PROJECT CONCEPT

AUGUSTA COUNTY

RIDGEVIEW ACRES SUBDIVISION DRAINAGE EASEMENT RECONSTRUCTION

Location Description

38.007731, -79.033843

In the Ridgeview Acres subdivision in Stuarts Draft, the main drainage easement runs along the existing channel from Falling Rock Drive downhill to Ridgeview Drive.

Project Purpose

Stabilize this section of drainage easement in Ridgeview Acres and reduce chronic flooding of residential backyards and basements.

Additional Information Needed

- Detailed survey of channel and defined drainage area
- Presence and locations of utilities
- Erosion extent and rate
- Exact location of drainage easement boundary
- Encroachments on the easement (sheds, etc)

Background

There is a 50-foot-wide drainage easement along the existing channel between the culverts under Ridgeview Drive and Falling Rock Drive. This channel runs through a number of properties in the subdivision (**Figure 1**). Houses along this corridor have noted standing water in their backyards and occasional basement flooding that occurs after more severe rain events, about yearly. County staff noted that during events exceeding a 10-year storm, the easement floods to 4 to 5 feet deep in places, with residential backyards underwater. There are sandy AB soils throughout the area with a high water table, which limits infiltration after the ground has been saturated. Though channel areas upstream of Falling Rock Drive are deeper and more well defined, the project area was only a small swale until large storms in 2018 caused things to become destabilized. The channel is now actively eroding bed and banks, leading to instability and altered sediment transport (**Figure 2**). Though erosion is the concern for much of the reach, sediment deposition is of particular concern in the section just downstream of the culverts running under Falling Rock Drive.

The current channel was designed and constructed during the 1960s. Since installation, high flows have resulted in scour and loss of vegetative protection. In some areas County officials have noted that there is inadequate grade. Channel degradation has been noted as far upstream as Greenway Road, though the County has not received complaints from this portion. This is likely because the

drainage easement bisects parcels along Ridgeview but largely runs concurrent with property boundaries along Greenway Road.

Within the project area, erosion along the banks has led to the increased loss of land and yard space for residents due to the channel deepening and widening. The ongoing erosion has created an access issue where certain residents struggle to cross the channel with lawnmowers and other equipment to manage portions of their properties. Thus, some residents have installed bridges or gravel crossings to allow access.

The channel is located near several houses along the project corridor, constraining certain design alternatives or channel alterations. There is an existing 50-foot drainage easement that runs through the area, allowing for construction and maintenance of the channel. Some structures such as sheds, fences, or bridges have been constructed within this drainage easement. Utilities likely run across the channel or in proximity, some of which have now been exposed by erosion. A more detailed survey will be required to determine the exact location of these existing lines. The project area is bounded by Ridgeview Drive and Falling Rock Drive. Depending on the nature of work, coordination with VDOT may be necessary around these culverts.

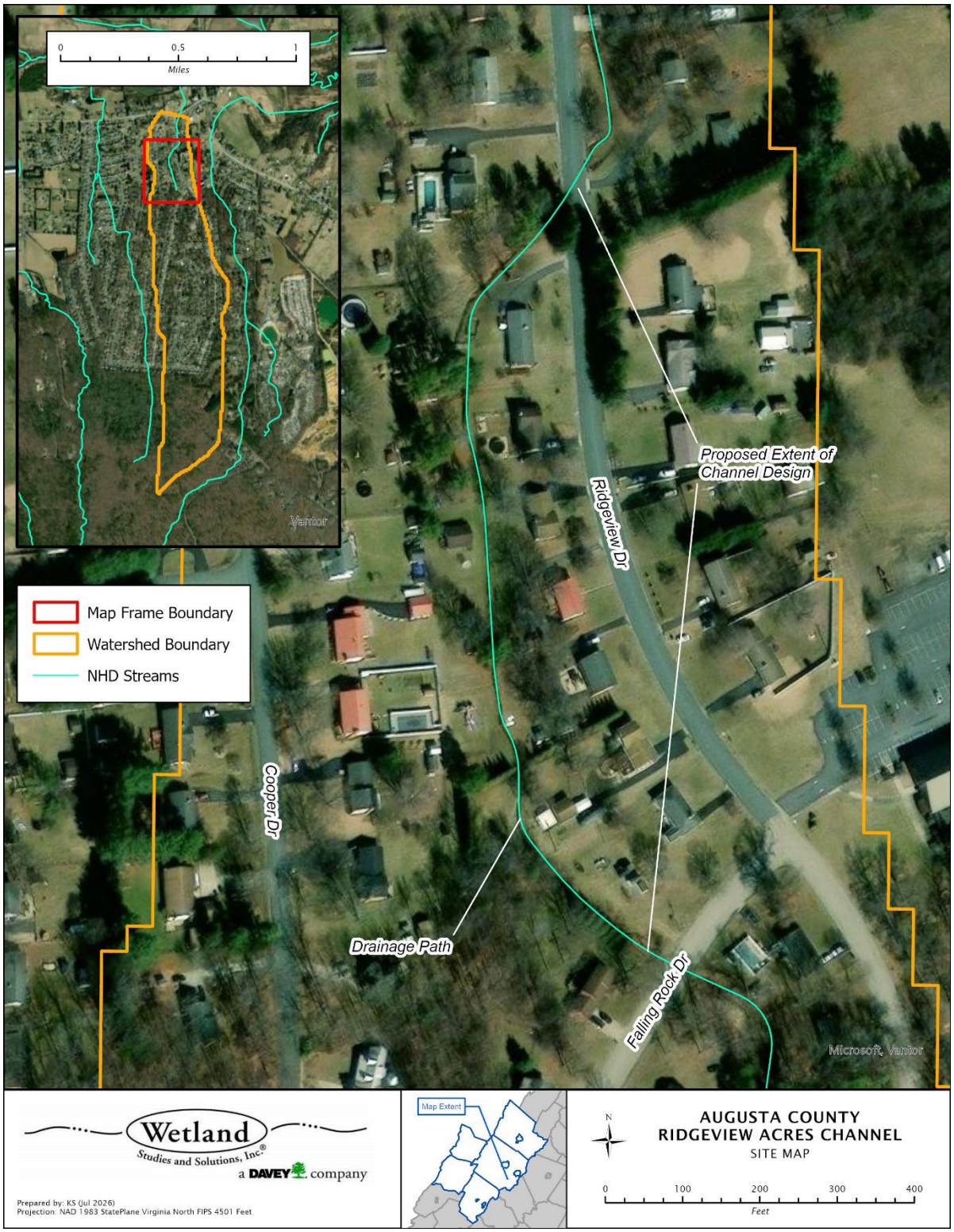


Figure 1. Drainage channel running along Ridgeview Drive with the proposed extent of channel alterations marked. Watershed boundary estimated from USGS StreamStats.



