



January 9, 2025

Anne Arundel County  
Office of Planning & Zoning  
2664 Riva Road  
Annapolis, MD 21401

**RE: Recinos Landscape & Tree Service  
29 Brick Church Rd, Edgewater  
Special Exception & Variance Application**

Sir or Madam:

Enclosed please find a complete variance and Special Exception application submittal package for proposed development at 29 Brick Church Rd in Edgewater. The applicant requested identical administrative approvals in 2021, under **2021-0087-S** and **2021-0168-V**, and was approved. Subsequent to the administrative approval, the property received Preliminary Plan approval under **C2022-0055**; however, the approvals expired during the Site Development Plan approval process.

The subject property is irregularly shaped, is roughly 9.89 Ac in area, and enjoys frontage along Brick Church Rd, a scenic & historic County Road, with a rural arterial functional classification. The property is currently mapped within the RA zoning district, and is improved with a single-family dwelling, a pole barn (constructed under B02374941), and several outbuildings utilized for the property owner's landscape contracting business, Recinos Landscaping & Tree Service, a landscaping and tree contracting with accessory recycling of logs into firewood commercial use. The property was created by deed (927/56), recorded in the land records of Anne Arundel County on May 7, 1955. The property is greater than 1 Acre with road frontage, and therefore is a legal lot. The existing improvements are located on a ridge near the rear of the property. Runoff flows to the northwest and southwest from the ridge, toward two streams listed as the headwaters of Mariott's Branch. The streams are classified as intermittent streams, only seeing flow during rain events. Each stream has a 100ft buffer. The two streams flow to the west and converge off-site, roughly 160ft outside of the subject property. Two small, isolated pockets of steep slopes are present adjacent to the northern stream. The property is forested along the perimeter of the property's boundary. The 100ft stream buffer to the northern, on-site stream is wooded. The stream to the south is off-site, and its 100ft buffer does not affect the subject property. The property is not located in any overlay districts and is served with private septic and a private well.

The owner seeks to perfect the use of the property for landscape and tree contracting with accessory recycling of logs into firewood in the RA zoning district. The property is currently the subject of an opening zoning violation (Z-2020-32). The approval of a Site Development Plan and subsequent Zoning Certificate of Use will abate the violation. Additionally, the existing pole barn will require a variance to Section 18-11-133 of the County Code of 35ft to the 50ft distance requirement for the commercial use from all property lines, to use the existing pole barn for landscape contractor use only, and not the recycling of logs into firewood. The use of the pole barn for the commercial use changes



which structure on-site is the principal structure, from the dwelling to the existing pole barn. Therefore, a variance to Section 18-2-204(b) is necessary to allow the existing and proposed accessory structures to be in the front yard of a non-waterfront lot.

The following discourse addresses the general criteria for the granting of a Special Exception found in Section 18-16-304 of the County Code.

- (1) The use will not be detrimental to the public health, safety, or welfare;

*The use of an agriculturally zoned property as a landscape contractor's yard will have no detrimental affect on the health, safety, or welfare of the public. Due to the location of the stream between the road and the use, the commercial use is set well back from the road.*

- (2) The location, nature, and height of each building, wall, and fence, the nature and extent of landscaping on the site, and the location, size, nature, and intensity of each phase of the use and its access roads will be compatible with the appropriate and orderly development of the district in which it is located;

*The dwelling and out-buildings are existing. Only one new storage barn is proposed. The commercial buildings are one-story, and appear more as agricultural structures than commercial buildings. Special Exception uses are generally recognized as compatible with the permitted uses of a zoning district, subject to a public hearing, and the affirmative findings of the Special Exception criteria.*

- (3) Operations related to the use will be no more objectionable with regard to noise, fumes, vibration, or light to nearby properties than operations in other uses allowed under this article;

*The operation of the business will be no more objectionable with regard to noise, fumes, vibration, or light than other allowed uses within the zoning district, such as farms, composting facilities, or gun ranges. The business will adhere to the operational hours limits.*

- (4) The use at the location proposed will not have any adverse effects above and beyond those inherently associated with the use irrespective of its location within the zoning district;

*The use will not have any additional adverse effects regardless of the location proposed. Adjacent residential lots are several acres in area, and some adjacent agricultural parcels are greater than 100 acres.*

- (5) The proposed use will not conflict with an existing or programmed public facility, public service, school, or road;

*The use will not conflict with any existing or proposed public facility, service, school, or road. Brick Church Road has a rural arterial functional classification, and no traffic mitigation was required during the review and approval of the Preliminary Plan. The project proposes to add pendant lights to existing power poles for traffic safety.*

- (6) The proposed use has the written recommendations and comments of the Health Department and the Office of Planning and Zoning;

*The project has received design recommendations, and conditional approval of the septic system, pending the installation of the system.*



- (7) The proposed use is consistent with the County General Development Plan;

*The proposed use is consistent with the General Development Plan, as Special Exception uses are generally recognized as compatible with the permitted uses of a zoning district, subject to a public hearing, and the affirmative findings of the Special Exception criteria.*

- (8) The applicant has presented sufficient evidence of public need for the use;

*The need for landscape contractors is evident through the success of the Applicant's business, which has flourished since it started over 20 years ago. Landscape contractors are essential for the maintenance and upkeep of property, when property owners do not have the time, the machinery, or the expertise to perform the work themselves.*

- (9) The applicant has presented sufficient evidence that the use will meet and be able to maintain adherence to the criteria for the specific use;

*The criteria for the specific use are addressed below.*

- (10) The application will conform to the critical area criteria for sites located in the critical area; and

*The property is not mapped within the Chesapeake Bay Critical Area or Bog protection overlay zone.*

- (11) The administrative site plan demonstrates the applicant's ability to comply with the requirements of the Landscape Manual.

*As the perimeter of the property is largely existing woods, the landscape buffers will be adhered to, and any internal landscape material required the site has plenty of space to accommodate it.*

(b) Phasing of development. If phasing of development is proposed for a use allowed by special exception and the Planning and Zoning Officer has approved a plan for phasing of development, the Administrative Hearing Officer may allow phasing pursuant to the approved plan as a condition of special exception approval.

