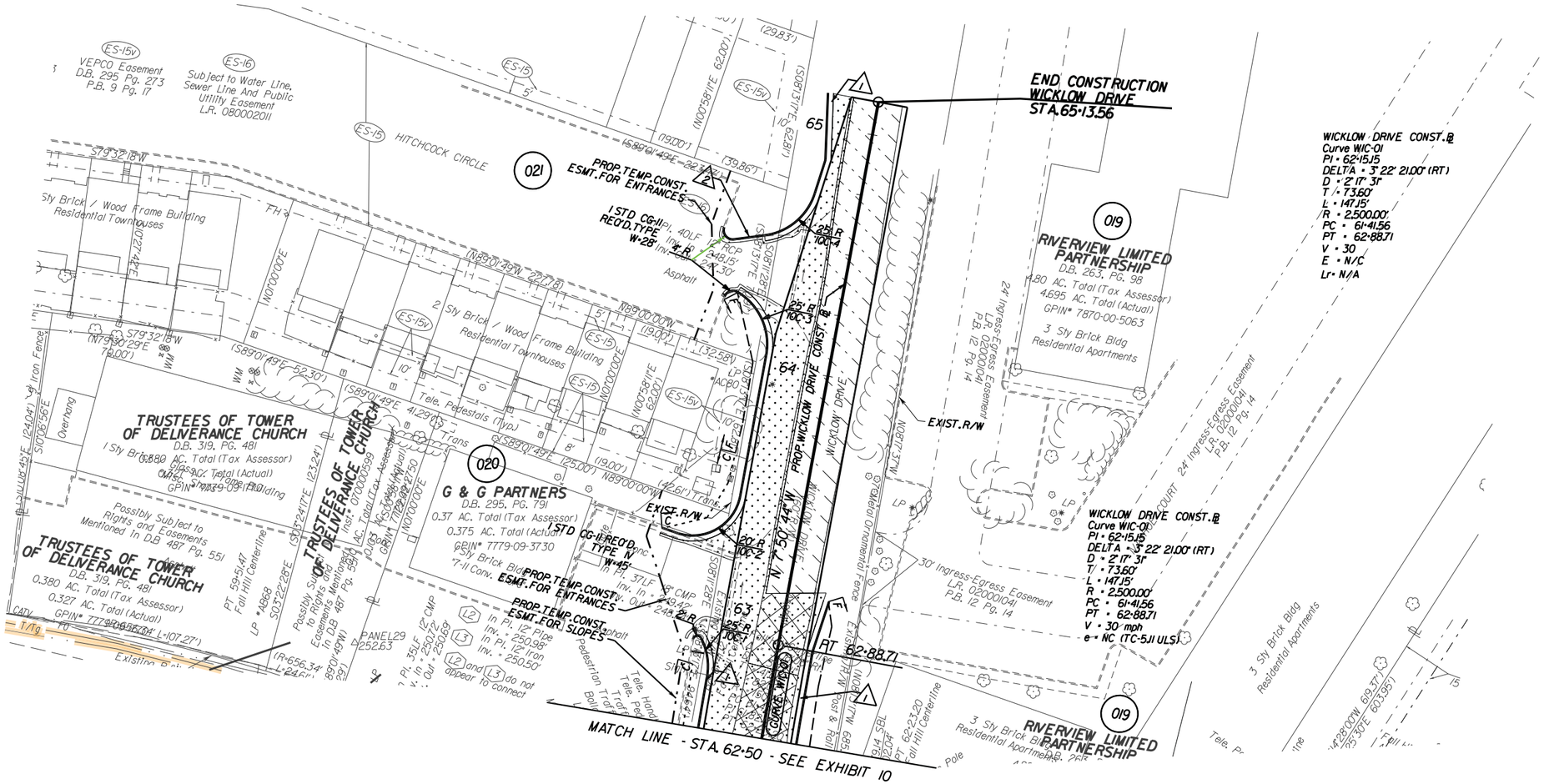
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	10C

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
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20. STD. CG-3 REQ'D

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- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	10C

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12/11/2013
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	11

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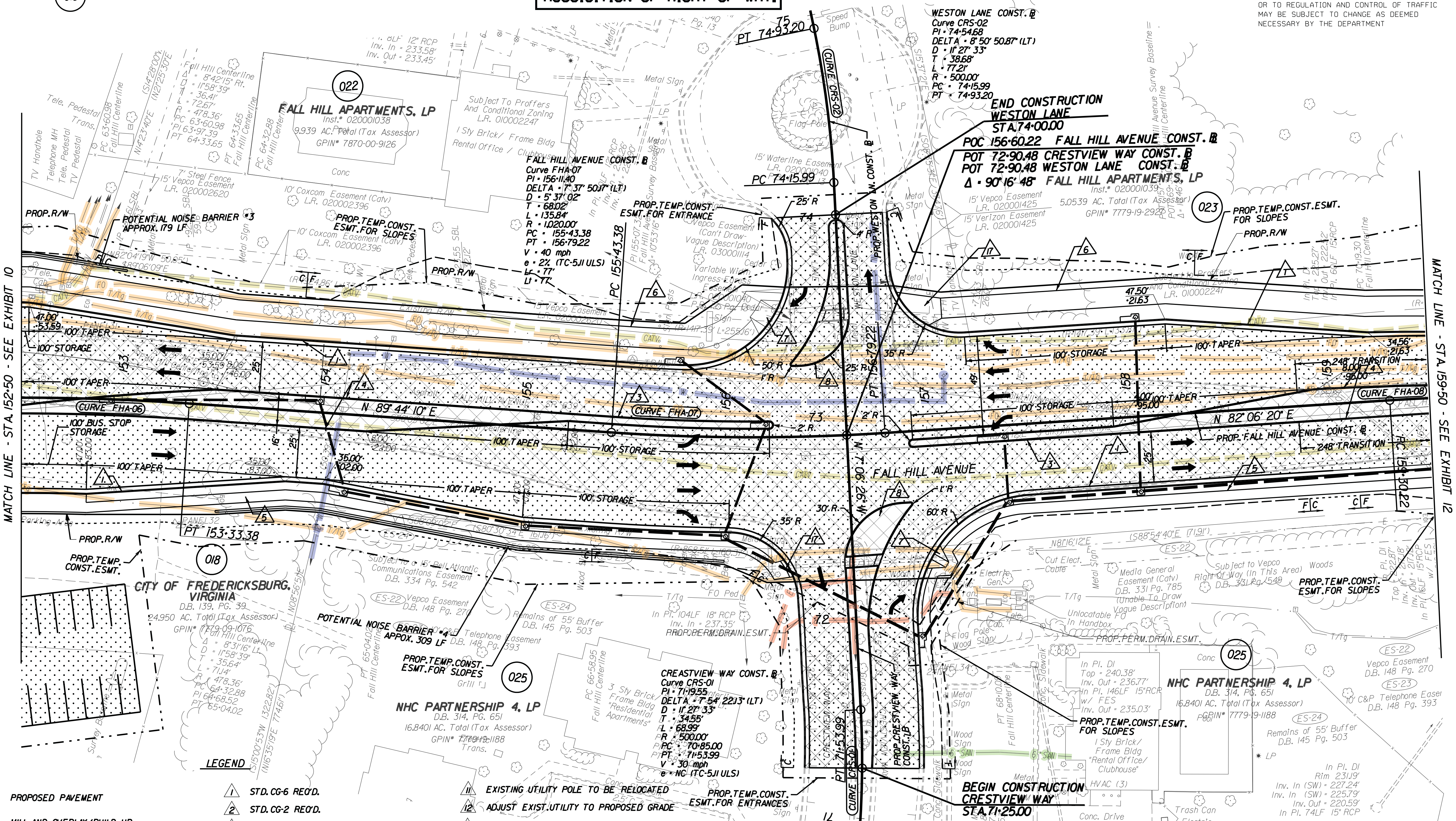

LEGEND

Symbol	Description
(dotted)	PROPOSED PAVEMENT
(hatched)	MILL AND OVERLAY/BUILD UP
(cross-hatched)	DEMOLITION OF PAVEMENT
(hatched)	OBSCURING OF PAVEMENT
C	DENOTES CONSTRUCTION LIMITS IN CUTS
F	DENOTES CONSTRUCTION LIMITS IN FILLS

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4. STD. MS-2 REQ'D.
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6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE R11 REQ'D.
9. STD. CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

Symbol	Utility
T/Tg	Telephone
FO	Fiber Optic
E	Electric
	Power Pole
24" W	Water
	Fire Hydrant
CATV	Cable TV
8" SAN	Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure — Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	11

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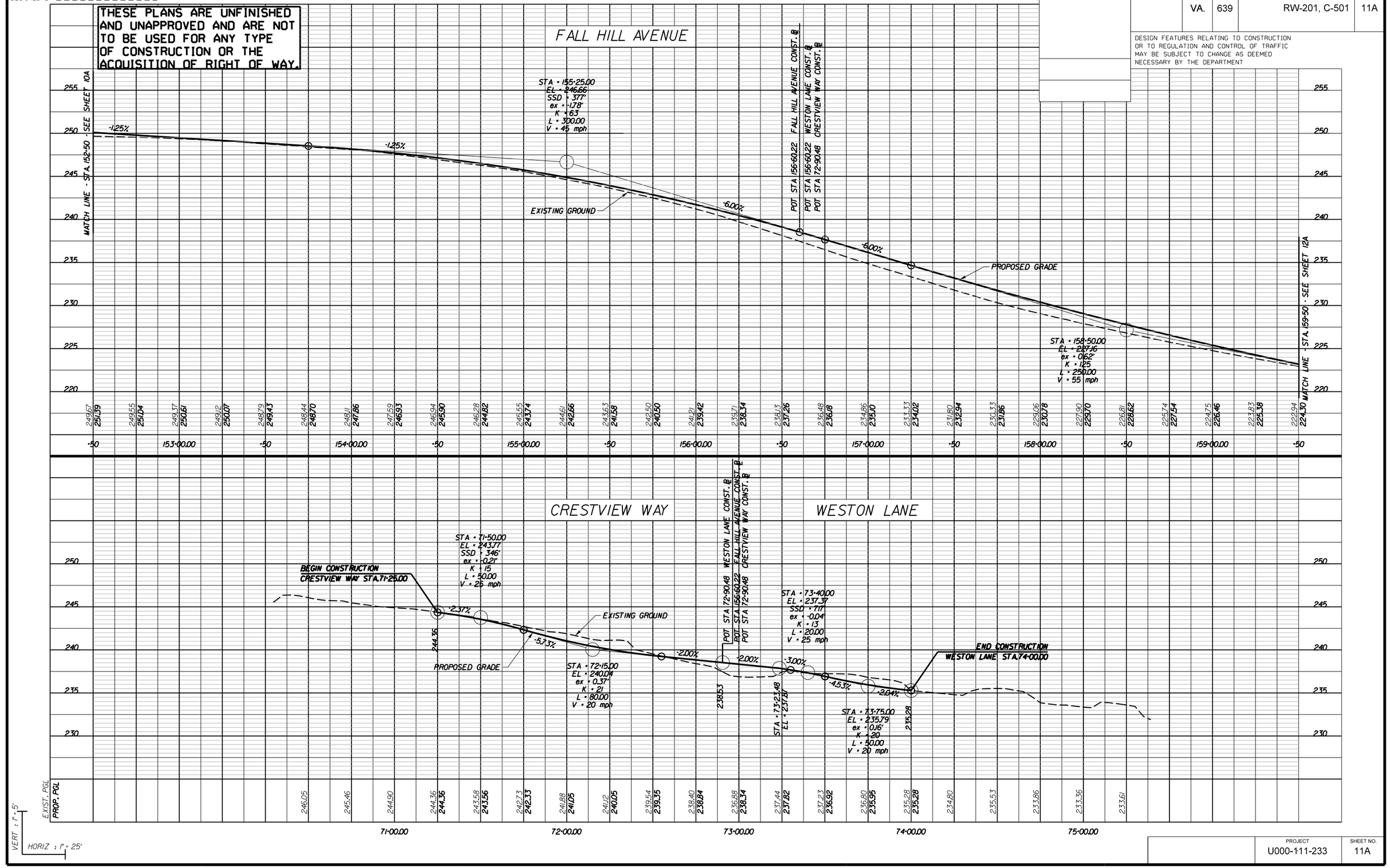
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	11A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PROJECT	SHEET NO.
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