Figure 2. Drainage easement channel downcutting and widening in yards of Ridgeview Drive residences.

Conceptual Design and Planning-Level Cost Estimate

The proposed restoration of this drainage path would encompass approximately 1,125 linear feet from the culverts under Falling Rock Drive downstream to culverts at Ridgeview Drive. This project would establish a low flow channel, designed to convey the intermittent, seasonal flows, within a second-stage channel designed to convey higher flows (**Figure 3**). In the proposed design, the elevation of the existing channel bottom would not be raised. Instead, an inset floodplain, or floodplain bench, would be designed and excavated below the existing ground. Ideally, this bench area would be planted with native vegetation to enhance channel stability. This inset floodplain would also reduce erosion by spreading out floodwaters laterally and allowing for some infiltration, while limiting the amount of floodwater encroachment on the yards and basements of adjacent residents. Building the channel with a new, lower floodplain bench would allow some of the benefits of natural floodplain connection (flood velocity reduction, habitat) while reducing the flood impacts to surrounding property. (This strategy is referred to as a Priority 2 stream

restoration.) In an effort to minimize disturbances to property along the easement, the proposed channel alignment would largely follow the existing channel scar, while shifting away from existing structures where feasible.

Based on United States Geological Survey (USGS) bankfull regional curves and existing watershed size/conditions, the primary channel is sized for a design flow of approximately 18.5 cfs (Keaton, Messinger, & Doheny, 2005). The area of the inset floodplain/floodplain bench is sized to convey and contain flows greater than the 10-year storm event, which is estimated at 56.8 cfs per the USGS StreamStats tool.

Strategic use of in-stream rock structures installed along the channel would help maintain channel form and prevent further erosion. Boulder pool structures (designed to mimic natural stream features) are proposed in areas with tighter bends to protect the bed and banks from further erosion, redirecting flow away from the outside bank. The boulder pools would also be used to promote improved sediment transport downstream of the Falling Rock Drive culverts. Rock sills are also proposed throughout the site. These structures match and maintain the streambed elevation, creating grade control throughout the site and preventing channel bed downcutting. Certain rock sills could be constructed so as to create ford crossings, allowing residents to drive over these structures with lawn equipment to access their entire property during periods where the channel is dry.

Coordination with property owners will be critical to discuss long-term property management and maintenance strategies. The design would likely call for a palette of native plantings within the extent of the floodplain bench. This planted buffer would enhance stream stability, reduce maintenance within the stream corridor, and promote greater wildlife habitat value. The specific native plant community selected would also take into consideration the desires and concerns of property owners with respect to aesthetics. For example, vegetation along the channel might be limited to shorter shrubs and herbaceous plants to allow for continued visibility from houses to the back portion of properties. This native herbaceous vegetation could include goldenrod, boneset, thimbleweed, ironweed, path rush, squarrose sedge, foxglove, and cardinal flower. Native shrubs could include buttonbush, elderberry, silky dogwood, chokeberry, spicebush, smooth alder, and black willow. Maintenance procedures would be an important part of discussions, with efforts aimed at optimizing channel stability. This would likely be a maintenance regime that minimizes cutting to prevent damaging the health or long-term survival of these plants. Landowners could cut back the vegetation annually after the growing season to limit vegetation height.

Cooperation and communication with residents whose property this drainage easement crosses are vital for the success of the proposed project. Allowing residents feedback on the species selection and some flexibility on the management of the drainage easement will encourage the buy-in needed to ensure long-term project success.

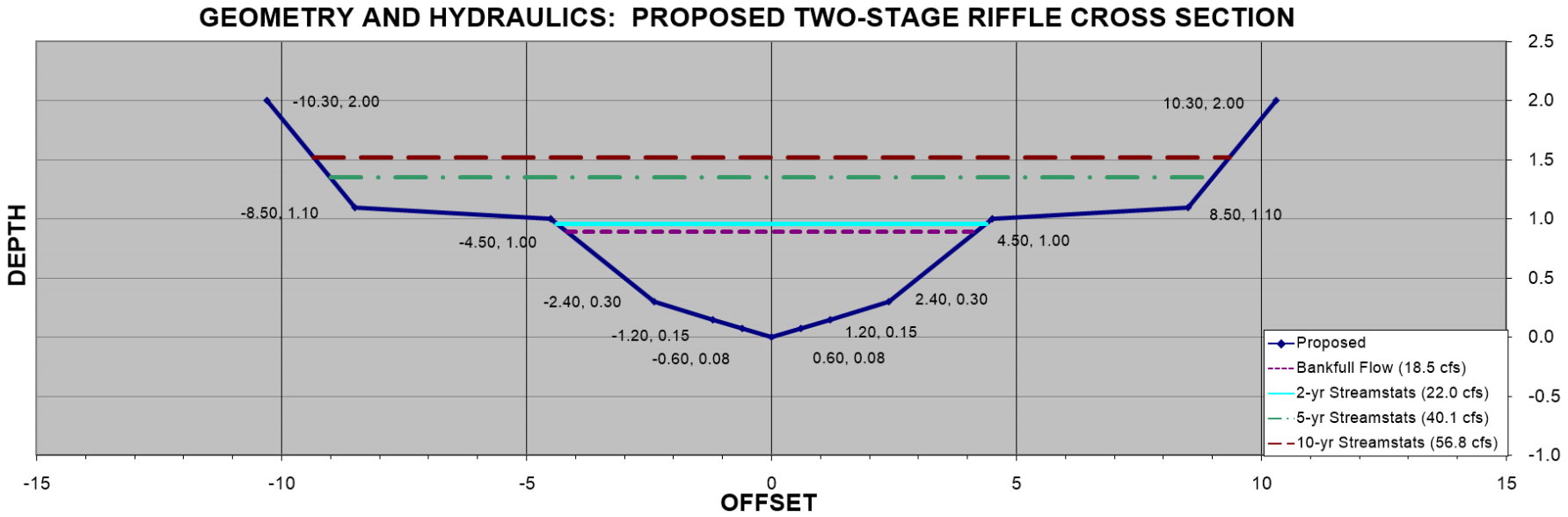


Figure 3. Conceptual cross section for the drainage easement, with the proposed bankfull channel and inset floodplain.

