

PROJECT MANAGER Vicente Vazquez, PE
 SURVEYED BY VDOT (May, 2017)
 DESIGN SUPERVISED BY Robert Kalbach, PE
 DESIGNED BY WSP USA

RIGHT-OF-WAY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	673	0673-053-082	CIE

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

HYDROLOGIC DATA

The data presented herein was statistically derived by empirical methods and from field observations. It is presented as an estimate of the hydraulic performance of these facilities during the passage of actual flood events.

1. Estimated 100 year frequency flood data (unless otherwise noted). This magnitude of flooding may pass through the proposed facility or it may obtain the necessary hydraulic conveyance by partial inundation of roadways and/or partial by pass of the facility.

2. Specified frequency flood data. It is anticipated that this magnitude of flooding will be conveyed through the proposed hydraulic facility under estimated conditions which satisfy the design criteria applicable to the site.

3. This data was obtained from observations by persons familiar with the area and/or official records combined with an evaluation by empirical methods. The reliability of this data is relative to the accuracy of the source. A future flood of the same magnitude may achieve a significantly different stage elevation from that shown due to changes in the physical characteristics of the watershed.

FIELD INSPECTION STAGE <input type="checkbox"/>					FINAL DESIGN STAGE <input type="checkbox"/>					BASE FLOOD 1.			DESIGN FLOOD 2.			OVERTOPPING FLOOD			HISTORICAL DATA 3.		
Sheet No.	Station	Stream Name	Drainage Area	Structure Size	Discharge (C.F.S.)	Stage Elevation (Ft.)	Discharge (C.F.S.)	Estimated Exceedance Probability %	Stage Elevation (Ft.)	Stage Elevation (Ft.)	Estimated Exceedance Probability %	Date	Stage Elevation (Ft.)	Estimated Exceedance Probability %							
3	103+42	CATOCTIN CREEK	71.04 mi ²	BRIDGE	18,911	302.54	8,493	10	297.71	303.74	0.6	1972	304.29	0.4							
					REMARKS																
					Source of Information and Other Related Data																

Route 673 Over Catoctin Creek
 Streamflow Hydrograph Sheet

PROJECT MANAGER: Vicente Velez, PE
SURVEYED BY: VDOT (Mar, 2017)
DESIGN SUPERVISED BY: Robert Kalbach, PE
DESIGNED BY: WSP, USA

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REVISED	STATE	STATE		SHEET NO.
		ROUTE	PROJECT	
	VA.	673	0673-053-082	CIF(1)

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

Route : 673
Project : 0673-053-082, P101
District : NOVA
County : Loudoun
From : 1000' East Of Bridge Over Catoclin Creek
To : 1000' West Of Bridge Over Catoclin Creek
Horizontal Datum Based On NAD 83
Vertical Datum Base d On NAVD 88
Survey By : J. Bly
Operator : T. Marva
Date : 4-13-15
Scale : 1" = 25'
UPC* : 105898

LD-200 (REV. 8/2014) Virginia Department of Transportation Horizontal Control Control Station I.D.: GPS *3 Date : 02-11-15	
VDOT Project Coordinates (2014) East (X) : 11740444.1469 ft. North (Y) : 7133245.8121 ft. Elevation : 306.59 ft.	VA State Plane Coordinates : NAD 83 - U.S. Survey Feet East (X) : 11740444.1469 ft. North (Y) : 7133245.8121 ft. Ortho. Elevation (H) : 306.59 ft. Zone : North X South (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.00000	Project Information Project Number : 0673-053-082, P101 UPC 105898 Route : 673 City/County : Loudoun Established By : VDOT
Latitude : 39° 13' 57.53512" N Longitude : 77° 35' 27.16362" W Geoid Separation (N) : _____ Ellipsoid Height (h) : _____ Horizontal Datum : NAD 83 Year : 2012 Vertical Datum : NAVD 88 Geoid : 12A Azimuth to Station GPS *4 is 94°45'16" Control Based On: Station (Name/PID) _____ or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : * Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) * Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet

SURVEY TRAVERSE POINTS

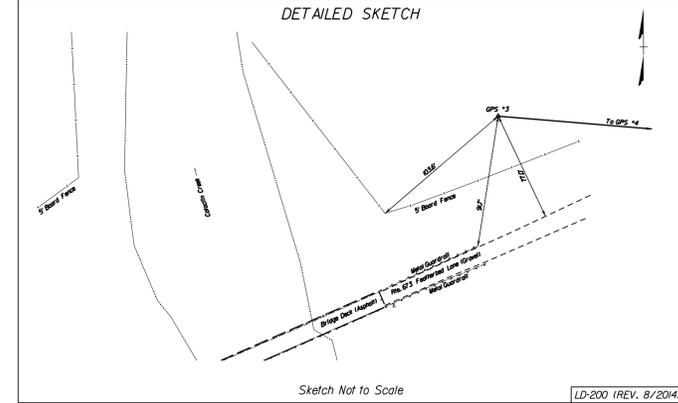
TRAV *	NORTH (Y)	EAST (X)	ELEV (Z)
Trav.*1	7133056.511	11740351.092	293.25'
Trav.*2	7133122.679	11740165.417	292.49'
Trav.*5	7132598.213	11740274.307	311.83'
Trav.*6	7132569.108	11739763.731	294.25'
Trav.*7	7133855.595	11740260.479	291.78'

UTILITY LEGEND

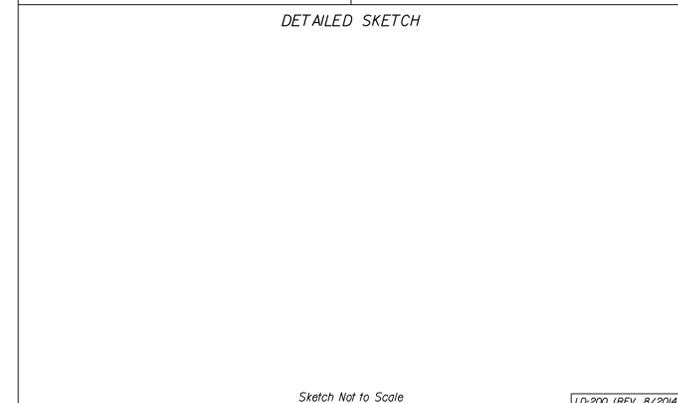
	Anchor (for towers) Electric Box Electric Guy Pole Electric Guy Wire Electric Hand Hole Electric Meter Electric Manhole Electric Marker Post Electric Pedestal Electric Stub Fire Hydrant Fiber Optic Marker Gas Meter Gas Manhole Gas Marker Post Gas Monitoring Well Gas Stub Gas Valve Gas Well Light Pole Luminaire Unknown Manhole Power Pole Satellite Dish Sewer Clean Out Sanitary Force Main Valve Sanitary Manhole Sanitary Stub Traffic Control Hand Hole Traffic Control Manhole Telephone Booth Telephone Guy Pole Telephone Guy Wire Telephone Hand Hole Telephone Manhole Telephone Marker Post Telephone Pole Telephone Pedestal Traffic Signal Guy Pole Traffic Signal Pole Telephone Stub Television Hand Hole Television Manhole Television Pedestal Television Stub Water Well Water Meter Water Manhole Water Spigot Water Stub Water Valve Fiber Optic Cable Television Chemical Line (above or below ground) Underground Fiber Optic Duct Fuel Line (above or below ground) Gas Line * Gas Line Duct * Gravity Sewer * Sanitary Force Main * Traffic Control Fiber Optic Telephone Fiber Optic Underground Fiber Optic Unknown Utility Line Underground Power Cable Underground Power Cable Duct Underground Telephone Cable Underground Telephone Cable Duct Underground Telephone Cable Duct Underground Traffic Control Underground Traffic Control Duct Underground Television Cable Underground Television Cable Duct Vacuum Sewer Water Line * Water Line Duct * * Depleted According To Utility Records ** * Abandoned According To Utility Records ** * According To Miss Utility Information ** * Designate size (Variable from 0.75" to 54") ** Designate type (Unknown line is shown)
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PLANIMETRIC LEGEND

