COUNCIL BARADEL
ATTORNEYS AT LAW

SALLY V. BALDWIN
E-Mail: Baldwin@CouncilBaradel.com
Telephone Extension: 3462

December 9, 2025

Anne Arundel County
Office of Planning and Zoning
2664 Riva Road
Annapolis, Maryland 21401
Attn: Jennifer Lechner

Re: 870 Mill Creek Road, Arnold
Tax Map 32, Block 17, Parcel 4
Permit G02020213, Prefile 2025-0017-P
Letter of Explanation- variance application

Dear Ms. Lechner:

On behalf of our Client, Style Works Design Build, LLC, we are submitting this statement of justification in support of the application for variances to develop the above-referenced property with a single-family dwelling. The property is known as parcel 4, as shown on Anne Arundel County tax map 32 in block 17. The property, known as 870 Mill Creek Road, is a vacant lot located at the southern end of Mill Creek Road, in Arnold, MD 21012. The lot contains approximately 14,536 sq. ft. (0.33 ac.) of land zoned R5. The site is also located within an Intensely Developed Area (IDA) and a Resource Conservation Area (RCA) of the Chesapeake Bay Critical Area, due to its proximity to Mill Creek.

The parcel is traversed by an abandoned dirt and gravel access road, but is otherwise unimproved and forested. The property is impacted by a tidal flood zone at elevation 6.0, as shown on F.E.M.A. flood map 24003C0159F, and abuts Mill Creek, a perennial stream. Although the majority of the shoreline of Mill Creek west of the subject property has been developed and is now deemed Buffer Modified (due to the location of the existing dwellings along Mill Creek Road), the presence of the existing perennial stream near the southern end of Mill Creek Road terminates the Buffer Modified area, which provides for the expansion of the 100' Buffer to tidal waters to fully encompass the subject property, despite the presence of waterfront homes between the subject property and Mill Creek.

The proposed improvements include the construction of a single-family dwelling, driveway, public utility connections, and stormwater management practices, as shown on the attached grading plans. The current proposal addresses stormwater via the installation of multiple infiltration berms and native planting; the stormwater management plan has been reviewed and only requires the requested variances for final approval. The proposed dwelling

will derive access near the southern terminus of Mill Creek Road, from an unnamed right-of-way that connects Mill Creek Road to Mago Vista Park and which is currently improved with existing public utilities. Since a previous variance submission in 2021, and following meetings with the County's engineering and permit representatives, the owner has re-designed the plan to reduce the size of the proposed dwelling. The property owner has developed a plan that minimizes environmental impacts to the greatest extent possible. Importantly, the proposed permanent lot coverage on the lot will be 1,647 square feet, which is below the 1,864 square feet of existing lot coverage (the gravel road currently traversing the property).

The current proposal meets all critical area requirements regarding water quality, clearing and lot coverage; however, due to the presence of existing steep slopes in the area and the expansion of the Critical Area Buffer, variance relief is required prior to approval of the permit. Thus, in order to develop the residential lot with a single family dwelling the applicant seeks the following variances:

1. A Variance to allow the disturbance of 1,999 sq ft. of steep slopes within the Critical Area in accordance with Article 17, Section 8-201 of the Code.
2. A Variance to allow the disturbance of 4,205 sq ft. of expanded Critical Area Buffer in accordance with Article 17, Section 8-301 of the Code.
3. A Variance of 7' to the minimum 25' front setback in an area zoned R5 to allow a front setback of 18' in accordance with Article 18, Section 4-601 of the Code.
4. A Variance of 13' to the minimum 20' side yard setback to a right-of-way in an area zoned R5 to allow a side setback of 7' in accordance with Article 18, Section 4-601 of the Code.

Pursuant to Anne Arundel County Code § 18-16-305, the subject property has unique physical characteristics as it is entirely encompassed by the expanded buffer, despite not being a waterfront property. The neighboring waterfront properties have the development benefits of being mapped as Buffer Modified, however the subject property does not. Further, its steep slopes, perennial stream (with associated buffer) and existing dirt road constitute exceptional topographical conditions.

As a legal buildable lot in the R5 zoning district, the intended use of a single-family residential dwelling is a permitted use by right. Without the variances, an unwarranted hardship would result because the applicants would be deprived of reasonable and significant use of their property: development with a single-family dwelling in an R5 residential zone. The surrounding properties are developed with similarly sized single family dwellings and thus the denial of the variance would also deprive the applicants of rights commonly enjoyed by others. The granting of the variance would not confer on the applicant any special privilege for the same reasons. The variance request is not based on conditions or circumstances that are the result of actions by the applicant; the variances are requested due to the conditions on the property that limit the development area.

Because this request proposes stormwater management where none presently exists, and reduces the overall lot coverage while providing steep slope stabilization, environmental impact

has been reduced to the greatest extent possible. The granting of the variance would not adversely affect water quality, or fish, wildlife or plant habitat, as set forth in the attached Critical Area report. For the reasons set forth above, the applicant has overcome the presumption in the Natural Resources Article, § 8-1808, of the State Code. As demonstrated with the prior submissions, the applicant has evaluated other site planning alternatives and has determined that the proposed plan would involve the minimum variance necessary to afford the requested relief. The improvements are for a modest dwelling, that has been reduced in size to the greatest extent possible, but not so much that it is out of character with the community. Granting the variance would not alter the essential character of the neighborhood, nor would it impair the use or development of the adjacent property. Mitigation is being provided for any clearing, so overall the proposal would not reduce forest cover. Approval of the variance would also not be detrimental to the public welfare for the reasons stated herein.

Thank you for considering this variance request and please let me know if you have any questions.

Very truly yours,

Sally N. Baldwin

BOYD & DOWGIALLO, P.A.

Engineers, Surveyors & Planners
Maryland Professional Engineering Firm License No. 47570

December 10, 2025

Office of Planning & Zoning
2664 Riva Road
Annapolis, MD 21401
Attn: Ms. Sterling Seay

Re: 870 Mill Creek Road
Tax Map 32, Block 17, Parcel 4
Plat Book 2, page 7
permit #G02020213

Dear Ms. Seay,

On behalf of our client, Style Works Design Build, LLC, owner and developer of the above-referenced property, and in connection with the attached statement of justification from Ms. Sally Baldwin with Council Baradel, we are submitting herewith a Variance request to the Anne Arundel County Code.

In accordance with the Variance Instructions Checklist on-line, the following items are submitted herewith:

1. A signed Variance Application.
2. A copy of this explanation letter, including the statement of justification.
3. A copy of the Variance Site Plan, and one (1) copy of the Variance Submittal Requirements.
4. The deed for the property.
5. A list of property owners within 300 feet.
6. A Filing Fee for the Variance fee and two signs was provided with the original Variance submittal.
7. a.) A copy of the revised Critical Area report, including the existing and developed plan views, one copy of the project notification application, one copy of the County topography map at 200 scale showing the property location.
   b.) The pre-file comments from Planning and Zoning.
   c.) A copy of the completed single-family engineering checklist. One copy of the updated/revised Stormwater Management Report.

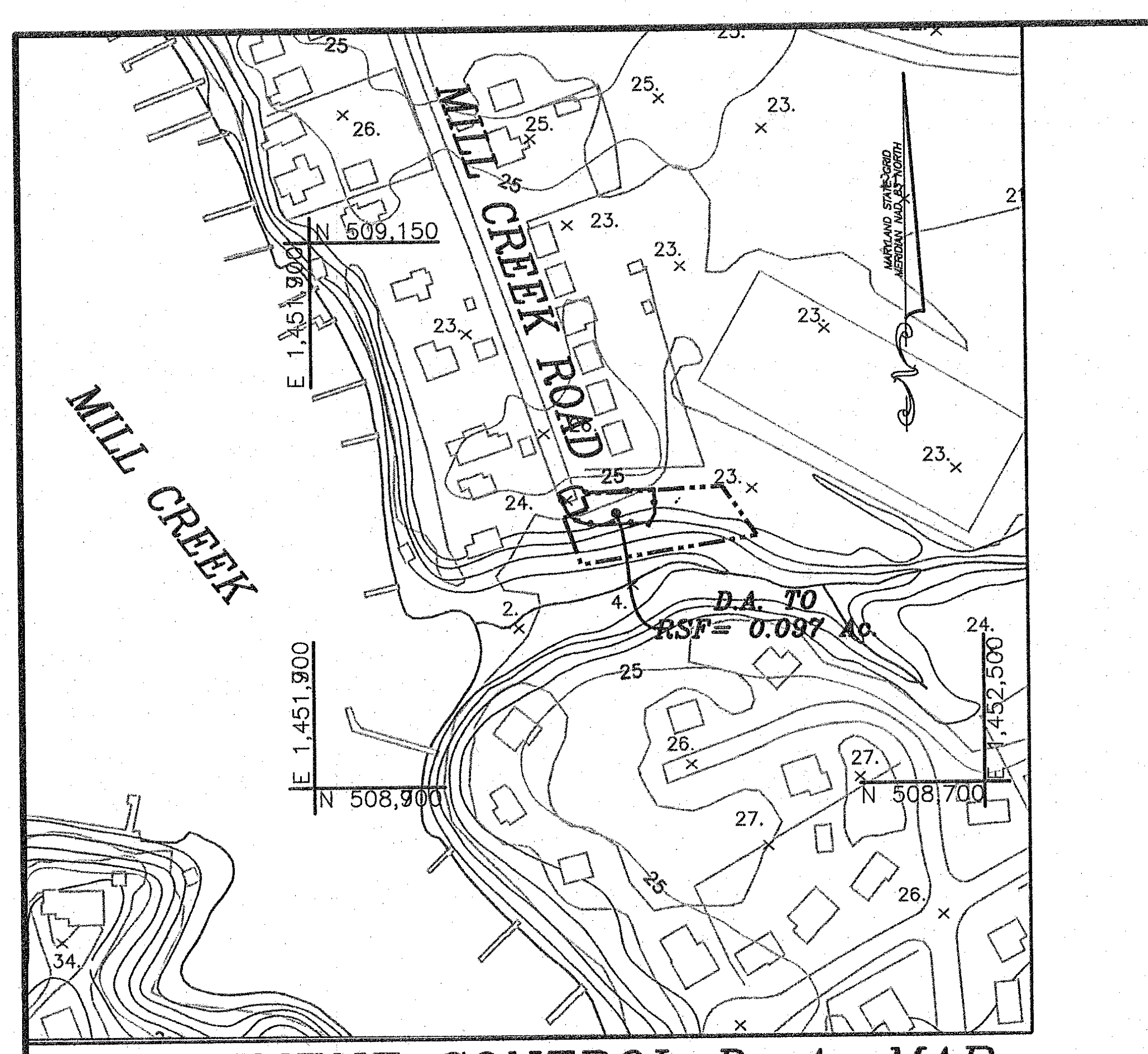
We appreciate your attention in this matter. If you have any questions or require any additional information regarding this request, please do not hesitate to contact our office.

Very truly yours,

Boyd & Dowgiallo, P.A.

By: _____
Jerry Tolodziecki, P.E.

cc: file
enclosures

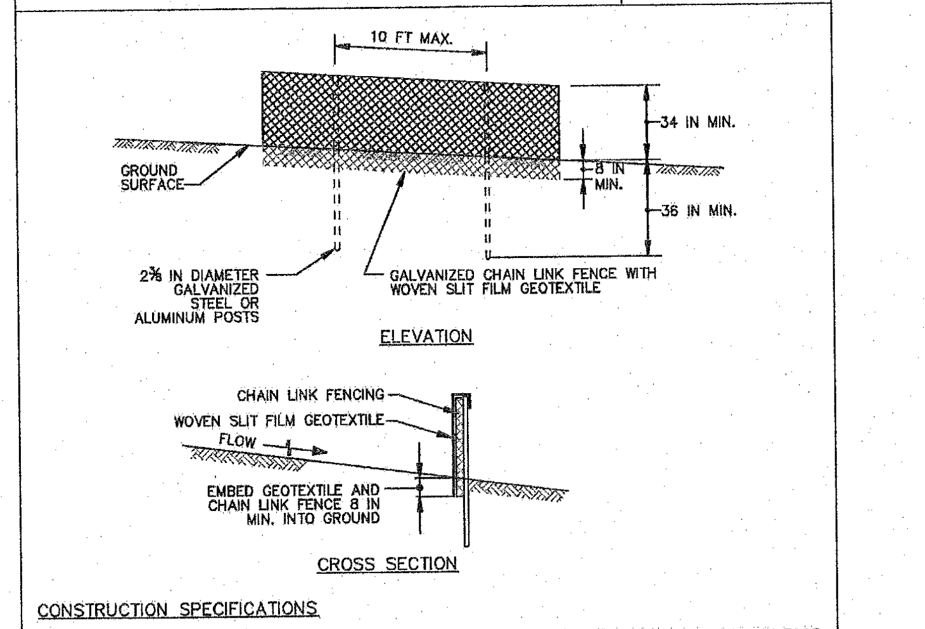


SEDIMENT CONTROL D. A. MAP

SCALE: 1"=200'

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: —SSF—



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

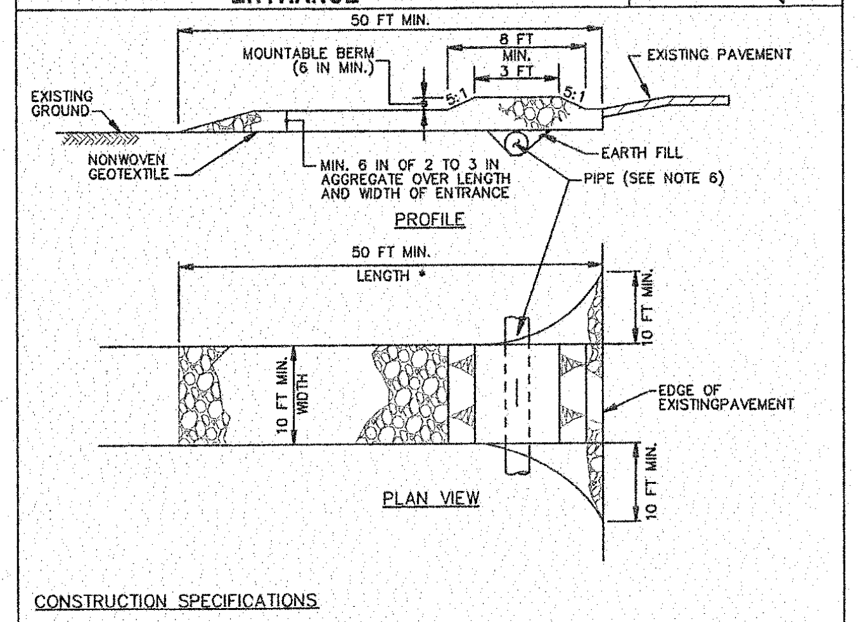
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.7

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



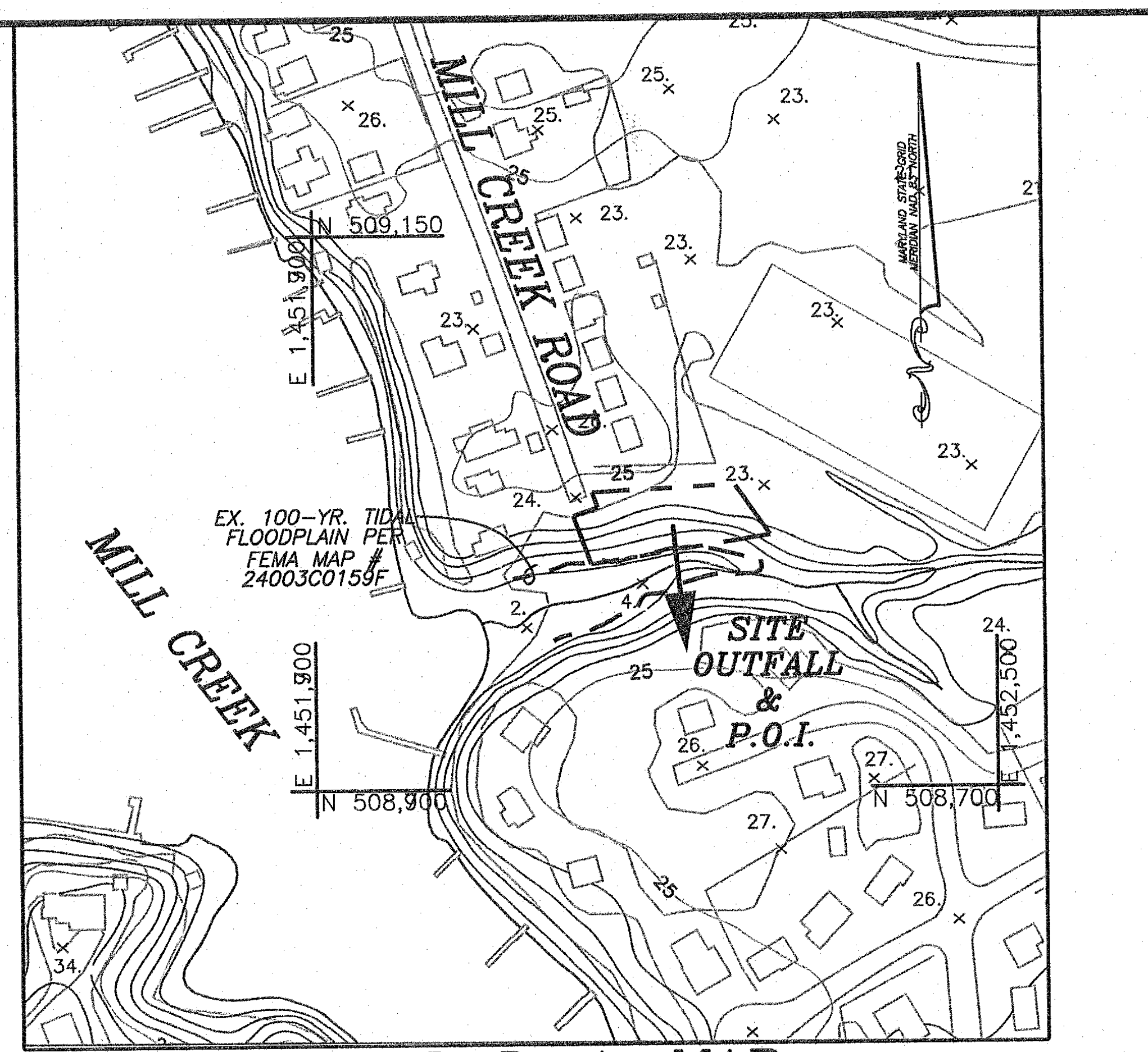
CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.2



P.O.I. D. A. MAP

SCALE: 1"=200'

GRADING AS-BUILTS

All grading drainage structures and/or systems, erosion and sediment control practices including facilities and vegetative measures have been completed essentially in conformance with the approved plans and specifications.