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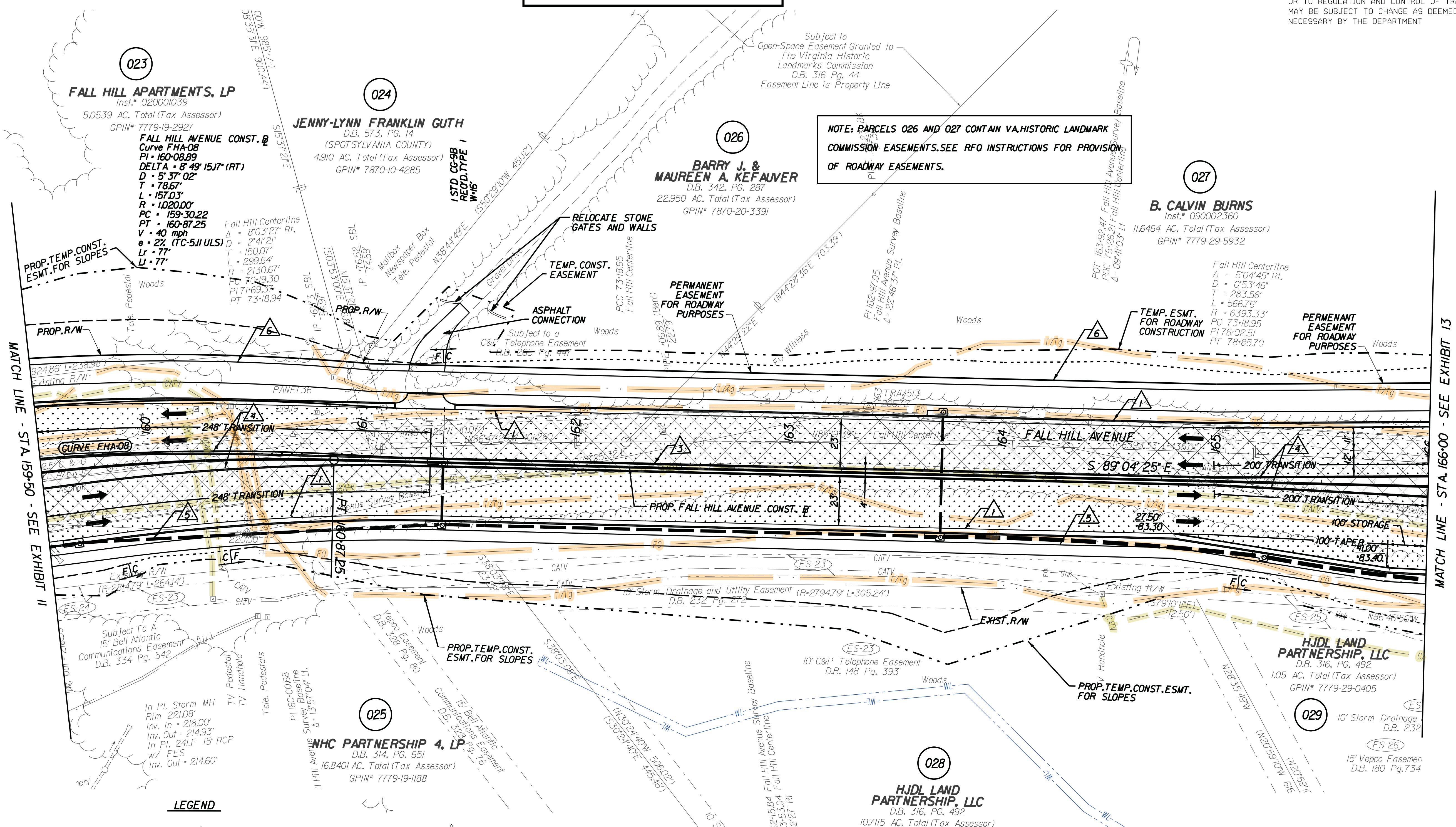
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	12

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C – – – DENOTES CONSTRUCTION LIMITS IN CUTS
- F — — DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD.CG-12, TYPE A REQ'D.
8. STD.CG-12, TYPE R11 REQ'D.
9. STD.CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
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17. STD.CG-12, TYPE B REQ'D.
18. STD.CG-12, TYPE C REQ'D.
19. STD.CG-7 REQ'D.
20. STD.CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24"W — Water
- Fire Hydrant
- CATV — Cable TV
- 8"SAN — Sanitary Sewer

SCALE 0 25' 50'

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PROJECT	SHEET NO.
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	12A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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FALL HILL AVENUE

MATCH LINE - STA. 159+50 - SEE SHEET 11A

ST A = 158+50.00
EL = 227.16
ex = 0.62'
K = 125
L = 250.00
V = 55 mph

-4.00%

PROPOSED GRADE

EXISTING GROUND

ST A = 167+00.00
EL = 193.16
SSD = 386'
ex = 2.90'
K = 69
L = 400.00
V = 45 mph

-4.00%

MATCH LINE - STA. 166+00 - SEE SHEET 13A

	160+00.00	+50	161+00.00	+50	162+00.00	+50	163+00.00	+50	164+00.00	+50	165+00.00	+50	166+00.00
EXIST. PGL	222.94	222.13	221.31	220.47	219.51	218.53	217.41	216.21	215.00	213.83	212.66	211.73	210.64	209.71	207.78	206.08	204.76	203.45	201.46	199.66	198.35	197.41	196.79	196.13	195.54	194.94	194.29
PROP. PGL	224.30	223.22	222.14	221.06	219.98	218.90	217.82	216.74	215.66	214.58	213.50	212.42	211.34	210.26	209.18	208.10	207.02	205.94	204.86	203.78	202.70	201.62	200.54	199.46	198.38	197.30	196.15

VERT : 1" = 5'
HORIZ : 1" = 25'

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PROJECT	SHEET NO.
U000-111-233	12A

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	13

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

NOTE: PARCELS 026 AND 027 CONTAIN VA. HISTORIC LANDMARK COMMISSION EASEMENTS. SEE RFQ INSTRUCTIONS FOR PROVISION OF ROADWAY EASEMENTS.

027
B. CALVIN BURNS
Inst.# 090002360
11.6464 AC. Total (Tax Assessor)
GPIN# 7779-29-5932

034
B. CALVIN BURNS
Inst.# 090002360
1.8532 AC. Total (Tax Assessor)
GPIN# 7779-29-2757

027
B. CALVIN BURNS
Inst.# 090002360
11.6464 AC. Total (Tax Assessor)
GPIN# 7779-29-5932

ARCHAEOLOGICAL SITE 44SP0573 SEE NEPA DOCUMENT

POT 167+25.17 FALL HILL AVENUE CONST. ℄
POT 82+60.00 FALL HILL OFFICE PARK CONST. ℄
Δ = 86° 40' 52" RT.

MATCH LINE - STA. 166+00 - SEE EXHIBIT 12

MATCH LINE - STA. 172+00 - SEE EXHIBIT 14

TEMP. ESMT. FOR ROADWAY CONSTRUCTION

PERMENANT EASEMENT FOR ROADWAY PURPOSES

Fall Hill Centerline
Δ = 21°16'26" Lt.
D = 4°40'12"
T = 230.43'
L = 455.55'
R = 1226.90
PC 78+85.71
PI 81+16.14
PT 83+41.26

PC 168+73.25

PT 171+84.46

POT 82+60.00

800' TRANSITION

200' TRANSITION

100' STORAGE

150' STORAGE

FALL HILL AVENUE

110' TAPER

CURVE FHA-09

180' STORAGE

100' TAPER

PROP. FALL HILL AVENUE CONST. ℄

PT 82+11.75

43.94'
81.35

EXIST. R/W

PROP. TEMP. CONST. ESMT. FOR SLOPES

PROP. TEMP. CONST. ESMT. FOR ENTRANCE

PROP. TEMP. CONST. ESMT. FOR SLOPES

PROP. R/W

029
HJDL LAND PARTNERSHIP, LLC
D.B. 316, PG. 492
1.05 AC. Total (Tax Assessor)
GPIN# 7779-29-0405

030
FALL HILL PROFESSIONAL VILLAGE PARTNERSHIP
D.B. 316, PG. 488
2.97 AC. Total (Tax Assessor)
GPIN# 7779-29-4251

Curve OFF-01
PI = 81+54.71
DELTA = 49° 44' 22.00" (RT)
D = 40° 38' 07"
T = 65.36'
L = 122.40'
R = 141.00'
PC = 80+89.35
PT = 82+11.75
V = 15 mph
e = NC (TC-5.11 ULS)

(CURVE OFF-01)

80+89.35 FALL HILL OFFICE PARK

BEGIN CONSTRUCTION FALL HILL OFFICE PARK STA. 80+75.00

N 52° 07' 55" W

Easement Area for Access, Utilities and Drainage P.B. 6 Pg. 15

031
HJDL LAND PARTNERSHIP, LLC
D.B. 316, PG. 492
0.61 AC. Total (Tax Assessor)
GPIN# 7779-29-2571

032
HJDL LAND PARTNERSHIP, LLC
1.26 AC. Total (Tax Assessor)
GPIN# 7779-29-4454

033
FOREST VILLAGE MCF-SCG, LP
Inst.# 080001279
21.804 AC. Total (Tax Assessor)
GPIN# 7779-39-1495

Curve FHA-09
PI = 170+29.74
DELTA = 14° 51' 33.04" (LT)
D = 4° 46' 29"
T = 156.48'
L = 311.21'
R = 1,200.00'
PC = 168+73.25
PT = 171+84.46
V = 40 mph
e = 2% (TC-5.11 ULS)
Lr = 77'
Li = 77'

Ex. 10' Storm Drainage and Utility Easement D.B. 232 Pg. 272

Ex. 15' Vepco Easement

10' C&P Telephone Easemer. D.B. 148 Pg. 393

Unable to Designate Lines To WV's

Tele. Cable Attached To Wood Post

Fall Hill Avenue Survey Baseline Δ = 15°08'27" Lt.