	Advertising Sign Bench Mark Bollard Post Photo Control Point Control Station Cell Tower Drainage Flow Arrow (Storm Drainage) Filler Cap (Gas Stations) Flow Arrow (Streams & Rivers) Flag Pole Secondary Control Point Filler Pipe (Gas Stations) Gas Tank Access Manhole (Gas Stations) Gravesite Marker Guard Post Gas Vent Pipe (Gas Stations) Mine Entrance Node Point Property Line Symbol Found Monumentation Property Monument Metal or Wooden Post Right of Way Monument Iron Right of Way Pin Railroad Mile Marker Railroad Right of Way Monument Railroad Signal Pole or Gate Railroad Telegraph Pole Railroad Telephone Pole Shrub Storm Sewer Manhole Tree Wetland Flag Automatic Wetland Flag Manual Elevation Tick Mark Connected Plat Symbol Brush Line Pipe Culverts * City Line County Line Curb Only Curb and Gutter Fence Line Guardrail Hedge Row Jersey Barrier Obscure Areas Paved Ditches Railroad Right of Way State Line Edges of Water Sidewalks Wetlands Woods * Designate size of culverts (Variable from 12" to 120")
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LD-200 (REV. 8/2014) Virginia Department of Transportation Horizontal Control Control Station I.D.: GPS * 4 Date : 02-11-15	
VDOT Project Coordinates (2014) East (X) : 11740949.9169 ft. North (Y) : 7133203.7453 ft. Elevation : 323.58 ft.	VA State Plane Coordinates : NAD 83 - U.S. Survey Feet East (X) : 11740949.9169 ft. North (Y) : 7133203.7453 ft. Ortho. Elevation (H) : 323.58 ft. Zone : North X South (place an 'X' beside one)
Project Specific Combined Scale Factor: 1.00000	Project Information Project Number : 0673-053-082, P101 UPC 105898 Route : 673 City/County : Loudoun Established By : VDOT
Latitude : 39° 13' 57.06982" N Longitude : 77° 35' 20.74168" W Geoid Separation (N) : _____ Ellipsoid Height (h) : _____ Horizontal Datum : NAD 83 Year : 2012 Vertical Datum : NAVD 88 Geoid : 12A Azimuth to Station GPS *3 is 27°44'51.6" Control Based On: Station (Name/PID) _____ or Project (Monument No.) : _____	To convert Virginia State Plane Coordinates to VDOT Project Coordinates, use the following formula : * Multiply the Easting And Northing Values (For Both Zones) by the Project Specific Combined Scale Factor. (Located above left) * Reverse this Procedure to convert VDOT Project Coordinates (2014) to NAD 83 - U.S. Survey Feet



Route 673 Over Catoclin Creek

Survey Alignment Data

PROJECT	SHEET NO.
0673-053-082	CIF(1)

PROJECT MANAGER Vicente Velez, PE
SURVEYED BY VDOT (May, 2017)
DESIGN SUPERVISED BY Robert Kalbach, PE
DESIGNED BY WSP USA

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TRANSPORTATION MANAGEMENT PLAN NOTES

REVISED	STATE	STATE		SHEET NO.
	VA.	ROUTE	PROJECT	
		673	0673-053-082	CJ(1)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
WSP USA INC. HERNDON, VA ROADWAY ENGINEER				

Project Description

Route 673 (Featherbed Lane) Bridge over Catactin Creek in Loudoun County, Virginia, carries one alternating traffic lane with an overall width of about 14 feet and clear roadway width of 11.6 feet. The bridge was posted to the National Register of Historic Places on June 25, 1974. Catactin Creek is a State Scenic River. The 2016 ADT is 60. Route 673 at the project location is classified as a Rural Local with no posted speed limit signs. However, effective July 1, 2014, a maximum speed limit of 35 mph applies to all unpaved roads statewide, as a result of legislation passed by the General Assembly this year. The road does not have to be posted. Based on existing conditions of Featherbed Lane, a 25 MPH design speed was used for the roadway design.

The approach roadway improvements extend approximately 239' to the east from the existing bridge western abutment on Route 673, and 156' west from the western abutment.

Detour plans are provided for closure of Route 673 (Featherbed Lane) within limits of improvements.

Public Communication and Outreach Strategies

Notification

- The Contractor shall provide advance notice of all approved closures to the Engineer who will communicate with the VDOT Northern Virginia Public Affairs Section, Loudoun County Supervisors, Federal Agencies and Schools in close proximity, radio and television, emergency services, VDOT, and the Traffic Operations Center, as determined appropriate.
- The Contractor shall coordinate with VDOT and develop a Public Communication Plan based on contractor's projected work schedule. Ensuring proper, timely and accurate communication to the media and general public is critical to providing en-route traveler information.
- The Contractor shall coordinate with the Loudoun County Fire and Rescue and notify all other local area emergency services concerning all detours and road closures of any nature.

Loudoun County Police Department (703) 777-1021
Loudoun County Fire Department (703) 777-0333
Loudoun County Emergency Services (703) 777-0320
Loudoun County Department Of Public Works (703) 777-0100
Loudoun County Department Of Parks And Recreation (703) 777-0343
Virginia State Police (703) 791-3101
- The Contractor shall be responsible for maintaining project lane closure information on LCAMS and VaTraffic throughout the duration of the project in accordance with IIM-OD-16-03, dated December 16, 2016.

Temporary Traffic Control Strategies

Traffic Control Plan Notes

- The Transportation Management Plan and Temporary Traffic Control (TMP/TTC) is intended as a guide. It is not to enumerate every detail which must be considered in the construction of each phase or stage, but only to show the general handling of traffic. It shall be the responsibility of the contractor to present a formal TMP/TTC to the engineer for approval prior to any construction that may affect the existing traffic.
- The TMP/TTC, during construction, shall be in accordance with the VDOT Road and Bridge Specifications (2016), including 2017 supplements, the 2011 Virginia Work Area Protection Manual (Rev. 2015) and the 2009 Manual on Uniform Traffic Control Devices (MUTCD), and the 2011 VA Supplement to the 2009 MUTCD (Rev. 2013).
- All vehicles shall be equipped with at least one rotating or two high intensity amber lights. The light shall only be displayed when the vehicle is entering the work area from the travel lane and it should be clearly visible to vehicles following.
- The Contractor shall submit a request for any lane or shoulder closures to VDOT 10 days in advance of the closure. Further advance notice may be required per the Public Communications Plan.
- Disposal site and staging area locations shall be the responsibility of the Contractor. No work shall be performed until such sites have been accepted by the Engineer. The sites cannot be placed on any wetlands, E&S sediment basins/traps, park land or other environmentally sensitive areas.
- The Contractor shall schedule all stages of construction in such manner that water, sewer, cable, power, any overhanging utility and any underground utility services will not be interrupted. The cost of any temporary connection, in part or whole, shall be incidental to other items. The Contractor shall coordinate his utility adjustments/relocation activities with the owner of the utility.
- Unless otherwise approved or directed by the Engineer, the Contractor shall plan and prosecute the work in accordance with the sequence of construction sheets. Otherwise the Contractor shall submit a detailed maintenance of traffic and sequence of construction plan for review and approval by VDOT. This plan shall also include a plan detailing how the pedestrian and bicycle traffic shall be handled. The Contractor shall allow a minimum of a two-week review period. Any major changes in phasing will require approval of the Engineer. Minor adjustments of the maintenance of traffic plan shall be reviewed by the Engineer.

Traffic Control Plan Notes (Continued)

- When detour plan is not implemented, traffic shall not be stopped on Route 673 or any connections for longer than 7 minutes at any time unless otherwise directed by the Engineer.
- Access and adequate sight distance to and from all properties shall be maintained at all times. For connections and entrances, minimum width shall be no less than existing conditions unless otherwise shown on plans. Emergency vehicles and Postal vehicles must also have access to all properties at all times. Mailboxes shall be reset/available for use each day.
- Once construction is started on a Stage/Phase, the work shall be prosecuted continuously through complete in place final asphalt before proceeding to the next Stage/Phase, or as directed by Engineer.
- All flagging operations shall follow TTC-23J, and/or TTC-24J of the (VWAPM). The cost of the required Shadow Vehicle shall be included in price bid for other items in the contract and no additional compensation for this item will be made.
- All construction signs shall be the responsibility of the contractor, including furnishing, installing, adjusting, maintaining, and removing the signs and posts per the Specifications and Standard Details. If the signs are not setup as a pay item, they shall be considered incidental to the price of other items.
- The location of existing features and dimensions shown on these plans beyond limits of the project survey is approximate.
- The channelization devices and signs shown are for schematic purposes only. The contractor shall follow the Virginia Work Area Protection Manual (2011) for the proper placement of these and other traffic control devices.
- Traffic will be maintained by using Figure TTC-23J, TTC-34J, TTC-43J, TTC-48J, TTC-53.0, (2011, Rev. 2015) VA WAPM) during working hours. Sign stands shall be used for signs.
- Installation of Temporary Traffic Control devices or signs shall not obstruct the sight distance from any travel-way.
- Any existing regulatory signs that conflict with construction signs shall be covered during Temporary Traffic Control. The cost of covering the existing signs shall be incidental and included in the price bid for construction signs.
- Temporary items required to safely reopen the work area to traffic when work is not yet complete, including but not limited to construction pavement markings, delineators, asphalt wedges (See Detail on this sheet), additional planing, construction signs (such as Uneven Lanes, Bump, etc) shall not be measured for separate payment and the cost shall be incidental to other work items.
- Contractor to ensure positive drainage for the duration of the project. Additional temporary measures may be needed to facilitate proper positive drainage.
- The Contractor must continually monitor lane closures and/or detour routes and make spot adjustments as needed/available to ease/undue backups, delays, or queuing.

Transportation Operations Strategies

Work Zone Management

- The Contractor shall be responsible for providing a designated Work Zone Safety Coordinator to develop and monitor all traffic control devices and ensure compliance with the current edition (2011, Rev. 2015) of the Virginia Work Area Protection Manual.
- A temporary barrier should be placed before each approach to the bridge per note 11 of TTC-48J. Additional warning lights may be warranted at final road closure locations, particularly when the contractor is not on site. There is no existing lighting in the area.