By: Jerry Tolodziecki, P.E. Date
(For SWM Only)

GRADING AS-BUILTS

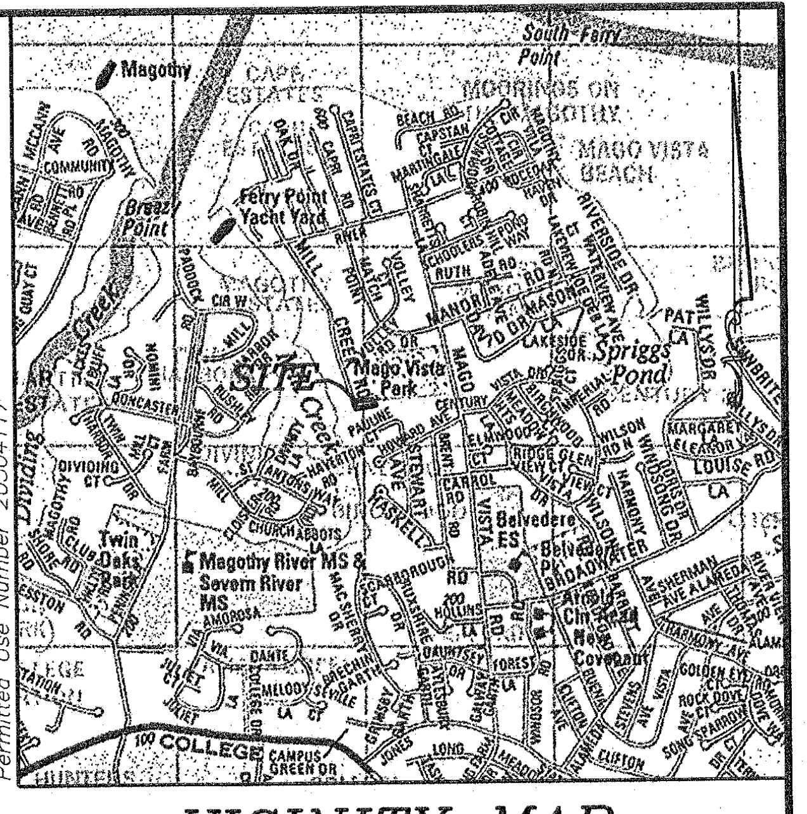
All grading drainage structures and/or systems, erosion and sediment control practices including facilities and vegetative measures have been completed essentially in conformance with the approved plans and specifications.

By: Ken Sikora Date
For: Style Works Design Build, LLC

STORMWATER MANAGEMENT RECORD DRAWING CERTIFICATION

"This certifies to the best of my professional belief and knowledge, the approved S.W.M. system(s) as shown hereon have been constructed in such a manner that would be consistent with the approved plans. Any changes/modifications are identified in red."

By: Date:



Copyright ADC The Map People
Permitted Use Number 20504117

VICINITY MAP

SCALE: 1"=2000'

LEGEND

Existing Curb	= = = = =
Existing Contour	— — 51 — —
Existing Woods line	◡◡◡◡◡
Existing Stormdrain Inlet	▨
Existing Stormdrain Manhole	Ⓓ
Existing Sewer Manhole	Ⓢ
Existing Sewer Cleanout	⊙
Existing Water Valve	-○-
Existing Water Meter	●
Proposed Contour	—18—
Proposed Reinforced Silt Fence	—RSF—
Proposed Limit of Disturbance	—D—
Stabilized Construction Entrance	S.C.E.
Boring Location	◐

STANDARD RESPONSIBILITY NOTES

1. I (We) certify that:
   a. All development and construction will be done in accordance with this sediment and erosion control plan, and further, authorize the right of entry for periodic on-site evaluation by the Anne Arundel Soil Conservation District (AASCD) Board of Supervisors or their authorized agents.
   b. Any responsible personnel involved in the construction project will have a certificate of attendance from the Maryland Department of the Environment's approved training program for the control of sediment and erosion before beginning the project.

      Responsible personnel on site: T.B.D.
   c. If applicable, the appropriate enclosure will be constructed and maintained on sediment basin(s) included in this plan. Such structure(s) will be in compliance with the Anne Arundel County Code.
2. The developer is responsible for the acquisition of all easements, right, and/or rights-of-way that may be required for the sediment and erosion control practices, storm water management practices and the discharge of storm water onto or across adjacent or downstream properties included in the plan.
3. For initial soil disturbance or re-disturbance, permanent and/or temporary stabilization per the AASCD Vegetative Establishment shall be completed within three calendar days for the surface of all controls, dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1), and seven days for all other disturbed or graded areas on the project site.
4. The grading and sediment control approval on this plan extends only to those areas within the limits of disturbance.
5. The approval of this plan for sediment and erosion control does not relieve the developer/consultant from complying with Federal, State or County requirements pertaining to environmental issues.
6. The developer must request that the sediment and erosion control inspector approve work completed in accordance with the approved erosion and sediment control plan, the grading or building permit, and the ordinance.
7. All material shall be taken to a site with an approved sediment and erosion control plan.
8. First phase inspection and approval of the sediment and erosion control inspector shall be required upon completion of the installation of erosion and sediment controls prior to proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until the initial approval by the sediment and erosion control inspector is given. Inspection and Permits may also require that an inspection and certification of the installation of sediment control also be performed by a design professional prior to construction commencing.
9. Approval from the inspector must be requested on final stabilization of all sites prior to removal of sediment and erosion controls.
10. Existing topography must be field verified by responsible personnel to the satisfaction of the sediment control inspector prior to commencing work.

Carole Sikora For Style Works Design Build, LLC 8/8/2024
Signature of Developer/Owner Date

Print:
Name: STYLE WORKS DESIGN BUILD LLC
Title: OWNER
Affiliation: DEVELOPER
Address: 204 SOUTH VILLA AVENUE ANNAPOLIS, MD 21401
Telephone Number: 786-391-5569
Email Address: SIKORAINVESTMENT@GMAIL.COM

CONSULTANT'S CERTIFICATION

The developer's plan to control silt and erosion is adequate to contain the silt and erosion of the property covered by the plan. I certify that this plan of erosion and sediment control represents a practical and workable plan based on my personal knowledge of this site, and was prepared in accordance with the requirements of Anne Arundel Soil Conservation District Plan Submittal Guidelines and the current Maryland Standards and Specifications for Soil Erosion and Sediment Control.

I have reviewed this erosion and sediment control plan with the owner / developer.

11/22/25
Jerry Tolodziecki P.E. #19577 Date

JEROME EDWARD TOLODZIECKI
NO. 19577

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19577, EXPIRATION DATE: 3-16-2026."

BOYD & DOWGIALLO, P.A.
ENGINEERS*SURVEYORS*PLANNERS
412 Headquarters Drive, Suite 5
Millersville, Maryland 21108
(410) 729-1234

2018 VEGETATIVE ESTABLISHMENT

Following initial soil disturbances or redisturbance, permanent or temporary stabilization shall be completed within three calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and seven days for all other disturbed or graded areas on the project site.

1. Permanent Seeding:

   A. Soil Tests: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of initial rough grading or as recommended by the sediment control inspector. Rates and analyses will be provided to the grading inspector as well as the contractor.

      Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6-week incubation period to allow oxidation of sulfates.

      The minimum soil conditions required for permanent vegetative establishment are:

      a. Soil pH shall be between 6.0 and 7.0.
      b. Soluble salts shall be less than 500 parts per million (ppm).
      c. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable.
      d. Soil shall contain 1.5% minimum organic matter by weight.
      e. Soil must contain sufficient pore space to permit adequate root penetration.
      f. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with the Standard and Specification for Soil Preparation, Topsoiling and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or amendments made as recommended by a certified agronomist.

   B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3-5 inches. The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds dolomitic limestone and 21 pounds of 10-10-10 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3-5 inches on slopes flatter than 3:1.

   C. Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 1 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be ¼ inch in clayey soils and ½ inch in sandy soils when using other than the hydroseeder method. Irrigate where necessary to support adequate growth until vegetation is firmly established. If other seed mixes are to be used, select from Table B3 and B5 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

   D. Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading. Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch-anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches.

   E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:

      i. Use a mulch-anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can operate safely.

      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons of water.

      iii. Liquid binders may be used. Apply at higher rates at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the manufacturers.

      iv. Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's recommendations.

2. Temporary Seeding:

Lime:	100 pounds of dolomitic limestone per 1,000 square feet.
Fertilizer:	15 pounds of 10-10-10 per 1,000 square feet.
Seed:	Perennial rye – 0.92 pounds per 1,000 square feet (February 1 through April 30 or August 15 through October 31). Millet – 0.92 pounds per 1,000 square feet (May 1 through August 15).
Mulch:	Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill is to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All compaction requirements are in accordance to Anne Arundel County Standard Specifications for Construction as well as the AA County Design Manual and Standard Details. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

4. Permanent Sod:

   Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted in section (B) above. Permanent sod is to be tall fescue, state approved sod; lime and fertilizer per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

5. Mining Operations:

   Sediment control plans for mining operations must include the following seeding dates and mixtures:

   For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and sericea lespedeza at the minimum rate of 0.5 pounds per 1,000 square feet.

6. Topsoil shall be applied as per the Standard and Specifications for Soil Preparation, Topsoiling, and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

7. Use of these Vegetative Establishment Specifications does not preclude the permittee or contractor from meeting all of the requirements set forth in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

GENERAL NOTES

1. *Notify the Anne Arundel County Department of Planning and Code Enforcement, Environmental Programs, (410)222-7784 (48) forty-eight hour before beginning the work shown on these plans.*
2. *The existing utilities and obstructions shown are from the best available records and shall be verified by the contractor prior to construction. Necessary precautions shall be taken by the contractor to protect existing services and mains, and any damage to them shall be repaired immediately at his own expense.*
3. *It shall be distinctly understood that failure to mention specifically any work which would normally be required to complete the project shall not relieve the contractor of his responsibility to complete such work.*
4. *Temporary sediment control measures shall be maintained until all contributing areas are graded and stabilized.*
5. *The property and topographic information shown hereon is based on field surveys taken from a previously approved Variance Site Plan by MAF & Associates LLC dated August, 2021 and the A.A. Co. G.I.S. Site dated 2020 and field verified by Boyd & Dowgiallo P.A.*
6. *All disturbed areas shall be seeded or better as per plans.*
7. *The user is responsible to verify all information shown on these plans.*
8. *The contractor shall note that in case of a discrepancy between the scaled and the computed dimensions shown on these plans: the computed dimensions shall govern.*
9. *Pile dirt on the high side of the trench during utility construction.*
10. *The grading quantities shown hereon are for permit purposes only and should not be used for bidding purposes.*
11. *All construction shall be in conformance with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment controls."*
12. *For exact building dimensions, see Architectural Plans, by others.*
13. *All easements, irrespective of public or private disposition, are to be permanent unless otherwise labeled. All private easements have been labeled as such.*
14. *All roof drains shall be directed to the proposed landscape infiltration berms, as shown on sheet 3 of these plans.*
15. *This project is located within Severn River watershed.*
16. *The boundary lines, bearings, and distances as shown hereon for all adjacent parcels, rights-of-way, etc. are taken from deed plotting's only. This drawing does not represent a field run survey of any parcel except Tax Map 32 Block 17 Parcel 4 as shown hereon.*
17. *The property shown hereon is partly located within a 100-year flood zone at elevation 6.0., as shown on F.E.M.A. Map 24003C0159F dated February 8, 2015.*
18. *For title, see Deed Liber 37157 Folio 216.*

ESD SUMMARY TABLE

Total Required ESD volume	= 206 cu. ft.
Microscale Practice – Landscape Infiltration Berms ESD volume prov'd.	= 216 cu. ft.
Total Microscale ESD volume prov'd	= 216 cu. ft.
Total ESD volume required	= 0 cu.ft.

STORMWATER MANAGEMENT NOTE

This grading permit #G02020213 was reviewed under the 2010 regulations for stormwater management. Stormwater management practices will be provided for the proposed redevelopment shown hereon in accordance with Article 16, Section 4 and the final plan on file with the Office of Planning & Zoning. ESD to the MEP was achieved through the use of a landscape infiltration berm practice, in accordance with Chapter 5, Section M-3 of the 2009 MDE Stormwater Design Manual. Although not required, the Overbank Flood Protection volume is being provided on site by the "Reduced Curve Number Method" to ensure that slope stability is maintained.

STORMWATER MANAGEMENT SUMMARY TABLE

MINIMUM SIZING CRITERIA	SYMBOL	VOLUME REQUIRED (CUBIC-FEET)	SWM Practice	NOTES
Environmental Site Design Volume	(ESDv)	206	M-3	Provided through the use of microscale landscape infiltration berms.
Recharge Volume	(Rev)	47	M-3	Provided through the use of microscale landscape infiltration berms.
Channel Protection Storage Volume	(CPv)	N/A	M-3	The channel protection volume for this lot is being provided through the use of environmental site design practices that provide the target rainfall value of 1.0", as specified in Table 5.3 of the revised M.D.E. Manual and return the site back to a "pre-development state of woods in good condition".
Overbank Flood Protection	(Qp10)	N/A	N/A	Provided by a direct outfall to a tidal floodplain of Mill Creek. Although not required, the Overbank Flood Protection volume is being provided on site by the "Reduced Curve Number Method" to ensure that slope stability is maintained.
Extreme Flood Protection	(Qf)	N/A	N/A	Provided by a direct outfall to a tidal floodplain of Mill Creek.

GRADING INSPECTOR NOTES

IF HOUSE CONSTRUCTION IS NOT STARTED IN A TIMELY MANNER UPON CLEARING AND GRUBING AREA/LOT WITH STEEP SLOPES, THE INSPECTOR CAN REQUEST:

1. INSTALL REINFORCED SILT FENCE (OR EQUAL) ACROSS CLEARED SLOPES @ 30'INTERVALS.

2. PROVIDE A 3'BARRIER OF 6"DEPTH OF MULCH ALONG THE PERIMETER OF REINFORCED/SUPER SILT FENCE

*DURING FOUNDATION EXCAVATION, DIRT IS TO BE HAULED AWAY TO AN APPROVED SITE DAILY.
*EXCAVATED SLOPES TO BE TEMPORARLY STABILIZED WITH SOIL STABILIZATION MATTING OR EQUAL AT THE END OF EACH DAY.

OUTFALL STATEMENT

Runoff from the site flows over woods in a southerly direction directly to a tidal floodplain of Mill Creek, a tributary to the Magothy River. Although not needed, a sufficient amount of ESDv volume is being provided on site to reduce the 10-year post-development discharge to its pre-development rate and minimize any impacts to existing steep slopes.

Given that the site discharges directly to a tidal floodplain, and the required ESD volume is being provided on site, the site outfall & point-of-investigation (P.O.I.) is a point along the southernmost boundary line where runoff leaves the property and enters the floodplain of Mill Creek. The site outfall, and P.O.I. were inspected on a field investigation by an employee of Boyd & Dowgiallo, P.A., in May, 2024, and were found to be vegetated, stable and in good condition, with no signs of erosion, flooding, or sediment accumulation present.

Given that the ESD, recharge, channel protection volumes and overbank flood protection volumes are being provided, there should not be an increase in runoff as a result of the proposed improvements, no adverse effects should occur to the site outfall or P.O.I.

STORMWATER MANAGEMENT DATA

Project Table for Drainage Area

Permit Number	G02020213
Project Number	20-231
Project Name	Magothy Shores
StructureAddress	Mill Creek Road
Structure City	Arnold
State	Maryland
Structure Zip	21012
Total Drainage Area (Acres)	0.33
RCN - Pre Construction	62
RCN - Post Construction	64
RCN - Woods	30/70
Total Number of BMPs	1
PE Required (see Note 1)	1.0"
PE Addressed (see Note 2)	1.0"
MD 8-Digit HUC (see Note 4)	2131001
HUC	Blank - County Use

Sequence of Construction for Single Family Dwelling

1. Obtain all necessary permits. Conduct a Pre-construction meeting: Contractor to notify the Anne Arundel County Department of Inspections and Permits at (410) 222-7780 at least 48 hours prior to the start of construction. Work may not commence until the permittee, or the responsible personnel have met on-site with the Sediment and Erosion Control Inspector to review the approved plans. Note: The permittee or contractor shall not commence with clearing or any earth disturbance activities on the site during or before wet weather events. Once the site work begins, clearing and grubbing activities shall be for the installation and stabilization of the perimeter erosion control measures only. **(1 Day)**
2. Install Stabilized Construction Entrance and all sediment controls as shown on plan. No clearing or grading is to be done except where necessary for the installation of sediment controls. **(1 Day)**
3. Contact the inspector for approval of sediment control installation. Inspections and Permits may require that an inspection and certification of the installation of sediment controls also be performed by a design professional prior to construction commencing. **(1 Day)**
4. Clear, grub and rough grade site only as shown within the limits of disturbance. Haul all debris to an approved site. * **(1 Week)**
5. Install septic system, well or other utilities at this time if the access will be blocked by building construction. Any sediment controls damaged must be replaced by the end of the workday. **(2 Weeks)**
6. Construct proposed foundation and associated improvements. Construction of the first floor walls of any building or structure may not proceed until the foundation has been backfilled and all disturbed areas within the limits of disturbance have been permanently or temporarily stabilized. A certificate is to be provided by the engineer to the inspector verifying the grades and drainage patterns shown on the approved erosion and sediment control plan have been obtained. **(2 Weeks)**
7. Once the site is stabilized, with the Grading Inspectors approval, framing may commence above the ground floor. During building construction beyond the ground floor, all disturbed areas must be stabilized at the end of each business day. All areas are to be vegetatively stabilized per the Anne Arundel Soil Conservation District's Details and Specifications for Vegetative Establishment. **(120 Days)**
8. Once upstream areas are 95% stabilized, install SWM systems and devices and/or plantings. (Sediment is to be prevented from entering SWM systems during construction; inflow pipes to be connected after contributing drainage areas are also stabilized.) The engineer must certify SWM installation. **(1 Week)**
9. Fine grade and stabilize all disturbed and affected areas. Install driveway to final surface and stabilize access with CR-6 gravel or pavement from access road or right-of-way to the structure. **(2 Days)**
10. With grading inspector's approval, remove remaining sediment controls. **(1 Day)**
11. Maintenance. **(Ongoing)**

*For lots with long proposed driveways, add to sequence: "Install driveway to base course prior to any house construction."