ITEM/DESCRIPTION	QTY	UNIT	UNIT COST	ITEM SUB-TOTAL	EXTENDED SUB-TOTAL
Design					**$105,000**
Channel and Utility Survey	1	LS	$11,000	$11,000	
Natural Channel Design	1	LS	$85,000	$85,000	
Permitting	1	LS	$9,000	$9,000	
Construction Oversight and Administration					**$25,000**
Access and Erosion/Sediment Control					**$26,400**
Temporary Construction Entrance	1	EA	$4,500	$4,500	
Deck Mats	100	LF	$100	$10,000	
Super Silt Fence	300	LF	$9	$2,700	
Inlet Protection	4	EA	$300.00	$1,200	
Orange Safety Mesh	2,000	LF	$4	$8,000	
Construction					**$303,450**
Stakeout and As-Built	1	LS	$32,000	$32,000	
Mobilization	1	LS	$20,000	$20,000	
Clearing	1	AC	$20,000	$20,000	
Grading – fine	0.55	AC	$9,000	$4,950	
Excavation & Hauling	1000	CY	$75	$75,000	
Boulder Pools	5	EA	$5,500	$27,500	
Rock Sills	19	EA	$3,000	$57,000	
Reinforced Bed Material	370	TN	$100	$37,000	
Utility Relocation	1	EA	$30,000	$30,000	
Planting					**$53,000**
Native Seed and Natural Fiber Matting	1,270	SY	$12	$15,240	
Live Stakes	2,300	EA	$10	$23,000	
Contingency (30%)					**$153,855**
TOTAL ESTIMATED BUDGET					**$666,705**

Assumptions

- Watershed (via StreamStats 7/31/2026) is 0.35 square miles (227 acres).
- Drainage easement is assumed to maintain a 50 foot width along the channel to the intersection with Falling Rock Drive, past what has been digitized from the 1965 plat.

Recommended Next Steps

Reach out to VDOT for sizing calculations of the existing culverts. Gauge and/or develop landowner support for project prior to initiating design stages. Recommend developing renderings of what the area will be expected to look like immediately and several years post-construction. Be prepared to discuss what maintenance would look like for residents and have visuals of recommended vegetation species.

References

Keaton, J. N., Messinger, T., & Doheny, E. J. (2005). *Development and analysis of regional curves for streams in the non-urban valley and ridge physiographic province, Maryland, Virginia, and West Virginia* (No. 2005-5076). US Geological Survey.

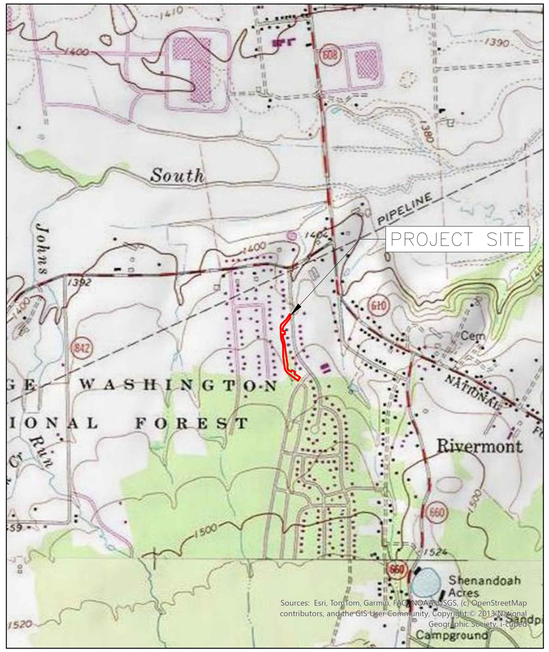
USGS. StreamStats v4.34.0. Accessed online 31 July 2026.

OCTOBER, 2026

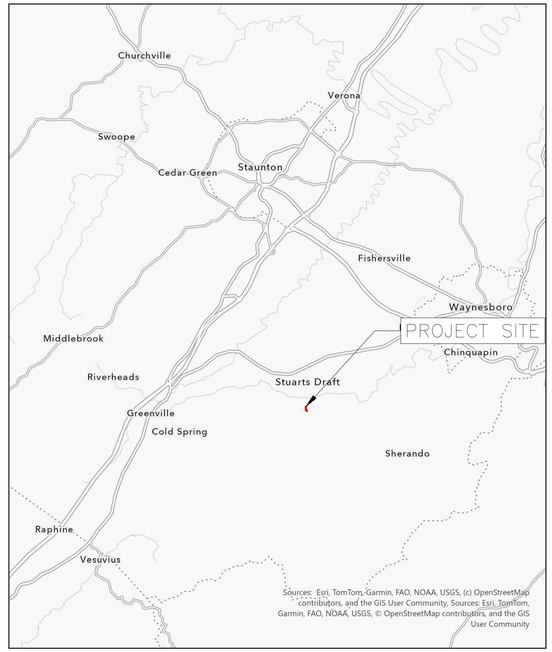
AUGUSTA COUNTY
ENGINEERING DEPARTMENT

18 GOVERNMENT CENTER LANE
VERONA, VA 24482

RIDGEVIEW ACRES SUBDIVISION
DRAINAGE EASEMENT RECONSTRUCTION



VICINITY MAP 0 0.13 0.25 0.5 Miles N



LOCATION MAP 0 1.25 2.5 5 Miles N

COMMONWEALTH OF VIRGINIA
NATHAN A. STALEY
Lic. No. 047145
PROFESSIONAL ENGINEER

SHEET INDEX

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2-3 GRADING PLAN
4-5 CONSTRUCTION DETAILS

Wetland Studies and Solutions, Inc.
a DAVEY company
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CONCEPT PLAN SET