ALLOWABLE HOURS FOR LANE CLOSURES:

- The Contractor should make every effort to maintain the existing travel lanes open to traffic at all times in accordance with the lane closures in NOVA district memorandum, dated September 29, 2016 except as noted on TTC Plans. Route 673 shall only be closed as directed by the Engineer. The Contractor shall consult with the Engineer for any planned closure scenario not anticipated by this Transportation Management Plan. Access to and from all private properties shall be maintained at all times.
- Long-term closure of Route 673 will be required for the proposed work on the bridge.
- The Contractor must contact the VDOT Northern Region Transportation Operations Center (TOC) 15-45 minutes prior to executing lane and/or shoulder closures and contact TOC once work has been completed and lane and/or shoulder closures have been removed.
- Lane closures or shoulder work should not begin if any heavy traffic or significant queuing and backups are already present.
- Lane and shoulder closure hours of operation may be adjusted by VDOT during the contract at any time, as necessary, if heavy volume or significant queuing routinely develop as a result of the project.

Route 673 Over Catactin Creek
Transportation Management Plan
(Structure No. 6051)

PROJECT
0673-053-082

SHEET NO.
CJ(1)

PROJECT MANAGER: Vicente Valera, PE
SURVEYED BY: VDOT (Mar, 2017)
DESIGN SUPERVISED BY: Robert Kalbach, PE
DESIGNED BY: WSP_USA

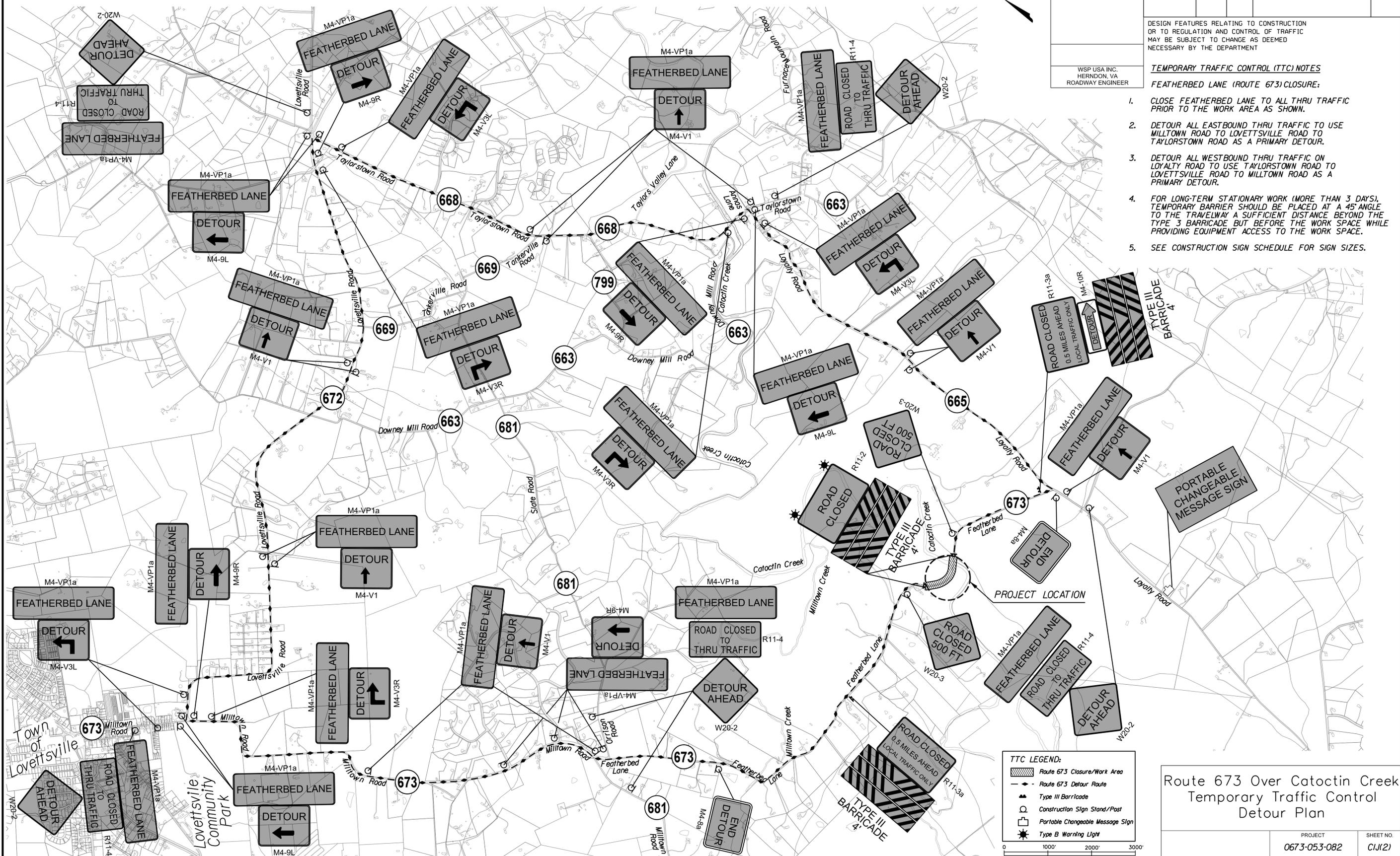
RIGHT-OF-WAY PLANS
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REVISED	STATE	ROUTE	STATE	PROJECT	SHEET NO.
	VA.	673		0673-053-082	C11(2)

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- TEMPORARY TRAFFIC CONTROL (TTC) NOTES**
- FEATHERBED LANE (ROUTE 673) CLOSURE:**
- CLOSE FEATHERBED LANE TO ALL THRU TRAFFIC PRIOR TO THE WORK AREA AS SHOWN.
 - DETOUR ALL EASTBOUND THRU TRAFFIC TO USE MILLTOWN ROAD TO LOVETTSVILLE ROAD TO TAYLORSTOWN ROAD AS A PRIMARY DETOUR.
 - DETOUR ALL WESTBOUND THRU TRAFFIC ON LOYALTY ROAD TO USE TAYLORSTOWN ROAD TO LOVETTSVILLE ROAD TO MILLTOWN ROAD AS A PRIMARY DETOUR.
 - FOR LONG-TERM STATIONARY WORK (MORE THAN 3 DAYS), TEMPORARY BARRIER SHOULD BE PLACED AT A 45° ANGLE TO THE TRAVELWAY A SUFFICIENT DISTANCE BEYOND THE TYPE 3 BARRICADE BUT BEFORE THE WORK SPACE WHILE PROVIDING EQUIPMENT ACCESS TO THE WORK SPACE.
 - SEE CONSTRUCTION SIGN SCHEDULE FOR SIGN SIZES.

WSP USA INC.
HERNDON, VA
ROADWAY ENGINEER



TTC LEGEND:

- Route 673 Closure/Work Area
- Route 673 Detour Route
- Type III Barricade
- Construction Sign Stand/Past
- Portable Changeable Message Sign
- Type B Warning Light

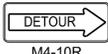
Route 673 Over Catoclin Creek
Temporary Traffic Control
Detour Plan

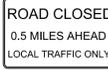
PROJECT	SHEET NO.
0673-053-082	C11(2)

PROJECT MANAGER Vicente Velez, PE
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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT				
WSP USA INC. HERNDON, VA ROADWAY ENGINEER				

TEXT	PANEL SIZE		SIGN NO.	Quantity	SIGN AREA TOTAL S.F.
	W	H			
 M4-10R	48"	18"	M4-10R	1	6
 M4-VP1a	48"	30"	M4-VP1a	36	360
 W20-2	48"	48"	W20-2	6	96
 M4-V3R	60"	48"	M4-V3R	3	60
 M4-V3L	60"	48"	M4-V3L	4	80
 M4-9R	60"	48"	M4-9R	6	120
 M4-9L	60"	48"	M4-9L	5	100
 M4-V1	60"	48"	M4-V1	12	240
 M4-8a	24"	18"	M4-8a	2	6
 W20-3	48"	48"	W20-3	2	32

TEXT	PANEL SIZE		SIGN NO.	Quantity	SIGN AREA TOTAL S.F.
	W	H			
 R11-2	48"	30"	R11-2	2	20
 R11-3a	68"	30"	R11-3a	2	28.33
 R11-4	68"	30"	R11-4	6	85
SQ FT TOTAL					1,233

TEMPORARY TRAFFIC CONTROL/
 MAINTENANCE OF TRAFFIC
 CONSTRUCTION SIGN SCHEDULE

PROJECT MANAGER Vicente Valdez, PE
SURVEYED BY VDOT (Mar, 2017)
DESIGN SUPERVISED BY Robert Kalbach, PE
DESIGNED BY WSP USA

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GENERAL NOTES

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	673	0673-053-082	C2

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

GRADING

- G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.
- G-2 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction.
- G-3 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction. Payment will be made only for quantities actually moved.
- G-7 Material from regular excavation which is suitable for stabilization with hydraulic cement (lime) shall be placed in the top portion of the subgrade.