2022

SITE ANALYSIS

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Disturbed Area	4,205 Sq.Ft.± (0.097 Ac.±)
Vegetative Area	2,186 Sq.Ft.± (0.05 Ac.±)
Predominant Soil Type	DwB: Downer-Hammonton-Urban land complex, 0 to 5 percent slopes (HSG A) AuD: Annapolis-Urban land complex, 5 to 15 percent slopes (HSG C)
Existing Developed Woodlands	14,536 Sq.Ft.± (0.33 Ac.±)
Total Proposed Clearing	3,308 Sq.Ft.± (0.08 Ac.±) (518 Sq.Ft. Off-Site + 2,790 Sq.Ft. On-Site)
Existing Lot Coverage	1,864 Sq.Ft.± (0.04 Ac.±) (Ex. Abandoned Road)
Proposed Lot Coverage	2,019 Sq.Ft.± (1,179 Sq.Ft. House + 468 Sq.Ft. On-Site D/W + 372 Off-Site D/W)
Grading Quantities	200 cu. yds. Cut
	150 cu. yds. Fill

VARIANCE NOTES:

1. *In accordance with Article 17, Section 8-201 of the Anne Arundel County Code, a variance is required to allow the disturbance* of 1,999 Sq.Ft. of 15%+ steep slopes within the Critical Area and allow the construction of a dwelling and driveway.*

2. *In accordance with Article 18, Section 4-601 of the Anne Arundel County Code, a 13 foot variance to the required 20 foot setback of an abutting right-of-way to allow a side setback of 7 feet.*

3. *In accordance with Article 17, Section 8-301 of the Anne Arundel County Code, a variance is required to allow the disturbance of 4,205 Sq.Ft. of expanded buffer within the Critical Area and allow the construction of a dwelling and driveway.*

4. *In accordance with Article 18, Section 4-601 of the Anne Arundel County Code, a 7 foot variance to the required 25 foot front setback to allow a front setback of 18 feet.*

* *Excluding removal of ex. abandoned road and prop. SWM Plantings.*

INDEX OF DRAWINGS

SWM STRUCTURAL DATA SHEET

For Each Practice in the Drainage Area

STORM_ID	STRU_NAME	MDE BMP CLASS (E, S, or A)	MDE BMP TYPE	CONSTRUCTION PURPOSE (New development (NEWD), Redvelopment (REDE), or Restoration (REST))	ON or OFF SITE	LAND USE (MDP Code)	DEVICE DRAINAGE AREA (acres)	IMPERVIOUS AREA DRAINING TO DEVICE (sq. ft.)	IMPERVIOUS ACRES RESTORED (See Note 3)	MD NORTH COORD (NAD83 - FT)	MD EAST COORD (NAD83 - FT)	WQ$_v$ (cu.-ft) (See Note 5)	Maintenance Responsibility	Comments
Blank - County Use														
	Landscape Infiltration Berm	E	MILS	NEWD	ON	12	0.043	1,200	NA	N 509,006	E 1,452,097	216	Individual Homeowner	

NOTES

1 - Rainfall target (from Table 5.3, Design Manual pp.5.21-22) used to determine ESD goals and size practices (for new development or redevelopment). If practice is for restoration, then PE_REQ is 1inch.
2 - Rainfall addressed (using both ESD techniques and practices, and structural practices) by the BMPs within the drainage area
3 - Equals Impervious Area Draining to Device when PE_ADR = 1 inch (for restoration only)
4 - Maryland 8-Digit HUC (Hydrologic Unit Code) can be found by using the map at: https://data.maryland.gov/Energy-and-Environment/Maryland-s-8-Digit-Sub-Watersheds/e9j9-vuxg
5 - Water Quality volume, the smaller of the volume of the actual storage volume in the device or the volume from the 1-year 24-hour storm for the drainage area to the device ((2.7" x Rv x A)/12)

SCD APPROVAL BLOCK

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

Maryland Professional Engineering Firm License No. 47570
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412 Headquarters Drive, Suite 5
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(410) 729-1234 (P)
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JERRYT@BNDPA.COM

JEROME EDWARD TOLODZIECKI
NO. 19577

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19577, EXPIRATION DATE: 3-16-2026."

VARIANCE/GRADING & SEDIMENT CONTROL PLAN

Job No.: 20-231
Sheet No.: 1 of 4
Checked By: JET
DATE: NOVEMBER, 2025
Permit #G02020213
Proj. No.

870 MILL CREEK ROAD

TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

THIRD DISTRICT
ANNE ARUNDEL COUNTY, MD 21012

JOB# 20-231

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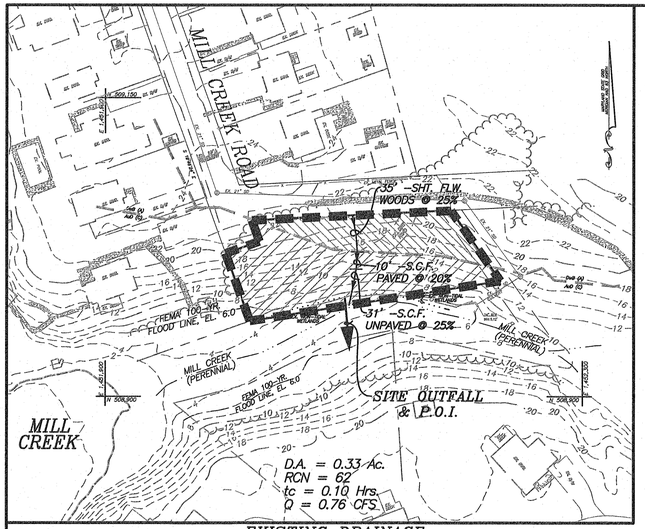
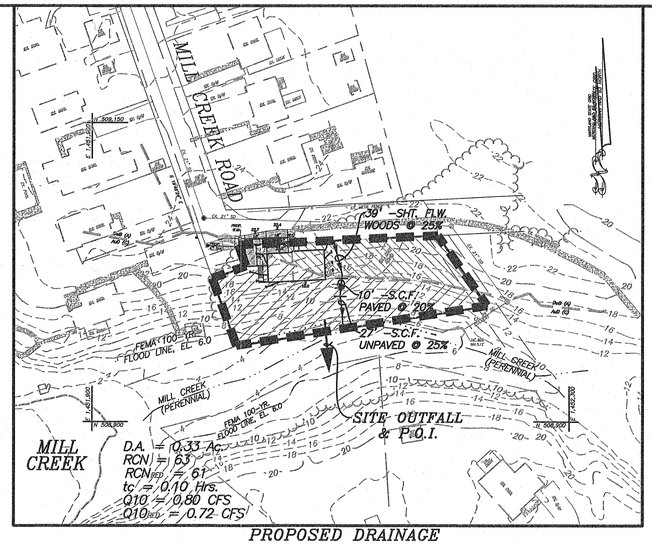


EXISTING DRAINAGE
AREA MAP
SCALE: 1"= 60'



PROPOSED DRAINAGE
AREA MAP
SCALE: 1"= 60'

ADJOINING OWNERS

TAX MAP 32, BLOCK 17, PARCEL 798
LOT 30
JOHN JOHNSEN
ANTONIA HOY
866 MILL CREEK ROAD
ARNOLD, MD 21012
TAX # 03-525-28061600
ZONING R5
L 37493 / F 25

TAX MAP 32, BLOCK 17, PARCEL 394
STEPHEN R. HUTCHINS
MARY A. HUTCHINS
867 MILL CREEK ROAD
ARNOLD, MD 21012
TAX # 03-525-22369050
ZONING R5
L 6861 / F 512

TAX MAP 32, BLOCK 17, PARCEL 395
ANNE ARUNDEL COUNTY
DEPT REC & PARKS
ANNAPOLIS, MD 21401
TAX # 03-000-90000507
ZONING R5
L 2730 / F 685

TAX MAP 32, BLOCK 17, PARCEL 797
LOT 5, FUNHOUSER PROPERTY
PLAT BOOK 101 PAGE 18
MELANIE DANOS
202 PAULINE COURT
ARNOLD, MD 21012
TAX # 03-525-90050091
ZONING R5
L 13581 / F 33

TAX MAP 32, BLOCK 17, PARCEL 797
LOT 6, FUNHOUSER PROPERTY
PLAT BOOK 101 PAGE 18
CHRISTOPHER SHIFFLER
204 PAULINE COURT
ARNOLD, MD 21012
TAX # 03-000-90050092
ZONING R5
L 38855 / F 115

LEGEND

- Existing Curb
- Existing Contour (51)
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods line
- Existing Gas Line
- Existing Gas Valve (GV)
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole (S)
- Existing Sewer Cleanout
- Existing Telephone Manhole (T)
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter (W)
- Pre/Post Development Discharge Point
- Flow Direction Arrow
- Ex. FEMA Line
- Ex. 15%+ Slopes
- Limits of Non-Tidal Wetlands

B-4.2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

B.12

   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading

B.13

and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

SOILS LEGEND

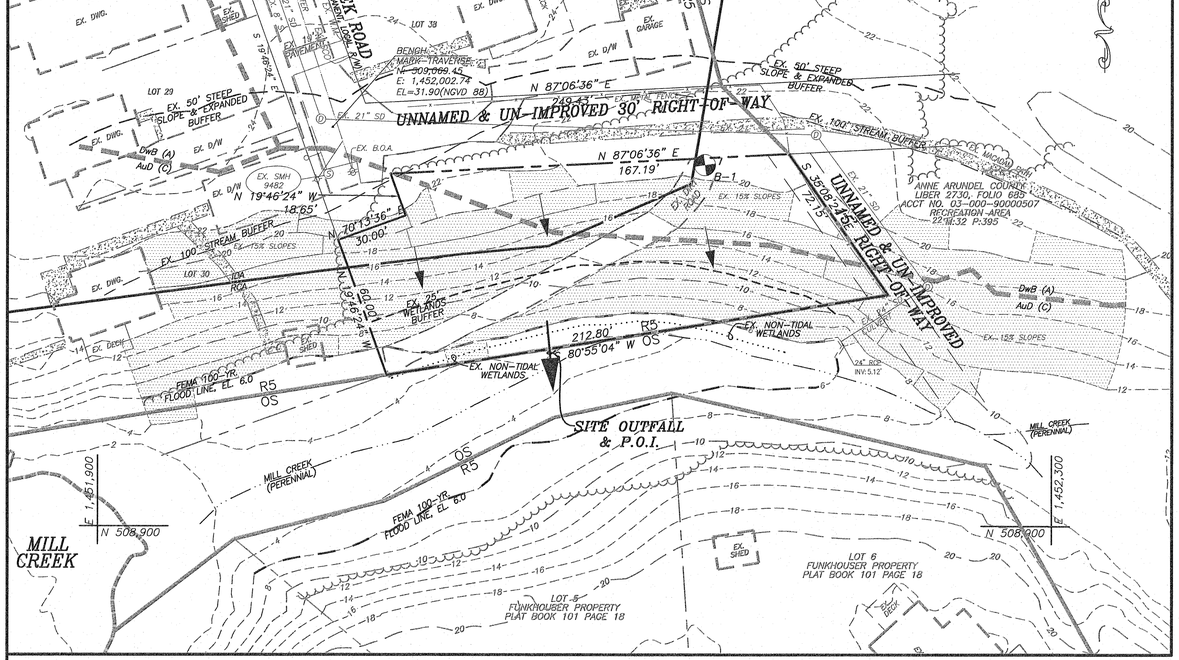
OwB: Downer-hammonton-urban land complex, 0 to 5 percent slopes (A)
AuD: Annapolis-urban land complex, 5 to 15 percent slopes (C)

NOTE: The property shown hereon is located within FEMA flood Zone AE El=6.0 as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel No.24003C0159F of Anne Arundel County, Maryland. (Unincorporated Areas) dated 2/8/15.

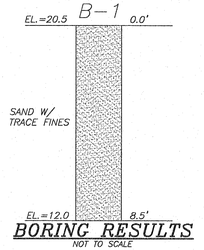
HYDROLOGIC SOIL PROPERTIES CLASSIFIED BY SOIL TEXTURE*

TEXTURE CLASS	EFFECTIVE WATER CAPACITY (Cw) (INCH PER INCH)	MINIMUM INFILTRATION RATE (f) (INCHES PER HOUR)	HYDROLOGIC SOIL GROUPING
Sand	0.35	8.27	A
Loamy Sand	0.31	2.41	A
Sandy Loam	0.25	1.02	B
Loam	0.19	0.52	B
Silt Loam	0.17	0.27	C
Sandy Clay Loam	0.14	0.17	C
Clay Loam	0.14	0.09	D
Silty Clay Loam	0.11	0.06	D
Sandy Clay	0.09	0.05	D
Silty Clay	0.09	0.04	D
Clay	0.08	0.02	D

* Taken from the Maryland Department of Natural Resources, Water Resources Administration, Stormwater Management Division Standards and Specifications for Infiltration Practices.



RESOURCE/PRE DEVELOPMENT PLAN VIEW
SCALE: 1"= 30'



BORING RESULTS
NOT TO SCALE

BOG PROTECTION NOTE

This site is not located within a bog, a bog buffer area or within a contributing drainage area of a bog, as determined by the Anne Arundel County Bog Protection Area Guidance Map, dated December, 2006.

SCENIC & HISTORIC ROAD NOTE

This site does not derive access from or abut a scenic or historic road as shown on Anne Arundel County Scenic and Historic Roads Map, dated 2006.

WATER & SEWER SERVICE AREA

WATER SERVICE AREA: BROADNECK – EXISTING SERVICE
SEWER SERVICE AREA: BROADNECK – EXISTING SERVICE

HISTORICAL, ARCHAEOLOGICAL & CEMETARY NOTE

This site does not contain any historical or archaeological items, based upon a field observation by Boyd & Dowgiallo, P.A. and is not part of an existing cemetary.

ZONING NOTE

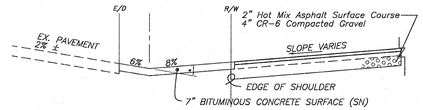
This site is located within an R5 zoning district and an Intensely Developed Area (IDA) and a Resource Conservation Area (RCA) of the Chesapeake Bay Critical Area.

RESOURCE MAP CERTIFICATION NOTE

The property and topographic information shown hereon is based surveys performed by Boyd & Dowgiallo, PA and the AA.Co. GIS and has been field verified.

Jerry E. Toodziecki, P.E. #19577 — 11/24/25

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19577, EXPIRATION DATE: 3-16-2026."



DRIVEWAY SECTION (TYP)
(NOT TO SCALE)

NOTE: 1. FOR THE MINIMUM PAVING FOR DRIVEWAYS IN THE COUNTY RIGHT OF WAY, SEE LOCAL ROAD PAVING SECTIONS, DETAIL P-8.
2. DITCH LINING AND VELOCITY DISSIPATORS TO BE PROVIDED AS REQUIRED.
3. ALLOWING SURFACE DRAINAGE TO CROSS A PAVED DRIVEWAY ON THE SURFACE IS SUBJECT TO THE APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS.
*4. MAXIMUM ALGEBRAIC GRADE DIFFERENCE IS 14%.

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

Maryland Professional Engineering Firm License No. 47570
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VARIANCE/GRADING & SEDIMENT CONTROL PLAN

Sheet No.: 2 of 4
Checked By: JET
DATE: NOVEMBER, 2025
Permit #G02020213
Proj. No.

870 MILL CREEK ROAD

TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

THIRD DISTRICT — ANNE ARUNDEL COUNTY, MD 21012

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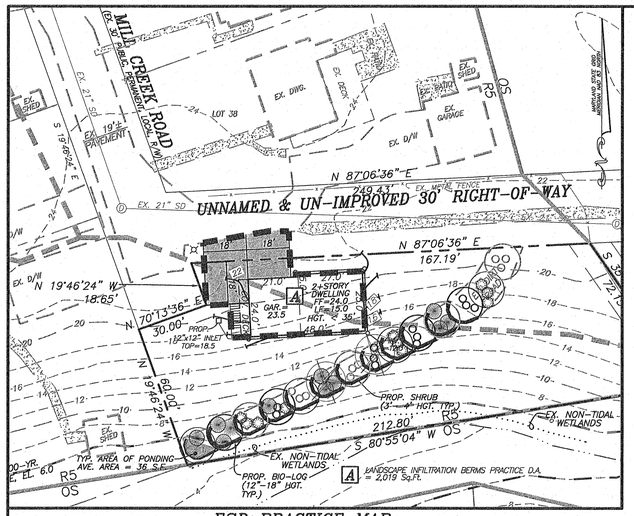
JOB# 20-231



ESD PRACTICE MAP

SCALE: 1" = 30'

C. A. BUFFER TABULATION

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.±
Total Critical Area	14,536 Sq.Ft.±
Existing Coverage within 100' Buffer	1,864 Sq.Ft.*
Existing Coverage outside of 100' Buffer	0 Sq.Ft.
Proposed Lot Coverage Within 100' Buffer	1,647 Sq.Ft.
Proposed clearing within 100' Buffer	4,205 Sq.Ft.
Permanent Buffer Disturbance @ 3:1	4,205 Sq.Ft. X 3 = 12,615 Sq.Ft.
Increase in Lot Coverage within 100' Buffer	2,019 Sq.Ft. – 1,864* Sq.Ft. = 155 Sq.Ft.
Buffer Mitigation for Lot Cover	310 Sq.Ft.
Prop. Clearing w/in Buffer	3,308 Sq.Ft.
Total Buffer Mitigation	12,615 + 310 + 3,308 = 16,233 Sq.Ft.

*Existing Dirt Road to be Removed

IDA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	IDA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area–IDA	3,890 Sq.Ft.± (0.09 Ac.±)
Developed Woodlands (Within I.D.A.)	3,890 Sq.Ft.± (0.09 Ac.±) (Includes Ex. Dirt Road)
Maximum Clearing Allowed (Within C.A.)	N/A
Proposed Clearing (Within IDA C.A.)	3,050 Sq.Ft. (2,532 Sq.Ft. On–Site + 518 Sq.Ft. Off–Site)
Reforestation Required (Prop. Clearing x 1.0)	N/A
Afforestation Threshold	N/A
Reforestation Provided	N/A
Remaining Reforestation Remaining	N/A
Existing Lot Coverage	58 Sq.Ft. (Includes Ex. Dirt Road)
Maximum Lot Coverage (Within C.A.)	N/A
Proposed Lot Coverage (On–Site)	1,646 Sq.Ft.± (0.05 Ac.±) (1,178 Sq.Ft. DWG + 468 Sq.Ft. D/W)

RCA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area–RCA	10,646 Sq.Ft.± (0.24 Ac.±)
Developed Woodlands (Within R.C.A.)	10,646 Sq.Ft.± (0.24 Ac.±)
Maximum Clearing Allowed (Within C.A.)	6,534 Sq.Ft.
Proposed Clearing (Within RCA C.A.)	258 Sq.Ft.± (Excludes Ex. Dirt Rd.)
Reforestation Required (Prop. Clearing x 1.0)	258 Sq.Ft.±
Afforestation Threshold	1,596 Sq.Ft.± (15%)
Reforestation Provided	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Req'd. Buffer Mitigation	16,078 Sq.Ft.
Total Planting/Reforestation Req'd.	258 Sq.Ft. + 16,078 Sq.Ft. = 16,336 Sq.Ft.
Total Planting/Reforestation Prov'd.	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Remaining Mitigation Req'd.	16,336 Sq.Ft.± – 4,200 Sq.Ft. = 12,136 Sq.Ft.*
Existing Lot Coverage	1,864 Sq.Ft. (Ex. Dirt Road)
Maximum Lot Coverage (Within R.C.A.)	1,596 Sq.Ft.± (0.037 Ac.±)
Proposed Lot Coverage (Within RCA) (On–Site)	1 Sq.Ft.±