*The development of the property will not be phased.*

The following discourse addresses the general criteria for the granting of a Special Exception found in Section 18-11-133 of the County Code for the specific use of landscape and tree contracting with accessory recycling of logs into firewood.

- (1) The facility shall be located on a lot of at least five acres.

*The property is 9.89 acres, as surveyed.*

- (2) Buildings and outdoor areas to be used for parking, loading or storage of vehicles, equipment, tools, and supplies related to landscaping and tree contracting shall be delineated on a site development plan and located at least 50 feet from all lot lines and public roads.

*All commercial areas, except the existing pole barn, are a minimum of 50ft for all property lines.*



- (3) The processing areas, parking and loading areas, and areas for storage of mechanical equipment related to the recycling of logs into firewood shall be delineated on a site development plan and located at least 200 feet from lot lines.

*All processing, parking, and loading areas, and areas for the storage of mechanical equipment for the recycling of logs into firewood are 200ft from all property lines.*

- (4) Firewood shall be stored in windrows not more than 10 feet high and 20 feet wide, in static piles not more than 20 feet high, or in bulk storage bags and shall be located at least 50 feet from lot lines.

*The firewood windrows meet the size criteria and are a minimum of 50ft from all property lines.*

- (5) Outdoor storage, including storage of unprocessed logs and processed firewood, may not occupy more than 20% of the total lot area, not to exceed five acres.

*The area for the processing of logs into firewood measures approximately 8,000sf, or 1.8% of the site area.*

- (6) Hours of operation for the recycling of logs into firewood shall be limited to either 9:00 a.m. to 12:00 p.m. or 1:00 p.m. to 4:00 p.m. on any one day, Monday through Friday.

*The applicant shall adhere to the operational hours for the processing of logs into firewood.*

- (7) The sound level at any residentially zoned or residentially developed property line may not exceed an average of 55 dba and a peak of 60 dba based on readings taken during operations.

*Chainsaws run at approximately 110-120dba; at a distance of 200ft from the source, the sound readings will fall within the proscribed levels.*

- (8) The storage and processing of logs that are not incidental to the landscaping and tree contracting business is prohibited.

*Only logs incidental to the landscaping and tree business shall be recycled into firewood.*

- (9) The facility shall meet the requirements of § 18-11-132(2), (4), (5), (6), and (7).

*The following are responses to Section 18-11-132 of the County Code.*

- (10) (2) All vehicular access to the site shall be directly from a collector or higher classification road.

*Per the Anne Arundel County Dept of Public Works, Brick Church Road has a functional classification of a rural arterial road.*

- (11) (4) The location and design of the operation shall be such that the use will not be a nuisance to neighboring properties due to noise, dust, and fumes.

*The operation of the business shall not be a nuisance to neighboring properties due to noise, dust, or fumes. Vehicular traffic shall be relegated to paved areas of the site to keep dust down. Noise generated shall adhere to the decibel limits proscribed in #7 by adhering to the distance setback. The business uses standard lawncare equipment utilized at residential properties. Typically, only*



*the chainsaws and trucks will generate any fumes, which are no greater than any other truck or lawn equipment.*

(12) (5) Hours of operation shall be limited to 7:00 a.m. to 6:00 p.m.

*The hours of operation shall be adhered to by the applicant, and are his current hours of operation.*

(13) (6) Accessory outdoor storage and parking areas shall be screened from neighboring properties in accordance with the Landscape Manual.

*The property is screened from neighboring properties by the existing, fully wooded areas. Supplemental screening will be provided, if deemed necessary.*

(14) (7) Minor repairs to vehicles or equipment are permitted, provided such activities take place inside a building. Body work, engine rebuilding, engine reconditioning, painting, and similar activities are not permitted.

*Minor vehicle or equipment repairs shall be relegated to inside the building(s), if necessary. The business does not currently have the equipment or the expertise to perform body work, engine rebuilding or reconditioning, painting or other activities, and the applicant has no intention of undertaking these activities.*

Additionally, the proposed work complies with the criteria contained in 18-16-305 for the granting of variances. The following discourse addresses those criteria, as well.

(a) Requirements for zoning variances. The Administrative Hearing Officer may vary or modify the provisions of this article when it is alleged that practical difficulties or unnecessary hardships prevent conformance with the strict letter of this article, provided the spirit of law is observed, public safety secured, and substantial justice done. A variance may be granted only if the Administrative Hearing Officer makes the following affirmative findings:

(1) Because of certain unique physical conditions, such as irregularity, narrowness or shallowness of lot size and shape or exceptional topographical conditions peculiar to and inherent in the particular lot, there is no reasonable possibility of developing the lot in strict conformance with this article; or

(2) Because of exceptional circumstances other than financial considerations, the grant of a variance is necessary to avoid practical difficulties or unnecessary hardship and to enable the applicant to develop the lot.

*The granting of the variance is necessary to avoid the unnecessary hardship of not being able to continue to utilize the existing structure for the business. The pole barn is located in proximity to the property line shared with Parcel 140. Parcel 140 is currently undeveloped, and developing this property would be difficult due to its irregular shape, and the fact that the majority of the property is encumbered with the stream buffer and challenging topography. The closest existing dwellings to the pole barn are 39 Brick Church Rd, to the west, and 27 Brick Church Rd, to the east. The dwelling at 39 Brick Church Rd is approximately 520ft from the barn, and the existing dwelling at 27 Brick Church Rd is approximately 550ft from the barn. The existing environmental and topographic features provide natural separation between the residential and commercial uses.*

(b) Requirements for critical or bog protection area variances. For a property located in the critical area or a bog protection area, a variance to the requirements of the County's critical area program or





the bog protection program may be granted if the Administrative Hearing Officer makes the following affirmative findings:

*This County Code Section is not applicable, as the property is not mapped within the Chesapeake Bay Critical Area or Bog Protection Area overlay districts.*

(c) Requirements for all variances. A variance may not be granted unless it is found that:

(1) the variance is the minimum variance necessary to afford relief; and

*The requested variance is the minimum necessary to afford relief, as it allows the applicant to continue the commercial use of the existing structure.*

(2) the granting of the variance will not:

(i) alter the essential character of the neighborhood or district in which the lot is located;