INCIDENTALS

- I-3 Service Roads are to be constructed, and private entrances connected thereto prior to the permanent severing of private entrances by other phases of the proposed construction.
- I-9 When no centerline alignment is shown for a proposed entrance, the entrance shall be constructed in the same location as the existing entrance.
- I-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.
- I-20 The Official Electronic PDF Version of the plans will override the paper copies or prints of specific layers.

Portions of this plan assembly have been CADD generated. To assist in the preparation of the bid and construction of the project, Microstation format (.dgn) files will be made available to the prime contractor during bids and after award of the contract.
- I-21 All electronic plan assemblies will include the construction plans in two formats: PDF files and MicroStation format (.dgn) files. Only the PDF files will be considered as part of the official plan assembly.

The MicroStation format (.dgn) files are furnished only as information for the contractor. These plans are developed in layers (levels) to aid in readability. (See the VDOT CADD Manual for CADD Level Structure). However, the construction items may or may not be in the proper layering scheme as described in the VDOT CADD Manual. The Microstation files will only match the scanned files if all required levels are turned on. A Microstation Software license is required to be able to read these files.

PAVEMENT

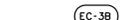
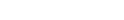
- P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

EROSION AND SEDIMENT CONTROL (ESC)

- E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.

- E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

- E-3 The following symbols are used to depict Erosion Control items in the plan assembly:

-  EC-2 Denotes Protective Covering, St'd EC-2
-  EC-3A Denotes Soil Stabilization Mat, St'd EC-3 Type A, B or C
-  EC-3B EC-3C
-  (TFB) Denotes Temporary Filter Barrier, St'd EC-5
-  (TSF) Denotes Temporary Silt Fence, St'd EC-5
-  (TDC) Denotes Temporary Diversion Channel, St'd EC-12
-  (DD) Denotes Temporary Diversion Dike, St'd EC-9
-  (TC-I) Denotes Turbidity Curtain, Type - Impervious
-  (TC-P) Denotes Turbidity Curtain, Type - Pervious
-  (RCD-1) Denotes Rock Check Dam, Type I; St'd EC-4
-  (RCD-2) Denotes Rock Check Dam, Type II; St'd EC-4
-  (IP-A) Denotes Inlet Protection, Type A; St'd EC-6
-  (IP-B) Denotes Inlet Protection, Type B; St'd EC-6

DRAINAGE

- D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.
- D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.
- D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.
- D-6 Pipes shall conform to any of the allowable types shown on this sheet, within the applicable height of cover limitations. For strength, sheet thickness, or class designation; available sizes; height of cover limitations; and other restrictions for a particular pipe type or height of cover, see the VDOT Road and Bridge Standard PC-1. Structural plate pipe may be substituted for corrugated pipe of the same size, provided the substitution complies with the applicable sections of the VDOT Road and Bridge Standards PC-1.
- D-10 The proposed riprap may be omitted by the Engineer if the slope designated for placement of riprap is found to be comprised of solid rock or closely consolidated boulders with soundness, size and weight equal to, or exceeding, the specifications for the proposed riprap.

ALLOWABLE TYPE OF PIPE CULVERT (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE ROAD & BRIDGE STANDARD PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	ALUMINUM COATED TYPE 2 CORRUGATED STEEL	POLYMER COATED (10/10) CORRUGATED STEEL	UNCOATED GALVANIZED CORRUGATED STEEL	GALVANIZED STEEL STRUCTURAL PLATE	GALVANIZED STEEL STRUCTURAL PLATE WITH THICKENED INVERT	CORRUGATED ALUMINUM ALLOY	CORRUGATED ALUMINUM ALLOY STRUCTURAL PLATE	POLYVINYLCHLORIDE (PVC) PROFILE WALL PIPE (SMOOTH INTERIOR)	POLYETHYLENE (PE) CORRUGATED TYPE C	POLYETHYLENE (PE) CORRUGATED TYPE S	POLYPROPYLENE (PP) TYPE D OR S
FEATHERBED LANE	X	X	X			X	X	X	X	X	X	X
ACCESS RD	X	X	X		X	X	X	X	X	X	X	X

Route 673 Over Catoctin Creek

General Notes

PROJECT
0673-053-082

SHEET NO.
C2

PROJECT MANAGER Vicente Valdez, PE
 SURVEYED BY VDOT (Mar, 2017)
 DESIGN SUPERVISED BY Robert Kalbach, PE
 DESIGNED BY WSP_USA

RIGHT-OF-WAY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

ROADSIDE DEVELOPMENT

REVISED	STATE	ROUTE	STATE PROJECT	SHEET NO.
	VA.	673	0673-053-082	

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

CORE MIX

MIX	LBS./ACRES	DESCRIPTION
1	▲ 100	* 100% CERTIFIED FINE FESCUE
2	▲	100% CERTIFIED TALL FESCUE
3	▲	50% CERTIFIED TALL FESCUE * 50% CERTIFIED FINE FESCUE
4	▲ 100	50% ORCHARDGRASS 50% CERTIFIED KENTUCKY BLUEGRASS
5	▲	100% BERMUDAGRASS
TEMPORARY		
3/1 - 5/16 and	50	50% CERTIFIED TALL FESCUE
8/16 - 3/1	50	50% BARLEY, WINTER RYE OR WINTER WHEAT
5/16 - 8/16	50	50% FOXTAIL MILLET
	50	50% CERTIFIED TALL FESCUE

ADDITIVES

TYPE	LBS./ACRES	DESCRIPTION
A	▲	100% LOVEGRASS
B	▲ 25	100% BARLEY, WINTER RYE OR WINTER WHEAT
C	▲ 10	100% FOXTAIL MILLET
D	▲	100% ANNUAL RYEGRASS
E	▲	100% CROWN VETCH (LEGUME)
F	▲	100% SERICEA LESPEDEZA (LEGUME)
G	▲	100% BIRDSFOOT TREFOIL (LEGUME)
H	▲ 25	
I	▲	
J	▲	
K	▲	

NOTES:

APPROXIMATELY 0.70 ACRES WILL BE DISTURBED ON THIS PROJECT AND WILL REQUIRE THE ESTABLISHMENT OF GRASSES AND/OR LEGUMES.

☆ NOTES FOR FIELD USE ONLY

OVERSEEDING RATES SHALL BE 100 PERCENT OF THE SEED MIXTURE SUPPLIED WITHOUT FERTILIZER.

THE ENGINEER WILL REQUIRE THE CONTRACTOR TO PERFORM SUPPLEMENTAL SEEDING WHEN LESS THAN 75 PERCENT UNIFORM STAND OF THE PERMANENT GRASS SPECIFIED IN THE MIXTURES IS OBTAINED. (ANNUAL SPECIES SUCH AS, RYE AND MILLET ARE TEMPORARY VARIETIES AND REQUIRE SUPPLEMENTAL SEEDING.)

NOTES APPLY TO SCHEDULE

LEGUME SEED MIXES (BIRDSFOOT TREFOIL, CROWN VETCH, AND SERICEA LESPEDEZA) AND WEEPING LOVEGRASS SHALL NOT BE USED ON SHOULDERS AND OTHER LOCATIONS FLATTER THAN 3:1 SLOPE.

LEGUME SEED SHALL BE INOCULATED WITH THE APPROPRIATE STRAIN AND RATE OF BACTERIA. FOR HYDROSEEDING, USE FIVE TIMES THE DRY SEEDING RATE OF INOCULATE.

A TEMPORARY MIX OR EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ONLY ON AREAS THAT ARE TO BE REGRADED OR LATER DISTURBED, IF LEFT DORMANT FOR MORE THAN 15 DAYS.

EROSION CONTROL MULCH, AS DIRECTED BY THE ENGINEER, IS TO BE USED ON AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 15 DAYS BETWEEN DECEMBER 1 AND FEBRUARY 28.

EROSION CONTROL MULCH, AS LISTED ON THE VDOT APPROVED PRODUCTS LIST, SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

EROSION CONTROL MULCH SHALL PROVIDE 100 PERCENT COVERAGE OF ALL DENUDED AREAS.

SPRING & SUMMER AND FALL & WINTER DEFINED FOR THE PURPOSE OF DETERMINING WHETHER HULLED OR UNHULLED BERMUDAGRASS AND SERICEA LESPEDEZA SEED IS REQUIRED:

SPRING & SUMMER 4/1 - 9/15 - USE HULLED SEED
 FALL & WINTER 9/15 - 4/1 - USE UNHULLED SEED

TYPE I MULCH (STRAW) TO BE USED ON NEWLY SEEDED AREAS ADJACENT TO ALL WATERWAYS, WETLANDS, SWAMPS, OR ANY AREA IN WHICH DRAINAGE FLOWS TOWARD AREAS UNDER THE JURISDICTION OF THE ENVIRONMENTAL REGULATORY AGENCIES.

TYPE I MULCH SHALL BE APPLIED TO PROVIDE A MINIMUM 90 PERCENT COVERAGE.

TYPE I MULCH SHALL BE TACKED WITH FIBER MULCH AT THE RATE OF 750 LBS. PER ACRE AND/OR MULCH TACKIFIER.

TYPE II MULCH (FIBER MULCH) MAY BE SUBSTITUTED FOR TYPE I MULCH AT THE RECOMMENDATION OF THE DISTRICT ROADSIDE MANAGER.