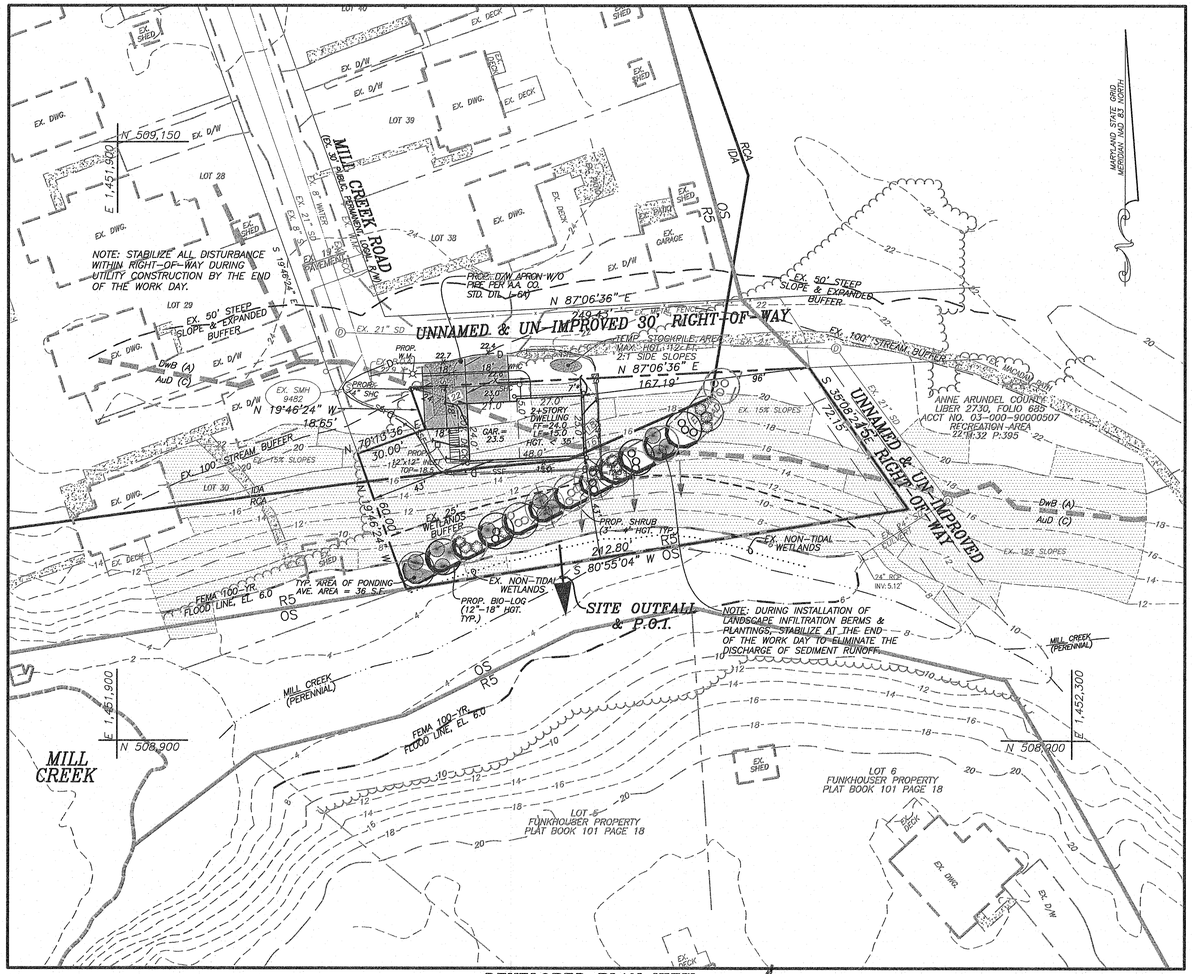
*to be provided via off–site mitigation

SETBACKS (ZONED R5)

Front . . . . . N/A*
Rear . . . . . 20'
Side . . . . . 7'
*Established by existing dwellings

LEGEND

Existing Curb
Existing Contour — 51 —
Existing Wire Fence
Existing Wood Fence
Existing Woods line
Existing Gas Line
Existing Gas Valve
Existing Stormdrain Inlet
Existing Stormdrain Manhole
Existing Sewer Manhole
Existing Sewer Cleanout
Existing Telephone Manhole
Existing Utility Pole
Existing Water Valve
Existing Water Meter
Proposed Contour 18
Proposed Reinforced Silt Fence SSF
Proposed Limit of Disturbance D
Stabilized Construction Entrance S.C.E.
Proposed Reforestation Plantings (See Reforestation Plans for Details)
Proposed Bio–Log
Overland Relief Flow Path



DEVELOPED PLAN VIEW

SCALE: 1" = 30'

TOPSOIL SPECIFICATIONS

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

B.12

   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the

B.13

and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manner may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
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(410) 729–1243 (F)
JERRYT@BNDPA.COM

STATE OF MARYLAND — JERRY TODD BOYD — NO. 19571 — PROFESSIONAL ENGINEER
PROFESSIONAL ENGINEER'S CERTIFICATE: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19571, EXPIRATION DATE 7-16-2026.

VARIANCE/GRADING & SEDIMENT CONTROL PLAN

Job No.: 20–231
Sheet No.: 3 of 4
Checked By: JET
DATE: OCTOBER, 2025
Permit #G02020213
Proj. No.

870 MILL CREEK ROAD

TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

THIRD DISTRICT — ANNE ARUNDEL COUNTY, MD 21012

JOB# 20–231

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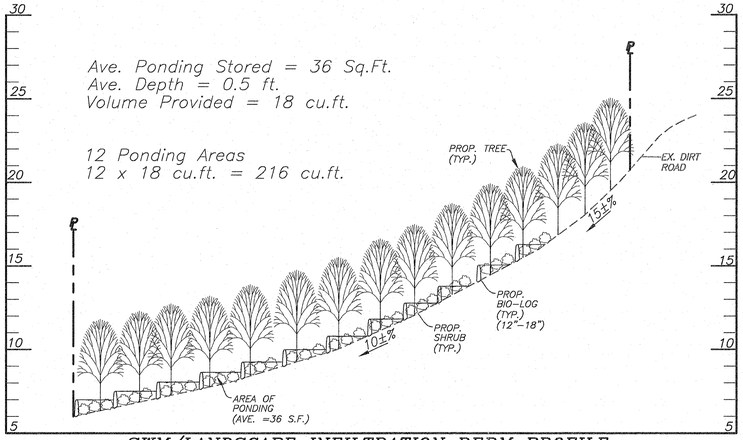
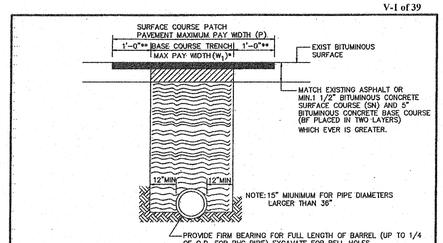


SWM/LANDSCAPE INFILTRATION BERM PROFILE

SCALE: 1"= 4' (V)
1"= 20' (H)



DETAIL OF CUTTING & REPLACING PAVEMENT IN ROADWAYS OTHER THAN STATE ROADS
(BITUMINOUS CONCRETE FOR SURFACE COURSE & BASE COURSE-IN LBS.PER LINEAR FOOT PER INCH ARE FOR ESTIMATING ONLY)

PIPE DIAMETER	MAXIMUM TRENCH PAY WIDTH	PATCH PAVEMENT PAY QUANITIES			
		BIT. CONC. SURFACE COURSE		BIT. CONC. BASE COURSE	
		SQ.YDS./L.F.	LBS/L.F./INCH-DEPTH *	SQ.YDS./L.F.	LBS/L.F./INCH-DEPTH *
UNDER 21"	60"	0.78	88 LBS.	0.56	63 LBS.
21" – 24"	66"	0.83	94 LBS.	0.61	69 LBS.
27" – 30"	72"	0.89	100 LBS.	0.67	75 LBS.
33" – 36"	78"	0.94	106 LBS.	0.72	81 LBS.

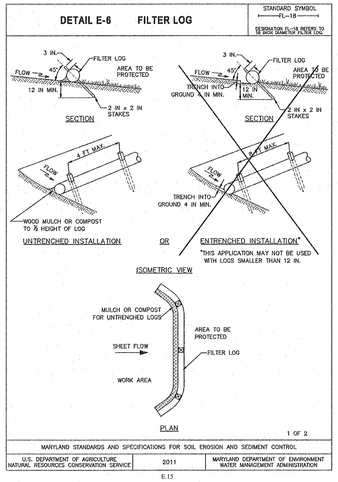
* BASED ON 150 LBS/FT³

NOTES:
1. TEMPORARY SURFACE (EITHER GRADED AGGREGATE OR BITUMINOUS CONCRETE TO BE INSTALLED AND MAINTAINED AT THE CONTRACTORS EXPENSE.
2. CONTRACTOR RESPONSIBLE FOR TRENCH SUPPORTS.
3. AGGREGATE SUBBASE SHALL BE CLEANED AND THOROUGHLY COMPACTED PRIOR TO PLACING PERMANENT PAVEMENT MATERIAL.
4. TRENCH SUPPORT MATERIAL TO BE REMOVED IN SUCH A MANNER THAT BACKFILL MATERIAL FOR FIRST TWO FEET ABOVE PIPE WILL BE COMPACTED AGAINST UNDISTURBED EARTH.
5. NOTED PAY WIDTHS ARE TO BE USED FOR MEASUREMENT REGARDLESS OF METHOD USED TO SUPPORT TRENCH.
6. CONTRACTOR RESPONSIBLE FOR MAINTAINING TEMPORARY TRENCH SURFACE PRIOR TO PLACING PERMANENT PAVING.
* 7. FOR COMPACTION AND AGGREGATE DETAILS AND TRENCH PAY WIDTHS QUANITIES SEE STD. PLATE S/1B.
** 8. AREA TO BE MILLED TO A DEPTH OF 1 1/2" TO ACCOMODATE PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE.
9. THE MILLING SHALL EXTEND A MINIMUM DISTANCE OF 1'-0" BEYOND ANY DISTURBED SURFACE PAVEMENT INDEPENDENT OF THE SURFACE COURSE PATCH PAVEMENT MAXIMUM PAY WIDTH.
10. REQUIRED THAT FLOWABLE FILL BE USED IN TRENCHES IN ROADS CLASSIFIED AS ARTERIAL OR ANY ROAD WHOSE PAVEMENT IS CUT WITHIN FIVE (5) YEARS OF THE ROAD BEING CONSTRUCTED OR RESURFACED SEE PLATE S/1B.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED: CHIEF ENGINEER / DESIGN ENGINEER — DATE:	STANDARD SANITARY SEWER DETAILS. REPAVING TRENCHES AND PAYMENT QUANITIES.	REVISED	S 1

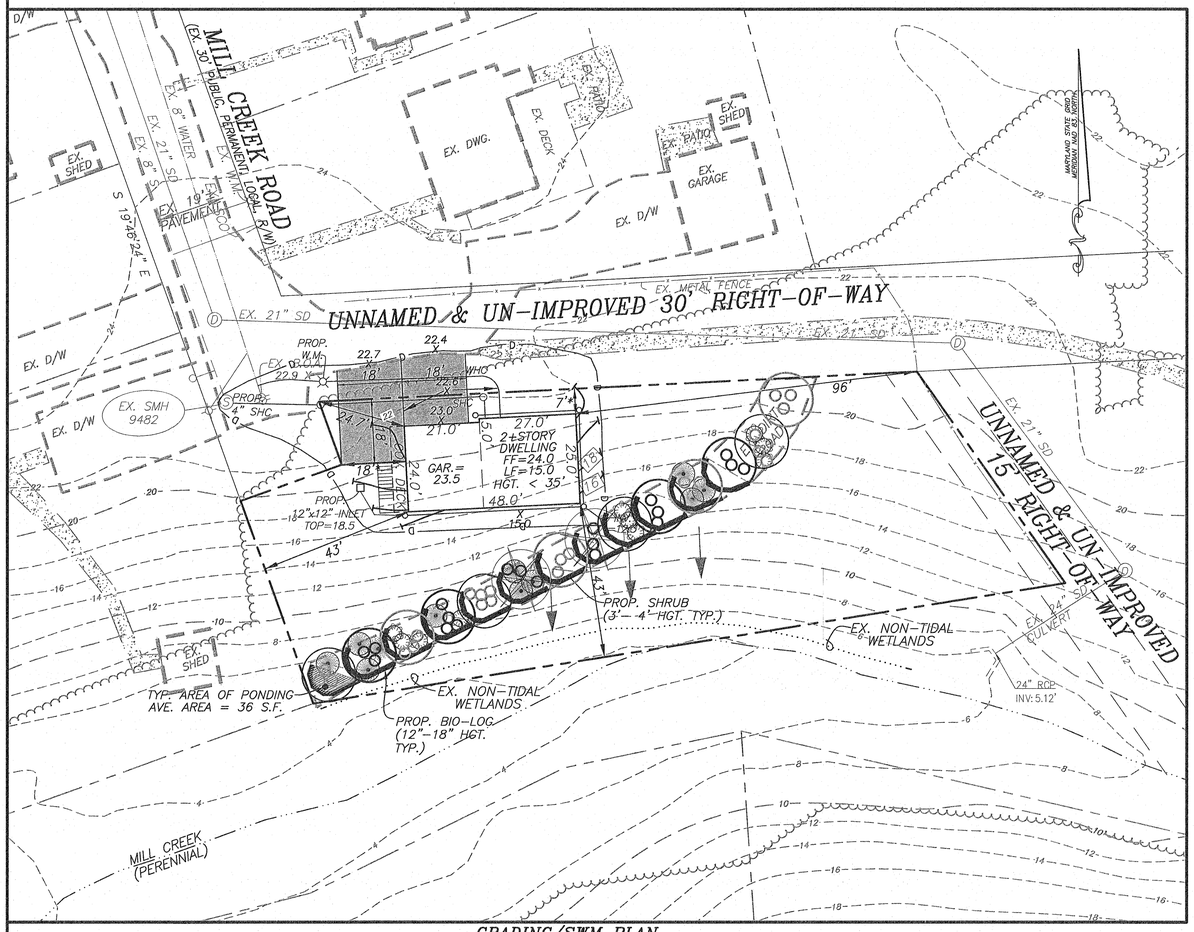
Published: 01/01 Revised:

A.A. COUNTY STD. DTL. S-1



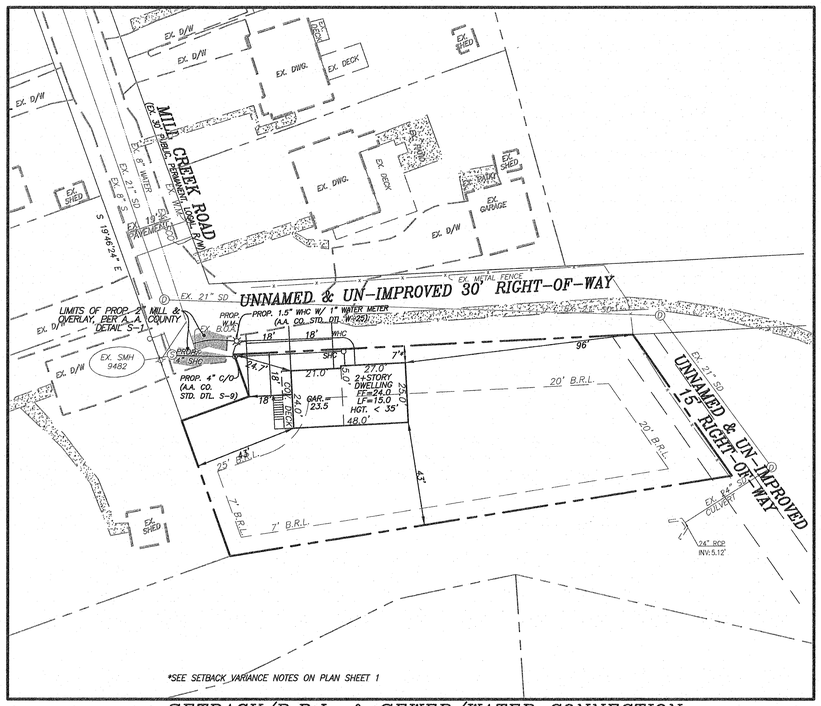
LEGEND

- Existing Curb
- Existing Contour — 51 —
- Existing Wire Fence — x — x —
- Existing Wood Fence — # — #
- Existing Woods line
- Existing Gas Line — G —
- Existing Gas Valve (GV)
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole (D)
- Existing Sewer Manhole (S)
- Existing Sewer Cleanout
- Existing Telephone Manhole (T)
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter (W)
- Proposed Contour — 18 —
- Proposed Super Silt Fence — SSF —
- Proposed Limit of Disturbance — D —
- Proposed Reforestation Plantings (See Reforestation Plans for Details)
- Proposed Bio-Log
- Overland Relief Flow Path



GRADING/SWM PLAN

SCALE: 1"= 20'



*SEE SETBACK VARIANCE NOTES ON PLAN SHEET 1

SETBACK/B.R.L. & SEWER/WATER CONNECTION INSET

SCALE: 1"=30'

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
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Maryland Professional Engineering Firm License No. 47570
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JERRYT@BNDPA.COM

STATE OF MARYLAND — JESSE EDWARD YOUDER — NO. 21971 — PROFESSIONAL ENGINEER
"PROFESSIONAL ENGINEER'S CERTIFICATE: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21971, EXPIRATION DATE: 3-16-2026."

VARIANCE/GRADING & SEDIMENT CONTROL PLAN

870 MILL CREEK ROAD

TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5

Job No.: 20-231	
Sheet No.: 4 of 4	
Checked By: JET	
DATE: NOVEMBER, 2025	
Permit #G02020213	
Proj. No.	

THIRD DISTRICT — ANNE ARUNDEL COUNTY, MD 21012

\\HAL\Land Projects 2020\3 Digit\20-231\DWG\20-231 GSC BASE 7-1-25.dwg //GSC 4

JOB# 20-231

CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS
1804 WEST STREET, SUITE 100
ANNAPOLIS, MD 21401

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Jurisdiction: Anne Arundel County

Date:

Tax Map #	Parcel #	Block #	Lot #	Section
32	4	17	N/A	N/A

Tax ID: 3525-3419-1002

FOR RESUBMITTAL ONLY
Corrections ☐
Redesign ☐
No Change ☐
Non-Critical Area ☐

*Complete Only Page 1 General Project Information

Project Name (site name, subdivision name, or other): 870 MILL CREEK RD

Project location/Address: 870 MILL CREEK RD.

City: ARNOLD Zip: 21012

Local case number: 2025-0017-P

Applicant: Last name: SIKORA First name: KENNETH

Company: STYLE WORKS DESIGN BUILD, LLC

Application Type (check all that apply):

Building Permit	☐	Variance	☒
Buffer Management Plan	☐	Rezoning	☐
Conditional Use	☐	Site Plan	☐
Consistency Report	☐	Special Exception	☐
Disturbance > 5,000 sq ft	☐	Subdivision	☐
Grading Permit	☐	Other	☐

Local Jurisdiction Contact Information:

Last name: AACo Zoning Administration Section First name:

Phone #: 410-222-7437 Response from Commission Required By: TBD

Fax #: Hearing date: TBD

SPECIFIC PROJECT INFORMATION

Describe Proposed use of project site:

PROPOSED SINGLE FAMILY DWELLING

	Yes		Yes
Intra-Family Transfer	☐	Growth Allocation	☐
Grandfathered Lot	☒	Buffer Exemption Area	☐

Project Type (check all that apply)

Commercial	☐	Recreational	☐
Consistency Report	☐	Redevelopment	☐
Industrial	☐	Residential	☒
Institutional	☐	Shore Erosion Control	☐
Mixed Use	☐	Water-Dependent Facility	☐
Other	☐		

SITE INVENTORY (Enter acres or square feet)

	Acres	Sq Ft
IDA Area	0.09	3,890
LDA Area	0.24	10,646
RCA Area	0	0
Total Area	0.33	14,536

	Acres	Sq Ft
Total Disturbed Area	0.10	4205

# of Lots Created 0

	Acres	Sq Ft		Acres	Sq Ft
Existing Forest/Woodland/Trees	0.33	14,536	Existing Lot Coverage	0.04	1869
Created Forest/Woodland/Trees	0.10	4,200	New Lot Coverage	0.046	2,019
Removed Forest/Woodland/Trees	0.08	3,308*	Removed Lot Coverage	0.04	1,864
* INCLUDES OFF-SITE CLEARING			Total Lot Coverage	0.046	2,019

VARIANCE INFORMATION (Check all that apply)

	Acres	Sq Ft		Acres	Sq Ft
Buffer Disturbance	0.10	4,205	Buffer Forest Clearing		
Non-Buffer Disturbance	0	0	Mitigation	0.046	4,200

Variance Type		Structure	
Buffer	☒	Acc. Structure Addition	☐
Forest Clearing	☐	Barn	☐
HPA Impact	☐	Deck	☐
Lot Coverage	☐	Dwelling	☐
Expanded Buffer	☐	Dwelling Addition	☐
Nontidal Wetlands	☐	Garage	☐
Setback	☒	Gazebo	☐
Steep Slopes	☒	Patio	☐
Other	☐	Pool	☐
		Shed	☐
		Other	☐

Magothy Shores, Parcel 4
December 13, 2021,
Revised: October 1, 2025
Completed by: Kevin C. Haines
Holly Oak Consulting, LLC

CRITICAL AREA REPORT CRITERIA

If your property is located within the Chesapeake Bay Critical Area, you will need to provide the Zoning Office with more information in order to process your request. In reviewing your application, the Office of Planning and Zoning must determine the impact your proposal will have on stormwater management and plant and animal habitat in conformance with Critical Area Law.