APPROVED BY:
ENGINEERING _____ DATE
PLANNING _____

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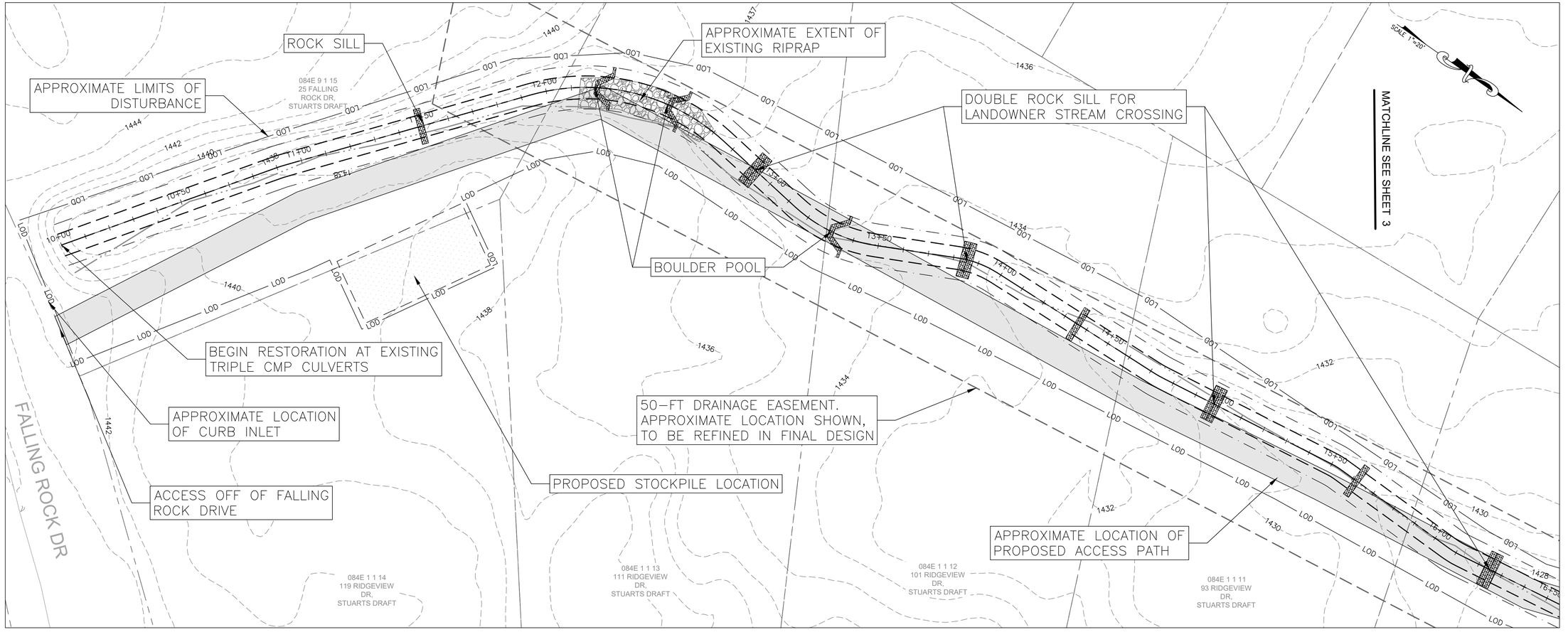

20 10 0 20 40 60

SCALE: 1"=20'

GRADING LEGEND

- 350 — GIS 2.0' CONTOURS
- PROPOSED CENTERLINE
- PROPOSED BANKFULL
- PROPOSED EXTENT OF BANKFULL BENCH
- BOULDER POOL
- ROCK SILL
- LOD — LIMITS OF DISTURBANCE
- DRAINAGE EASEMENT BOUNDARY
- PARCEL BOUNDARIES
- ROAD CENTERLINE
- EXISTING THALWEG
- TEMPORARY ACCESS
- PROPOSED STOCKPILE AREA

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Ridgeview Acres Subdivision Drainage Easement Reconstruction
Concept Plan
Augusta County, Virginia

Grading Plan

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NATHAN A. STALEY
Lic. No. 047145
PROFESSIONAL ENGINEER

REVISIONS

No.	Date	Description	Rev. By:	App. By:

SCALE: 1" = 20'

DATE: OCTOBER, 2026

Horizontal Datum: VCS NAD 83

Vertical Datum: NAVD 88

Boundary and Topo Source: WSSI Digital Data

Design	Draft	Approved
NDM	NDM	NAS

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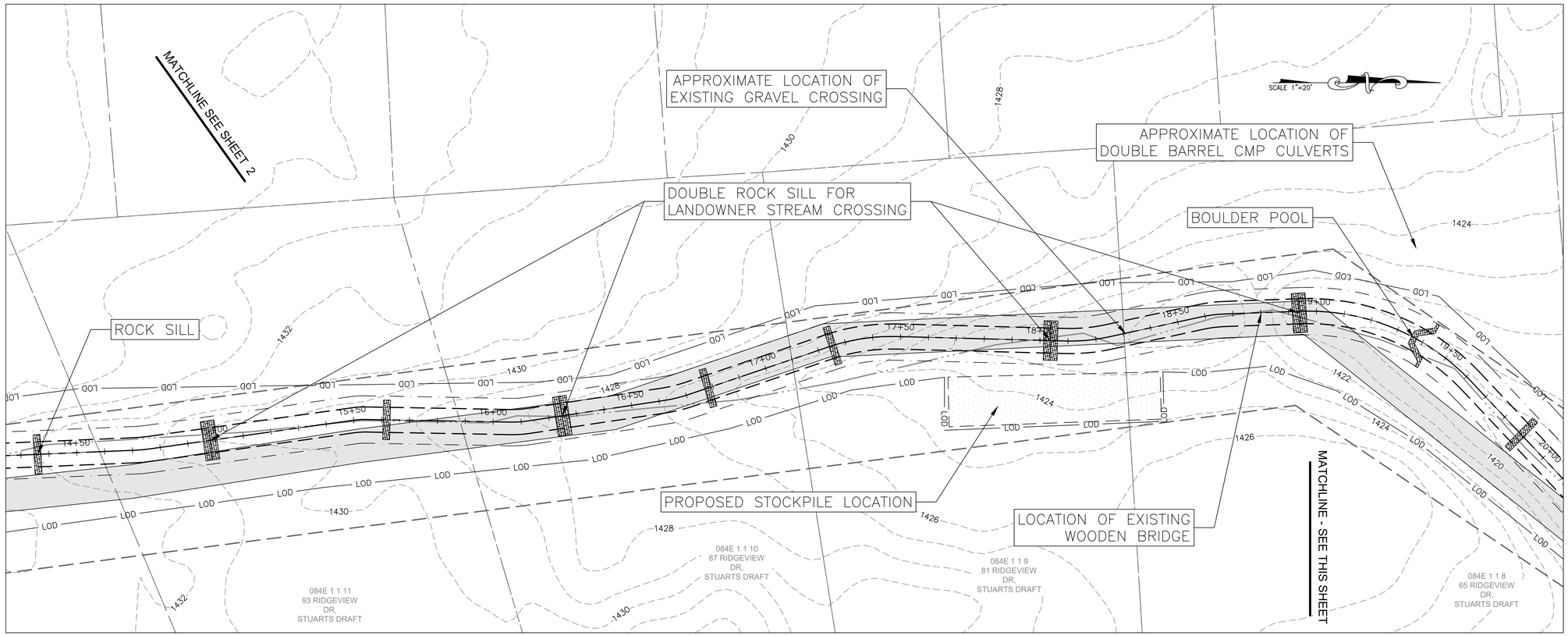