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C _ _ DENOTES CONSTRUCTION LIMITS IN CUTS
- F __ DENOTES CONSTRUCTION LIMITS IN FILLS
- NOTE: DOT · DOT · DASHED LINES DENOTE TEMPORARY EASEMENTS.
- NOTE: DOT · DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
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14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
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18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24 "W — Water
- Fire Hydrant
- CATV — Cable TV
- 8 "SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure

rda Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	13

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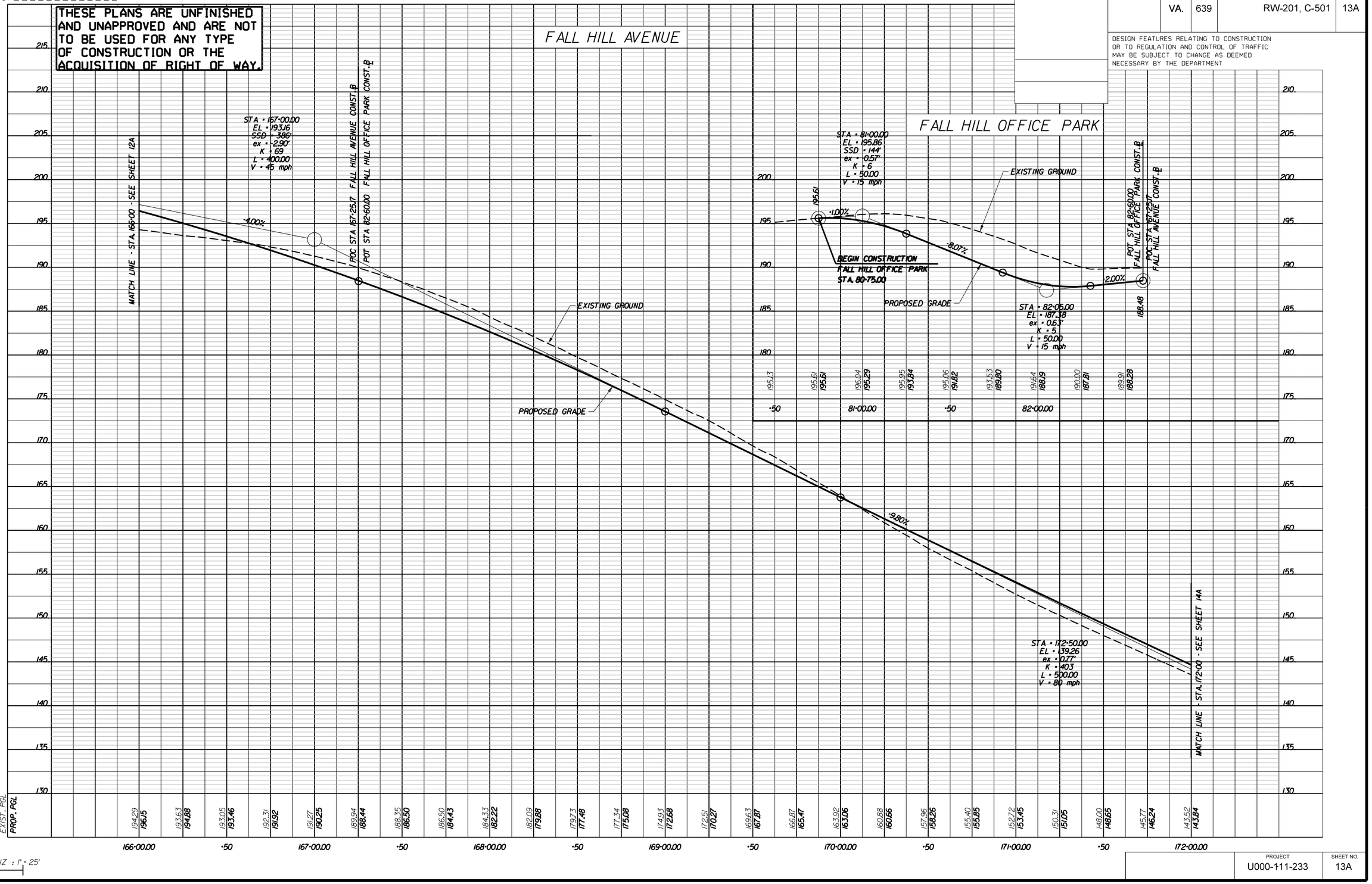
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	13A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



PROJECT	SHEET NO.
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	14

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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NOTE: PARCELS 026 AND 027 CONTAIN VA. HISTORIC LANDMARK COMMISSION EASEMENTS. SEE RFQ INSTRUCTIONS FOR PROVISION OF ROADWAY EASEMENTS.

027
B. CALVIN BURNS
Inst.# 090002360
11.6464 AC. Total (Tax Assessor)
GPIN# 7779-29-5932

MATCH LINE - STA. 172+00 - SEE EXHIBIT 13

MATCH LINE - STA. 178+00 - SEE EXHIBIT 15

POT 172+96.15 FALL HILL AVENUE CONST. ℄
POT 93+32.31 FOREST VILLAGE CONST. ℄
Δ = 89° 2' 14" RT.

PROP. U-TURN POCKET
TEMP. ESMT. FOR ROADWAY CONSTRUCTION
PERMANENT EASEMENT FOR ROADWAY PURPOSES
TEMP. ESMT. FOR ROADWAY CONSTRUCTION
POT 174+51.16 Fall Hill Avenue Survey Baseline
Fall Hill Centerline
POC 85+74.15
Δ = 04°41'31" Rt.
PI 176+32.59 Fall Hill Avenue Survey Baseline
Δ = 14°05'48" Rt.
POT 177+52.03 Fall Hill Avenue Survey Baseline
POT 88+17.85 Fall Hill Centerline
Δ = 07°56'17" Rt.
POC 83+41.27 Fall Hill Centerline
Mela Sign
Inv. Dr. 32.34'
Inv. Out 27.53'
n Pipe 24" RCP
Inv. Out 26.86'

FALL HILL AVENUE
100' STORAGE
100' TAPER
200' TRANSITION
180' STORAGE
POT 93+32.31
N 76° 04' 02" E
PROP. FALL HILL AVENUE CONST. ℄
Fall Hill Avenue (30' Prescriptive R/W)
N 76° 04' 02" E 465.47'
PROP. R/W
PROP. TEMP. CONST. ESMT. FOR ENTRANCE
PROP. TEMP. CONST. ESMT. FOR SLOPES
PROP. TEMP. CONST. ESMT. FOR SLOPES
PROP. FOREST VILLAGE CONST. ℄
CURVE APW-01
Curve APW-01
PI = 91+46.67
DELTA = 14° 29' 23.00" (LT)
D = 8° 11' 06"
T = 88.99'
L = 177.03'
R = 700.00'
PC = 90+57.69
PT = 92+34.71
V = 15 mph
e = Match Existing
PT 92+34.71
PT 88+06.70 Fall Hill Centerline
BEGIN CONSTRUCTION FOREST VILLAGE STA. 92+30.00
Fall Hill Centerline
Δ = 2°56'02" Rt.
D = 0°37'49"
T = 232.76'
L = 465.42'
R = 9089.24'
PC = 83+41.28
PI 85+74.04
PT 88+06.70
3 Sty Brick Bldg "Forest Village Apartments"
033
FOREST VILLAGE MCF-SCG, LP
Inst.# 080001279
FOREST VILLAGE
Asphalt
Canopy
Conc. Sidewalk
Gas Meter
Gas Test
TV Handhole
Metal Slabs
Metal Sign
Asphalt
Woods
Utility Pole
Guy Wire
Fence
Unk
WV's 8" W.
8" W
24" W
2.0' C & G
CANAL
PANEL 142
118.54
ES-23
ES-26
ES-29
ES-27
LP
WM
WV
FO
T/Tg
CATV
8" SAN
E
C
F

Impacted Utilities
- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
- F ___ DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-2 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

SCALE 0 25' 50'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	14A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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FALL HILL AVENUE

FOREST VILLAGE

MATCH LINE - STA. 172+00 - SEE SHEET 13A

POT STA 172+96.15 FALL HILL AVENUE CONST. ℄

POT STA 93+32.31 FOREST VILLAGE CONST. ℄

STA = 172+50.00
EL = 139.26
ex = 0.77'
K = 403
L = 500.00
V = 80 mph

PROPOSED GRADE

-9.56%

EXISTING GROUND

BEGIN CONSTRUCTION FOREST VILLAGE STA. 92+30.00

-1.68%

-8.33%

STA = 92+55.00
EL = 131.79
ex = 0.33'
K = 6
L = 40.00
V = 15 mph

131.37

STA = 92+90.00
EL = 134.71
SSD = 217'
ex = -0.20'
K = 6
L = 30.00
V = 15 mph

PROPOSED GRADE

+3.00%

+2.00%

135.82

POT STA 93+32.31 FOREST VILLAGE CONST. ℄

STA = 93+16.81
EL = 135.51

POT STA 172+96.15 FALL HILL AVENUE CONST. ℄

STA = 180+00.00
EL = 75.05
SSD = 354'
ex = 5.30'
K = 85
L = 600.00
V = 40 mph

MATCH LINE - STA. 178+00 - SEE SHEET 15A

EXIST. PGL	143.52	141.27	138.98	136.68	134.40	132.09	129.79	127.54	125.40	123.37	121.50	119.68	117.60	115.47	113.01	110.77	108.26	106.09	103.98	101.83	99.76	98.09	96.41	94.80	93.29
PROP. PGL	143.84	141.44	139.03	136.63	134.23	131.86	129.58	127.37	125.24	123.15	121.06	118.97	116.87	114.78	112.69	110.60	108.51	106.42	104.33	102.24	100.15	98.06	95.96	93.87	91.83

172+00.00 · 50 173+00.00 · 50 174+00.00 · 50 175+00.00 · 50 176+00.00 · 50 177+00.00 · 50 178+00.00

91+00.00 92+00.00 93+00.00

VERT : 1" = 5'

HORIZ : 1" = 25'

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12/11/2013

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PROJECT	SHEET NO.
U000-111-233	14A

PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	15

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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NOTE: PARCELS 026 AND 027 CONTAIN VA.HISTORIC LANDMARK COMMISSION EASEMENTS.SEE RFQ INSTRUCTIONS FOR PROVISION OF ROADWAY EASEMENTS.

036
LT. COL. (RETIRED)
BUTLER BRAYNE THORNTON FRANKLIN
D.B. 186, PG. 621
20.00 AC. Total (Tax Assessor)
GPIN# 7870-20-8864

D.B. 342, PG. 287
22.950 AC. Total (Tax Assessor)
GPIN# 7870-20-3391

B. CALVIN BURNS
Inst.# 090002360
11.6464 AC. Total (Tax Assessor)
GPIN# 7779-29-5932
027

POT 200+15.29 MARY WASHINGTON BLVD.CONST.℄
POC 182+57.53 FALL HILL AVENUE CONST.℄
Δ = 61° 41' 36.6" RT.