*The proposed use of the pole barn as part of the landscape contractor yard will not alter the agricultural nature of the surrounding properties. Special Exception uses are recognized as compatible with the permitted uses of a zoning district, subject to a public hearing, and the affirmative findings of the Special Exception criteria. The pole barn is not, and will not, be utilized for the recycling of logs into firewood.*

(ii) substantially impair the appropriate use or development of adjacent property;

*The adjacent Parcel 140 is currently undeveloped, and development of the property will be challenging due to the existing stream and topographic features of the property. The location and use of the pole barn will not impair the use or development of Parcel 140. The use and development of Parcel 140 is already impaired by the natural features of the site. Other adjacent properties are developed, and adequately separated and screened from the commercial use.*

(iii) reduce forest cover in the limited development and resource conservation areas of the critical area;

*The property is not located in the Chesapeake Bay Critical Area.*

(iv) be contrary to acceptable clearing and replanting practices required for development in the critical area or a bog protection area; nor

*The property is not located in the Chesapeake Bay Critical Area.*

(v) be detrimental to the public welfare.

*The use is not detrimental to the public health, safety, or welfare.*

(d) Conditions for granting a variance in the critical area.

*This section is not applicable, as the property is not located within the Chesapeake Bay Critical Area.*

(e) Lapse. Any critical area variance granted shall lapse by operation of law if the conditions are not satisfied within 90 days or as extended.

*This section is not applicable, as the property is not located within the Chesapeake Bay Critical Area.*



If you have any questions regarding this variance request, or any of the materials contained within this submittal package, please contact me at 667-204-8042 or [wbower@atwell.com](mailto:wbower@atwell.com). Thank you.

Respectfully,

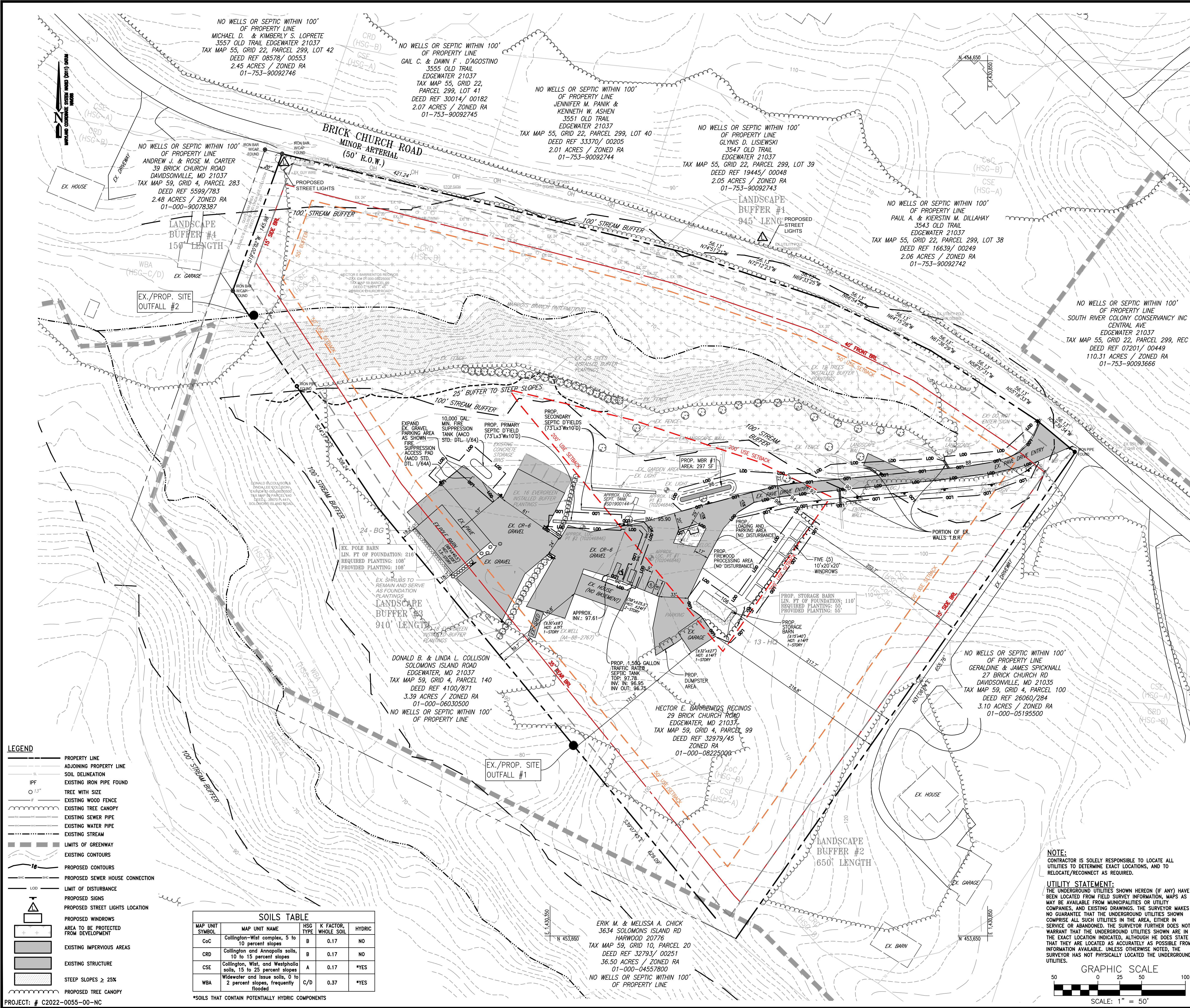
**ATWELL, LLC**

Annapolis, MD



William Bower, PE, PLS  
Sr. Project Manager





VICINITY MAP  
SCALE: 1" = 2000'

SITE TABULATIONS:

GROSS SITE AREA: 430,803 SF (9.89 AC.)