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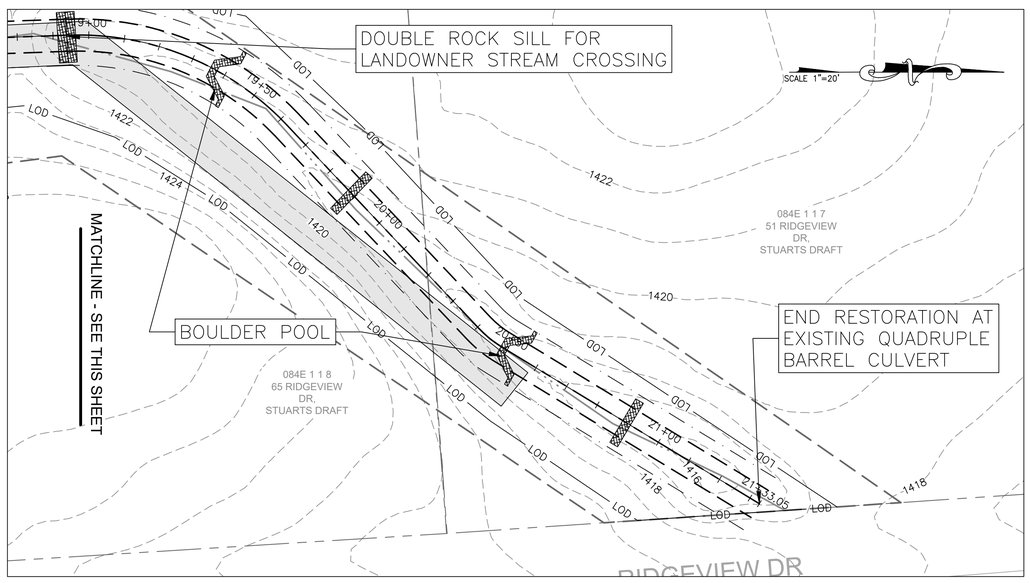

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Grading Plan (cont'd)

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Sheet # 3 of 5

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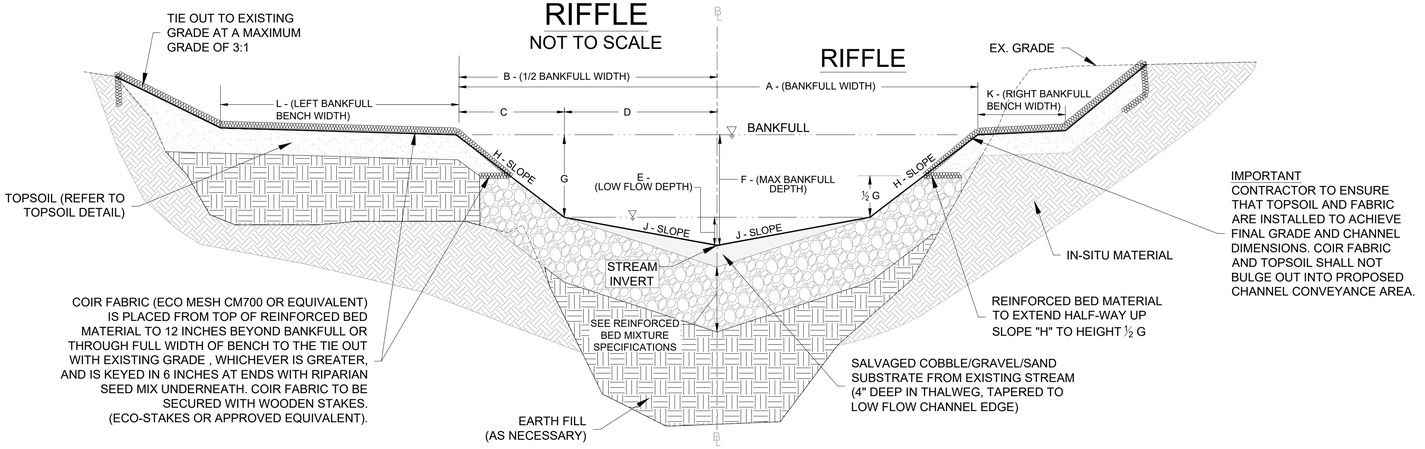


ORIENTATION LOOKING DOWNSTREAM

SECTION LOCATION			RIFFLE CROSS-SECTION DIMENSIONS[2]											
REACH ID	PER BASELINE STATION [1]		CROSS-SECTION PARAMETER (FT)											
	FROM	TO	A	B	C	D	E	F[1]	G	H[3]	J[3]	K[4]	L[4]	NOTES
REACH	10+00.00	21+33.05	9.0	4.5	2.10	2.40	0.30	1.0	0.70	3.0:1	8.0:1	*	*	*VARIES - SEE GRADING PLAN

ADDITIONAL SPECIFIC DIMENSION INFORMATION REGARDING STRUCTURES TO BE PROVIDED IN FINAL DESIGN.

RIFFLE NOTES:

[1] REFER TO THE GRADING PLAN AND LONGITUDINAL PROFILE SHEETS FOR PLACEMENT OF ROCK STRUCTURES WITHIN THE RIFFLE SECTIONS SPECIFIED ABOVE.