TYPE II MULCH SHALL BE APPLIED AT A RATE OF 1500 LBS. (NET DRY WEIGHT) PER ACRE TO PROVIDE A MINIMUM OF 90 PERCENT COVERAGE, AND SHALL BE APPLIED IN A SEPARATE APPLICATION.

ALL TOPSOIL IS TO BE FREE OF HARD LUMPS, CLODS, ROCKS AND FOREIGN DEBRIS AND IS TO BE HAND RAKED TO TIE INTO EXISTING LAWNS.

ALL SEED MUST BE IN CONFORMANCE WITH VDOT SEED SPECIFICATIONS FOR GRASSES & LEGUMES AND BE PROVIDED AT THE PROJECT SITE IN BAGS NOT OPENED AND LABELED FOR USE ON VDOT PROJECTS WITH A GREEN TAG CERTIFYING INSPECTION BY THE VIRGINIA CROP IMPROVEMENT ASSOCIATION.

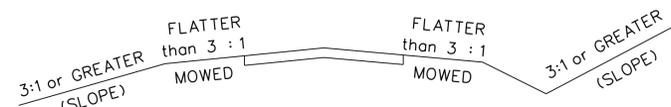
MIX REQUIREMENTS THIS PROJECT

RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. ARE TO BE OBTAINED FROM THE DISTRICT ROADSIDE MANAGER.

▲ ALL RATES TO BE SPECIFIED BY THE DISTRICT ROADSIDE MANAGER

* FINE FESCUES INCLUDE CHEWINGS, CREEPING RED, HARD, SHEEP

SECTION OF SEED LOCATIONS



SEEDING SCHEDULE

PROJECT NUMBERS	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
	SPRING MONTH & DATE	SUMMER MONTH & DATE	FALL & WINTER MONTH & DATE	4/1 - 6/1	6/1 - 9/15	9/15 - 4/1
0673-053-082		1 C		4 C		1 B
* SPECIFY KIND OF FINE FESCUE		*				*

PROJECT NUMBERS	⊗ TOPSOIL 2" CLASS A B	REGULAR SEED	OVER SEEDING	LIME	FERT. 15-30-15	LEGUME SEED	LEGUME OVER SEEDING	TEMPORARY SEEDING
	ACRES	LBS.	LBS.	TONS	TONS	LBS.	LBS.	LBS.
0673-053-082	1	89	55	1.75	0.13	0	0	0

⊗ DENOTES ITEM(S) TO BE PAID FOR ON THE BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE CURRENT ROAD AND BRIDGE SPECIFICATIONS.

Route 673 Over Catoctin Creek
 Roadside Development Sheet
 PROJECT 0673-053-082
 SHEET NO. C2B

PROJECT MANAGER Vicente Valeza, PE
SURVEYED BY VDOT (Mar, 2017)
DESIGN SUPERVISED BY Robert Kalbach, PE
DESIGNED BY WSP, USA

RIGHT-OF-WAY PLANS
*THESE PLANS NOT TO BE USED
FOR CONSTRUCTION*

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

See Sheet 2 of 3 for Acronyms

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	673	0673-053-082	C2E(1)

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

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

X Denotes information that is to be provided/completed by the VDOT RLD.
XX Denotes information that is to be provided/completed by the contractor.

SECTION I GENERAL INFORMATION

1. Activity Description - Replacement of the existing Route 673 (Featherbed Lane) Bridge over Catocin Creek with a new truss bridge or bridge with a truss facade.

2. This land disturbance (construction) activity site is located in both Loudoun County and approximately 0.70 acres will be disturbed by excavation, grading or other construction activities.

~~3. This proposed activity disturbs one acre or greater and requires coverage under the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) as issued by the DEQ. A copy of the VPDES Construction Permit (VAR10), the registration information (LD-445 form) and the permit coverage letter received from DEQ shall be maintained with other SWPPP documents for this land disturbing (construction) activity.~~

XX 4. The location of on-site support facilities that will be covered under the VPDES Construction Permit coverage for this land disturbance (construction) activity shall be provided by the contractor and identified on the record set of plans or in other appropriate contract documents. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

XX 5. Evidence of permit coverage shall be provided by the contractor for all support activities located outside of VDOT right of way or easement in the form of the Construction General Permit coverage letter: (List permit number when applicable)

6. List the surface waters that have been identified as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report for sediment, total suspended solids, turbidity, nitrogen or phosphorus. These pollutants are considered benthic impairments:
NONE

7. Identify the TMDLs where stormwater from construction activities discharges into a watershed with a TMDL waste load allocation established and approved by the State Water Control Board prior to July 1, 2014 for sediment, total suspended solids, turbidity, nitrogen or phosphorus:
NONE

8. This land disturbance (construction) activity discharges stormwater to the following surface waters that have been identified as exceptional in Section 9VAC25-260-30 A 3 c of the Virginia Administrative Code:
NONE

9. Locations of surface waters and locations where concentrated stormwater is discharged from this land disturbance (construction) activity are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

10. The ESC and SWM plans (where applicable) for this land disturbance (construction) activity have been developed in accordance with VDOT's Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications as approved by the DEQ.

11. (a) List the RLD for the land disturbance activity: (required for erosion and sediment control)
(b) The following individual(s) has delegated authority to sign all reports required by the construction permit including the SWPPP (LD445E) and inspection reports. The individual(s) has overall responsibility for environmental matters for the project: (required only for permitted projects)

Name	Position
_____	_____
_____	_____
_____	_____
_____	_____

X 12. The name of the individual(s) responsible for the inspection of the erosion and sediment control and pollution prevention measures on this land disturbance (construction) activity is identified on the LD-445E form which will be maintained with the other SWPPP documents for this land disturbance (construction) activity (Note: Individual(s) shall be certified through the DEQ ESC Inspector Certification Program and shall be knowledgeable in the area of pollution prevention at construction sites and shall be a VDOT employee or an agent working for VDOT.)

X 13. The ESC and P2 inspections for this land disturbing (construction) activity shall follow either Schedule 1 or 2 as defined in Section 107.16(e) of the VDOT Road & Bridge Specifications Special Provision S107J31. Rain gage notes apply only to Inspection Schedule 1.

XX 14. The location of the on-site rain gage that will be used to determine the occurrence of a measurable storm event for the purposes of ESC and Pollution Prevention inspections will be provided by the contractor and identified on the record set of plans or in other appropriate SWPPP documents for this land disturbance (construction) activity: (List location of rain gage)

The rain gage shall be observed daily at (insert time) to determine the occurrence of a measurable storm event (i.e., 0.25 inches of rainfall or greater in a 24 hour period). A log book shall be maintained to record observation information which shall include (1) the date, (2) the time, (3) whether or not rainfall is occurring at the time of the observation, (4) the amount of accumulated rainfall in the gage, if any, and (5) whether or not an inspection is required based on the amount of accumulated rainfall in the gage. If there is no rainfall occurring at the time of the observation, the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

If there is rainfall occurring at the time of the observation, the observation information is to be noted in the log book. The rain gage is not to be emptied but left to accumulate additional rainfall until the conclusion of the rainfall event. At the conclusion of the rainfall event, an observation of the rain gage shall be made and the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

15. The following VDOT documents serve the purpose of a) permitted projects b) non-permitted projects in Chesapeake Bay Preservation Areas (CBPA) with 2,500 S.F. to 1.0 acre of land disturbance c) non-permitted projects requiring a SWPPP and d) Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP:

- VDOT LD-445: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
- VDOT LD-445A: Permitted projects only.
- VDOT LD-445B: Permitted projects only.
- VDOT LD-445C: Projects that require a permit or SWPPP.
- VDOT LD-445D: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
- VDOT LD-445E: Permitted projects only.
- VDOT LD-445F: Emergency work projects (when applicable).
- VDOT LD-445G: Permitted and CBPA projects requesting a Water Quality Requirement Exception (when applicable).
- VDOT LD-445H: Permitted projects only.
- VDOT C-107 Part I and Part II: All projects that require a permit or SWPPP.

SECTION II EROSION AND SEDIMENT CONTROL

1. The following variances to the Virginia ESC Regulations have been approved by the DEQ for this land disturbance (construction) activity: NONE

XX 2. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.) shall be provided by the contractor in accordance with Section 108.03 of the VDOT R&B Specifications and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

3. Directions of stormwater flow and approximate slopes anticipated after major grading activities are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

4. Areas of soil disturbance and areas of the site which will not be disturbed are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

5. Locations of major structural and nonstructural ESC measures intended to filter, settle or similarly remove sediment are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. Locations where stabilization practices are expected to occur are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

7. A description of interim and permanent stabilization practices for the site are identified in the applicable sections of the documents identified in the Note 1 of Section III.

XX 8. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated will be provided by the contractor and maintained with the record set of plans or other SWPPP documents for this land disturbance (construction) activity: (List how this will be tracked and the location)

9. A description and schedule of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good and effective operating conditions are identified in Sections 107.16 and 303.03 of the VDOT R&B Specifications.

10. Nutrients shall be applied in accordance with Sections 603 and 604 of the VDOT Road and Bridge Specifications. Nutrients shall not be applied during rainfall events.