ZONING DISTRICT: RA (RURAL AGRICULTURAL)

USES:

LANDSCAPE & TREE CONTRACTING, WITH THE RECYCLING OF LOGS INTO FIREWOOD: 42,300 SF (PROPOSED)

OUTDOOR STORAGE: 15,475 SF (EXISTING)

DWELLING, SINGLE-FAMILY DETACHED: 1,422 SF (EXISTING)

FARMING: 3,425 SF (EXISTING)

EXISTING COVERAGE BY STRUCTURES:

POLE BARN: 2,728 SF

HOUSE: 1,422 SF

GARAGE: 907 SF

BARN: 290 SF

ALLOWABLE COVERAGE BY STRUCTURES: 107,700 SF (25%)

PROPOSED COVERAGE BY STRUCTURES:

POLE BARN: 2,728 SF

HOUSE: 1,422 SF

EX. GARAGE: 907 SF

EX. BARN: 290 SF

PROP. WINDROWS: 1,000 SF

PROP. STORAGE BARN: 609 SF

MIN. SETBACKS FOR PRINC. STRUCTURES (RURAL AGRICULTURAL):

FRONT: 40'

SIDE: 15'/40'

CORNER SIDE: 40'

REAR: 30'

PRINCIPAL ARTERIAL: 50'

MAX HEIGHT: 45'

\* SECOND NUMBER IS THE COMBINATION OF BOTH SIDE LOT LINES WITH THE LESSER NUMBER ALLOWED AS MINIMUM ON ONE SIDE ONLY

LIMITS OF DISTURBANCE: 24,463 SF (0.56AC.)

PARKING:

REQUIRED:

LANDSCAPE & TREE CONTRACTING: NONE

ADJ.-ACCESSIBLE: 1 SPACE

DWELLING, SINGLE-FAMILY DETACHED: 2 SPACES

FARMING: NONE

TOTAL PARKING REQUIRED: 2 SPACES

PROVIDED:

LANDSCAPE & TREE CONTRACTING: 3 SPACES

ADJ.-ACCESSIBLE: 1 SPACE

DWELLING, SINGLE-FAMILY DETACHED: 2 SPACES

FARMING: NONE

TOTAL PARKING PROVIDED: 6 SPACES

PROPOSED CLEARING: 9,160 SF (0.21 AC.)

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE ANNE ARUNDEL COUNTY DEPT. OF PUBLIC WORKS STANDARD DETAILS FOR CONSTRUCTION OF STORM DRAINS, ROADS, AND STORMWATER MANAGEMENT.
- NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS. ANY DAMAGE TO EXISTING SERVICES AND MAINS DUE TO THEIR NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION BEFORE STARTING CONSTRUCTION. NEITHER CPJA NOR ANNE ARUNDEL COUNTY DEPT. OF PUBLIC WORKS WARRANT OR GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE INFORMATION GIVEN.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO SPECIFICALLY MENTION ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 5 DAYS PRIOR TO STARTING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE ANNE ARUNDEL COUNTY DEPT OF INSPECTIONS AND PERMITS FIVE (5) WORKING DAYS PRIOR TO STARTING WORK SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY @ 1-800-257-7777 FIVE (5) WORKING DAYS PRIOR TO STARTING WORK SHOWN ON THESE DRAWINGS.
- ALL UTILITY POLES SHALL BE BRACED AS NECESSARY AT THE CONTRACTOR'S EXPENSE. UTILITY POLES SHALL BE RELOCATED AT THE OWNER'S EXPENSE IN CASES WHERE THEY WILL INTERFERE WITH CONSTRUCTION. ALL WORK WITHIN 10-FT OF OVERHEAD LINES SHALL CONFORM WITH THE MARYLAND HIGH VOLTAGE LINE ACT, THE NATIONAL ELECTRICAL SAFETY CODE, AND OCCUPATIONAL SAFETY AND HEALTH CODE.
- PIPE ELEVATION REFER TO INVERTS, UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPES ARE POLYVINYL CHLORIDE (PVC) UNLESS OTHERWISE NOTED, AS SCH-40 PVC.
- CONTRACTOR TO PLACE CUT MATERIAL ON THE HIGH SIDE OF TRENCH WHEN WORKING ON UNDERGROUND UTILITIES.
- DEED REFERENCE L: 32979 F: 45

PROPOSED SITE DATA:

GROSS SITE AREA: 430,803 SF (9.89 AC.)

EX. IMPERVIOUS AREA: 44,452 SF (1.02 AC.)

EX. IMPERVIOUS AREA RATIO: 10.3%

PROP. IMPERVIOUS AREA: 48,950 SF (1.12 AC.)

PROP. IMPERVIOUS AREA RATIO: 11.4%

FLOOR AREAS:

EX. GARAGE: 0 SF

EX. POLE BARN: 2,728 SF

EX. BARN: 290 SF

PROP. STORAGE BARN: 609 SF

SURVEY NOTE:  
THIS SITE PLAN IS BASED ON A BOUNDARY SURVEY PROVIDED BY ANAREX, DATED AUGUST 2020. LIMITED FIELD RUN TOPOGRAPHY WAS PROVIDED BY BAY ENGINEERING, INC. AERIAL TOPOGRAPHIC & ENVIRONMENTAL FEATURE DATA WAS PROVIDED BY AL COUNTY GIS.

FLOODPLAINS: THE SUBJECT PROPERTY RATE MAP 24003C02377 ZONE: X.

Revisions

Rev. #	Date	By	Description
1	01/25/2024	JCL	Final Plan

DATE: 01/25/2024  
JOB NUMBER: 23-7791  
SCALE: AS SHOWN  
DRAWN BY: JCL  
APPROVED BY: JWB  
FOLDER REFERENCE: 3745 Birdsview Road

SITE PLAN  
FOR  
FINAL PLAN  
EDgewater, P.99  
TAX MAP 59, GRID 04, TAX PARCEL 99  
29 BRICK CHURCH RD  
EDgewater, MARYLAND 21037  
SECOND DISTRICT ANNE ARUNDEL COUNTY

Sheet No. 01 OF 01





M A R Y L A N D

Office of Planning and Zoning

Jenny B. Dempsey  
Planning and Zoning Officer

## MEMORANDUM

TO: Zoning Division

FROM: Jessica Levy, Long Range Planner

THROUGH: Cindy Carrier, Planning Administrator, Long Range Planning

SUBJECT: Long Range Planning Comments

DATE: February 12, 2025

---

**Name of Project:** Recinos Landscape & Tree Service  
**Case#:** 2025-0007-S  
**Location:** 29 Brick Church Rd, Edgewater  
Tax Map 59, Parcel 99  
**Region Planning Area:** Region 8  
**Community:** Edgewater

### Summary:

The applicant requests a Special Exception to perfect a landscaping and tree contracting business with accessory recycling of logs into firewood in the RA zoning district. The property is currently improved with a single-family dwelling, a pole barn (constructed under B02374941), and several outbuildings utilized for the property owner's landscape contracting business. The applicant requested and was approved a Special Exception for the purpose listed above, 2021-0087-S, but the approvals expired during the Site Development Plan approval process.