Curve FHA-10
PI = 182+17.41
DELTA = 7° 17' 02.04" (RT)
D = 1° 54' 35"
T = 190.95'
L = 381.38'
R = 3,000.00'
PC = 180+26.46
PT = 184+07.85
V = 40 mph
e = NC (TC-5.11 ULS)

PERMANENT EASEMENT FOR ROADWAY PURPOSES
TEMP. ESMT. FOR ROADWAY CONSTRUCTION
PROP. R/W
PROP. R/W FOR PROJ.U000-111-R38, C-501
DVP TRANSMISSION TOWER
EXIST. STONE GATES TO BE PROTECTED
CITY OF FREDERICKSBURG, VIRGINIA
D.B. 137, PG. 360
7.039 AC. Total (Tax Assessor)
GPIN# 7870-30-5391
(VEPCO CANAL)
036

END CONSTRUCTION PROJECT U000-111-R38,C-501 FALL HILL AVENUE (UNDER CONSTRUCTION BY OTHERS)
POT STA.184+07.85
CANAL BRIDGE POT STA.36+98

PEDESTRIAN BRIDGE (U000-111-R38,C-501)
PRE-FAB PED. BRIDGE 10' WIDTH
PROP. FALL HILL AVENUE BRIDGE CONST.℄ POR 184+07.85
Bridge w/ Parapet Walls Metal Guardrail
Fall Hill Centerline
Metal Guardrail

FALL HILL AVENUE BRIDGE
CITY OF FREDERICKSBURG, VIRGINIA
037

PROP. R/W FOR PROJ.U000-111-R38,C-501
Curve FHEAST-C1
PI = 300+83.24
DELTA = 44° 57' 12.79" (RT)
D = 28° 38' 52"
T = 82.75'
L = 156.92'
R = 200.00'
PC = 300+00.50
PT = 301+57.41

038
CITY OF FREDERICKSBURG, VIRGINIA
D.B. 345, PG. 528
1.335 AC. Total (Tax Assessor)
GPIN# 7779-39-8706

APPROXIMATE RETAINING WALL 2
SEE EXHIBIT 22 FOR PROFILE

033
FOREST VILLAGE MCF-SCG, LP
Inst.# 080001279
21.804 AC. Total (Tax Assessor)
GPIN# 7779-39-1405
3 Sty Brick Bldg "Forest Village Apartments"

MATCH LINE - STA.178+00 - SEE EXHIBIT 14
MATCH LINE - STA.202+50.00 - SEE EXHIBIT 16

Impacted Utilities
- Telephone (T/Tg)
- Fiber Optic (FO)
- Electric (E)
- Power Pole
- Water (24" W)
- Fire Hydrant
- Cable TV (CATV)
- Sanitary Sewer (8" SAN)

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
- F ___ DENOTES CONSTRUCTION LIMITS IN FILLS
- NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
- NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD.CG-6 REQ'D.
2. STD.CG-2 REQ'D.
3. STD.MS-1A REQ'D.
4. STD.MS-2 REQ'D.
5. PROP.5' CONC.SIDEWALK
6. PROP.10' SHARED USE PATH
7. STD.CG-12,TYPE A REQ'D.
8. STD.CG-12,TYPE RII REQ'D.
9. STD.CG-12,TYPE RI2 REQ'D.
10. EXIST.PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST.UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD.CG-12,TYPE B REQ'D.
18. STD.CG-12,TYPE C REQ'D.
19. STD.CG-7 REQ'D.
20. STD.CG-3 REQ'D

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

SCALE 0 50' 100'

American Infrastructure
Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	15

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	15A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

MARY WASHINGTON BLVD.

POT STA 200+15.29 MARY WASHINGTON BLVD CONST. @
POT STA 182+57.53 FALL HILL AVENUE CONST. @
7.34
EXISTING GROUND
PROPOSED GRADE
2.00%
MATCH LINE - STA. 202+50 - SEE SHEET 16A

"CAUTION"
HIGH TENSION POWER LINES.
CONTRACTOR SHALL EXCERCISE EXTREME CAUTION. SIGNS AND WARNING DEVICES SHALL BE INSTALLED PER DOMINION POWER CRITERIA. MINIMUM CONSTRUCTION CLEARANCES TO EQUIPMENT SHALL BE PER OSHA AND DOMINION REQUIREMENTS.

DOMINION POWER HIGH TENSION LINE #252
(ELEVATIONS AS SURVEYED)

DOMINION POWER HIGH TENSION LINE #29
(ELEVATIONS AS SURVEYED)

DOMINION POWER HIGH TENSION LINE #252
(ELEVATIONS AS SURVEYED)

27' MIN. VERT. CLEARANCE

FALL HILL AVENUE

MATCH LINE - STA. 178+00 - SEE SHEET 16A

STA = 180+00.00
EL = 75.05
SSD = 354'
ex = 5.30'
K = 85
L = 600.00
V = 40 mph

Note: Vertical curve adjusted to meet headlight stopping sight distance.

EXISTING GROUND
PROPOSED GRADE
-8.56%
-1.50%
-1.50%

POT STA 182+57.53 FALL HILL AVENUE CONST. @ *
POT STA 200+22.65 MARY WASHINGTON BOULEVARD CONST. @

END CONSTRUCTION STA. 184+07.85
PROJECT 000-111-R36, C-501
(UNDER CONST. BY OTHERS)
ELEV. 68.94

POTENTIAL FUTURE GRADE

EXIST. PGL	93.29	91.75	90.27	88.87	87.37	86.21	85.18	83.89	82.57	81.46	80.39	79.17	77.82	76.31	74.58	72.56	69.73	67.54	67.30	65.36	63.83	62.35	63.53	60.75	59.69
PROP. PGL	91.83	89.88	88.03	86.27	84.61	83.04	81.57	80.20	78.91	77.73	76.64	75.64	74.75	73.94	73.23	72.62	72.10	71.68	71.30	70.93	70.55	70.18	69.80	69.43	69.05
	178+00.00		+50		179+00.00		+50		180+00.00		+50		181+00.00		+50		182+00.00		+50		183+00.00		+50		184+00.00

VERT : 1" = 5'
HORIZ : 1" = 25'

PROJECT	SHEET NO.
U000-111-233	15A

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

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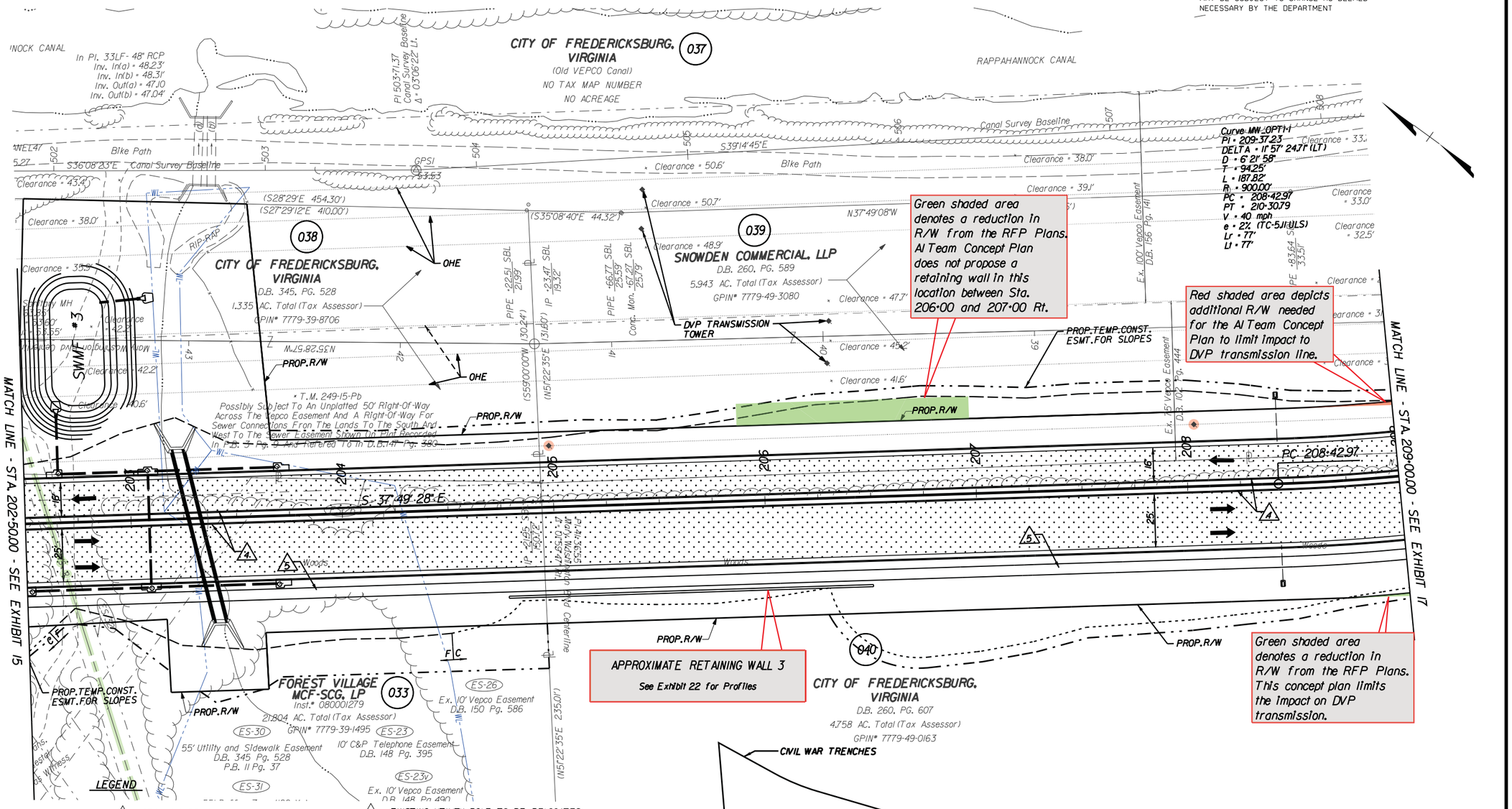
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	16

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C _ _ _ DENOTES CONSTRUCTION LIMITS IN CUTS
- F __ DENOTES CONSTRUCTION LIMITS IN FILLS
- NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
- NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	16

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

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REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	17

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

CITY OF FREDERICKSBURG, VIRGINIA (037)
(Old VEPCO Canal)
NO TAX MAP NUMBER
NO ACREAGE

Red shaded area depicts additional R/W needed for the Al Team Concept Plan to limit impact to DVP transmission.

Red shaded areas depict additional R/W needed for the Al Team Concept Plan to limit impact to DVP transmission.

Green shaded area denotes a reduction in R/W from the RFP Plans. This concept plan eliminates the need for a wall between Sta. 212+20 to 213+85 RT and limits the impact to DVP transmission.

SNOWDEN COMMERCIAL, LLP (039)
D.B. 260, PG. 589
5.943 AC. Total (Tax Assessor)
GPIN# 7779-49-3080

CITY OF FREDERICKSBURG, VIRGINIA (040)
D.B. 260, PG. 607
4.758 AC. Total (Tax Assessor)
GPIN# 7779-49-0163

Curve MW_OPT1-1
PI = 209+37.23
DELTA = 11° 57' 24.7" (LT)
D = 6° 21' 58"
T = 94.25'
L = 187.82'
R = 900.00'
PC = 208+42.97
PT = 210+30.79
V = 40 mph
e = 2% (TC-5.11 ULS)
Lr = 77'
Lt = 77'

Curve MW_OPT1-2
PI = 212+85.95
DELTA = 11° 57' 24.7" (RT)
D = 6° 21' 58"
T = 94.25'
L = 187.82'
R = 900.00'
PC = 211+91.70
PT = 213+79.52
V = 40 mph
e = 2% (TC-5.11 ULS)
Lr = 77'
Lt = 77'

MATCH LINE - STA. 209+00.00 - SEE EXHIBIT 16

MATCH LINE - STA. 214+75.00 - SEE EXHIBIT 18

SWMF #4

320' TRANSITION

150' STORAGE

100' TAPER

PROP.TEMP.CONST. ESMT.FOR SLOPES

PROP.R/W

PROP.PERM. DRAINAGE ESMT.