You are responsible for submitting 4 copies of a Critical Area Report with your Zoning Application. Each copy of the Critical Area Report should include:

Y **1. Project Notification Application Form**

Y - See plan by B&D **2. A Site Plan – The site plan of the property should be drawn to an engineers scale (1"=20', 30' or 40') showing the applicable features of the subject property; steep slopes, existing tree line, wetlands (tidal and non-tidal), mean high water line, floodplain, proposed landscaping, all buffers, and all existing structures.**

Y - See plan by B&D **3. A topographic map to scale (available in the mapping office on the 4th floor of building 2664 Riva Rd)**

Y **4. A narrative statement (a paragraph or less) on a separate sheet addressing each point listed below:**

Y **A. Describe the proposed use of the subject property and include if the project is residential, commercial, industrial, or maritime.**

Y **B. Describe the type of predominant trees and shrubs on the subject property. Include a statement addressing the square footage of the property that is vegetated with trees and shrubs, how much of the property will be disturbed by the proposed development, and how the disturbance will be mitigated.**

Y **C. Describe the methods to minimize impacts on water quality and habitat from proposed construction (i.e. stormwater management, sediment control, and silt fence).**

Y **D. Calculate the impervious surface before and after construction, including all structures, gravel areas, driveways, and concrete areas.**

Y **E. If applicable, describe any habitat protection areas on the subject property including expanded buffers, steep slopes of 15% or greater, rare and endangered species, anadromous fish propagation waters, colonial water bird nesting sites, historic waterfowl stating and concentration areas, riparian forests, natural heritage areas, and plant and wildlife habitats of local significance.**

Chesapeake Bay Critical Area Report

Magothy Shores—Parcel 4
Tax Map: 32 Grid: 17 Parcel: 4

Arnold, MD

December 2021
Revised: October 2025

Prepared for:

Style Works Design Build, LLC
205 South Villa Avenue
Annapolis, MD 21401

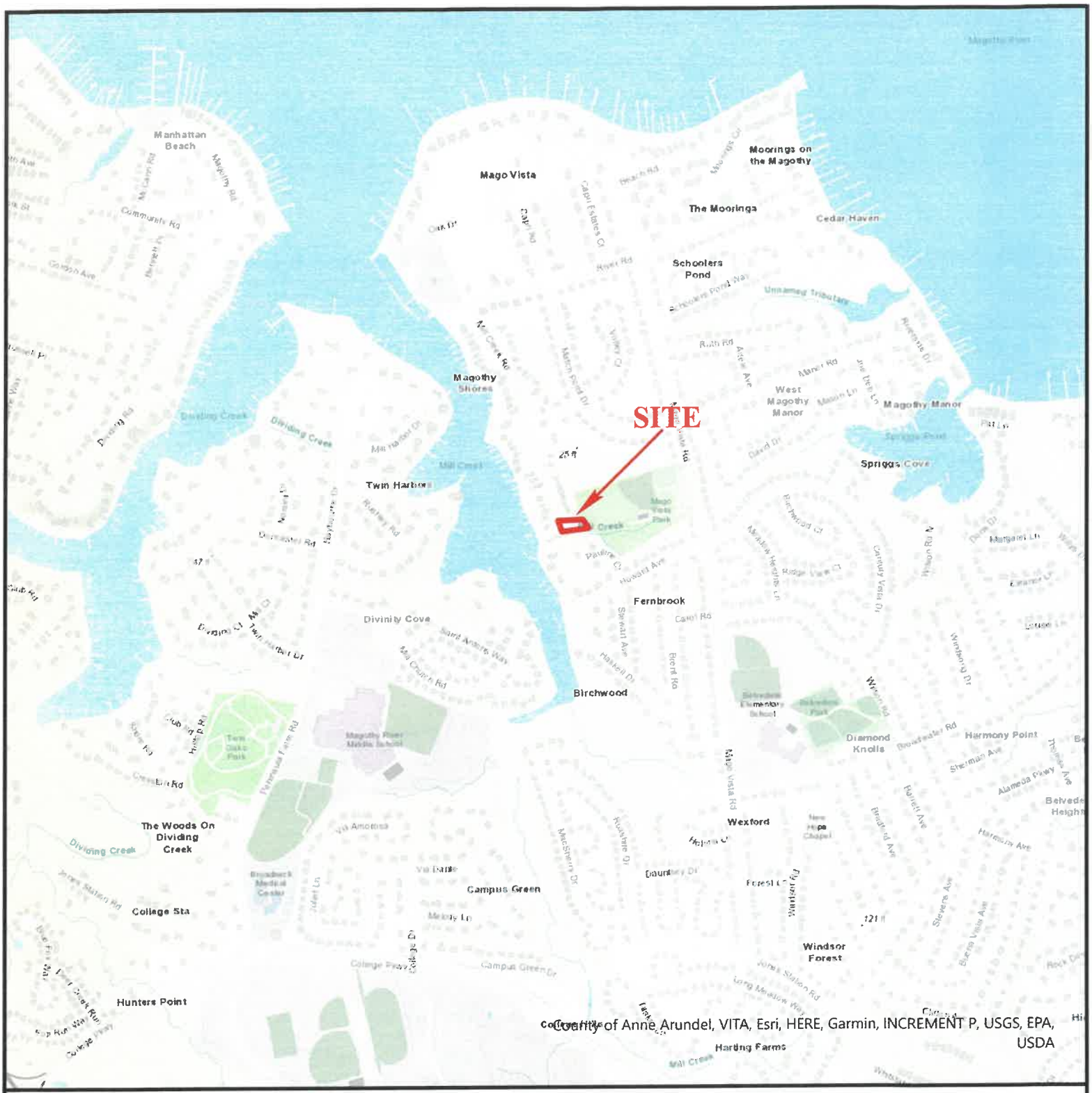
Prepared by:

Holly Oak Consulting, LLC
303 Sycamore Rd
Severna Park, MD 21146
khaines@hollyoakconsulting.com

HOLLY OAK CONSULTING, LLC

10/1/2025

Kevin C. Haines — Date



Vicinity Map
Magothy Shores
Arnold, MD
Scale: 1": 1,000'

N

HOLLY OAK CONSULTING, LLC

1,000 500 0 1,000 Feet

TABLE OF CONTENTS

1.0 - INTRODUCTION

The subject property is located at the terminus of Mill Creek Road, Maryland. The property is identified on Tax Map 32, Block 17, as Parcel 4. The site is zoned as R5 and OS per the Anne Arundel County Zoning Map. Field work for this report was completed on November 1, 2021 and a follow-up visit was made on September 24, 2025 by Kevin C. Haines of Holly Oak Consulting, LLC.

2.0 – EXISTING CONDITIONS

The site contains 0.33-acre all of which is within the Chesapeake Bay Critical Area. More specifically the site is mapped within the Limited Development Area (LDA) and the Resource Conservation Area (RCA). The site falls from north to south towards an intermittent stream channel, an unnamed tributary to Mill Creek. The site is entirely forested.

The site is bordered to the north by an unnamed and unimproved right-of-way, to the east by Mago Vista Park, to the south by undeveloped land, and to the west by a single-family residential property.

The United States Department of Agriculture Natural Resources Conservation Service has mapped the soils throughout Anne Arundel County and makes the mapped soils and descriptions available online through the Web Soil Survey. The data that was retrieved on October 26, 2021 and showed two (2) soil types exist in the study area. The soil type and description can be found below. A copy of the soil mapping can be found in ***Appendix A***.

Map Unit Symbol	*Map Unit Name*	*Hydric (%)*	*K-Factor (Whole Soil)*
AuB	Annapolis-Urban land complex, 5-15% slopes	0	0.24
DwB	Downer-Hammonton Urban land complex, 0-5% slopes	0	0.00

3.0 – AERIAL IMAGERY REVIEW & SITE HISTORY

This site is in Arnold, MD a suburb of the greater Baltimore-Annapolis area. The surrounding area was largely used as a summering location from the 1920s through the 1950s when the surrounding areas began to become developed with residential subdivisions.

Per aerial photos from 1970-2021 the site has remained in a similar vegetative state.

4.0 – PROPOSED CONDITIONS

The applicant proposes to construct a house with an attached garage. A retaining wall is proposed along the southern edge of the driveway and house. The project will be served by public water and sewer.

Developed woodland clearing of 4,205 square feet will be required for this project, and it will be mitigated as shown on the administrative site plan in conjunction with the buffer mitigation needed. In total, 7,499 sq. ft. of reforestation is required, and 4,200 sq. ft. of it will be replanted on site.

Stormwater management will comply with ESD as required during the building and/or grading permit review. With the current proposed plan, a series of landscape infiltration berms will be placed along the existing pathway of the road on the site. The road will be removed and the soil will be replaced as needed to promote the necessary infiltration. The project will require an

approved grading permit which will incorporate the required sediment controls (i.e. reinforced silt fence, stabilized constriction entrances, etc..).

5.0 – HABITAT PROTECTION AREAS

State and County Critical Area Law identifies certain areas of high environmental value as Habitat Protection Areas (HPA's). Below is a discussion of HPA's existing within the subject site.

5.1 - Steep Slopes

Anne Arundel County designates steep slopes within the Critical Area as a slope of 15% or greater that is at least 6' high. Most of the site is encumbered with steep slopes and much of the proposed development is occurring with steep slope areas. The stopes will be stabilized post-construction by the house foundation, a retaining wall, and vegetation.

5.2 - Rare, Threatened & Endangered Species

The site does not lie within the mapped FIDS habitat per MDDNR's MERLIN Online GIS Database. The on-site forest is not mapped as Forest Interior Dwelling Species (FIDS) habitat. Based on observations made during the field visit, the on-site forest does not provide an adequate area and composition to support FIDS.

5.3 - Wetlands, Streams, & 100-Year Floodplain

The site does contain non-tidal wetlands with a stream being located just to south of the property. The details of a wetland delineation may be found in a Wetland Delineation Report prepared by Holly Oak Consulting, LLC. the USFWS National Wetland Inventory (***Appendix A***) maps a stream within the site. The MD DNR Wetland Inventory does not indicate the presence of wetlands or streams within the boundary of the site.

The site is located within the Magothy River Watershed (MD 02131001 8-digit).

The majority of the site lies within Zone X (areas of minimal flood hazard) and a small portion lies within Zone AE (BFE – 6'), per FEMA Flood Insurance Rate Maps #24003C0159F(eff. 2/18/15) as shown in ***Appendix A***.

5.4 –Buffer and Expanded Buffer

The site contains a 100' Buffer that extends into the property from intermittent stream located to the south of the property. The 100' buffer is expanded on this site because it is mapped by the steep slopes, as shown on the Administrative Site Plan. Permanent disturbance within the buffer and expanded buffer will require mitigation at a rate of 3:1 with temporary disturbance requiring mitigation at a rate of 1:1. The final amounts of disturbance and mitigation will be determined at the grading permit review phase.

5.5 – Other HPAs Not Contained within Study Area

Several HPAs are not mapped within or adjacent to the study area. MDDNR's MERLIN online mapping database was reviewed and showed that the following HPA's are not located within or near the study area: Submerged aquatic vegetation, shellfish beds, historical waterfowl staging and concentration areas, sensitive species project review areas, and natural heritage areas.

6.0 – EXISTING VEGETATION & WILDLIFE

The vegetation within this site is very common for sloped areas along the shores of the Magothy and Severn Rivers. The dominant tree species within the site is tulip poplar (Liriodendron tulipifera), southern red oak (*Quercus falcata*), and chestnut oak (*Quercus montanaa*). The 6-11.9" DBH size class contained most of the trees within the site. The understory of the site is comprised mostly of American holly (*Ilex oapca*) and black gum (*Nyssa sylvatica)*. In the wetland areas along the southern property boundary sweetbay magnolia (*Magnolia virginiana*) was noted as occuring. The shrub and herbaceous layers are dominated by invasive species including wineberry (*Rubus phoenicolasius*), English ivy (*Hedera helix*), and oriental bittersweet (*Celastrus orbiculatus)*.

The function of the existing vegetation is limited to soil stabilization as it provides very little in the way of wildlife habitat given its predominance of invasive species.

References

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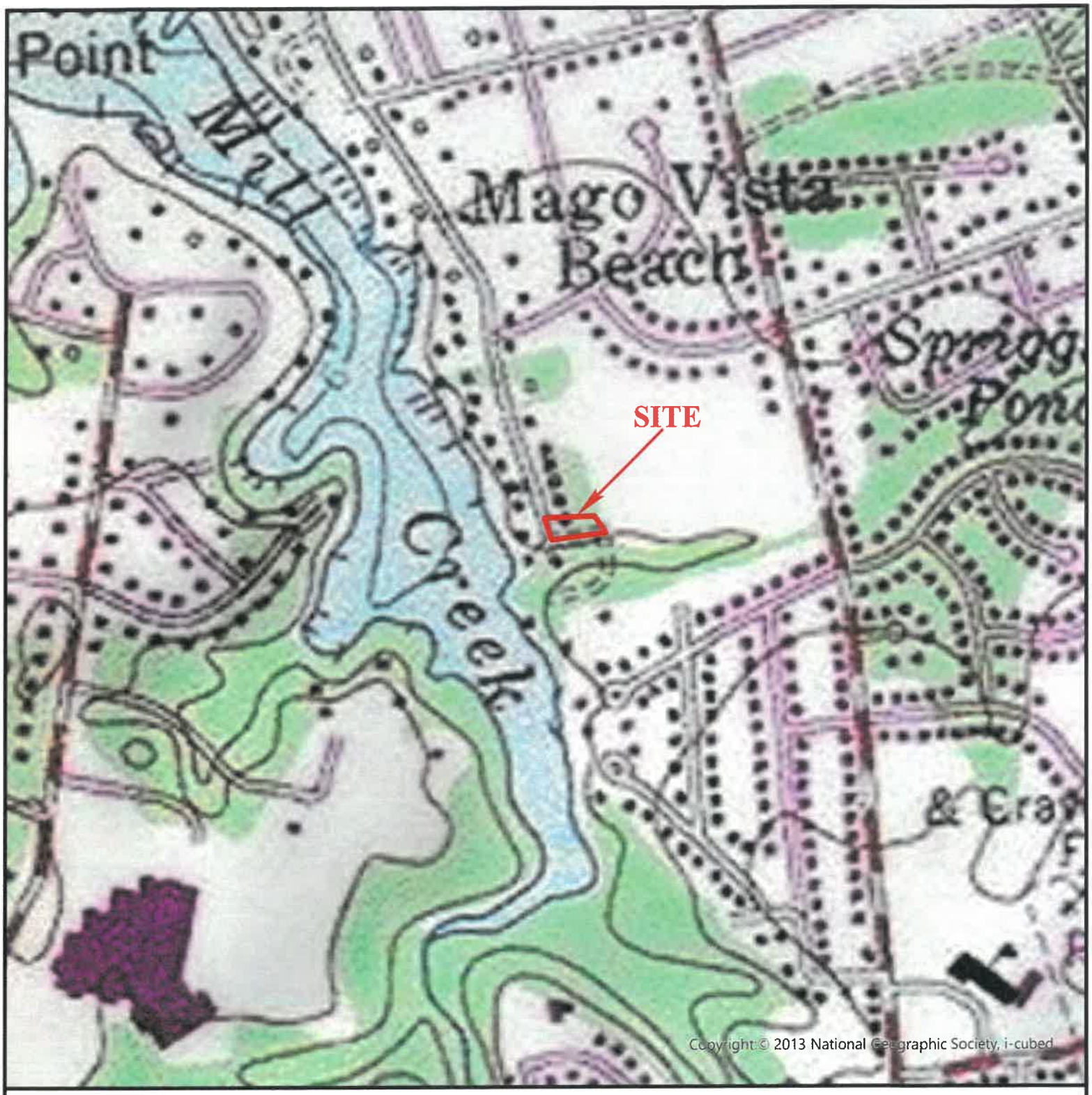
Appendix A:
Preliminary Mapping

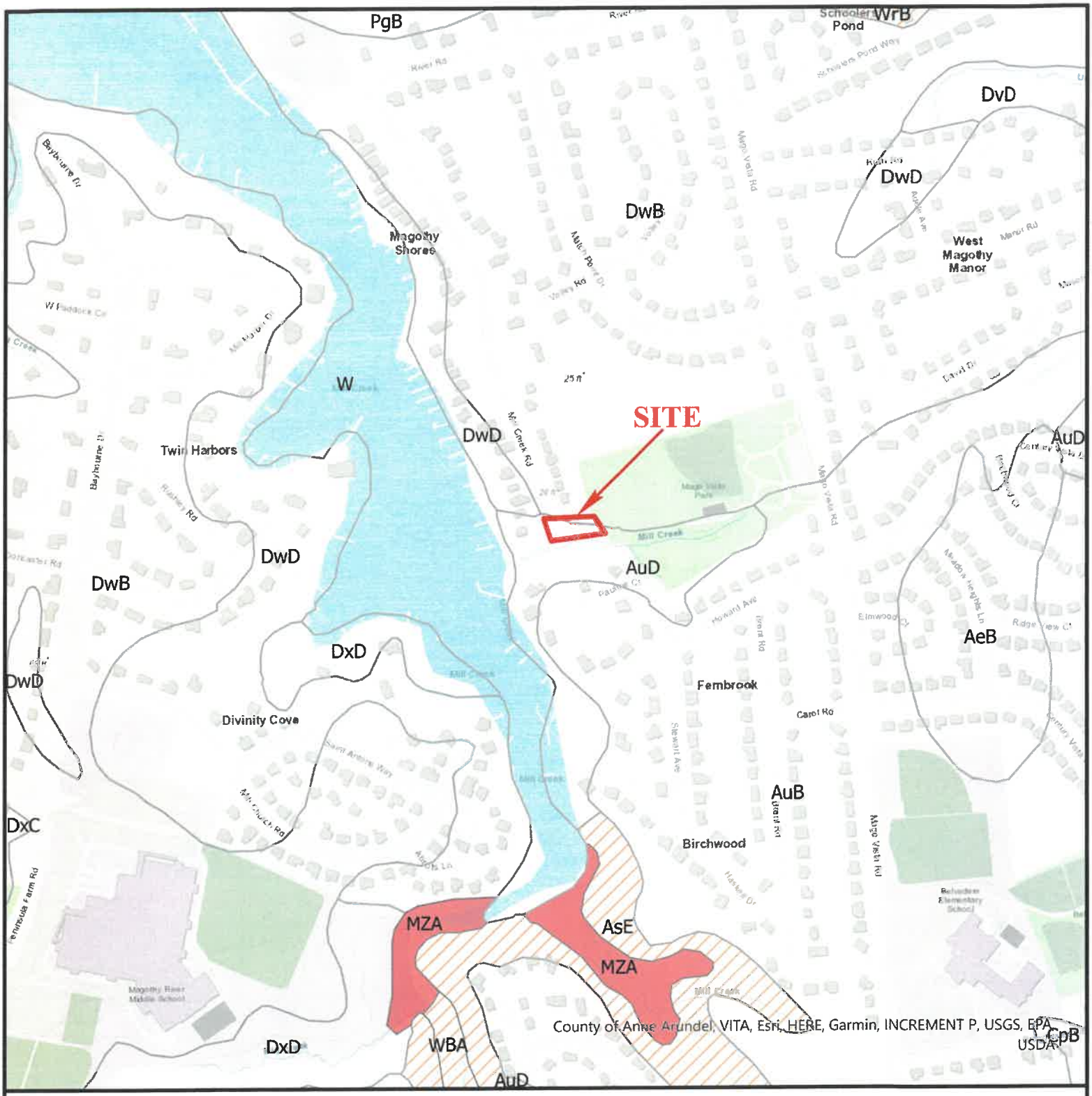


USGS 24k Topographical Map
Magothy Shores
Arnold, MD
Scale: 1": 500'