The approximately 9.8-acre site is located in the Plan2040 Rural and Agricultural Development Policy Area and the Rural Planned Land Use category. Surrounding properties are in the Rural Planned Land Use category. Zoning for the site is RA and surrounding properties are zoned RA. The site is not located within the Priority Funding Area nor is it within the Green Infrastructure Network.

### Findings:

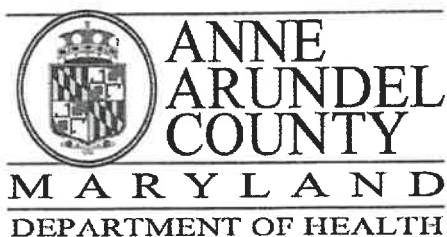
**Plan2040 General Development Plan:** Plan2040 does not have recommendations that are specific to this site and the proposal is generally consistent with the goals, policies and strategies of Plan2040 including:

- Policy HE2.5(a): Continue to promote traditional rural economy land uses such as the equine industry, agriculture, vineyards, community gardens, and heritage tourism in designated rural areas.

This proposal is within Region Planning Area 8. The Region 8 Plan and Comprehensive Zoning Map are expected to be adopted by the County Council in spring 2026.

**2022 Water and Sewer Master Plan:** The site is in the No Public Sewer Service category and the No Public Water Service category. The proposal is consistent with the 2022 Water and Sewer Master Plan.





J. Howard Beard Health Services Building  
3 Harry S. Truman Parkway  
Annapolis, Maryland 21401  
Phone: 410-222-7095 Fax: 410-222-7294  
Maryland Relay (TTY): 711  
www.aahealth.org

**Tonii Gedin, RN, DNP**  
**Health Officer**

**MEMORANDUM**

**TO:** Sadé Medina, Zoning Applications  
Planning and Zoning Department, MS-6301

**FROM:** Brian Chew, Program Manager  
Bureau of Environmental Health

**THROUGH:** Don Curtian, Director  
Bureau of Environmental Health

**DATE:** February 11, 2025

**RE:** Recinos Hector E. Barrientos  
29 Brick Church Road  
Edgewater, MD 21037

**NUMBER:** 2025-0007-S

**SUBJECT:** Variance/Special Exception/Rezoning

The Health Department has reviewed the above referenced special exception to perfect a landscaping and tree contracting with accessory recycling of logs into firewood use in an RA- Rural Agricultural District.

The Health Department does not have an approved plan for this project. The Health Department has no objection to the above referenced variance request as long as a plan is submitted and approved by the Health Department

If you have further questions or comments, please contact Brian Chew at 410-222-7413.

**cc:** Sterling Seay



J. Howard Beard Health Services Building  
3 Harry S. Truman Parkway  
Annapolis, Maryland 21401  
Phone: 410-222-7095 Fax: 410-222-7294  
Maryland Relay (TTY): 711  
www.aahealth.org

**Tonii Gedin, RN, DNP**  
**Health Officer**

### MEMORANDUM

TO: Sadé Medina, Zoning Applications  
Planning and Zoning Department, MS-6301

FROM: Brian Chew, Program Manager  
Bureau of Environmental Health *BC*

DATE: February 11, 2025

RE: Recinos Hector E. Barrientos  
29 Brick Church Road  
Edgewater, MD 21037

NUMBER: 2025-0008-V

SUBJECT: Variance/Special Exception/Rezoning

The Health Department has reviewed the above referenced variance to perfect a principal structure (pole barn) with less setbacks than required, to perfect the location of existing accessory structures (garage, dwelling, shed) in the front yard of a nonwaterfront lot, and to allow an accessory structure (barn) in the front yard of a nonwaterfront lot .

The Health Department does not have an approved plan for this project. The Health Department has no objection to the above referenced variance request as long as a plan is submitted and approved by the Health Department.

If you have further questions or comments, please contact Brian Chew at 410-222-7413.

cc: Sterling Seay





## **RECINOS LANDSCAPE & TREE SERVICE**

Stormwater Management Report  
29 Brick Church Rd, Edgewater, MD 21037  
**C2022-0055**

### **Prepared for:**

**Hector Recinos**  
3745 Birdsville Rd,  
Davidsonville, MD 21035



**William Bower, PE, PLS**

MDPE#58591  
MDPLS#21589

### **Prepared by:**

**Atwell, LLC**  
2661 Riva Rd, Bldg 800  
Annapolis, MD 21401

June 20, 2024

## **RECINOS LANDSCAPE & TREE SERVICE**

### **Stormwater Management Report**

#### **TABLE OF CONTENTS**

1.0	Existing Conditions .....	3
1.1	Site description .....	3
1.2	Environmental Features .....	3
1.3	Site outfall(s) .....	3
2.0	Environmental Site Design .....	4
2.1	Concept design .....	4
2.2	ESD <sub>v</sub> Narrative .....	4
2.3	esd <sub>v</sub> computations .....	6
3.0	Quantitative analysis .....	13
3.1	Channel Protection Volume (CP <sub>v</sub> ) .....	13
3.2	Overbank flood protection volume (Q <sub>P</sub> ) .....	13
3.3	Extreme flood volume (q <sub>F</sub> ) .....	13



## **1.0 EXISTING CONDITIONS**

### **1.1 SITE DESCRIPTION**

The subject property is known as 29 Brick Church Rd in Edgewater, MD. It is roughly 9.89 acres in area, and is mapped within the Rural Agricultural zoning district. The property is improved with a residential dwelling, several outbuildings, and a paved driveway. The developed portions of the property are relatively flat, and runoff flows to two intermittent streams along the northern and southern property boundaries. The streams flow in a westerly direction, converging just offsite of the subject property. The areas immediately adjacent to the streams are largely wooded, and therefore, vegetatively stabilized. The improvements are served with private well water, and a private septic system.