Ex. 100' Vepco Easement D.B. 146 Pg. 141

Ex. 75' Vepco Easement D.B. 102 Pg. 444

Bike Path

OHE

Woods

CIVIL WAR TRENCHES

CULTURAL RESOURCES SITE
SITE 44SP0574
SEE NEPA DOCUMENT

HV/AC (2)
Gas Meter
Tele. Pedestal
Metal Sign
Metal Sign
Tele. Pedestal
Electric Gen.
Electric Meter

High Tension Power Pole

SCALE 0 25' 50'

LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
- F ___ DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-? REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer
- DVP Transmission

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	17

12/11/2013

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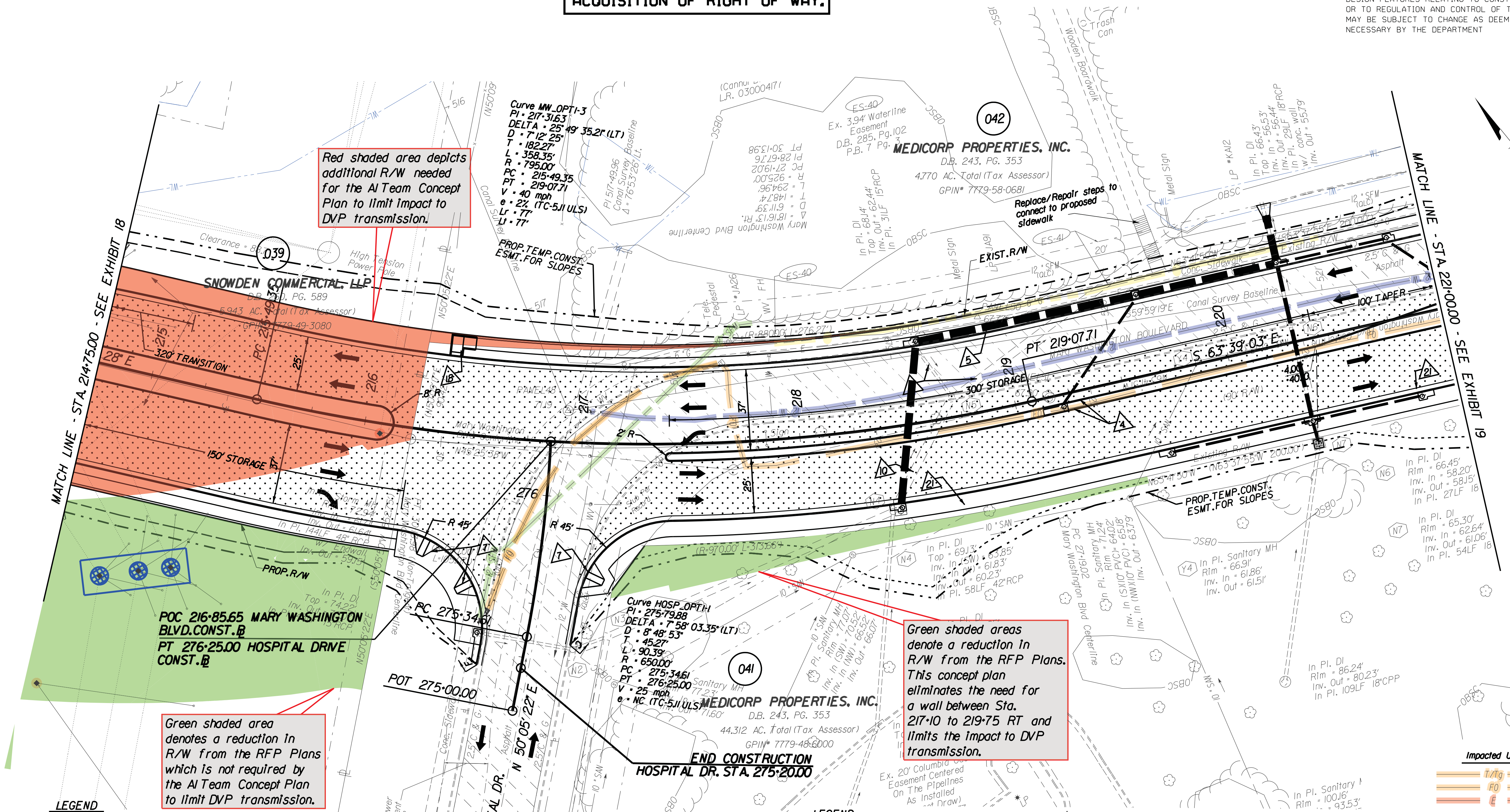
PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISED	STATE	ROUTE	PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	18

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

(dotted)	PROPOSED PAVEMENT
(hatched)	MILL AND OVERLAY/BUILD UP
(cross-hatched)	DEMOLITION OF PAVEMENT
(hatched)	OBSCURING OF PAVEMENT

C DENOTES CONSTRUCTION LIMITS IN CUTS
F DENOTES CONSTRUCTION LIMITS IN FILLS
NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

LEGEND

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE R11 REQ'D.
9. STD. CG-12, TYPE R12 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-? REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D
21. PROP. 7' CONC. SIDEWALK

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer
- DVP Transmission

SCALE 0 25' 50'

American Infrastructure
rda Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	18

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	18A

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

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MARY WASHINGTON BLVD.

MATCH LINE - STA 202+50 - SEE SHEET 15A

STA = 203+00.00
EL = 65.64
ex = 1.31'
K = 86
L = 300.00
V = 45 mph

-1.50%

-1.50%

STA = 206+50.00
EL = 70.89
SSD = 420'
ex = 1.50'
K = 75
L = 300.00
V = 45 mph

-2.50%

PROPOSED GRADE

EXISTING GROUND

MATCH LINE - STA 209+00 - THIS SHEET

203+00.00	204+00.00	205+00.00	206+00.00	207+00.00	208+00.00	209+00.00
67.44 / 67.23	65.22 / 67.05	58.99 / 66.96	55.26 / 66.93	55.63 / 66.98	56.47 / 67.00	57.01 / 67.29
57.76 / 67.55	64.32 / 67.89	73.07 / 68.27	73.93 / 68.64	73.72 / 68.98	73.52 / 69.23	71.99 / 69.39
71.81 / 69.48	70.73 / 69.48	69.39 / 69.39	66.80 / 69.23	66.65 / 68.98	66.05 / 68.64	65.42 / 68.23
64.11 / 67.73	63.28 / 67.14	62.48 / 66.52	62.22 / 65.89	62.50 / 65.30	62.88 / 64.77	

MARY WASHINGTON BLVD.

MATCH LINE - STA 209+00 - THIS SHEET

STA = 210+75.00
EL = 60.27
ex = 2.56'
K = 99
L = 450.00
V = 50 mph

-2.50%

2.05%

PROPOSED GRADE

EXISTING GROUND

MATCH LINE - STA 214+75 - THIS SHEET

209+00.00	210+00.00	211+00.00	212+00.00	213+00.00	214+00.00
62.88 / 64.77	62.36 / 64.30	62.31 / 63.90	62.50 / 63.56	61.24 / 63.28	60.12 / 63.07
58.93 / 62.92	57.87 / 62.83	57.52 / 62.80	56.81 / 62.84	56.70 / 62.94	57.17 / 63.11
57.06 / 63.34	57.74 / 63.63	58.20 / 63.98	58.59 / 64.40	59.11 / 64.88	60.18 / 65.39
61.16 / 65.91	61.55 / 66.42	61.87 / 66.93	62.06 / 67.44	62.48 / 67.96	62.40 / 68.47

MARY WASHINGTON BLVD.

MATCH LINE - STA 214+75 - THIS SHEET

STA = 216+50.00
EL = 72.06
SSD = 388'
ex = 0.94'
K = 53
L = 200.00
V = 40 mph

2.05%

-1.70%

SPLINE GRADE
MATCH EXISTING

HOSPITAL DRIVE

10

75.19

-1.49%

-5.10%

-2.00%

71.41

STA = 275+55.00
EL = 72.81
ex = 0.31'
K = 26
L = 80.00
V = 20 mph

EXIST. PGL
PROP. PGL

215+00.00	216+00.00	217+00.00	218+00.00	275+00.00	276+00.00
62.40 / 68.47	61.55 / 68.98	61.71 / 69.49	62.12 / 70.01	62.39 / 70.46	63.80 / 70.80
67.46 / 71.02	71.36 / 71.12	71.70 / 71.10	70.72 / 70.97	70.25 / 70.72	70.07 / 70.36
69.73 / 69.93	69.41 / 69.51	75.53	74.34 / 74.36	73.48 / 73.30	72.51 / 72.49
71.56 / 71.91	71.46 / 71.41				

VERT : 1" = 5'
HORIZ : 1" = 25'

PROJECT	SHEET NO.
U000-111-233	18A

12/11/2013

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

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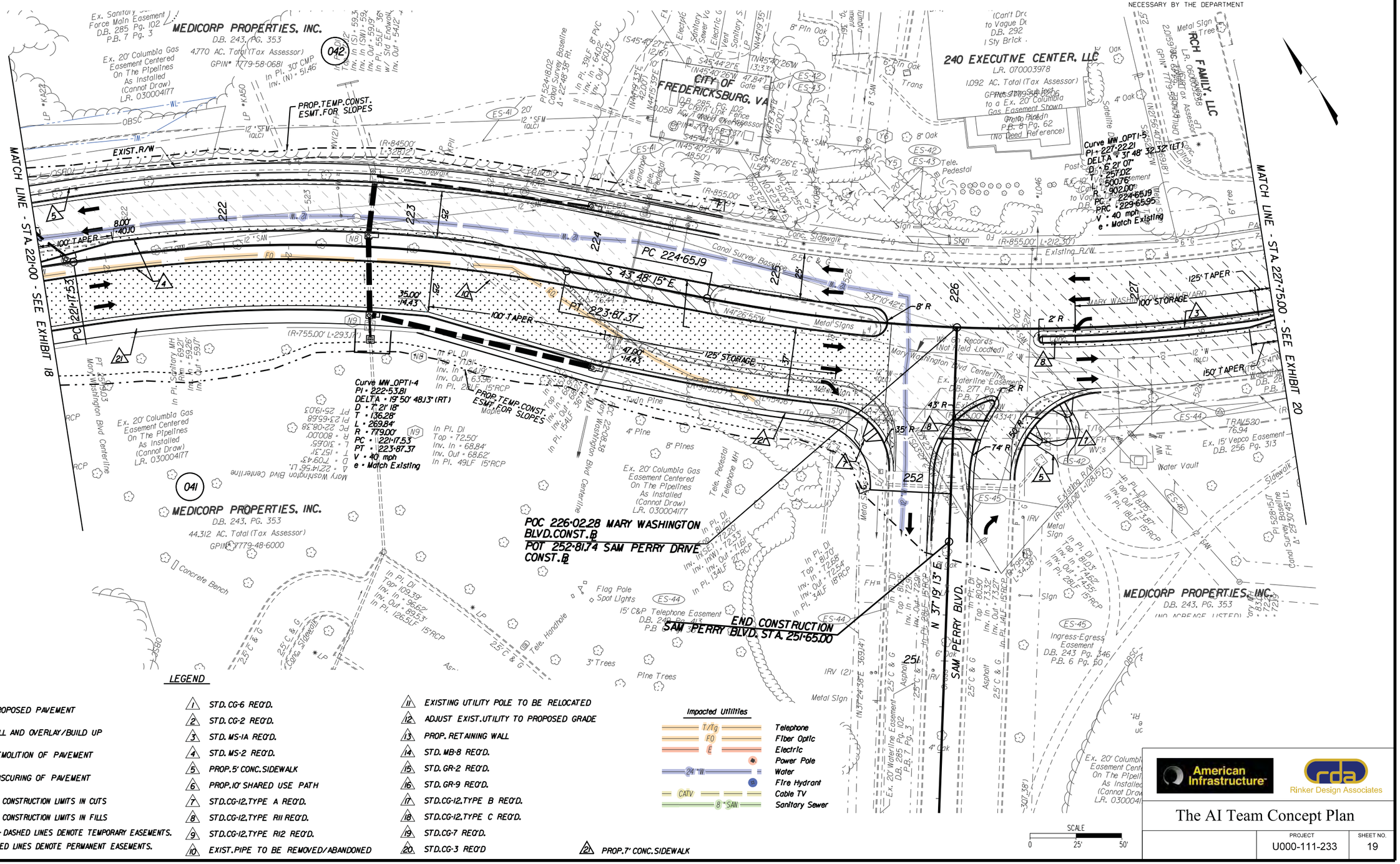
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	19