N

HOLLY OAK CONSULTING, LLC

500 250 0 500
Feet



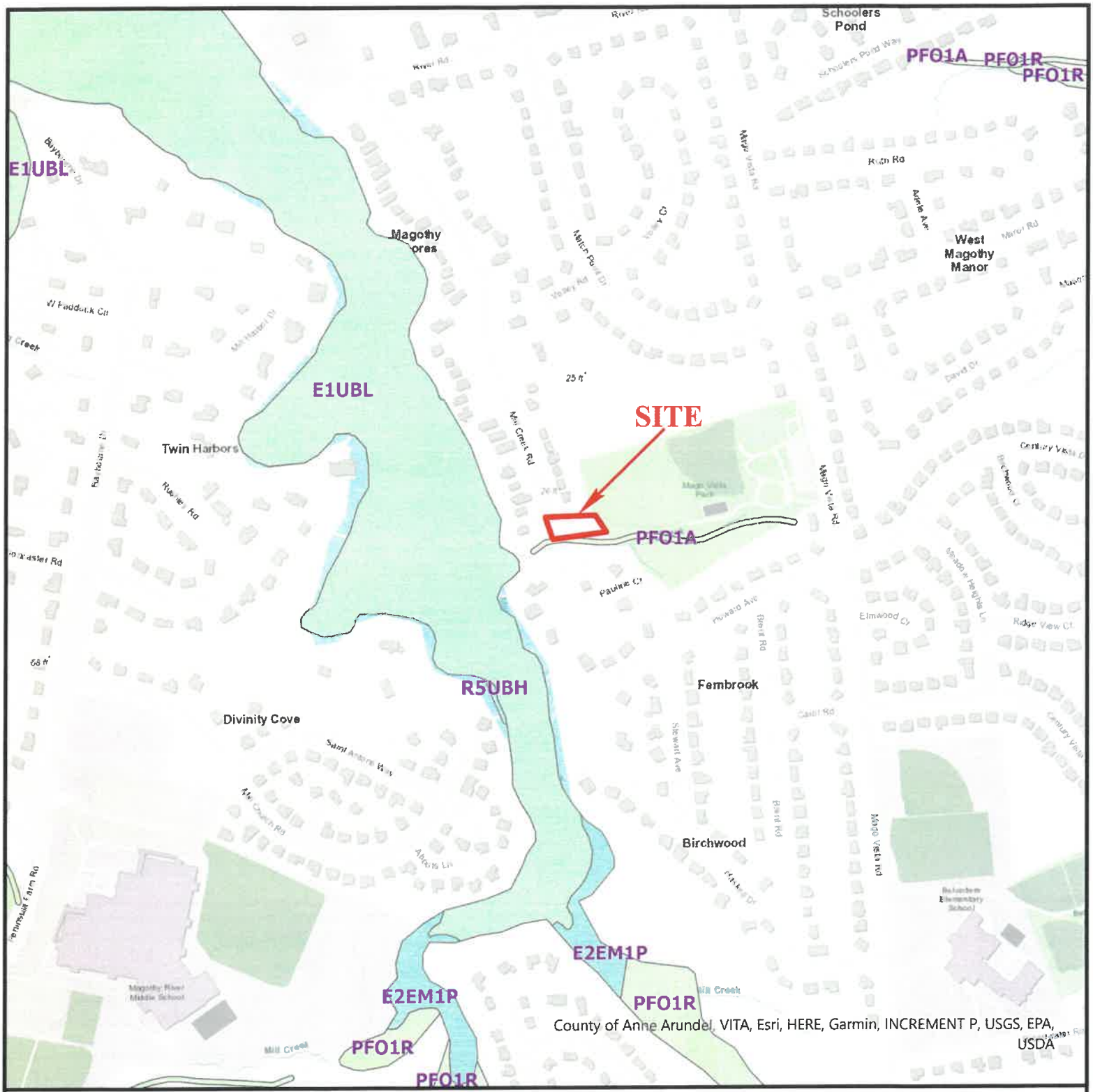
USDA NRCS Soil Survey (Anne Arundel Co., MD)
Magothy Shores
Arnold, MD
Scale: 1": 500'

% Hydric Component
- 0
- 0.1-64.9%
- 65.0-100%

N

HOLLY OAK CONSULTING, LLC

500 250 0 500 Feet

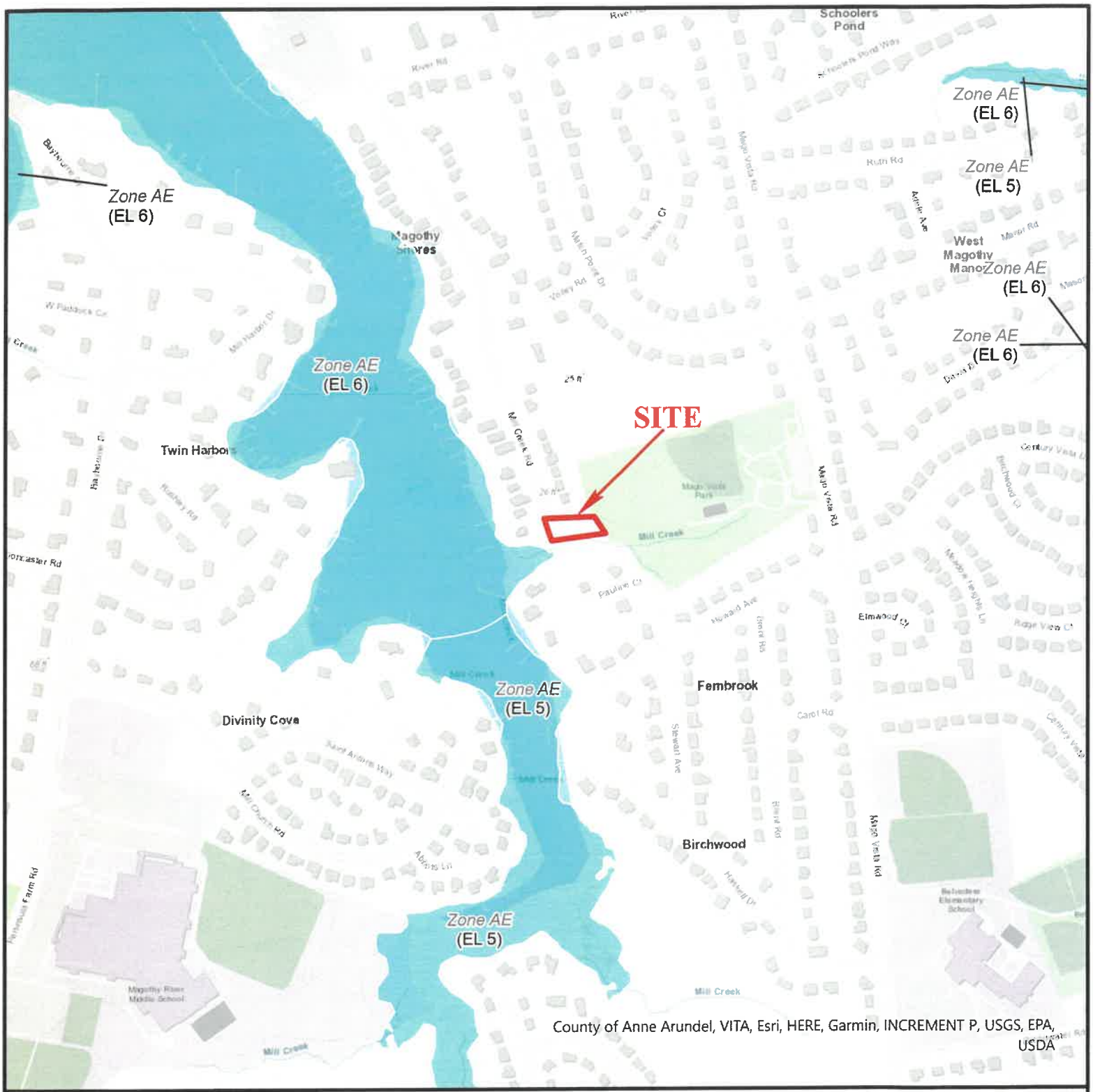


USFWS National Wetland Inventory
Magothy Shores
Arnold, MD
Scale: 1": 500'

N

HOLLY OAK CONSULTING, LLC

500 250 0 500 Feet



FEMA Flood Insurance Rate Map
Magothy Shores
Arnold, MD
Scale: 1": 500'

N

HOLLY OAK CONSULTING, LLC

500 250 0 500
Feet

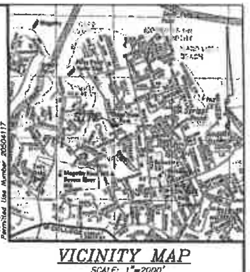
2.0 – EXISTING CONDITIONS

The site contains 0.33-acre all of which is within the Chesapeake Bay Critical Area. More specifically the site is mapped within the Limited Development Area (LDA) and the Resource Conservation Area (RCA). The site falls from north to south towards an intermittent stream channel, an unnamed tributary to Mill Creek. The site is entirely forested.

The site is bordered to the north by an unnamed and unimproved right-of-way, to the east by Mago Vista Park, to the south by undeveloped land, and to the west by a single-family residential property.

The United States Department of Agriculture Natural Resources Conservation Service has mapped the soils throughout Anne Arundel County and makes the mapped soils and descriptions available online through the Web Soil Survey. The data that was retrieved on October 26, 2021 and showed two (2) soil types exist in the study area. The soil type and description can be found below. A copy of the soil mapping can be found in *Appendix A*.

Map Unit Symbol	*Map Unit Name*	*Hydric (%)*	*K-Factor (Whole Soil)*
AuB	Annapolis-Urban land complex, 5-15% slopes	0	0.24
DwB	Downer-Hammonton Urban land complex, 0-5% slopes	0	0.00



VICINITY MAP
SCALE: 1"=2000'

LEGEND

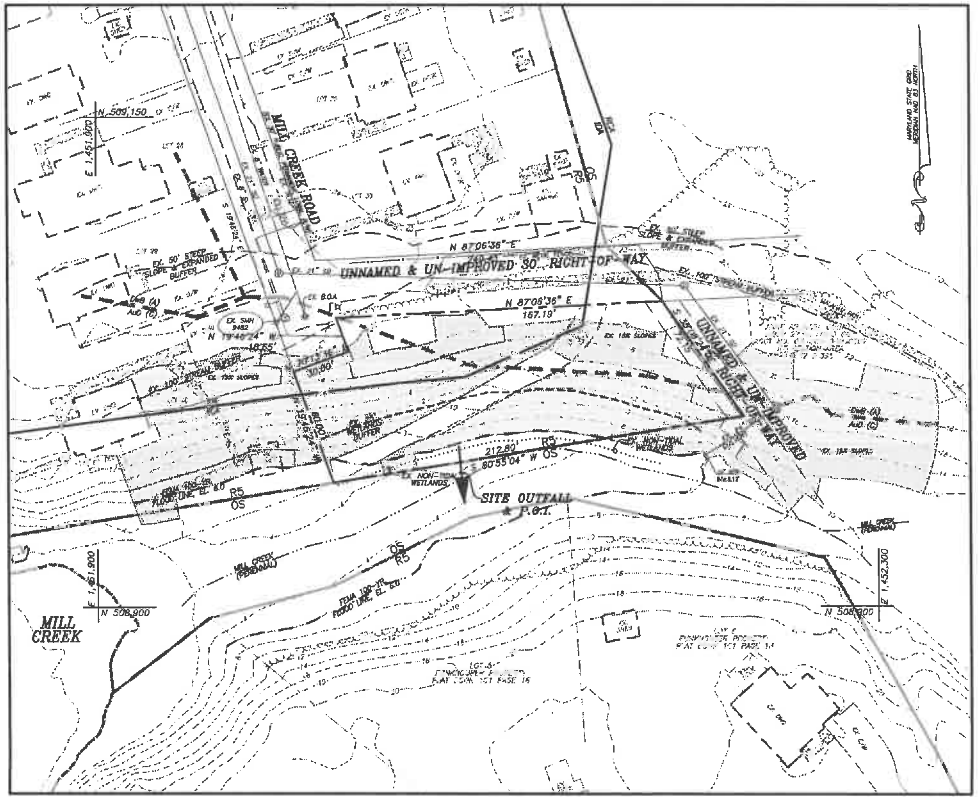
- Existing Curb
- Existing Contour
- Existing Wire Fence
- Existing Wood Fence
- Existing Woods line
- Existing Gas Line
- Existing Gas Valve
- Existing Stormdrain Inlet
- Existing Stormdrain Manhole
- Existing Sewer Manhole
- Existing Sewer Cleanout
- Existing Telephone Manhole
- Existing Utility Pole
- Existing Water Valve
- Existing Water Meter
- Ex. FEMA Line
- Ex. 15%+ Slopes
- Limits of Non-Tidal Wetlands

SETBACKS (ZONED R5)

Front . . . . N/A*
Rear . . . . 20'
Side . . . . 7'

*Established by existing dwellings

SITE ANALYSIS	
Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Predominant Soil Type	DwB: Downer-Hammonton-Urban land complex, 0 to 5 percent slopes (HSG A) AuB: Annapolis-Urban land complex, 5 to 15 percent slopes (HSG C)
Existing Developed Woodlands	14,536 Sq.Ft.± (0.33 Ac.±)
Existing Lot Coverage	1,864 Sq.Ft.± (0.04 Ac.±) (Ex. Abandoned Road)



EXISTING PLAN VIEW
SCALE: 1"= 30'

QUALIFIED PROFESSIONAL CERTIFICATION
PRE CRITICAL AREA CERTIFIED BY:

SIGNED:________________ DATE:__________
KEVIN C. HAINES
HOLLY OAK CONSULTING, LLC
303 SYCAMORE RD
SEVERNA PARK, MD 21146
PHONE: (443) 906-3419
KHAINE@HOLLYOAKCONSULTING.COM

NO.	DATE	BY	REVISION	APPROVED	DATE

OWNER/DEVELOPER
STYLE WORKS DESIGN BUILD, LLC
204 SOUTH VILLA AVENUE
ANNAPOLIS, MD 21401
786-391-5569
SIKORAINVESTMENT@GMAIL.COM

Maryland Professional Engineering Firm License No. 47570
BOYD & DOWGIALLO, P.A.
ENGINEERS*SURVEYORS*PLANNERS
412 Headquarters Drive, Suite 5
Millersville, Maryland 21108
(410) 729-1234 (P)
(410) 729-1243 (F)
JERRYT@BNDPA.COM

PRE CRITICAL AREA PLAN

Job No.: 20-231
Sheet No.: 1 of 1
Checked By: JET
DATE: SEPTEMBER, 2025
Permit #G02020213
Proj. No.

870 MILL CREEK ROAD

TAX MAP 32 BLOCK 17, PARCEL 4
ZONED R5
THIRD DISTRICT
ANNE ARUNDEL COUNTY, MD 21012

JOB# 20-231

BUFFER TABULATION

Zoning	R5
Critical Area Classification	IDA/RCA
Total Site Area	14,536 Sq.Ft.±
Total Critical Area	14,536 Sq.Ft.±
Existing Coverage within 100' Buffer	1,864 Sq.Ft.*
Existing Coverage outside of 100' Buffer	0 Sq.Ft.
Proposed Lot Coverage Within 100' Buffer	1,647 Sq.Ft.
Permanent Buffer Disturbance @ 3:1	1,647 Sq.Ft. X 3 = 4,941 Sq.Ft.
Temporary Buffer Disturbance	2,558 Sq.Ft. X 1 = 2,558 Sq.Ft.
Increase in Lot Coverage within 100' Buffer	1,647 Sq.Ft. - 1,864* Sq.Ft. = -217 Sq.Ft.
Total Buffer Mitigation	2,558 Sq.Ft. + 4,941 Sq.Ft. = 7,499 Sq.Ft.