### **1.2 ENVIRONMENTAL FEATURES**

The property contains the following environmental features:

- Stream: two branches of the Marriott's Branch stream system are located on the property. The streams flow in a westerly direction, and converge just off-site of the property.

### **1.3 SITE OUTFALL(S)**

The subject property has two Site Outfalls:

- Site Outfall #1 is located along the western property line, toward the southern corner of the property. This discharge leaves the site in a shallow concentrated flow condition, and flows into the nearby unnamed tributary of Marriott's Branch. From there, the stream continues to flow west, eventually merging with another unnamed tributary of Marriott's Branch, until reaching the location chosen as the Point-of-Investigation (POI).
- Site Outfall #2 is also located in the western portion of the property, but northerly of Site Outfall #1. The outfall is fed by an unnamed tributary of Marriott's Branch, similar to Site Outfall #1, and flows in a westerly direction.

The location chosen as the POI is approximately 1200 feet to the west of the subject property, prior to a culvert pipe passing under the adjacent property's driveway. The channel is a well defined parabolic channel with a varying cross-section.

The location of the site outfalls will remain the same in the proposed condition, and while discharge from the site will increase slightly based on ultimate development, the well defined stream sections are stable and have adequate capacity to safely convey any additional flow.

## **2.0 ENVIRONMENTAL SITE DESIGN**

### **2.1 CONCEPT DESIGN**

The subject property consists of 9.89 acres located in the Edgewater area of southern Anne Arundel County. The site is presently used as landscape contractor's yard, farm, residential dwelling, and some outbuildings for the commercial use. An existing gravel driveway provide access via Brick Church Road, a scenic & historic road. The vegetative stabilization of the site is predominately wooded areas along the periphery of the site, and some turf lawn areas around the existing house. The property is irregularly shaped, and existing grades range from 2% or less to 25% or greater in isolated areas near the intermittent streams.

The site is near it's development capacity, and the purpose of this development application is mainly to legalize the existing use. A small outbuilding may, or may not, be built in the future. The driveway widening is only to provide fire truck access. Similarly, the proposed fire suppression tank is being required by the Fire Marshal's office.

### **2.2 ESD<sub>v</sub> NARRATIVE**

The overall concept for stormwater management is minimal, as the proposed impervious surfaces are minimal. The existing site is largely developed. A micro-bioretenention area will manage runoff from the existing driveway, and the proposed barn, if ever built. The following is a summary of all ESD Practices that were considered for the proposed development, and the reasons why the practices were or were not utilized.

#### **A. Alternative surfaces:**

- **Green Roofs** shall not be utilized, as they are not included in the architectural design.
- **Pervious pavements** shall not be utilized for the proposed development. As a landscape contractor's yard the possibility of clogging the surface of the pervious pavement is a concern.

#### **B. Non-Structural Practices:**

- **The Disconnection of Rooftop Runoff** shall not be utilized, as rooftop runoff does not discharge to a vegetatively stabilized area with adequate slope.
- **The Disconnection of Non-Rooftop Runoff** shall not be utilized as the slopes are too great.
- **The Sheetflow to Conservation Areas** shall not be utilized, as there are no conservation easements on the subject property, and none are proposed.

#### **C. Micro-Scale Practices:**

- **Rainwater Harvesting** shall not be utilized as a management practice for this site. No grey water reuse is proposed for this single-



family residential project. Filters and infiltration devices are more appropriate.

- **Submerged gravel wetlands** shall not be utilized as the soils on-site are relatively permeable, especially at depths greater than two feet. SWM filters and infiltration devices would be more appropriate.
- **Landscape infiltration** was considered for this project, but was not utilized. Landscape infiltration devices tend to have a shallower profile than micro-bioretenion systems especially when they are designed with an enhanced filter.
- **Infiltration berms** were not considered for this project, as the surface soil layer is not conducive to infiltration, and impounding impervious runoff in a landscape contractor's yard is not an acceptable design variant.
- **Drywells** shall not be utilized, as managing the runoff from the existing driveway was deemed a higher priority.
- **Micro-Bioretenion** shall be utilized to manage runoff from a portion of the existing driveway.
- **Rain Gardens** shall not be utilized, as the maximum drainage area is too small to be practical. Additionally, rain gardens typically do not have enhanced filters. As previously stated, SWM practices that have a deep enough vertical profile to reach the more permeable substratum of sand loam soils is more appropriate.
- **Swales** shall not be utilized for SWM, as the property naturally sheetflows. Concentrating impervious runoff into a swale would be counter-productive.

The concept of converting filtration devices to **enhanced filters** shall be utilized. The sandy loam substratum of soil is conducive to stormwater infiltration. The enhanced filters are sized to provide the Recharge Volume ( $Re_v$ ) at a minimum.

In conclusion, it is our opinion that the proposed design represents the best solution to overcome the unique complexities inherent in the subject property. Our primary environmental concern is protecting the streams and forested areas. First, we sited the proposed improvements adjacent to the existing development. Next, we graduated to analyzing our stormwater management options. In considering stormwater management, we designed a simple device to treat runoff from the existing impervious surface. Therefore, we feel that the proposed design minimizes the development footprint; maximizes groundwater recharge; captures and treats stormwater runoff to remove non-point pollution; restores, enhances, and maintains the chemical, physical, and biological integrity of receiving waters; protects public health; and enhances domestic, municipal, recreational, industrial, and other uses of water as specified by MDE.

### 2.3 ESD<sub>v</sub> COMPUTATIONS

Environmental Site Design requirements for the proposed development was computed in accordance with Article 16, Title 4 of the Anne Arundel County Code, COMAR 26.17.02, and the Maryland Stormwater Design Manual, Volumes I & II.

Soils in the development area have a types A & B hydrologic classifications; the Target RCN for “woods in good condition” is 47. The proposed imperviousness for the development area (LOD) is 26%. Utilizing Table 5.3 from the State Manual, a target rainfall depth ( $P_E$ ) of 1.6” and a target runoff depth ( $Q_E$ ) of 0.46” were determined. From these initial computations, a minimum Environmental Site Design Volume (ESD<sub>v</sub>) of 935 c.f. of runoff would need to be managed, of which 213 c.f. would need to be Recharge Volume (Rev).