[2] THE "STREAM CROSS SECTION SUMMARY" IS PROVIDED ON THE GRADING AND LONGITUDINAL PROFILE SHEETS. THIS SUMMARY SPECIFIES THE TYPE OF CROSS-SECTIONS AND STRUCTURES THAT SHALL BE CONSTRUCTED ALONG THE PROFILE.

[3] J IS THE SLOPE OF THE SALVAGED SUBSTRATE. VARIABLES "H" & "J" ARE SLOPES EXPRESSED AS HORIZONTAL:VERTICAL (H:V).

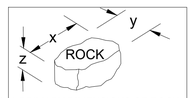
[4] TYPICAL VALUES GIVEN IN TABLE ABOVE. VARIABLES MAY BE ADJUSTED TO MINIMIZE DISTURBANCE TO TREES, **BUT** THE SPECIFIED SUM OF K AND L MUST BE MET OR EXCEEDED. IF BENCH WIDTHS ARE NOT SPECIFIED OVERBANK AREAS SHOULD BE GRADED WITH A 2% CROSS SLOPE EXTENDING AS FAR AS POSSIBLE WHILE STILL ALLOWING 3:1 (MAX.) TIE OUT SLOPES.

STRUCTURE DETAIL LEGEND

- REINFORCED BED
- IN-SITU MATERIAL
- FILL MATERIAL
- TOPSOIL (3 INCH MIN.)
- FILTER FABRIC
- COIR MATTING
- STAKEOUT/WEIR POINT
- HEADER (TOP) ROCK
- WEIR ROCK
- FOOTER ROCK
- SPLASH ROCK

STRUCTURE ROCK NOTES

1. ALL HEADER AND FOOTER ROCKS USED IN THE MAIN CHANNEL SHALL HAVE AN INTERMEDIATE DIMENSION OF AT LEAST **30 INCHES**.
2. SILL ROCKS SHALL HAVE AN INTERMEDIATE DIMENSION OF AT LEAST 12 INCHES.
3. THE BOTTOM OF ALL FOOTER ROCKS SHALL BE A MINIMUM OF 18 INCHES BELOW MAX POOL ELEVATION.
4. FOR NARROW STREAMS, THE VANE HEADER ROCKS MAY BE CONFIGURED TO TAKE THE PLACE OF THE CENTER HEADER ROCK AS LONG AS ALL DIMENSIONS OF THE STRUCTURE ARE MAINTAINED.
5. MORE THAN 2 ROWS OF ROCKS MAY BE NECESSARY TO ACHIEVE PROPER DIMENSIONS.
6. STRUCTURE ROCKS SHOULD BE PLACED SO AS TO MINIMIZE GAPS BETWEEN ROCKS. (THIS MAY REQUIRE MISSHAPEN ROCKS BE SET ASIDE FOR USE ELSEWHERE.) PRIORITY SHOULD BE GIVEN TO FORMING TIGHT JOINTS AT THE TOP OF ROCKS. ANY GAPS LARGER THAN FIST-SIZED MUST BE CHINKED ON THE UPSTREAM (BACK SIDE) OF THE STRUCTURE PRIOR TO PLACING FILTER FABRIC AND BACKFILLING.



3 PRIMARY DIMENSIONS OF ROCK:
x = LONGEST DIMENSION
y = INTERMEDIATE DIMENSION
z = SHORTEST DIMENSION

GENERAL STRUCTURE NOTES

1. SEE LONGITUDINAL PROFILE AND STAKEOUT SHEETS FOR ADDITIONAL INFORMATION INCLUDING ELEVATIONS AND SPECIFICS REGARDING POOL ARMORING AND BED MATERIAL THICKNESS. (ANY PORTIONS OF THE CHANNEL WITH SLOPES GREATER THAN 2.0% SHALL HAVE A MINIMUM REINFORCED BED MATERIAL THICKNESS OF 1.5x THE BED MATERIAL ROCK FRACTION D50, UNLESS OTHERWISE SPECIFIED IN THE PROFILE.)
2. REFER TO THE TYPICAL RIFFLE CROSS-SECTION FOR PLACEMENT OF COIR FABRIC ALONG THE STREAM.
3. STRUCTURES SHALL BE UNDERLAIN WITH WOVEN OR NON-WOVEN POLYPROPYLENE GEOTEXTILE AS NOTED IN TECHNICAL SPECIFICATIONS.
4. BACKFILL BETWEEN VANES AND BANKS WITH REINFORCED BED USED IN CHANNEL.
5. ALL STRUCTURES SHALL BE KEYED INTO THE BANK, VIA SILL OR STRUCTURE ROCK PLACEMENT, A MINIMUM OF 3 FT BEYOND BANKFULL AND COMPLETELY ACROSS ANY PLACED FILL (SEE PLAN VIEW FOR DETAILS).
6. THE PLAN VIEWS OF ALL STRUCTURES LOCATED IN MEANDER BENDS ARE SHOWN AS LEFT MEANDERS (THE OUTER BANK SITUATED ON THE RIGHT LOOKING DOWNSTREAM). FOR A RIGHT MEANDER STRUCTURE (THE OUTER BANK SITUATED ON THE LEFT), THE PLAN VIEW SHOWN IS A MIRROR IMAGE OF WHAT SHOULD BE CONSTRUCTED. SEE STRUCTURE STAKEOUT SHEETS FOR STAKEOUT POINT INFORMATION.

"CL A1 REINFORCED BED"[1] MIXTURE SPECIFICATIONS



THE REINFORCED BED MIXTURE SPECIFIED BELOW MUST BE APPROVED BY THE C.O.R. PRIOR TO BEING PLACED IN THE STREAM CHANNEL.

MATERIAL	SIZE (D_{50})	PORTION	PERCENT (%)
ROCK[2] VDOT CL AI RIPRAP	6.7 - 10.8 in (170 - 274 mm)	2 BUCKETS	35 - 40%
BANK RUN[3] GRAVEL	0.08 - 2.5 in (2 - 64 mm) (D_{50} =1.3 in)	2 BUCKETS	35 - 40%
COARSE SAND[4]	0.04 - 0.08 in (1 - 2 mm)	0.75 BUCKET	12 - 17%
TOPSOIL[5]	LOAM OR SILT LOAM WITH 3-5% ORGANIC CONTENT	0.5 BUCKET	7 - 12%

[1] THE REINFORCED BED SHALL BE A MINIMUM OF **18"** IN DEPTH. SEE LONGITUDINAL PROFILE FOR LOCATIONS AND THICKNESS.