11. All engineering calculations supporting the design of erosion and sediment control measures proposed for this land disturbance (construction) activity are contained in the project drainage file located in the VDOT NOVA District Hydraulics Section and will be made available for review upon request during normal business hours.

12. The temporary erosion and siltation control items shown on the ESC Plan for this land disturbing (construction) activity are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC Plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The contractor, in conjunction with the VDOT Project Engineer and/or ESC Inspector, shall adjust the location, quantity and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction and the actual scheduling and sequencing of the construction activities. Significant changes to the proposed ESC Plan (e.g., those that require an engineering analysis) shall be submitted to the applicable District Hydraulics Engineer for review and approval. Any changes to the proposed ESC Plan must be noted on the designated record set of plans which shall be retained on the project site and made available upon request during normal business hours.

13. The areas beyond the project's construction area are to be protected from siltation. Perimeter controls such as silt fence, diversion dikes, turbidity curtains, etc. shall be installed prior to any grubbing operations or other earth moving activities.

14. Temporary earthen structures such as dikes and berms are to be stabilized immediately upon installation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and/or soil stabilization blankets and matting in conjunction with seeding.

15. All channel relocations are to be constructed during the earliest stage of construction and shall be constructed in accordance with all applicable permit requirements and shall be constructed in the dry wherever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed area as directed by the Engineer.

16. The contractor shall plan and implement his land disturbance operations in order to:

- a. Control the volume and velocity of stormwater runoff within the site to minimize erosion.
- b. Control the peak flow rates, volume and velocity of stormwater discharges to minimize erosion at outlets and in downstream channels.
- c. Minimize the amount of soil exposed.
- d. Minimize the disturbance of steep slopes.
- e. Minimize sediment discharge from the site.
- f. Provide and maintain natural buffers around surface waters, direct stormwater runoff to vegetated areas and maximize stormwater infiltration, unless infeasible.
- g. Minimize soil compaction (except in those areas where compaction is required by the contract documents) and preserve topsoil where feasible.

XX 17. The name of the individual(s) or contractor(s) responsible for the installation and maintenance of the erosion and sediment control measures shall be supplied by the contractor and maintained with the other SWPPP documents for this land disturbance (construction) activity.

18. Soil stockpiles temporarily placed within the project area or on VDOT right of way or easement shall be stabilized or protected with sediment trapping measures.

19. A construction entrance or other approved measure shall be installed at all locations where construction vehicular traffic access routes intersect a paved or a public road in order to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or a public road surface, the road shall be cleaned thoroughly at the end of each work day by shoveling or sweeping. Removed sediment shall be disposed of in accordance with Section 106.04 of the R&B Specifications.

Route 673 Over Catocin Creek
SWPPP
SHEET 1 OF 3

PROJECT MANAGER Vicente Valeza, PE
SURVEYED BY VDOT (May, 2017)
DESIGN SUPERVISED BY Robert Kalbach, PE
DESIGNED BY WSP USA

RIGHT-OF-WAY PLANS
*THESE PLANS NOT TO BE USED
FOR CONSTRUCTION*

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

	REVISED	STATE		SHEET NO.	
		ROUTE	PROJECT		
		VA.	673	0673-053-082	C2E(2)
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT					
* Revised information that is to be provided/completed by the VDOT RLD. * WSP USA INC. * HERNDON, VA. * ROADWAY ENGINEER					

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION III SWPPP

1. All documents related to the SWPPP for this land disturbance (construction) activity shall be maintained at the activity site and shall be readily available for review upon request during normal business hours. Such documents include, but are not limited to, the construction plans (or other such documents), the ESC Plan, the Pollution Prevention Plan, the post construction SWM Plan (if applicable), the VDOT R&B Standards and Specifications, Supplemental Specifications, Special Provisions and Special Provision Copied Notes. Documents related to stormwater pollution prevention which are not a part of those documents referenced above, such as a copies of the VPDES Construction Permit coverage letter (when applicable) and the VPDES General Permit For Discharges Of Stormwater From Construction Activities (when applicable) and those required to be developed by the contractor for pollution prevention associated with any on-site support facilities being included in the VPDES Construction Permit coverage for this land disturbance (construction) activity are to be maintained at the activity site with the other SWPPP documents for this land disturbance (construction) activity. Where no facilities are available at the activity site to maintain the SWPPP documents, they are to be kept by or with the designated RLD at a location convenient to the activity site where they would be made available for review upon request during normal business hours.

2. The SWPPP and any subsequent amendments, modifications and updates shall be implemented from commencement of land disturbance until termination of VPDES Construction Permit coverage or completion of land disturbance (construction) activities where no VPDES Construction Permit coverage is required.

XX 3. For all on-site support facilities that will be included in the VPDES Construction Permit coverage for this land disturbance (construction) activity, the contractor shall develop a SWPPP in accordance with, but not limited to, Section 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications. The SWPPP for the on-site support facilities shall be maintained with and become a component of the SWPPP for this land disturbance (construction) activity. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

X 4. By completing and submitting the SWPPP Certification form LD-445E, the RLD, or his authorized representative, certifies that all documents identified herein to be supplied by the contractor will be reviewed, approved (as applicable) and included with the other SWPPP documents for this land disturbance (construction) activity prior to start of work in those areas identified by such information.

5. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the SWPPP shall be made available for review upon the request of the DEQ, the EPA, the VSMP Authority, the VESCP Authority, local government officials or the operator of a municipal separate storm sewer system (MS4) receiving discharge from the construction site.

X 6. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the VDOT RLD shall post, or have posted, a copy of the General Permit coverage letter and a copy of a completed LD-445A form, noting the name and contact information for the VDOT person responsible for the land disturbing (construction) activity and its SWPPP, outside the project's construction office along with other Federal and State mandated information. Where there is no construction office (e.g., a maintenance activity), the permit coverage letter and the LD-445A form are to be maintained with the other SWPPP documents for the land disturbing (construction) activity.

7. The SWPPP shall be made available for review by the public upon request. Such reviews shall be at a time and publicly accessible location convenient to the VDOT and shall be scheduled during normal business hours and no less than once per month.

ACRONYMS

BMP - Best Management Practice DEQ - Department of Environmental Quality EPA - U.S. Environmental Protection Agency ESC - Erosion and Sediment Control IIM - Instructional and Informational Memorandum R&B - Road and Bridge RLD - Responsible Land Disturber SWM - Stormwater Management SWPPP - Stormwater Pollution Prevention Plan	TMDL - Total Maximum Daily Load VDOT - Virginia Department of Transportation VPDES - Virginia Pollutant Discharge Elimination System VSMP - Virginia Stormwater Management Program VESCP - Virginia Erosion and Sediment Control Program
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SECTION IV POST CONSTRUCTION STORMWATER MANAGEMENT

2. This land disturbance (construction) activity utilizes the Part IIB technical criteria (i.e., Runoff Reduction Method, Energy Balance Equation, etc.) in Section 9VAC25-870-62 et seq. of the VSMP Regulations.

5. The permanent onsite SWM facilities or offsite strategies proposed to meet the water quality/quantity requirements for this land disturbance (construction) activity are listed in Section VI.

6. A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed is included in the construction plan set (or other such documents) for this land disturbance (construction) activity.

7. All engineering calculations supporting the design of the post-construction stormwater management measures for this land disturbance (construction) activity, including an explanation of the technical basis used to select the practices, are contained in the project drainage file located in the VDOT NOVA District Hydraulics Section and will be made available for review upon request during normal working business hours.

SECTION V - POLLUTION PREVENTION PLAN

1. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are prohibited:

- a. Wastewater from concrete washouts.
- b. Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
- c. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance.
- d. Oils, toxic substances or hazardous substances from spills or other releases.
- e. Soaps, solvents or detergents used in equipment and vehicle washing.
- f. There shall be no discharge of floating solids or visible foam in other than trace amounts

2. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are allowed when discharged in compliance with the VPDES Construction Permit:

- a. Discharges from fire fighting activities.
- b. Fire hydrant flushings.
- c. Waters used to wash vehicles or equipment where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
- d. Water used to control dust that has been filtered, settled or similarly treated prior to discharge.
- e. Potable water sources including uncontaminated waterline flushings.
- f. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
- g. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing), where soaps, solvents or detergents have not been used and where the wash water has been filtered, settled or similarly treated prior to discharge.
- h. Uncontaminated air conditioning or compressor condensate.
- i. Uncontaminated ground water or spring water.
- j. Foundation or footing drains where flows are not contaminated with process materials such as solvents.
- k. Uncontaminated excavation dewatering, including dewatering trenches and excavations that have been filtered, settled or similarly treated prior to discharge.
- l. Landscape irrigation.