*Existing Dirt Road

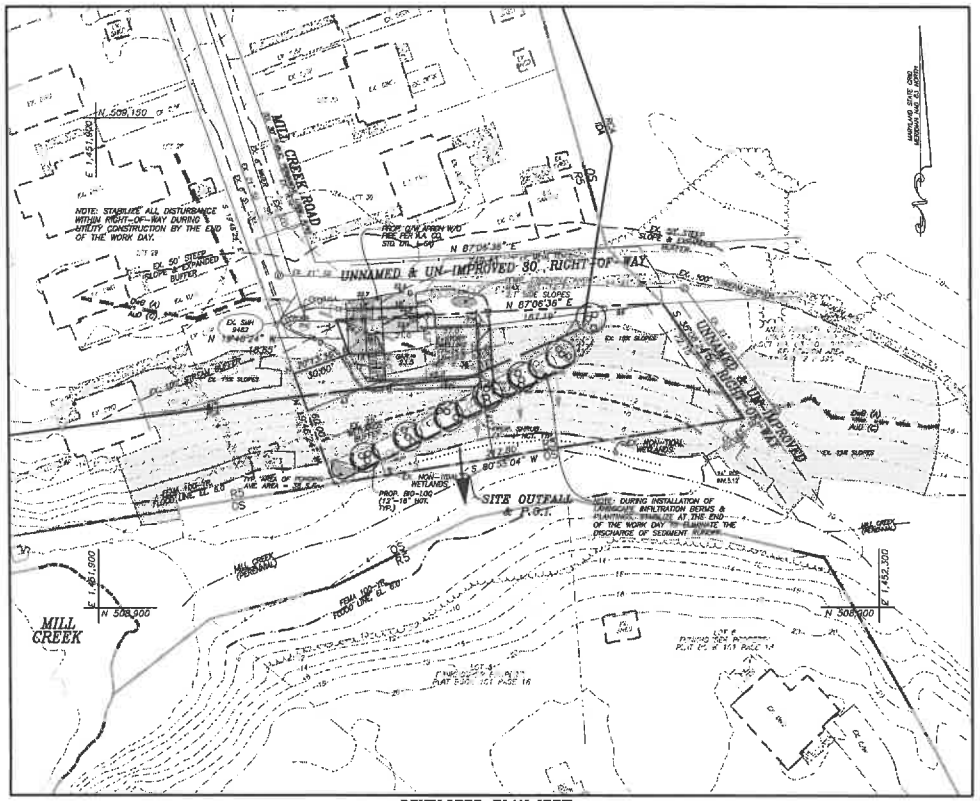
IDA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	IDA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-IDA	3,890 Sq.Ft.± (0.09 Ac.±)
Developed Woodlands (Within LOA.)	3,890 Sq.Ft.± (0.09 Ac.±) (includes Ex. Dirt Road)
Maximum Clearing Allowed (Within C.A.)	N/A
Proposed Clearing (Within IDA C.A.)	3,008 Sq.Ft. (2,532 Sq.Ft. On-Site + 518 Sq.Ft. Off-Site)
Reforestation Required (Prop. Clearing x 1.0)	N/A
Afforestation Threshold	N/A
Reforestation Provided	N/A
Remaining Reforestation Remaining	N/A
Existing Lot Coverage	58 Sq.Ft. (includes Ex. Dirt Road)
Maximum Lot Coverage (Within C.A.)	N/A
Proposed Lot Coverage (On-Site)	1,646 Sq.Ft.± (0.03 Ac.±) (1,178 Sq.Ft. DWG + 468 Sq.Ft. D/W)

RCA CRITICAL AREA TABULATION

Zoning	R5
Critical Area Classification	RCA
Total Site Area	14,536 Sq.Ft.± (0.33 Ac.±)
Total Critical Area-RCA	10,646 Sq.Ft.± (0.24 Ac.±)
Developed Woodlands (Within R.C.A.)	10,646 Sq.Ft.± (0.24 Ac.±)
Maximum Clearing Allowed (Within C.A.)	6,534 Sq.Ft.
Proposed Clearing (Within RCA C.A.)	258 Sq.Ft.± (Excludes Ex. Dirt Rd.)
Reforestation Required (Prop. Clearing x 1.0)	258 Sq.Ft.±
Afforestation Threshold	1,586 Sq.Ft.± (15%)
Reforestation Provided	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Req'd. Buffer Mitigation	7,499 Sq.Ft.
Total Planting/Reforestation Req'd.	258 Sq.Ft. + 7,499 Sq.Ft. = 7,757 Sq.Ft.
Total Planting/Reforestation Prov'd.	4,200 Sq.Ft.± (0.096 Ac.±) (14 Plant Units)
Remaining Mitigation Req'd.	7,757 Sq.Ft.± - 4,200 Sq.Ft. = 3,557 Sq.Ft.*
Existing Lot Coverage	1,805 Sq.Ft. (Ex. Dirt Road)
Maximum Lot Coverage (Within RCA C.A.)	1,586 Sq.Ft.± (0.037 Ac.±)
Proposed Lot Coverage (Within RCA) (On-Site)	1 Sq.Ft.±

*to be provided via off-site mitigation


MILL CREEK ROAD
UNNAMED & UN-IMPROVED 80' RIGHT-OF-WAY
S 80°55'04" W
N 6706'36" E
SITE OUTFALL & P.O.T.
PROP. 80'-100' (12"-18" RCP, TYP.)
MON. TYP. WETLANDS
MILL CREEK (PERENNIAL)
FEMA 100-YR FLOOD LINE EL. 6.0
MILL CREEK
N 509,150
N 508,900
N 509,300
E 1,461,600
E 1,462,300
NOTE: STABILIZE ALL DISTURBANCE WITHIN RIGHT-OF-WAY DURING ANY/ETY CONSTRUCTION BY THE END OF THE WORK DAY.
NOTE: DURING INSTALLATION OF MICROSCALE INFILTRATION BESTMS & PLANTINGS, STABILIZE AT THE END OF THE WORK DAY TO ELIMINATE THE DISCHARGE OF SEDIMENT LADEN
EX. 50' STEEP SLOPE & EXPANDED BUFFER
EX. 100' BUFFER
EX. 25' STEEP SLOPES & EXPANDED BUFFER
EX. 100' BUFFER
EX. 25' STEEP SLOPES
EX. 100' BUFFER
EX. SHED
EX. SWM
EX. 2-STORY DWG #870
PROP. D/W APRON W/O PRE. PER M.A. CO. STD. DTL. #617
PROP. D/W APRON W/O PRE. PER M.A. CO. STD. DTL. #617
DWG (A) AUD (C)
DWG (B) AUD (C)
DWG (C) AUD (C)
EX. SWM
EX. 2-STORY DWG #872
EX. 1-STORY DWG #868
EX. 1-STORY DWG #866
EX. 1-STORY DWG #864
EX. 1-STORY DWG #862
EX. 1-STORY DWG #860
EX. 1-STORY DWG #858
EX. 1-STORY DWG #856
EX. 1-STORY DWG #854
EX. 1-STORY DWG #852
EX. 1-STORY DWG #850
EX. 1-STORY DWG

STORMWATER MANAGEMENT
COMPUTATIONS
For

870 MILL CREEK ROAD

G02020213

Tax Map 32, Block 17, Parcel 4
ARNOLD, MD 21012

Nov., 2025

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19577, EXPIRATION DATE 3-16-2026"

by

Boyd & Dowgiallo, P.A.
412 Headquarters Drive
Suite 5
Millersville, MD 21108
410/729-1234

TABLE OF CONTENTS

STORMWATER MANAGEMENT STATEMENT

As stated in Article 16 of the Anne Arundel County Code, the purpose of Stormwater Management is "to protect and promote public health, safety and general welfare through the management of stormwater, to protect public and private property from damage, to reduce the effects of land use changes on stream channel erosion, to maintain and assist in the improvement of water quality, to preserve and enhance the environmental quality of streams and stream valleys, and to minimize adverse impacts on water quality and conserve plant, fish, and wildlife habitat."

In accordance with the General Performance Standards, outlined in the 2010 Anne Arundel County Stormwater Practices and Procedures Manual, the use of Environmental Site Design Practices (ESD) shall be provided as necessary to address the required performance standards, to prevent adverse impacts from stormwater runoff.

As defined, in Chapter 6, Section 6.1.5, the MEP standard is met when:

I. channel stability is maintained and
II. predevelopment groundwater recharge is replicated and
III. non-point source pollution is maintained and
IV. regenerative step pool conveyance systems are employed wherever practicable on all public stormwater systems.

INTRODUCTION

The subject property is known as Parcel 4, as shown on tax map 32, block 17 of the of tax maps of Anne Arundel County, Maryland. The lot is located in the Magothy Shores section of Arnold, Maryland 21012 at the southern end of Mill Creek Road and contains approximately 14,536 sq. ft. of land zoned R5. The site is also located within a Chesapeake Bay Intensely Developed Critical Area (IDA) due to its close proximity to Mill Creek, a tributary of the Magothy River. The ground cover on the lot is predominantly woods but also contains a dirt/gravel access road from Mill Creek Road to the shoreline along Mill Creek.

Ground slopes on the site vary from approximately 0.5% near Mill Creek to 25% near the center of the parcel. The entire site drains southerly directly into Mill Creek. As shown on the F.E.M.A. flood map 24003C00159F, the lot is impacted by a 100 year tidal flood zone at elevation 6.0. The remainder of the lot is located within Zone "X"- an area of minimal flooding. The site is also located within a 100' buffer to Mill Creek. Steep slopes greater than 15% are present and cover most of the lot. An area of tidal wetlands is present near the property's southern, as well as a 25 wetlands buffer. The property is not known to contain any rare, threatened or endangered species of plants, animals, and no wildlife habitat areas have been identified. The site is not known to contain any historical or archaeological artifacts or other items of historical or archaeological interest.

Planned development of the site includes the construction of a single-family residential dwelling, sidewalk, driveway, sewer connection, water connection, and stormwater management practices. The proposed improvements will result in the disturbance of approximately 4,205 sqft. and result in a lot coverage of 2,019 sqft., including the driveway aprons within the existing rights-of-way.

CONSIDERATION OF SWM PRACTICES & ALTERNATIVES

Stormwater design for the proposed improvements was provided in accordance with Chapter 5 of the 2009 M.D.E. where three general types of stormwater methods are used to provide the required ESD volume at a site:

1. *Alternative Surfaces*
   Listed under Section 5.3, these surfaces include green roofs, permeable pavements and reinforced turf. The feasibility of using a green roof on a residential residence is an un-appealing option to a homeowner since it involves an increased structural design of the roof, which makes increases the cost of construction. Furthermore, maintenance of a green roof is tedious and required an extra-ordinary amount of effort that many homeowners do not wish to be bothered with. Therefore, a green roof was not chosen as a stormwater management practice. The second alternative, permeable pavement was selected due to its return of a sizeable amount of ESD volume for a small area and was used for the surface of the driveway. A reinforced turf microscale practice was not used due to its high maintenance requirement and is primarily used in commercial site applications. Therefore, for this project, only a permeable pavement practice was selected as an alternative surface to provide a portion of the ESD volume.

2. *Non-structural Practices*
   Listed under Section 5.4.2 of the 2009 M.D.E. Manual, these practices include disconnection of rooftop runoff, disconnection of non-rooftop runoff, and sheetflow to

conservation area. A disconnection of rooftop or non-rooftop runoff practice was not utilized due to the existing slopes present, making the required disconnection lengths un-obtainable. A sheetflow to conservation area practice was not utilized due to the lack of existing woodlands present that qualify as forest conservation easement areas. Therefore, for this project, no non-structural practices are being utilized.

3. *Micro-scale Practices*
   Listed under Section 5.4.3 of the 2009 M.D.E. Manual, these practices include small water quality treatment devices to capture runoff from small, discrete areas. Out of the nine options listed under this category, those that provided the most effective treatment were the use of landscape infiltration berms. This practice was utilized to capture and treat runoff from the roof area of the dwelling.

PROTECTION OF NATURAL RESOURCES

The property is pre-dominantly covered by woodlands. The limit of disturbance has been made as small as possible to minimize any disturbance to natural areas on site.

RETENTION OF NATURAL FLOW PATTERNS

Through the use of grading techniques that mimic the existing site grades, no disturbance to existing flow patterns will occur and the direction of rainwater runoff flow will remain largely unaffected.

REDUCTION OF IMPERVIOUS SURFACES

Through the use of a relatively modest house footprint, the amount of impervious cover is being reduced beyond what is currently allowed by zoning.

POLLUTANT REDUCTION & REMOVAL

Given that the site is *partly* located within a Chesapeake Bay IDA critical area, it is mandatory that the proposed stormwater management techniques address the "Critical Area 10% Rule Guidance Manual" and provide a 10% pollutant removal reduction. The ESD practices being utilized to provide the water quality, ESD and Cpv volumes also help to reduce the amount of phosphorus to downstream receiving waters.

IMPLEMENTATION OF SEDIMENT & EROSION CONTROL

Given the relatively small size of the site, it is not possible to implement sediment control measures to provide in the stormwater management design of the site. The only sediment control measures used are those provided to capture sediment laden runoff from leaving the site.

SOIL & FACILITY INVESTIGATION

The Anne Arundel County Soil Survey indicates that the site is underlain by soils of the Downer-Hammonton Urban Land complex (DwB), 0 to 5% slopes and the Annapolis Urban Land complex (AuD) 5-15% slopes. The Downer-Hammonton soils have a hydrologic rating of "A" and are usually very conducive to infiltration. The Annapolis soils have a hydrologic rating of "C" and are only marginally conducive to infiltration. The proposed method of stormwater management for the improvements on the parcel will be through the planting of trees – so both soil types should be suitable for planting.

SUMMARY OF CONCLUSIONS

In accordance with the 2009 Maryland Department of the Environment (M.D.E.) Stormwater Design Manual and the 2017 Anne Arundel County Storm Water Management Practices and Procedures Manual, the water quality, recharge, channel protection, overbank flood protection, and extreme flood protection volumes were considered in the overall stormwater management design for this site.

ESDv volume is required in the amount of 206 cu. ft. and will be provided by a landscape infiltration berm practice. The recharge volume is required in the amount of 47 cu. ft. and is automatically provided through the utilization of the ESD practices being utilized on-site. The channel protection volume is being provided since the environmental site design target rainfall amount is being met through the use of ESD practices, in accordance with the 2009 M.D.E. Manual. The overbank flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.
The extreme flood protection volume is not required since the site has a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

OUTFALL STATEMENT

Runoff from the site flows over woods in a southerly direction directly to a tidal floodplain of Mill Creek, a tributary to the Magothy River. Although not needed, a sufficient amount of ESDv volume is being provided on site to reduce the 10-year post-development discharge to its pre-development rate and minimize any impacts to existing steep slopes.

Given that the site discharges directly to a tidal floodplain, and the required ESD volume is being provided on site, the site outfall & point-of-investigation (P.O.I.) is a point along the southernmost boundary line where runoff leaves the property and enters the floodplain of Mill Creek.
The site outfall, and P.O.I. were inspected on a field investigation by an employee of Boyd & Dowgiallo, P.A., in May, 2024, and were found to be vegetated, stable and in good condition, with no signs of erosion, flooding, or sediment accumulation present.

Given that the ESD, recharge, channel protection volumes and overbank flood protection volumes are being provided, there should not be an increase in runoff as a result of the proposed improvements, no adverse effects should occur to the site outfall or P.O.I.

STORMWATER MANAGEMENT
COMPUTATIONS

ENVIRONMENTAL SITE DESIGN

In Section 5.2.2 of the revised Chapter 5 of the 2000 M.D.E. Stormwater Design Manual, it is stated, "the criteria for sizing ESD practices are based on capturing and retaining enough rainfall so that the runoff leaving a site is reduced to a level equivalent to a wooded site in good condition as determined using U.S.D.A's Natural Resource Conservation Service methods…."the goal is to provide enough treatment using ESD practices to address Cp_v requirements by replicating an RCN for woods in good condition for the 1-year rainfall event. In accordance with the "Stormwater Management Act of 2007" and Table 5.3 of the revised Chapter 5 M.D.E. Manual, the environmentally sensitive runoff volume, ESD_v, is equal to,

$$ESD_v = P_E \times R_v \times A$$

Where, P_E = the rainfall target from Table 5.3
R_v = the volumetric runoff coefficient
A = drainage area

Site area = 14,536 sq. ft.
Total Proposed Impervious Cover = 2,019 sq. ft.

%I =2,019/14,536 = 13.9% (proposed)
$R_V = 0.05 + 0.009(13.9) = 0.17$
Existing soil types present = HSG "A" & "C"

From Table 5.3 of Chapter 5 of the M.D.E. Manual, the target rainfall based upon the impervious cover proposed and the soil types present is equal to 1.0".

and the ESD_v volume becomes,

$$ESD_v = (1.0")(0.17)(14{,}536)/12 = \mathbf{206\ cu.\ ft.}$$

This is the *total* ESDv volume required for the proposed improvements to return the site back to a state of "woods in good condition".

This volume will be provided on-site within ESD practices as described below.

STORMWATER

MANAGEMENT DESIGN

With

ESD_v PRACTICES

MICRO-SCALE PRACTICES

Microscale Practices – Landscape Infiltration Berms

In accordance with discussions between the design consultant and the Engineering Manager, stormwater management for the proposed improvements is to be addressed via a series of bio-logs (acting as landscape infiltration berms) and the installation of native trees/shrubs within the existing abandoned road traversing the lot. Through the installation of a series of bio-logs and associated plantings within the abandoned road, the required ESDv for the improvements will be provided. The provided ESD volume from the series of bio-logs can be computed as follows:

Average Ponding Area = 36 sqft. (approx. 4' x 9' W)
Height of bio-log (berm) = 1', resulting in an average depth of 0.5
ESDv for ponding area = 36 sqft. x 0.5' = 18 cu.ft. ESDv per bio-log

By installing 12 rows of bio-logs in a "step" design along the dirt road provides a total ESD volume of 12 x 18 cu.ft. = 216 cu.ft. of ESD volume (See Landscape Infiltration Berm profile on plan sheet 4 for additional information).

Total ESD volume provided through landscape infiltration berms = 216 cu. ft.

SUMMARY OF ESD VOLUMES

Total Required ESD volume	= 206 cu. ft.
Microscale Practice – Infiltration Berm	
ESD volume prov'd.	= 216 cu. ft.
Total ESD volume provided	= 216 cu. ft.

II. RECHARGE VOLUME

The required recharge volume (Rev) for the proposed development is determined in accordance with the following equation, as stated in Section 2.2 of the MDE Stormwater Design Manual:

$$Re_V = \frac{(S)(R_V)(A)}{12}$$ ac-ft, where A and R_V are as defined above, and

S = soil specific recharge factor;
= 0.42 for type "A" soil
= 0.14 for type "C" soil
S = (2,051 s.f. x 0.42) + (9,653 s.f. x 0.14) / 14,536 s.f. = 0.23

The required volume is calculated as follows:

Re_v = (0.23)(0.17)(14,536)/12 = **47 cu. ft.**

This is the required recharge volume required for the proposed improvements. The recharge volume will be provided through the use of environmental site design practices, as described in this report.

III. CHANNEL PROTECTION VOLUME

The channel protection volume for this lot is being provided through the use of environmental site design practices that provide the target rainfall value of 1.0", as specified in Table 5.3 of the revised M.D.E. Manual and return the site back to a "pre-development state of woods in good condition".

V. OVERBANK FLOOD PROTECTION VOLUME

The overbank flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

V. EXTREME FLOOD PROTECTION

The extreme flood protection volume is being provided by a direct discharge to the tidal waters of Mill Creek, a tributary to the Magothy River, in accordance with Section 7.2 of the October, 2017 Stormwater Practices & Procedures Manual.