Qualitative stormwater management shall be achieved by installing on micro-bioretenention area to manage runoff from the existing circular parking area. Based on this design a Net  $P_E$  Value of 1.6” was achieved. An ESD<sub>v</sub> of 961 cf is managed via the micro-bioretenention area, of which, 355cf could be counted toward Rev. These values are all greater than the minimums necessary, and therefore demonstrate that ESD has been implemented to the MEP. The proposed development mimics “woods in good condition,” and satisfies channel protection obligations via the Reduced Runoff Curve Number Method.



Designer: WB	Date: June 20, 2024	Checked By	Date:
Title: Recinos Landscape & Tree Service	Job No.: 23007239		
Subject: ESD Design	Sheet No. of		

#### Study Data:

<b>Location 29 Brick Church Rd, Edgewater, MD 21037</b>					
<b>County: Anne Arundel</b>					
Site Area:	430,803 sf	or	9.89 Ac.		
Study Area (A):	24,463 sf	or	0.56 Ac.	<i>LOD from Site Tabulations</i>	
Soils: HSG 'A' =	12,230 sf	or	0.281 Ac.	or	50 % of Site
HSG 'B' =	12,233 sf	or	0.281 Ac.	or	50 % of Site
HSG 'C' =	0 sf	or	0 Ac.	or	0 % of Site
HSG 'D' =	0 sf	or	0 Ac.	or	0 % of Site
New Hard Surfaces =	6,436 sf	or	0.15 Ac.		
Alternative Surfaces =	0 sf	or	0.00 Ac.	<i>NIDE, Chapter 5, Section 5.3</i>	
Disconnections =	0 sf	or	0.00 Ac.	<i>NIDE, Chapter 5, Section 5.4.2</i>	
<b>Impervious Surfaces =</b>	<b>6,436 sf</b>	<b>or</b>	<b>0.15 Ac.</b>		

#### Step 1: Determine ESD Implementation Goals

##### A. Determine Pre-Developed Conditions:

Soil Conditions and RCNs for "woods in good condition"

HSG	RCN*	Area	Percent
A	38	0.28 Ac.	49.99
B	55	0.28 Ac.	50.01
C	70	0.00 Ac.	0.00
D	77	0.00 Ac.	0.00

\* RCN for "woods in good condition" (Table 2-2, TR-55)

\*\* Actual RCN is less than 30, use RCN = 38

**Composite RCN for "woods in good condition"**

$$RCN_{unadj} = [(38 \times 0.28ac) + (55 \times 0.28ac) + (70 \times 0.00ac) + (77 \times 0.00ac)] / 9.89ac$$

$$RCN_{unadj} = 47$$

Target RCN for "woods in good condition" = **47**

##### B. Determine Target $P_E$ Using Table 5.3

$P_E$  = Rainfall used to size ESD practices

**Proposed imperviousness (%I)**

IART (as measured from site plan):

$$\%I = \text{Impervious Area} / \text{Drainage Area} = \frac{6,436 \text{ sf}}{24,463 \text{ sf}} = 26.31 \% = \text{26 \%}$$



- Determine  $P_E$  from Table

Hydrologic Soil Group 'A'										
%I	RCN*	$P_E = 1"$	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	40									
5%	43									
10%	46									
15%	48	38								
20%	51	40	38	38						
25%	54	41	40	39						
30%	57	42	41	39	38					
35%	60	44	42	40	39					
40%	61	44	42	40	39					
45%	66	48	46	41	40					
50%	69	51	48	42	41	38				
55%	72	54	50	42	41	39				
60%	74	57	52	44	42	40	38			
65%	77	61	55	47	44	42	40			
70%	80	66	61	55	50	45	40			
75%	84	71	67	62	56	48	40	38		
80%	86	73	70	65	60	52	44	40		
85%	89	77	74	70	65	58	49	42	38	
90%	92	81	78	74	70	65	58	48	42	38
95%	95	85	82	78	75	70	65	57	50	39
100%	98	89	86	83	80	76	72	66	59	40

Use  $P_E$  = 1.6 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'B'										
%I	RCN*	$P_E = 1"$	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	61									
5%	63									
10%	65									
15%	67	55								
20%	68	60	55	55						
25%	70	64	61	58						
30%	72	65	62	59	55					
35%	74	66	63	60	56					
40%	75	66	63	60	56					
45%	78	68	66	62	58					
50%	80	70	67	64	60					
55%	81	71	68	65	61	55				
60%	83	73	70	67	63	58				
65%	85	75	72	69	65	60	55			
70%	87	77	74	71	67	62	57			
75%	89	79	76	73	69	65	59			
80%	91	81	78	75	71	66	61			
85%	92	82	79	76	72	67	62	55		
90%	94	84	81	78	74	70	65	59	55	
95%	96	87	84	81	77	73	69	63	57	
100%	98	89	86	83	80	76	72	66	59	55

Use  $P_E$  = 1.6 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'C'										
%I	RCN*	P <sub>E</sub> = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	74									
5%	75									
10%	76									
15%	78									
20%	79	<b>70</b>								
25%	80	72	<b>70</b>	<b>70</b>						
30%	81	73	72	71						
35%	82	74	73	72	<b>70</b>					
40%	84	77	75	73	71					
45%	85	78	76	74	71					
50%	86	78	76	74	71					
55%	86	78	76	74	71	<b>70</b>				
60%	88	80	78	76	73	71				
65%	90	82	80	77	75	72				
70%	91	82	80	78	75	72				
75%	92	83	81	79	75	72				
80%	93	84	82	79	76	72				
85%	94	85	82	79	76	72				
90%	95	86	83	80	77	73	<b>70</b>			
95%	97	88	85	82	79	75	71			
100%	98	89	86	83	80	76	72	<b>70</b>		