[2] THE ROCK PORTION OF THE MIXTURE SHALL CONSIST OF RIVER WASHED COBBLE (TAN, YELLOW, OR BROWN) WITH THE SPECIFIED D_{50}. THE VOIDS FILLED WITH A MIXTURE OF SAND, GRAVEL, AND TOPSOIL. THE COMBINATION OF PARTICLE SIZES SPECIFIED IN CONJUNCTION WITH THE FILLING OF THE VOIDS, WILL RESULT IN A VERY RESISTANT, ARMORED SUBSTRATE THAT WILL BE CAPABLE OF WITHSTANDING MUCH GREATER SHEAR STRESS THAN THE COMPUTATION OF THE REQUIRED D_{50} WOULD SUGGEST.

[3] BANK RUN GRAVEL MAY INCLUDE UP TO 5% CLAY, SILT, AND/OR SAND, AND UP TO 25% COBBLE (D_{50} = 3" TO 8"). GRAVEL MUST HAVE NATURAL COLOR (TAN, YELLOW, OR BROWN).

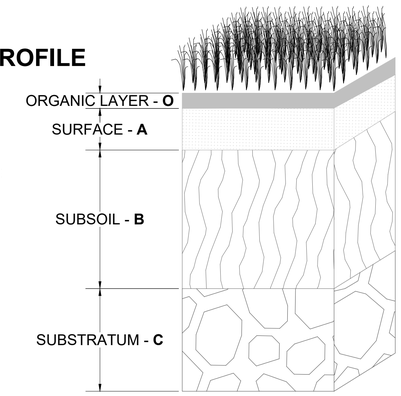
[4] THE SAND PORTION OF THE MIXTURE SHALL CONSIST OF A WELL MIXED SAND PREDOMINANTLY 1.0 MILLIMETERS TO 2.0 MILLIMETERS IN SIZE, SUBJECT TO ENGINEER APPROVAL (I.E. WASHED CONCRETE SAND IS NOT REQUIRED). SAND MUST BE WHITE, TAN, YELLOW, OR BROWN IN COLOR.

[5] THE TOPSOIL PORTION OF THE MIXTURE SHALL CONSIST OF 50% SIFTED, UNWASHED COARSE SAND (WITH FINES ALLOWED), 25% COMPOSTED LEAF/BARK MULCH, 25% MINERAL SILT OR FINER MATERIAL (STONE DUST FROM ROCK CRUSHING OPERATIONS OR ANY SILT/CLAY).

TOPSOIL SPECIFICATIONS

1. TOPSOIL SHALL BE PLACED ON DESIGNATED AREAS WITHIN THE LOD TO A MINIMUM DEPTH OF 4 INCHES, ON TOP OF 3" (MINIMUM) OF LOOSENED SUBGRADE.
2. ALL SALVAGED SOIL SHALL BE FROM THE "O" OR "A" HORIZONS (SEE TYPICAL SOIL HORIZON DETAIL - THIS SHEET). HORIZONS "B" AND "C" SHALL ONLY BE USED FOR FILL MATERIAL.
3. SALVAGED SOIL SHALL ONLY BE HARVESTED FROM AREAS DESIGNATED TO BE GRADED. NO TOPSOIL SHALL BE REMOVED FROM THE SITE AND A SOIL HARVEST CAN HAPPEN AT ANY GIVEN TIME DURING CONSTRUCTION.
4. ALL HARVESTED SOIL MUST BE PROPERLY STORED IN A DESIGNATED STOCKPILE/STAGING AREA WITH APPROPRIATE E&S CONTROLS IN ACCORDANCE WITH THE CONSTRUCTION PLANS AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
5. THE TOPSOIL MIXTURE SHALL BE WELL MIXED AND SEEDED PER THE PLANTING PLAN IMMEDIATELY FOLLOWING INSTALLATION AND PRIOR TO STRAW AND MATTING PLACEMENT.
6. IMPORTED TOPSOIL SHALL MEET THE REQUIREMENTS SPECIFIED IN THE CONSTRUCTION SPECIFICATIONS.

TYPICAL SOIL HORIZON PROFILE



O HORIZON – THE TOP LAYER OF SOIL IS COMPOSED PRIMARILY OF ORGANIC MATERIAL, INCLUDING LEAF LITTER, HERBACEOUS PLANTS, INSECTS, AND MICROORGANISMS.

A HORIZON – REFERRED TO AS TOPSOIL, WHERE SEEDS GERMINATE AND PLANT ROOTS THRIVE. THROUGH ELUVIATION, MINERALS AND CLAYS HAVE BEEN REMOVED, LEAVING THIS LAYER OF SAND AND SILT.

B HORIZON – REFERRED TO AS SUBSOIL. THROUGH PROCESS OF ILLUVIATION, SUBSOIL CONTAINS MINERAL DEPOSITS THAT HAVE MIGRATED FROM ABOVE SOIL HORIZON.

C HORIZON – THIS WEATHERING ROCK LAYER IS REFERRED TO AS REGOLITH AND CONSISTS OF UNCONSOLIDATED ROCKS AND LITTLE ORGANIC MATERIAL THAT INHIBIT THE GROWTH OF PLANT ROOTS

R HORIZON – THE “R” STANDS FOR ROCK AND IT REFERS TO THE UNCONSOLIDATED ROCK OR SOLID BEDROCK OF THIS HORIZON.