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C ___ DENOTES CONSTRUCTION LIMITS IN CUTS
- F ___ DENOTES CONSTRUCTION LIMITS IN FILLS
- NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
- NOTE: DOT - DOTTED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D
21. PROP. 7' CONC. SIDEWALK

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure

Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	19

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

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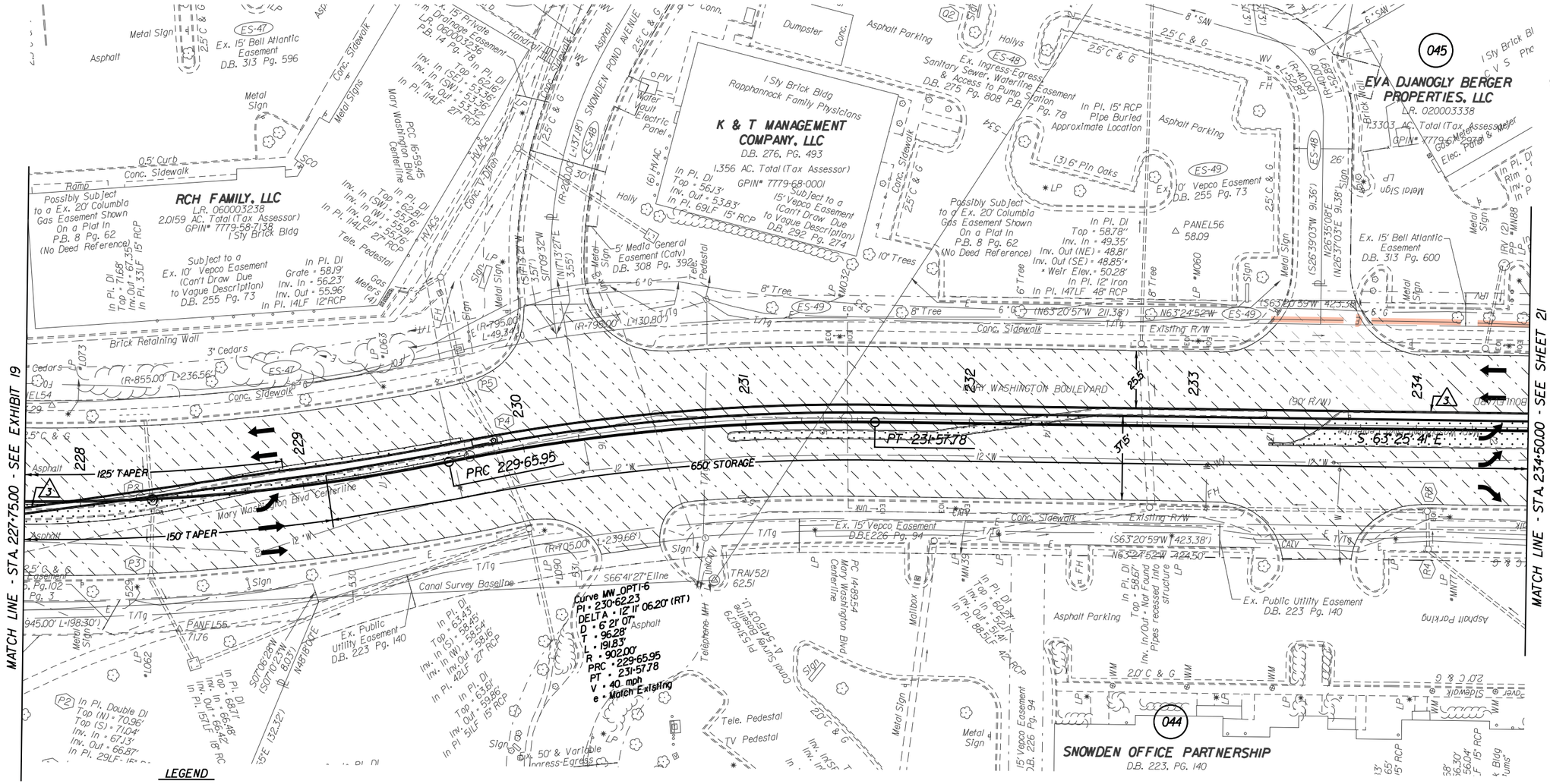
REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	20

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT



LEGEND

- PROPOSED PAVEMENT
- MILL AND OVERLAY/BUILD UP
- DEMOLITION OF PAVEMENT
- OBSCURING OF PAVEMENT
- C _ _ _ DENOTES CONSTRUCTION LIMITS IN CUTS
- F __ DENOTES CONSTRUCTION LIMITS IN FILLS
- NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.
- NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D

Impacted Utilities

- T/Tg — Telephone
- FO — Fiber Optic
- E — Electric
- Power Pole
- 24" W — Water
- Fire Hydrant
- CATV — Cable TV
- 8" SAN — Sanitary Sewer

SCALE 0 25' 50'

American Infrastructure | Rinker Design Associates

The AI Team Concept Plan

PROJECT	SHEET NO.
U000-111-233	20

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PROJECT MANAGER WWW
SURVEYED BY XXX
DESIGN SUPERVISED BY YYY
DESIGNED BY ZZZ

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

ADDITIONAL EASEMENTS FOR UTILITY RELOCATIONS MAY BE REQUIRED BEYOND THE PROPOSED RIGHT OF WAY SHOWN ON THE PLANS.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 PE-101, RW-201, C-501	21

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

MATCH LINE - STA. 234+50 - SEE EXHIBIT 20

MATCH LINE - STA. 612+75 - THIS EXHIBIT

Red shaded area depicts additional R/W to allow for 65' Radial Returns required by the RFP.

Red shaded area depicts additional R/W to allow for 65' Radial Returns required by the RFP.

044 SNOWDEN OFFICE PARTNERSHIP
D.B. 223, PG. 140
4.753 AC. Total (Plat)
In Pl. DI
Top = 65.81'
GPIN# 7779-57-9627

045 EVA DJANOGLY BERGER PROPERTIES, LLC
LR-020003338
1.3303 AC. Total (Tax Assessor)
GPIN# 7779-67-2973
In Pl. Storm MH
Rim = 57.11'
Inv. In/Out = Not found
Filled with water

047 CITY OF FREDERICKSBURG, VIRGINIA
(Old VEPCO Canal)
TAX MAP NUMBER
ACREAGE

037

Subject to a 100' Buffer From Nearest Waters Edge Of Old Vepco Canal
D.B. 275 Pg. 808
P.B. 7 Pg. 78

PROP. PERM. DRAINAGE ESMT.

Ex. 15' Vepco Easement D.B. 226 Pg. 94

Ex. 20' Storm Drainage Easement D.B. 302 Pg. 73 P.B. 10 Pg. 62

MARY WASHINGTON BOULEVARD

650' STORAGE

PROP. R/W

Existing R/W

PROP. 5' CONC. SIDEWALK

PROP. 10' SHARED USE PATH

PROP. 7' CONC. SIDEWALK

Brick Wall

4' Maple

Bushes (Typ.)

Sign

Metal Signs

Guy Wire

Utility Pole

Tele. Pedestal

Historical Informational Sign

Exposed Stone Gas Witness

Exposed Rock Outcrop

Asphalt

3 Split Rail Fence

Stoop

Telephone MH

PP #1031

Holly Bushes (Typ.)

Asphalt Parking

Conc. Sidewalk

Guardrail

Conc. Island

Ditch

(N32°50'E - HWY PLANS (235C-1))

(S32°50'00"W 487.02')

(S26°39'01"W 296.28')

(S26°38'04"W)

(S26°38'04"W 475.06')

(N12°23'36"W 10.42')

(S49°36'W 5.46')

(N16°42'00"W)

(N16°35'W)

S24°45'08"E 59.19'

S26°38'04"W 395.26'

N 26° 39' 01" E

R 65'

2' R

75' R

7' R

1' R

4' R

3' R

23' R

35' R

70' R

20'

18'

260' STORAGE

250' STORAGE

320' TRANSITION

100' STORAGE

100' TAPER

150' TAPER

48.30'
-37.70

33.69'
-37.55

7.93'
-73.27

7.92'
-41.00

58.97'
-04.00

59.00'
-64.00

16.00'
-04.56

47.00'
-64.00

8.00'
-55.00

2' GV In Area (Not Field Located)

6' GV In Area (Not Field Located)

4" G

2.5' C & G

Tie Loop

Asphalt

JEFFERSON DAVIS HIGHWAY

(130' R/W)

US ROUTE 1

JEFFERSON DAVIS HIGHWAY CONST. ℄

PROP. JEFF DAVIS HIGHWAY CONST. ℄

△PANEL58
59.26'

△PANEL59
69.42'

END PROJECT U000-111-233, PE-101, RW-201, C-501
STA. 236+39.89 MARY WASHINGTON BOULEVARD CONST. ℄

POT STA. 614+32.67 JEFFERSON DAVIS HIGHWAY CONST. ℄
POT 236+39.89 MARY WASHINGTON BOULEVARD CONST. ℄
Δ = 90°00'00" LT.

END CONSTRUCTION JEFFERSON DAVIS HIGHWAY STA. 618+03.36

BEGIN PROJECT U000-111-235 (UNDER DESIGN BY OTHERS)

BEGIN CONSTRUCTION JEFFERSON DAVIS HIGHWAY POT STA. 607+65.27

PROP. TEMP. CONST. ESMT. FOR ENTRANCE

PROP. TEMP. CONST. ESMT. FOR SLOPES

Ex. 15' VEPCO Easement D.B. 243 Pg. 229

Ex. Public Utility Easement D.B. 223 Pg. 140

Holly Bushes (Typ.)