XX 3. The contractor shall develop a Pollution Prevention Plan to address any of his on-site operations that have a potential to generate a pollutant that may reasonably be expected to affect the quality of stormwater discharges from this land disturbance (construction) activity. The Pollution Prevention Plan shall be developed in accordance with, but not limited to, Sections 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications and shall include a narrative with appropriate plan detail and shall be provided on standard 8.5 x 11 inch paper or larger and shall:

- a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater.
- b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the record set of plans, reference the record set of plans.
- c. Identify all non-stormwater discharges, as described in note two of this section, that are or will be commingled with stormwater discharges from the construction activity, including any on-site support activities.
- d. Identify the person(s) or contractor(s) responsible for implementing and maintaining the pollution prevention practice or practices for each pollutant-generating activity.
- e. Describe the pollution prevention practices and procedures that will be implemented to:
 - 1) Prevent and respond to leaks, spills, and other releases, including procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases, and procedures for reporting leaks, spills, and other releases in accordance with Section 107.16 of the VDOT Road and Bridge Specifications and the requirements within the VPDES Construction Permit.
 - 2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities.
 - 3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including procedures for the clean-up of stucco, paint, form release oils, and curing compounds.
 - 4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing.
 - 5) Direct concrete wash water into a leak-proof container or leak-proof settling basin. The container or basin shall be designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters.
 - 6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including building products (such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures), pesticides, herbicides, insecticides, fertilizers, landscape materials, construction and domestic wastes (such as packaging materials), scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.
 - 7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes.
 - 8) Address any other discharge from any potential pollutant-generating activity not listed herein.
 - 9) Describe and implement procedures for providing pollution prevention awareness (including but not limited to prevention practices, disposal practices and appropriate disposal locations) for all applicable wastes (including any wash water), to appropriate personnel.

Revised 09/29/16

Sheet 2 of 3

Route 673 Over Catoclin Creek
SWPPP
SHEET 2 OF 3

PROJECT 0673-053-082	SHEET NO. C2E(2)
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PROJECT MANAGER Vicente Valdez, PE
SURVEYED BY VDOT (Mar, 2017)
DESIGN SUPERVISED BY Robert Kalbach, PE
DESIGNED BY WSP USA

RIGHT-OF-WAY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
GENERAL INFORMATION SHEET

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2014 and VDOT's approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

REVISED	STATE	STATE		SHEET NO.
	ROUTE	PROJECT		
	VA.	673	0673-053-082	C2E(3)

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

WSP USA INC.
HERNDON, VA
ROADWAY ENGINEER

ACRONYMS

- BMP - Best Management Practice
- DEQ - Department of Environmental Quality
- EPA - U.S. Environmental Protection Agency
- ESC - Erosion and Sediment Control
- IIM - Instructional and Informational Memorandum
- R&B - Road and Bridge
- RLD - Responsible Land Disturber
- SWM - Stormwater Management
- SWPPP - Stormwater Pollution Prevention Plan
- TMDL - Total Maximum Daily Load
- VDOT - Virginia Department of Transportation
- VPDES - Virginia Pollutant Discharge Elimination System
- VSMP - Virginia Stormwater Management Program
- VESCP - Virginia Erosion and Sediment Control Program

SECTION VI - PERMANENT BMP INFORMATION Δ

X Denotes information that is to be completed by the VDOT RLD.
() See note referenced by number in parentheses.

INSTALLED BMP INFORMATION
Table A
(VDOT Owned/Operated)

Plan Sheet(s)	BMP Type (See Table 1 and 3)	County or City	Latitude/Longitude (1)		State Hydrologic Unit Code (7)	Receiving Stream Name (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3)			X BMP Maintenance ID Number (10)	BMP Maintenance Manual (11)	BMP Inspection Manual (11)
			LAT	LONG				Impervious	Pervious	TOTAL			
			SECTION					SECTION					

ALTERNATIVE BMP INFORMATION
Table B

BMP Type (See Table 2)	Name of Nutrient Credit Generating Entity (6)	County or City (5)	Latitude/Longitude (1) (5)		State Hydrologic Unit Code (5) (7)	Project Acres Treated Per BMP (3)			Nutrient Credits (lbs./acre/year) Acquired (6) (12)
			LAT	LONG		Impervious	Pervious	TOTAL	
			Purchase of Nutrient Credits	TBD		Loudoun County	39° 13'56"N	77° 35'28"W	

Table 1: Permanent BMP Types (1999 Va. SWM Handbook)

- Bio-Retention Basin
- Bio-Retention Filter
- Constructed Stormwater Wetlands
- Extended Detention Basin
- Extended Detention Basin Enhanced
- Grassed Swale
- Infiltration Basin
- Infiltration Trench
- Manufactured Treatment Device (MTD) (8)
- Retention Basin I
- Retention Basin II
- Retention Basin III
- Sand Filter
- Vegetated Filter Strip
- Other Approved Types (List Type)

Table 2: Alternative BMP Types

- Comprehensive SWM Plan (Regional) Facility
- Pollutant Loading Pro Rata Share Program
- Purchase of Nutrients Credits
- Other Approved Options (List Type) (4)

Table 3: Permanent BMP Types (BMP Clearing House)

- Sheet Flow to Vegetated Filter Strip
- Grass Channel
- Soil Compost Amendment
- Permeable Pavement
- Infiltration Practice
- Bioretention
- Dry Swale
- Wet Swale
- Filtering Practice
- Constructed Wetlands
- Bioretention Conservation
- Extended Detention Pond
- Wet Pond
- Manufactured Treatment Device (MTD)(8)
- Other Approved Types (List Type) (4)

NOTES:

- (1) In decimal degrees to the nearest one ten-thousandth of a degree.
- (2) For streams with no names, list "(Unnamed Tributary to closest stream name)".
- (3) Show acres treated to the nearest one tenth acre.
- (4) Include agreements with off-site BMP owners.
- (5) Information pertains to the alternative BMP option location, where applicable. Exception - Not required for nutrient credit purchase option.
- (6) Applies to the purchase of nutrient credits only.
- (7) Virginia 6th Order HUC (VAHU6) Example - Y030.
- (8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.

- (9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those streams listed as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report and shall be the first named waterbody to which the BMP discharges. The impaired waters are those impaired by sediment, total suspended solids, turbidity, nitrogen or phosphorus. These pollutants are considered benthic impairments.
- (10) BMP Maintenance ID Number is to be assigned by the District Infrastructure Manager at permit termination or project completion.
- (11) Provide the section of each Maintenance manual that pertains to the type of BMP. Both manuals can be found at www.vdot.virginia.gov/business/manuals in the Maintenance selections. Example: Section 4 would be noted for both the maintenance and inspection manuals for a Bioretention I infiltration BMP.
- (12) Nutrient credits purchased to the nearest one hundredth pound.

Δ Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the information shown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the record set of construction plans maintained in the VDOT Central Office Plan File Room (Falcon Web Suite). Prior to submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities, the RLD shall have the District Maintenance Infrastructure Manager review the BMPs installed with the project (BMP Table A) for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the information in BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities.

Revised 09/29/16
Sheet 3 of 3

Route 673 Over Catoclin Creek
SWPPP
SHEET 3 OF 3

PROJECT
0673-053-082
SHEET NO.
C2E(3)