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Ridgeview Acres Subdivision Drainage Easement Reconstruction
Concept Plan
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Construction Details

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REVISIONS				SCALE: As Noted
No.	Date	Description	Rev. By / App. By	
				DATE: OCTOBER, 2026

Horizontal Datum: N/A

Vertical Datum: N/A

Boundary and Topo Source: N/A

Design	Draft	Approved
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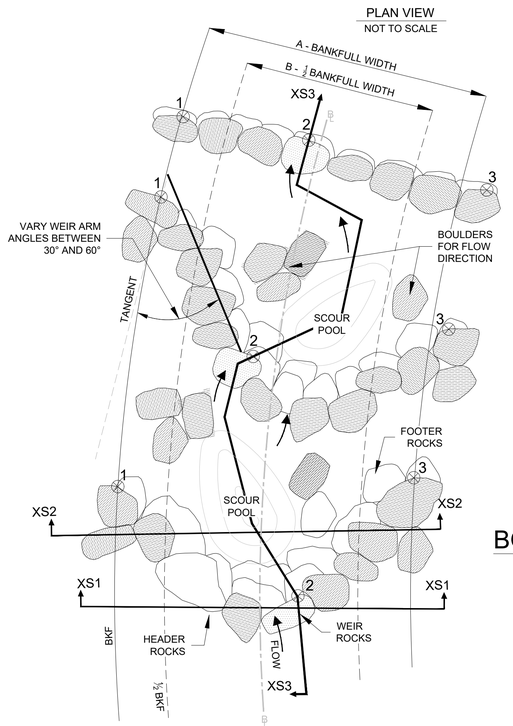
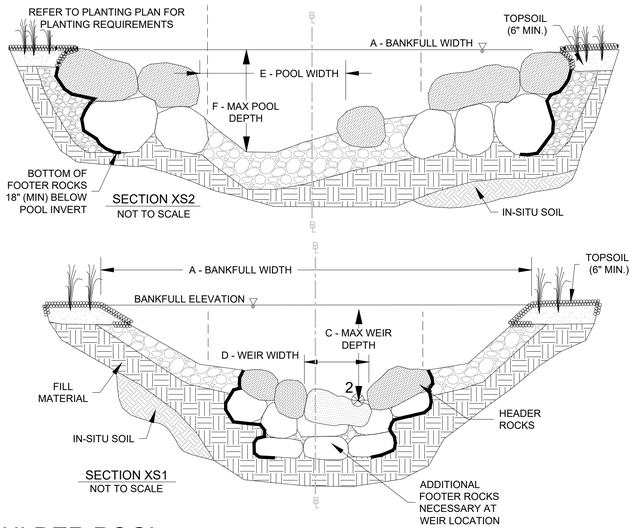
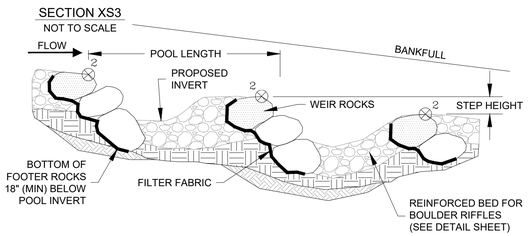




BOULDER POOL

NOT TO SCALE

REFER TO PROFILE SHEETS FOR ADDITIONAL INFORMATION



FEATURE LOCATION			DIMENSIONS
REACH ID	STATION INFORMATION		LENGTH (FT)
	FROM	TO	
REACH XX	10+00.00	10+00.00	XXX
REACH XX			
REACH XX			
REACH XX			
REACH XX			

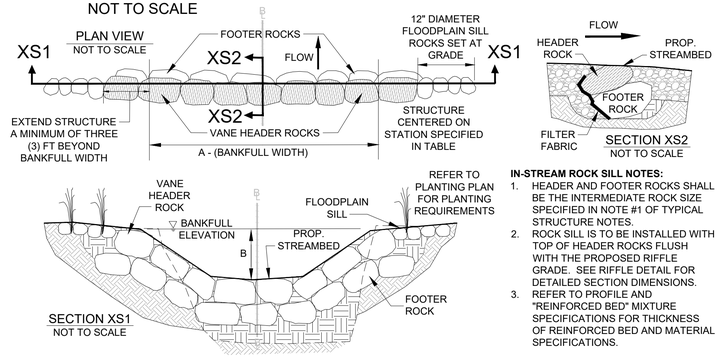
ADDITIONAL SPECIFIC DIMENSION INFORMATION REGARDING STRUCTURES TO BE PROVIDED IN FINAL DESIGN.

BOULDER POOL NOTES:

1. REFER TO "STRUCTURE ROCK NOTES" (SHEET 4) FOR ADDITIONAL INFORMATION CONCERNING ALL STRUCTURES.
2. SEE LONGITUDINAL PROFILE FOR WEIR POINT LOCATIONS (W) AND ELEVATIONS.
3. ALL WEIR POINTS ARE LOCATED ON THE DOWNSTREAM EDGE OF THE WEIR ROCK.
4. THE WEIR HEADER ROCK LOCATION SHALL BE VARIED LATERALLY WITHIN THE HALF-BANKFULL CHANNEL. CENTER WEIR ROCKS SHALL BE SHIFTED TO FORM AN IRREGULAR FLOW PATTERN FROM POOL TO POOL.

IN-STREAM ROCK SILL

NOT TO SCALE



IN-STREAM ROCK SILL NOTES:

1. HEADER AND FOOTER ROCKS SHALL BE THE INTERMEDIATE ROCK SIZE SPECIFIED IN NOTE #1 OF TYPICAL STRUCTURE NOTES.
2. ROCK SILL IS TO BE INSTALLED WITH TOP OF HEADER ROCKS FLUSH WITH THE PROPOSED RIFFLE GRADE. SEE RIFFLE DETAIL FOR DETAILED SECTION DIMENSIONS.
3. REFER TO PROFILE AND "REINFORCED BED" MIXTURE SPECIFICATIONS FOR THICKNESS OF REINFORCED BED AND MATERIAL SPECIFICATIONS.

STRUCTURE DETAIL LEGEND

- REINFORCED BED
- IN-SITU MATERIAL
- FILL MATERIAL
- TOPSOIL (3 INCH MIN.)
- FILTER FABRIC
- COIR MATTING
- STAKEOUT/WEIR POINT
- HEADER (TOP) ROCK
- WEIR ROCK
- FOOTER ROCK
- SPLASH ROCK

Wetland Studies and Solutions, Inc. a DAVEY company
3154 State Street • Suite B
Blacksburg, Virginia 24060
Phone: 540-953-0170
www.wetlands.com

Ridgeview Acres Subdivision Drainage Easement Reconstruction
Concept Plan
Augusta County, Virginia

Construction Details (cont'd)

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COMMONWEALTH OF VIRGINIA
NATHAN A. STALEY
Lic. No. 047145
PROFESSIONAL ENGINEER

REVISIONS

No.	Date	Description	Rev. By	App. By

DATE: OCTOBER, 2026
SCALE: As Noted

Horizontal Datum: N/A
Vertical Datum: N/A
Boundary and Topo Source: N/A

Design	Draft	Approved
NDM	NDM	NAS

Sheet #
5 of 5

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