Signs

Conc. Sidewalk 2.0' C & G

Asphalt

Existing R/W

Guardrail

Sign

Metal Sign

Conc. Sidewalk

Asphalt Parking

In Pl. DI
Top = 94.78'
Inv. In = 84.98'
Inv. Out = 84.82'
In Pl. 95LF 15" RCP

In Pl. Storm MH
Rim = 88.85'
Inv. In/Out = Inaccessible
In Pl. 106LF 15" RCP
w/ Conc. Endwall
Inv. Out = 73.80'

In Pl. DI
98.63'
90.50'

In Pl. DI
Top = 66.58'
Inv. Out = 62.13'
In Pl. 65LF 15" RCP

In Pl. Sa
Rim = 69.
Inv. In (S
Inv. In (N
Inv. Out =

FH
PP # MM46
PP # MM47
w/ Guys

8" SAN

WM

Holly

Locate

C F

608 609 610 611 612

607

N 26° 39' 01" E

0.87'
-69.00

14.89'
-69.00

24"

SCALE
0 25' 50'

LEGEND

1. STD. CG-6 REQ'D.
2. STD. CG-2 REQ'D.
3. STD. MS-1A REQ'D.
4. STD. MS-2 REQ'D.
5. PROP. 5' CONC. SIDEWALK
6. PROP. 10' SHARED USE PATH
7. STD. CG-12, TYPE A REQ'D.
8. STD. CG-12, TYPE RII REQ'D.
9. STD. CG-12, TYPE RI2 REQ'D.
10. EXIST. PIPE TO BE REMOVED/ABANDONED
11. EXISTING UTILITY POLE TO BE RELOCATED
12. ADJUST EXIST. UTILITY TO PROPOSED GRADE
13. PROP. RETAINING WALL
14. STD. MB-8 REQ'D.
15. STD. GR-2 REQ'D.
16. STD. GR-9 REQ'D.
17. STD. CG-12, TYPE B REQ'D.
18. STD. CG-12, TYPE C REQ'D.
19. STD. CG-7 REQ'D.
20. STD. CG-3 REQ'D
21. PROP. 7' CONC. SIDEWALK

PROPOSED PAVEMENT

MILL AND OVERLAY/BUILD UP

DEMOLITION OF PAVEMENT

OBSCURING OF PAVEMENT

C ___ DENOTES CONSTRUCTION LIMITS IN CUTS

F ___ DENOTES CONSTRUCTION LIMITS IN FILLS

NOTE: DOT - DOT - DASHED LINES DENOTE TEMPORARY EASEMENTS.

NOTE: DOT - DASHED LINES DENOTE PERMANENT EASEMENTS.

Impacted Utilities

T/Tlg	Telephone
FO	Fiber Optic
E	Electric
	Power Pole
24" W	Water
	Fire Hydrant
CATV	Cable TV
8" SAN	Sanitary Sewer

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PROJECT	SHEET NO.
U000-111-233	21

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4.3.2
Conceptual Structural Plans

PROJECT MANAGER K. Northridge (540)899-4280
SURVEYED BY NXL Construction Svcs., Inc.
DESIGN SUPERVISED BY Mitch Johnson, PE (Kimley-Horn)
DESIGNED BY Kimley-Horn and Associates, Inc.

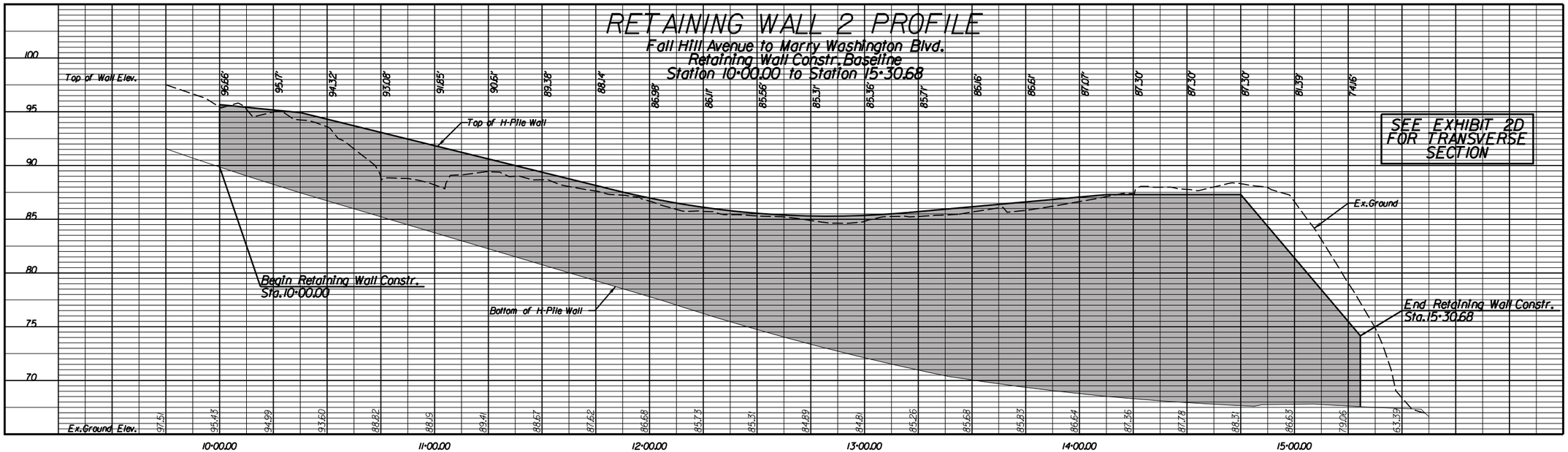
THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

REVISED	STATE	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.	639	U000-111-233 RW-201, C-501	22

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

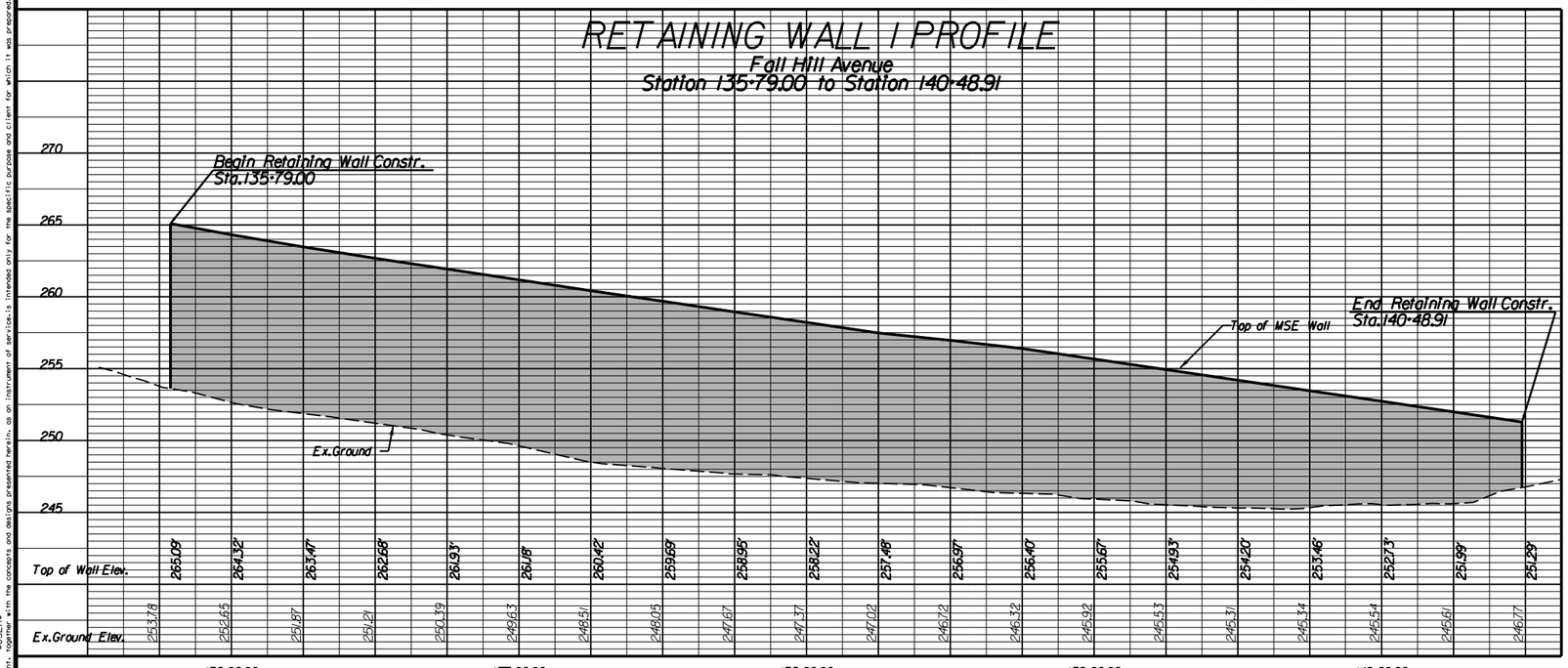
RETAINING WALL 2 PROFILE

Fall Hill Avenue to Marry Washington Blvd.
Retaining Wall Constr. Baseline
Station 10+00.00 to Station 15+30.68



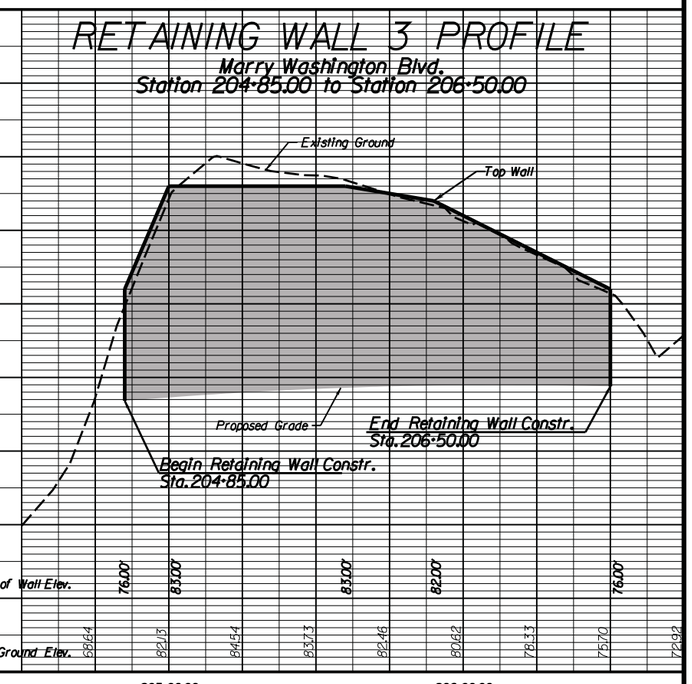
RETAINING WALL 1 PROFILE

Fall Hill Avenue
Station 135+79.00 to Station 140+48.91



RETAINING WALL 3 PROFILE

Marry Washington Blvd.
Station 204+85.00 to Station 206+50.00



SCALE: 1" = 25' HORIZ.
1" = 5' VERT.