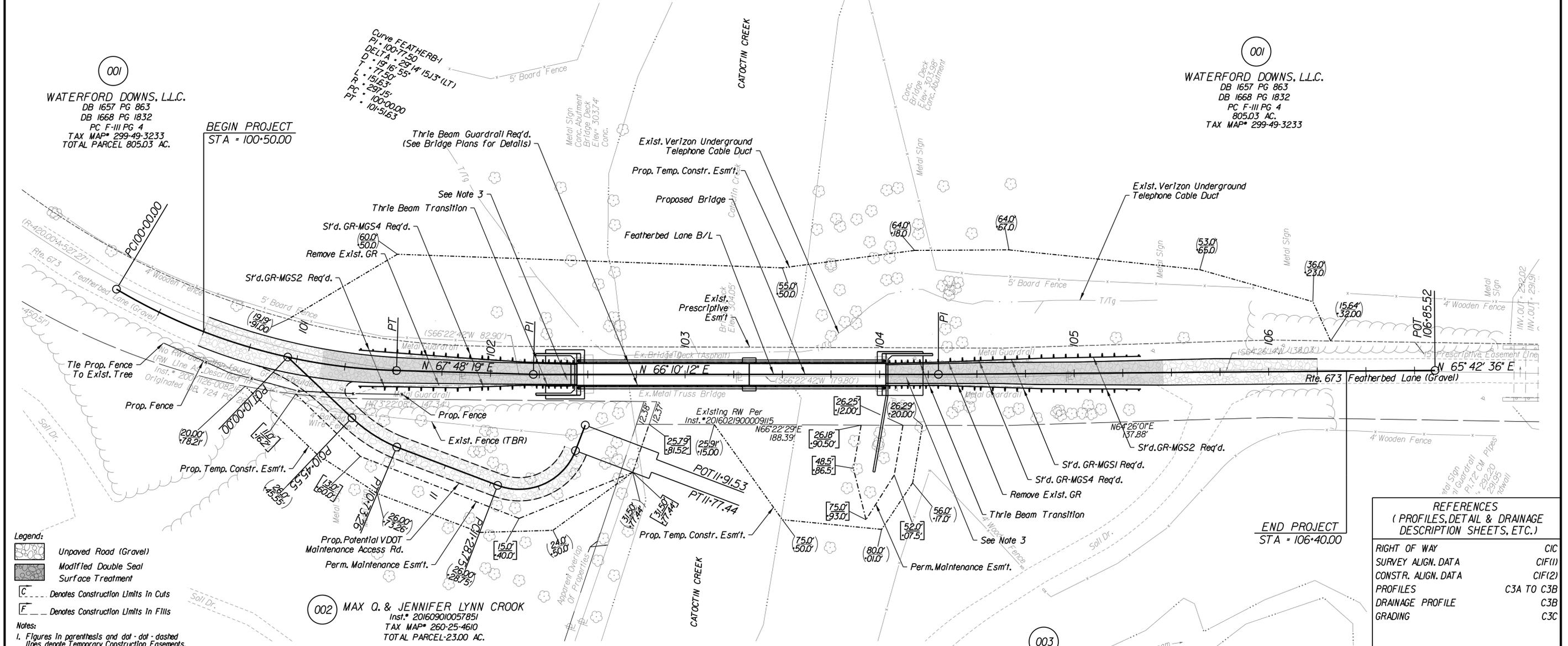
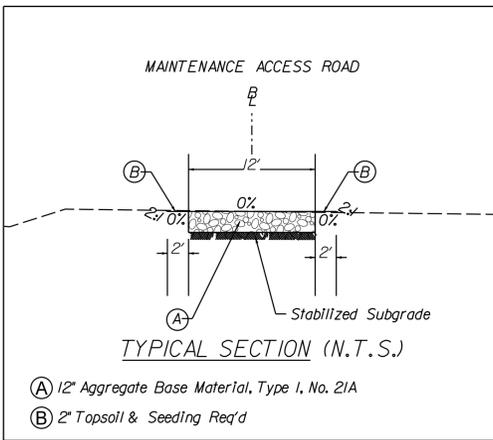
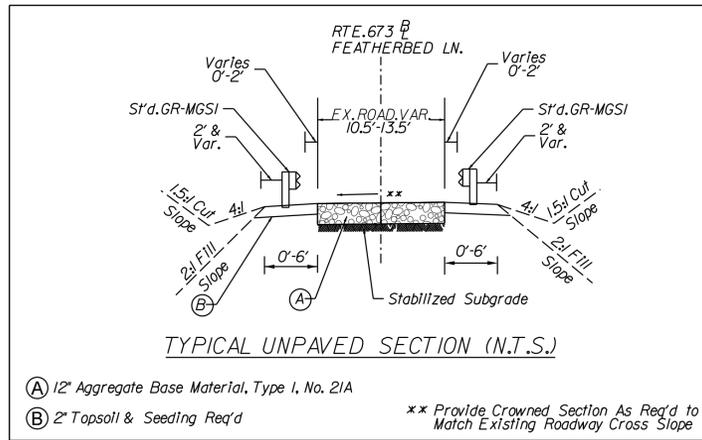
PROJECT MANAGER: Vicente Valera, PE
SURVEYED BY: VDOT (Mar. 2017)
DESIGN SUPERVISED BY: Robert Kalbach, PE
DESIGNED BY: WSP_USA

REVISED	STATE		SHEET NO.
	ROUTE	PROJECT	
	VA.	673	0673-053-082

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

RIGHT-OF-WAY PLANS
THESE PLANS NOT TO BE USED FOR CONSTRUCTION

WSP USA INC.
HERNDON, VA
ROADWAY ENGINEER



- Legend:**
- Unpaved Road (Gravel)
 - Modified Double Seal Surface Treatment
 - C --- Denotes Construction Limits in Cuts
 - F --- Denotes Construction Limits in Fills
- Notes:**
- Figures in parenthesis and dot - dot - dashed lines denote Temporary Construction Easements.
 - Figures in brackets and dot - dashed lines denote Permanent Maintenance Easements.
 - Apply Modified Double Seal Surface Treatment within the longitudinal limit of the new guardrail to minimize erosion of gravel bridge approaches.
 - See Bridge Sequence of Construction Drawings for identification of trees to be removed. Trees not marked for removal should not be impacted unless otherwise approved by the Engineer.

REFERENCES (PROFILES, DETAIL & DRAINAGE DESCRIPTION SHEETS, ETC.)

RIGHT OF WAY	C/C
SURVEY ALIGN. DATA	CIF(1)
CONSTR. ALIGN. DATA	CIF(2)
PROFILES	C3A TO C3B
DRAINAGE PROFILE	C3B
GRADING	C3C



Route 673 Over Catocctin Creek
Roadway Plan

PROJECT	SHEET NO.
0673-053-082	C3

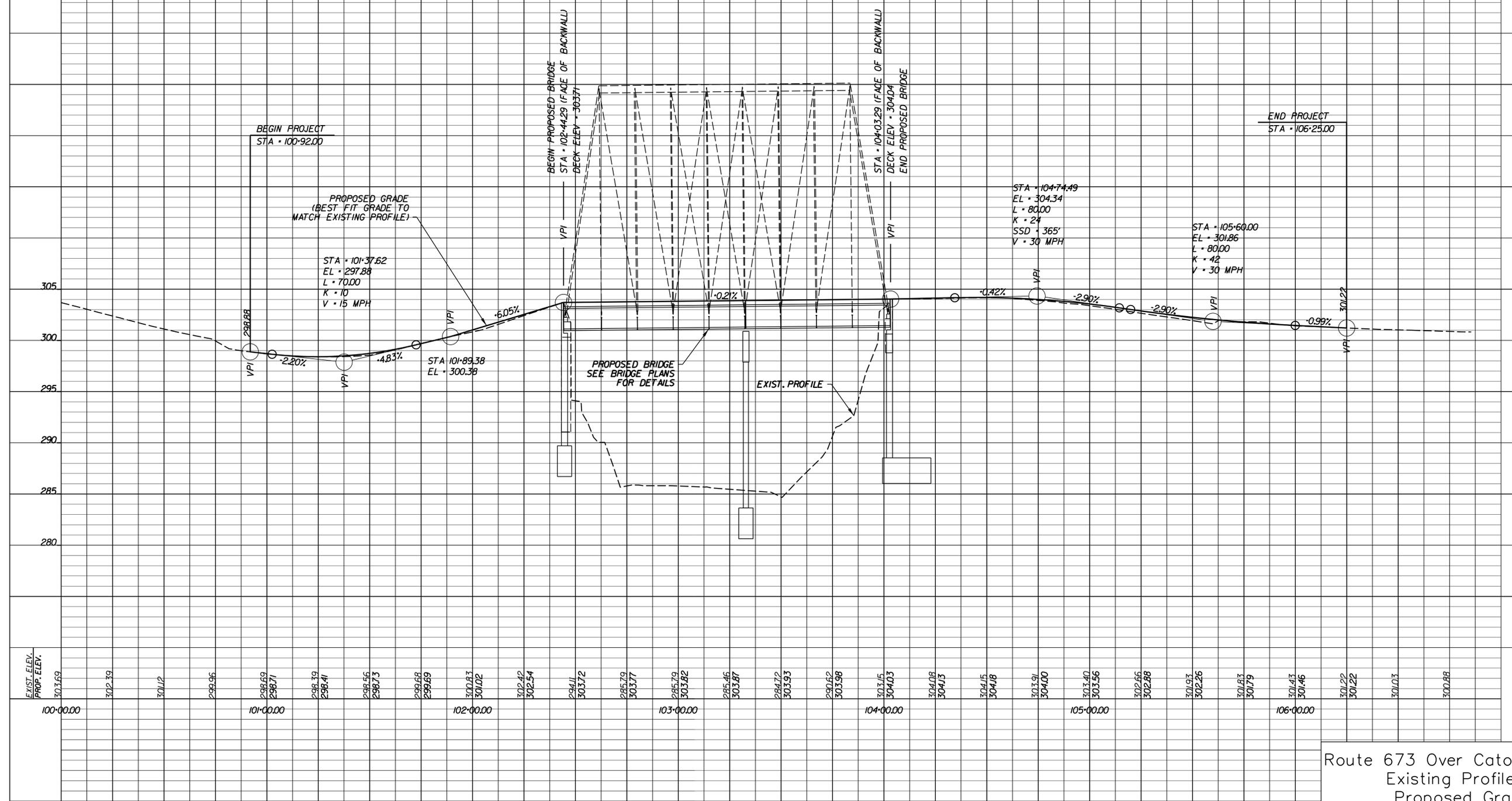
PROJECT MANAGER: Vicente Valeza, PE
 SURVEYED BY, DATE: V.DOT (May 2017)
 DESIGN BY: WSP USA
 SUBSURFACE UTILITY BY, DATE: _____

REVISED	STATE		SHEET NO.
	ROUTE	PROJECT	
	VA.	673	0673-053-082

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

WSP USA
HERNDON, VA
ROADWAY ENGINEER

RIGHT-OF-WAY PLANS
 THESE PLANS NOT TO BE USED
 FOR CONSTRUCTION



NOTE: THIS PROFILE DOES NOT SHOW BENCH GRADING UNDER THE BRIDGE



Route 673 Over Catoctin Creek
Existing Profile &
Proposed Grade

PROJECT	SHEET NO.
0673-053-082	C3A