SOILS & VICINITY MAPS

(See GSC Plans)

TR-55 COMPUTATIONS

WinTR-55 Current Data Description

--- Identification Data ---

User: TFJ
Project: MAGOTHY SHORES
SubTitle: 10 YR
State: Maryland
County: ANNE ARUNDEL
Filename: C:\TR55\20-231 10yr.w55

Date: 10/13/2025
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
PRE		Outlet	0.33	62	0.1
POST		Outlet	0.33	63	0.1
REDUCED		Outlet	0.33	61	0.100

Total area: .99 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.3	.0	5.2	.0	.0	7.4	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
3.3	.0	5.2	.0	.0	7.4	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)
SUBAREAS	
PRE	0.76
POST	0.80
REDUCED	0.72
REACHES	
OUTLET	2.28

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 10-Yr (cfs) (hr)
SUBAREAS	
PRE	0.76 11.94
POST	0.80 11.94
REDUCED	0.72 11.95
REACHES	
OUTLET	2.28

TFJ

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
PRE	.33	0.100	62	Outlet	
POST	.33	0.100	63	Outlet	
REDUCED	.33	0.100	61	Outlet	

Total Area: .99 (ac)

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
PRE							
SHEET	35	0.2500	0.400				0.055
SHALLOW	10	0.2000	0.025				0.000
SHALLOW	31	0.2500	0.050				0.001
					Time of Concentration		0.1
POST							
SHEET	39	0.2500	0.011				0.003
SHALLOW	10	0.2000	0.050				0.000
SHALLOW	27	0.2500	0.050				
					Time of Concentration		0.1
REDUCED							
User-provided							0.100
					Time of Concentration		0.100

MAGOTHY SHORES
10 YR
ANNE ARUNDEL County, Maryland

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
PRE	Paved parking lots, roofs, driveways		A	.014	98
	Paved parking lots, roofs, driveways		C	.029	98
	Woods	(good)	A	.098	30
	Woods	(good)	C	.192	70
	Total Area / Weighted Curve Number			.33	62
				===	==
POST	Open space; grass cover > 75%	(good)	A	.037	39
	Open space; grass cover > 75%	(good)	C	.026	74
	Paved parking lots, roofs, driveways		A	.018	98
	Paved parking lots, roofs, driveways		C	.019	98
	Woods	(good)	A	.057	30
	Woods	(good)	C	.176	70
	Total Area / Weighted Curve Number			.33	63
				===	==
REDUCED	CN directly entered by user		-	.33	61
	Total Area / Weighted Curve Number			.33	61
				===	==

Maryland ESD Calculations and 10% Phosphorus Removal

Last Update: 12/3/2013

Project Name:
Date:

data input cells
calculation cells

Step 1: Complete ESD Implementation Checklist

Check all of the Following ESD Practices That Were Implemented at Site	Yes - Yes - N/A
Environmental Mapping Was Conducted at Site Prior to Layout	
Natural Areas Were Conserved (e.g. forests, wetlands, steep slopes, floodplains)	
Stream, Wetland and Shoreline Buffers Were Reserved	
Disturbance of Permeable Soils Was Minimized	
Natural Flow Paths Were Maintained Across the Site	
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site	
Site Grading Promoted Sheetflow From Impervious Areas to Pervious Ones	
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover	
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater Treatment	
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Integrated into a Comprehensive Plan	
Tree Planting Was Used at the Site to Convert Turf Areas Into Forest	

Step 2: Calculate Site Imperviousness and Water Quality Volume, WQv (for redevelopment)

Site Area, A (acres)	
Existing Impervious Surface Area (acres)	
Proposed Impervious Surface Area (acres)	
Rainfall Depth, P (in)	1.0
Existing Imperviousness, I_{pre}	0.0%
Proposed Imperviousness, I_{post}	11.3%
Water Quality Calculation for Redevelopment Only	
Required Treatment Area (acres)	0.00
Runoff Coefficient, Rv	0.95
Water Quality Volume, WQv (cf)	0

Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites

Development Category (for ESD)	New Development
New Development	
Average Annual Pre-Development Load, L_{pre} (lbs P / yr)	0.17
Redevelopment	
Pre-Development Runoff Coefficient, Rv_{pre}	0.05
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Redevelopment Load, L_{pre} (lbs P / yr)	0.04
Post-Development Runoff Coefficient, Rv_{post}	0.17
Average Annual Post-Development Load, L_{post} (lbs P / yr)	0.14
Removal Requirement, RR (lbs P / yr)	-0.01

Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_E

Development Category (for ESD)	New Development
% Soil Type A	
% Soil Type B	
% Soil Type C	
% Soil Type D	
Pre-Developed Condition, RCN$_{pre}$	57.75
Soil Type A ESD Rainfall Target, P_E (in)	0.33
Soil Type B ESD Rainfall Target, P_E (in)	0.00
Soil Type C ESD Rainfall Target, P_E (in)	0.66
Soil Type D ESD Rainfall Target, P_E (in)	0.00
Maximum P_E (in)	2.7
Site ESD Rainfall Target, P_E (in)	0.00
ESD Runoff Depth, Q_E (in)	0.17
ESD Runoff Volume, ESDv (cf)	201
Total Treatment Volume (cf)	201

Step 5: Select Nonstructural Practices to Treat the ESD Rainfall Target

Nonstructural Practices	P_E Credit Description	Contributing Drainage Area (sf)	Direct WQv or ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	P_E Credit (in)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)
Disconnection of Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0
Disconnection of Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0
Disconnection of Non-Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow lengths.	0	0	0	0	0	0
Disconnection of Non-Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow	0	0	0	0	0	0
Sheetflow to Conservation Areas (A/B Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0
Sheetflow to Conservation Areas (C/D Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0

Critical Area Credits

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
20%	0%	0.00	0.00	0.00
20%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
25%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
25%	0%	0.00	0.00	0.00

Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target

Micro-Scale Practices	P_E Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Permeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Permeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Permeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Rainwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Infiltration	ESDv credit is based on design storage volume	953	212	0	212	0
Rain Gardens (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Rain Gardens (C/D Soils)	ESDv credit is based on design storage volume	1,249	3,173	0	261	2,912
Micro-Bioretention (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Bioretention (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Landscape Infiltration	ESDv credit is based on design storage volume	1,918	410	0	216	194
Grass Swales (A/B Soils	ESDv credit is based on design storage volume	0	0	0	0	0
Grass Swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales (A/B Soils	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Wet Swales	ESDv credit is based on design storage volume	0	0	0	0	0

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
45%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
40%	0%	0.00	0.00	0.00
40%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
95%	85%	0.05	0.05	0.01
65%	0%	0.00	0.00	0.00
25%	13%	0.79	0.10	0.69
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
75%	83%	0.10	0.09	0.02
40%	0%	0.00	0.00	0.00
20%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
40%	0%	0.00	0.00	0.00

Step 7: Check for ESDv to MEP compliance and Revise Site if Necessary

Drainage Area Treated (sf)	4,149

WQv or ESDv Treated (cf)	288
P achieved (inches)	0.34
Entire ESDv Treated Through Environmental Site Design?	YES
ESDv Remaining? (cf)	0
If ESDv is not fully treated, is ESD to MEP achieved?	

Total Load Reduction (lbs P / year)	0.24
Total Load Reduction Remaining (lbs P / yr)	0.00

New Development Water Quality Volume Requirements

Required Treatment Area (acres)	0.33
Runoff Coefficient, Rv	0.17
Water Quality Volume, WQv (cf)	204

Redevelopment WQv Requirements Met Through Environmental Site Design?	N/A
WQv Remaining? (cf)	0
New Development WQv Requirements Met Through Environmental Site Design?	YES
WQv Remaining? (cf)	0

Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon P_E Achieved

Reduced RCN for Type A Soils	N/A
Reduced RCN for Type B Soils	N/A
Reduced RCN for Type C Soils	N/A
Reduced RCN for Type D Soils	N/A
Composite Reduced RCN	N/A
S_E (in) for Reduced RCN	N/A
V (cf) for Reduced RCN	N/A
Volume Management Required (cf)	0

S_E (in) for RCN of 55	8.18
V (cf) for RCN of 55	144

Step 9: Select Structural Practices to Meet Volume Management Requirements

Structural Practices	Contributing Drainage Area (sf)	% Impervious Cover	Direct ESDv Received by Practice (cf)	ESDv from Upstream Practices (cf)	Treatment Volume (cf)
Stormwater Ponds (Level 1)	0	0%	0	0	0
Stormwater Ponds (Level 2)	0	0%	0	0	0
Stormwater Wetlands (Level 1)	0	0%	0	0	0
Stormwater Wetlands (Level 2)	0	0%	0	0	0
Stormwater Filtering Systems (Level 1)	0	0%	0	0	0
Stormwater Filtering Systems (Level 2)	0	0%	0	0	0
Stormwater Infiltration (Level 1)	0	0%	0	0	0
Stormwater Infiltration (Level 2)	0	0%	0	0	0

Total structural CPv provided	0
Management Requirement Met?	YES
Volume Remaining (cf)	0

Critical Area Credits

Phosphorous Removal Efficiency	Adjusted Phosphorus Removal Efficiency	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
65%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
90%	0%	0.00	0.00	0.00

Total Load Reduction (lbs P / year)	0.24
Total Load Reduction Remaining (lbs P / yr)	0.00

Maryland ESD Calculations and 10% Phosphorus Removal

Last Update: 12/3/2013

Project Name:	270 Mill Creek Road
Date:	August, 2024
	data input cells
	calculation cells

Step 1: Complete ESD Implementation Checklist

Check all of the Following ESD Practices That Were Implemented at Site	Yes - No - N/A
Environmental Mapping Was Conducted at Site Prior to Layout	
Natural Areas Were Conserved (e.g. forests, wetlands, steep slopes, floodplains)	
Stream, Wetland and Shoreline Buffers Were Reserved	
Disturbance of Permeable Soils Was Minimized	
Natural Flow Paths Were Maintained Across the Site	
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site	
Site Grading Promoted Sheetflow From Impervious Areas to Pervious Ones	
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover	
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater Treatment	
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Integrated into a Comprehensive Plan	
Tree Planting Was Used at the Site to Convert Turf Areas into Forest	

Step 2: Calculate Site Imperviousness and Water Quality Volume, WQv (for redevelopment)

Site Area, A (acres)	
Existing Impervious Surface Area (acres)	
Proposed Impervious Surface Area (acres)	
Rainfall Depth, P (in)	1.0
Existing Imperviousness, I_e	0.0%
Proposed Imperviousness, I_p	
Water Quality Calculation for Redevelopment Only	
Required Treatment Area (acres)	0.00
Runoff Coefficient, Rv	0.95
Water Quality Volume, WQv (cf)	0

Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites

Development Category (for L_M)	New Development
New Development	
Average Annual Pre-development Load (lbs P / yr)	0.17
Redevelopment	
Pre-development Runoff Coefficient, Rv	0.09
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Pre-development Load (lbs P / yr	0.04
Post-Development Runoff Coefficient, Rv	0.17
Average Annual Post-Development Load (lbs P / yr)	0.14
Removal Requirement, RR (lbs P / yr)	-0.01

Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_E

Development Category (for L_M)	New Development
% Soil Type A	
% Soil Type B	
% Soil Type C	
% Soil Type D	
Pre-Development Soil Composite, RCN	67.75
Soil Type A ESD Rainfall Target, P_E (in)	0.00
Soil Type B ESD Rainfall Target, P_E (in)	0.00
Soil Type C ESD Rainfall Target, P_E (in)	0.66
Soil Type D ESD Rainfall Target, P_E (in)	0.00
Treatment P_E (in)	0.0
Site ESD Rainfall Target, P_E (in)	0.00
ESD Runoff Depth, Q_E (in)	0.17
ESD Runoff Volume, ESDv (cf)	201
Total Treatment Volume (cf)	201

Step 5: Select Nonstructural Practices to Treat the ESD Rainfall Target

Nonstructural Practices	P_E Credit Description	Contributing Drainage Area (sf)	Direct WQv or ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	P_E Credit (in)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)
Disconnection of Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0
Disconnection of Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	0.00	0	0
Disconnection of Non-Rooftop Runoff (A/B Soils	Up to 1 inch credit provided based upon disconnection and contributing flow lengths.	0	0	0	0	0	0
Disconnection of Non-Rooftop Runoff (C/D Soils	Up to 1 inch credit provided based upon disconnection and contributing flow	0	0	0	0	0	0
Sheetflow to Conservation Areas (A/B Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0
Sheetflow to Conservation Areas (C/D Soils)	Up to 1 inch credit provided based upon conservation area width	0	0	0	0	0	0

Critical Area Credits

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
50%	0%	0.00	0.00	0.00
25%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
25%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
25%	0%	0.00	0.00	0.00

Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target

Micro-Scale Practices	P_E Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Permeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Permeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Permeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Rainwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Infiltration	ESDv credit is based on design storage volume	293	212	0	212	0
Rain Gardens (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Rain Gardens (C/D Soils)	ESDv credit is based on design storage volume	1,249	3,173	0	261	2,912
Micro-Bioretention (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Bioretention (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Landscape Infiltration	ESDv credit is based on design storage volume	1,918	410	0	219	191
Grass Swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Grass Swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0
Wet Swales	ESDv credit is based on design storage volume	0	0	0	0	0

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
45%	0%	0.00	0.00	0.00
80%	0%	0.00	0.00	0.00
85%	0%	0.00	0.00	0.00
80%	0%	0.00	0.00	0.00
40%	0%	0.00	0.00	0.00
45%	0%	0.00	0.00	0.00
80%	0%	0.00	0.00	0.00
65%	85%	0.05	0.05	0.01
85%	0%	0.00	0.00	0.00
25%	13%	0.79	0.10	0.69
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
75%	83%	0.10	0.08	0.02
40%	0%	0.00	0.00	0.00
20%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
40%	0%	0.00	0.00	0.00

Step 7: Check for ESDv to MEP compliance and Revise Site if Necessary

Drainage Area Treated (sf)	4,141
WQv or ESDv Treated (cf)	204
P_e achieved (inches)	3.36
Entire ESDv Treated Through Environmental Site Design?	YES
ESDv Remaining? (cf)	0
If ESDv is not fully treated, is ESD to MEP achieved?	
Redevelopment WQv Requirements Met Through Environmental Site Design?	N/A
WQv Remaining? (cf)	0
New Development WQv Requirements Met Through Environmental Site Design?	YES
WQv Remaining? (cf)	0
Total Load Reduction (lbs P / year)	0.84
Total Load Reduction Remaining (lbs P / yr)	0.00

New Development Water Quality Volume Requirements	
Required Treatment Area (acres)	0.33
Runoff Coefficient, Rv	0.17
Water Quality Volume, WQv (cf)	204

Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon P_e Achieved

Reduced RCN for Type A Soils	N/A		
Reduced RCN for Type B Soils	N/A		
Reduced RCN for Type C Soils	N/A		
Reduced RCN for Type D Soils	N/A		
Composite Reduced RCN	N/A		
Q_v (in) for Reduced RCN	N/A	Q_v (in) for RCN of 55	0.15
V (ft.) for Reduced RCN	N/A	V (ft.) for RCN of 55	148
Volume Management Required (cf)	0		

Step 9: Select Structural Practices to Meet Volume Management Requirements

Structural Practices	Contributing Drainage Area (sf)	% Impervious Cover	Direct ESDv Received by Practice (cf)	ESDv from Upstream Practices (cf)	Treatment Volume (cf)
Stormwater Ponds (Level 1)	0	0%	0	0	0
Stormwater Ponds (Level 2)	0	0%	0	0	0
Stormwater Wetlands (Level 1)	0	0%	0	0	0
Stormwater Wetlands (Level 2)	0	0%	0	0	0
Stormwater Filtering Systems, Level 1	0	0%	0	0	0
Stormwater Filtering Systems, Level 2	0	0%	0	0	0
Stormwater Infiltration (Level 1)	0	0%	0	0	0
Stormwater Infiltration (Level 2)	0	0%	0	0	0
Total structural ESDv provided (cf)					0
Management Requirement Met?					YES
Volume Remaining (cf)					0

Critical Area Credits

Phosphorous Removal Efficiency	Adjusted Phosphorus Removal Efficiency	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
85%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
90%	0%	0.00	0.00	0.00
			Total Load Reduction (lbs P / year)	0.2
			Total Load Reduction Remaining (lbs P / yr)	0.00

OFFICE OF PLANNING AND ZONING

CONFIRMATION OF PRE-FILE

PRE-FILE #: 2025-0017-P
DATE: 03/12/2025
OPZ STAFF: Jennifer Lechner
Kelly Krinetz
I&P STAFF: Natalie Norberg

APPLICANT/REPRESENTATIVE: Style Works Design Build LLC / Sally Baldwin / Boyd & Dowgiallo

EMAIL: grandvillahomes@gmail.com / baldwin@councilbaradel.com / JerryT@bndpa.com

SITE LOCATION: 870 Mill Creek Road, Arnold **LOT SIZE:** 14,536 square feet

ZONING: R5 **CA DESIGNATION:** RCA/IDA **BMA:** n/a **BUFFER:** YES **APPLICATION TYPE:** Variance

The applicant is proposing to construct a single-family dwelling, driveway, public utility connections, and stormwater management practices, and has reduced the size of the proposed dwelling and redesigned the proposed improvements to minimize the environmental impacts from previous requests.

G02020213 to construct a single family dwelling was submitted on 08/13/2024, and remains pending.
G02017807 to construct a single family dwelling was submitted on 10/16/2018, and remains pending.
2018-0229-V, to allow a dwelling with less setbacks and buffer than required, and with disturbance to steep slopes, was denied by the Board of Appeals, BA 73-18V.
2022-0009-V, to allow a dwelling and associated facilities with less setbacks and buffer than required, and with disturbance to steep slopes, was denied by the Administrative Hearing Officer.

The following variances are required:

- Article 17-8-201 to allow disturbance to slopes greater than 15% within the critical area RCA.
- Article 18-13-104 to allow disturbance to the 100ft buffer and/or expanded buffer.
- Article 18-4-601 to allow a principal structure with less setbacks than required.

The property is located within the 100ft stream buffer. A modification to § 17-6-403 may also be required, and will be determined at the time of permitting.

After reviewing the following comments, if needed, an in-person meeting may be coordinated by contacting Jennifer Lechner at pzlech23@aacounty.org or 410-222-7437.

COMMENTS

Zoning Administration Section:
The Draft Letter of Explanation is inadequate.
In order for the Administrative Hearing Officer to grant approval of the variances, the proposal must address and meet all of the applicable variance standards provided under Section 18-16-305. The Letter of Explanation should address each of those standards (a through c) and provide adequate justification for each of the variances required.

Revise the Administrative Site Plan to clearly indicate the setback distances to all lot lines in order to verify the relief requested.

Critical Area Team:
Due to the Cyber Incident, this Office is unable to access the previous decision in order to read the facts of the denial. The applicant has however indicated that the AHO required a reduction in environmental impacts from the previous design. Based on a comparison of the two plans, the LOD is relatively the same. There has been a minor reduction in the footprint of the home from 51'x28' to 48'x25' however the plans indicate that there will be an increase in the proposed lot coverage from 1840 sq ft to 1925 sq ft.

In addition, it appears that the grades for the driveway have been mislabeled and there is concern for the grade of the actual driveway as well as the grading around the driveway and the ability for the applicant to cut back into the existing grades as shown on the plan. Without the opportunity to read the statements in the prior decision, I do not believe that this proposal meets a reduction in impact.

I&P Engineering:
1. It appears the Sewer House Connection ties into the existing sewer along Mill Creek Road. Show the existing manhole where the connection occurs. Label the manhole number. If no manhole exists, a proposed manhole will need to be installed and will require a PWA. Address at grading permit.
2. If the public waterline ends with a fire hydrant, show and label the fire hydrant including its number. Show the tie-in for the WHC prior to the terminal fire hydrant. Address at grading permit.
3. Identify whether the un-named and un-improved 30' ROW is privately-owned or publicly-owned.
4. If the un-named and un-improved 30' ROW is privately-owned, a grading easement will be needed as the LOD falls within its boundary. Address at grading permit.
5. Label the width and the material of the walkway leading from the driveway to the front entrance of the house.
6. The raised rain gardens are labeled as being 5' wide, however, they scale less than 5' wide.
7. It appears there is little room between the property line and the rain gardens and even less so once the raised rain garden is drawn to the proper width. If a fence is installed access will be extremely difficult. Please refer to Blue Notice # IP-21-12 on guidance for maintenance access to BMPs.
8. A 100' buffer is shown. Identify what type of buffer it is (i.e. stream, wetland).
9. A public road cannot terminate in a private driveway. A T-Turnaround will be required. The un-named right-of-way may be able to be improved if public or if permission is received from the owner. Address at grading permit.
10. A full review of the grading and stormwater management will occur at grading permit.

INFORMATION FOR THE APPLICANT
Section 18-16-301 (c) Burden of Proof. The applicant has the burden of proof, including the burden of going forward with the production of evidence and the burden of persuasion, on all questions of fact. The burden of persuasion is by a preponderance of the evidence.

A variance to the requirements of the County's Critical Area Program may only be granted if the Administrative Hearing Officer makes affirmative findings that the applicant has addressed all the requirements outlined in Article 18-16-305. Comments made on this form are intended to provide guidance and are not intended to represent support or approval of the variance request.

A preliminary plan checklist is required for development impacting environmentally sensitive areas and for all new single-family dwellings. A stormwater management plan that satisfies the requirements of the County Procedures Manual is required for development impacting environmentally sensitive areas OR disturbing 5,000 square feet or more. State mandates require a developer of land provide SWM to control new development runoff from the start of the development process.