PROJECT	SHEET NO.
U000-111-233	22

12/11/2013

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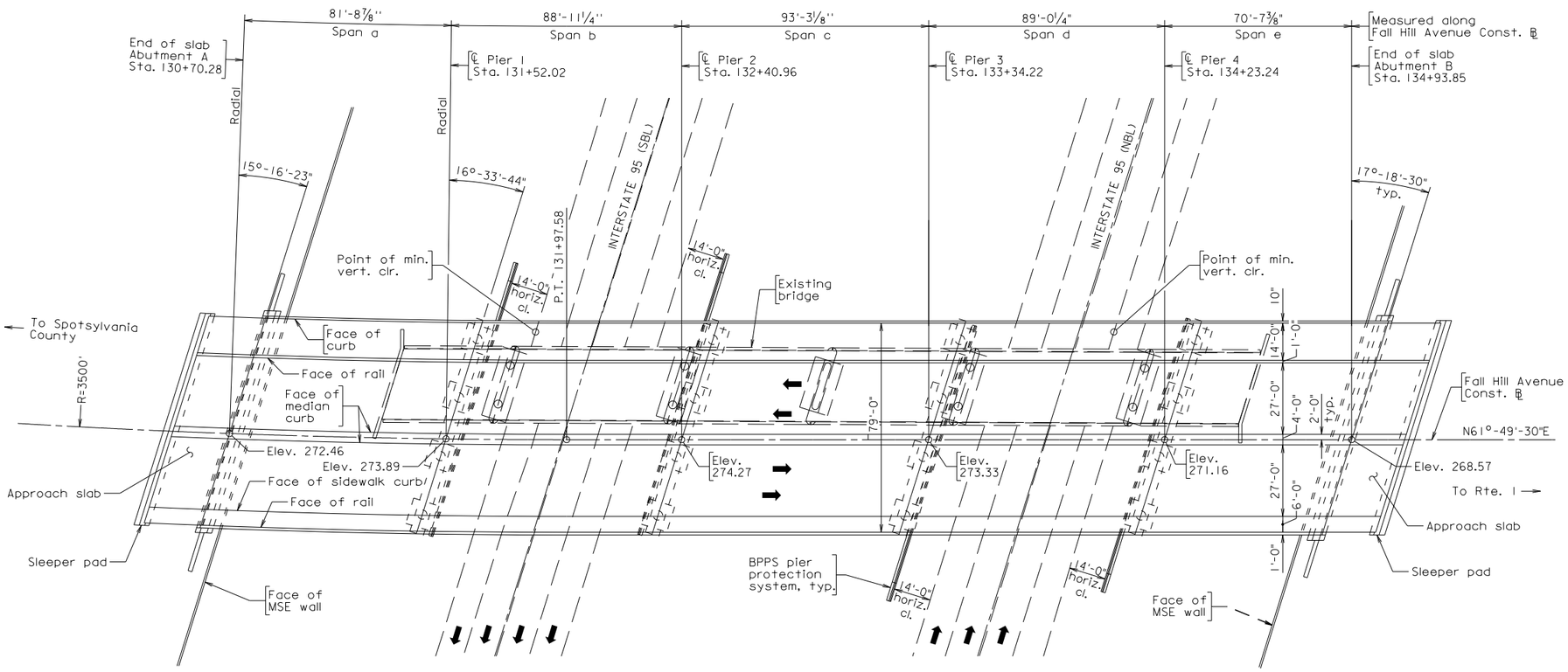
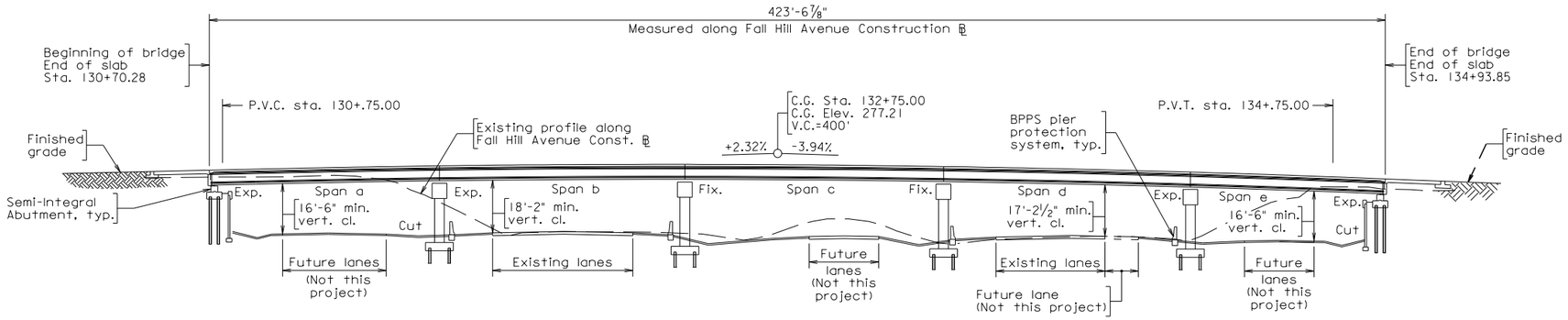
STATE	FEDERAL AID		STATE		SHEET
	ROUTE	PROJECT	ROUTE	PROJECT	NO.
VA.	—	-	639	U000-111-233, B609	1
NBIS Number: -			UPC No. 88699		
Federal Oversight Code: -			FHWA Construction and Scour Code:	X281-SN	



PLAN



ABUTMENT A PIER 1 PIER 2 PIER 3 PIER 4 ABUTMENT B

DEVELOPED SECTION ALONG CONSTRUCTION ℄

Scale: 1" = 25'

DESIGN EXCEPTION(S):

None

GENERAL NOTES:

Widths: 6'-0" sidewalk, 27'-0" roadway, 4'-0" median, 27'-0" roadway, 1'-0" barrier, 14'-0" shared use path. Overall width 79'-0" face-to-face of rails.

Span layout: 81'-9" - 88'-11" - 93'-3" - 89' - 70'-7" prestressed concrete 53" deep bulb-T beams spans continuous for live load.

Capacity: HL-93 loading.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2007.

Design 2012: AASHTO Standard Specifications for Highway Bridges, 6th Edition, 2012; 2013 Interim Specifications; and VDOT Modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2008.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

Bridge No. of existing bridge is 6082. Plan No. is 156-03.

The existing structure is designated a Type B structure in accordance with Sec. 411.

PRELIMINARY PLANS

THESE PLANS NOT TO BE USED FOR CONSTRUCTION OF BRIDGE

VDOT

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PROPOSED BRIDGE ON FALL HILL AVENUE OVER I-95
SPOTSYLVANIA CO. - 1.2 MI. N. OF RTE. 3
PROJ. U000-111-233, B609

American Infrastructure · Rinker Design Associates · moffatt & nichol

The AI Team Concept Plan

PLANS BY:
COORDINATED:
SUPERVISED:
DESIGNED:
DRAWN:
CHECKED:

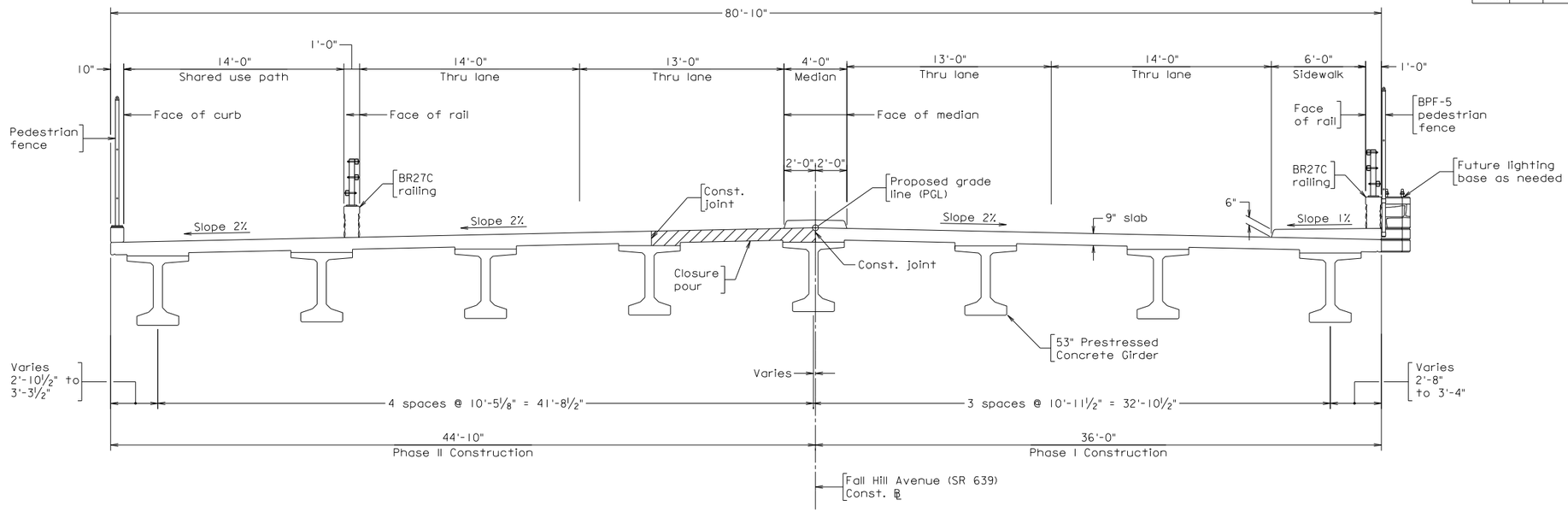
No.	Description	Date
REVISIONS		
For Table of Revisions, see Sheet 2.		

Recommended for Approval: _____ (Developer's Designee) Date

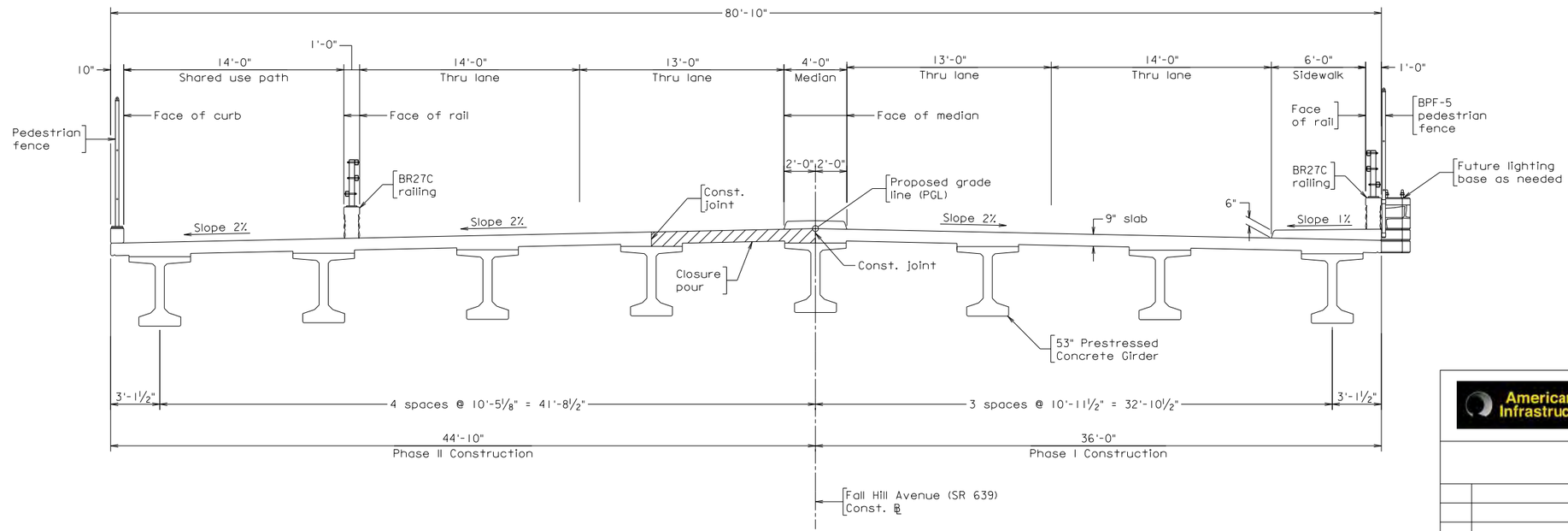
Approved: _____ Chief Engineer Date

Date: December 12, 2013 Sheet 1 of

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—		-	-	X



TRANSVERSE SECTION - SPANS A & B



TRANSVERSE SECTION - SPANS C, D & E

Scale: ¼" = 1'-0" unless otherwise noted

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Rinker Design Associates

moffatt & nichol

The AI Team Concept Plan

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

TRANSVERSE SECTION

No.	Description	Date
	Revisions	

Designed: DJW
Drawn: TPA
Checked:

Date	Plan No.	Sheet No.
Dec. 2013	XXX-XX	X of X

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