Use P<sub>E</sub> = 1.6 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'D'										
%I	RCN*	P <sub>E</sub> = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	80									
5%	81									
10%	82									
15%	83									
20%	84	<b>77</b>								
25%	85	78								
30%	85	78	<b>77</b>	<b>77</b>						
35%	86	79	78	78						
40%	87	82	81	79	<b>77</b>					
45%	88	82	81	79	78					
50%	89	83	82	80	78					
55%	90	84	82	80	78					
60%	91	85	83	81	78					
65%	92	85	83	81	78					
70%	93	86	84	81	78					
75%	94	86	84	81	78					
80%	94	86	84	82	79					
85%	95	86	84	82	79					
90%	96	87	84	82	79	<b>77</b>				
95%	97	88	85	82	80	78				
100%	98	89	86	83	80	78	<b>77</b>			

Use P<sub>E</sub> = 1.0 inches of rainfall as the target for ESD implementation

**Compute Composite  $P_E$ :**

HSG	Area	Target $P_E$	Net $P_E$
A	0.28 ac	1.6	$0.28 \text{ ac} \times 1.60 / 0.56 \text{ ac} = 0.8$
B	0.28 ac	1.6	$0.28 \text{ ac} \times 1.60 / 0.56 \text{ ac} = 0.8$
C	0.00 ac	1.6	$0.00 \text{ ac} \times 1.60 / 0.56 \text{ ac} = 0.0$
D	0.00 ac	1.0	$0.00 \text{ ac} \times 1.00 / 0.56 \text{ ac} = 0.0$
			<b>Composite <math>P_E = 1.6</math></b>

**C. Compute  $Q_E$ :**

$Q_E$  = Runoff depth used to size ESD practices

$Q_E = P_E \times R_V$ , where:

$P_E = 1.6 \text{ in.}$  (from above)

$R_V = 0.05 + (0.009)(I)$ ;  $I = 26.31 \%$

$= 0.05 + 0.009 \times (26.31)$

$= 0.29$

$Q_E = 1.6 \text{ " } \times 0.29$

$= 0.5 \text{ inches}$

**ESD Target for the Project**

$P_E = 1.6 \text{ inches}$  (Composite  $P_E$ , from above)

$Q_E = 0.5 \text{ inches}$

**D. Compute Minimum  $ESD_V$  &  $Re_V$  for Site:**

**Required Environmental Site Design Volume ( $ESD_V$ ) for Drainage Area:**

$$ESD_V = [(P_E) \times (R_V) \times (LOD)] / 12$$

$P_E = 1.6 \text{ in.}$  (Composite  $P_E$ , from above)

$R_V = 0.29$  (from  $Q_E$ , above)

Study Area (A) = 24,463 sf or 0.56 ac (LOD from Site Table)

$$\text{Target } ESD_V = [(1.60 \text{ in.}) \times (0.29) \times (24,463 \text{ sf})] / 12 =$$

**935 cf**

**Required Minimum Recharge Volume ( $Re_V$ ) for Site:**

$$Re_V = [(S) \times (R_V) \times (LOD)] / 12$$

Where:

Composite 'S'	HSG	Area	Recharge Factor	Net 'S'
	A	0.28 ac	0.42	$0.28 \text{ ac} \times 0.42 / 0.56 \text{ ac} = 0.21$
	B	0.28 ac	0.29	$0.28 \text{ ac} \times 0.29 / 0.56 \text{ ac} = 0.15$
	C	0.00 ac	0.14	$0.00 \text{ ac} \times 0.14 / 0.56 \text{ ac} = 0.00$
	D	0.00 ac	0.08	$0.00 \text{ ac} \times 0.08 / 0.56 \text{ ac} = 0.00$
				<b>Composite 'S' = 0.36</b>

$R_V = 0.29$  (from  $ESD_V$ , above)

Study Area (A) = 24,463 sf or 0.56 ac (LOD from Site Table)

$$\text{Min. } Re_V = [(0.36) \times (0.29) \times (24,463)] / 12 =$$

**213 cf**



**M-6A SD Practice M-6 Micro-Bioretenction A**

$$\text{Contributing Drainage Area (DA)} = 14,450 \text{ sf or } 0.33 \text{ Ac.}$$

$$\text{Impervious Surfaces in DA} = 4,208 \text{ sf or } 0.1 \text{ Ac.}$$

$$\%I = 4,208 \text{ sf} / 14,450 \text{ sf} = 29 \%$$

$$\text{Minimum Surface Area (A}_s\text{)} = 2\% \text{ of contributing DA}$$

$$14,450 \text{ sf} \times 0.02 = 289 \text{ sf MINIMUM}$$

$$\text{Surface Area (A}_s\text{)} = 296 \text{ sf}$$

**ESD<sub>v</sub> Concept Design Estimate:**

$$\text{ESD}_v = [(P_c) \times (R_v) \times (\text{DA})] / 12$$

$$\text{where: } P_c = 15 \text{ in} \times (\text{A}_s / \text{DA}) \text{ (Eqn. 5.2, HDS)}$$

$$= 15 \text{ in} \times (296 \text{ sf} / 14,450 \text{ sf})$$

$$P = 0.31 \text{ in (Concept Design Estimate)}$$

$$R_v = 0.05 + (0.009 \times \%I)$$

$$= 0.05 + (0.009 \times 29\%)$$

$$= 0.31$$

$$\text{ESD}_v = (0.31 \text{ in.} \times 0.31 \times 14,450 \text{ sf}) / 12$$

$$= 116 \text{ cf (Concept Design Estimate)}$$

$$\text{Re}_v = [(S) \times (R_v) \times (\text{DA})] \text{ if } P_c \geq S$$

$$S = 0.36 \text{ (Compare to } S' \text{ from site computation)}$$

$$\text{Re}_v = [(0.36) \times (0.31) \times (14,450 \text{ sf})] / 12 = P_c < S$$

$$= 0 \text{ cf}$$

$$\text{Maximum Allowable ESD}_v = (2.7 \text{ in.} \times 0.31 \times 14,450 \text{ sf}) / 12$$

$$= 1,008 \text{ cf based on 1 yr design storm}$$

**ESD<sub>v</sub> based on volume stored****Micro-Bioretenction Design:**

$$\text{Filter Media Depth} = 3.25 \text{ ft (planting grid + 3" mulch)}$$

$$\text{Pea Gravel Depth} = 0.50 \text{ ft (6" of #4 gravel)}$$

$$\text{Gravel} = 0.00 \text{ ft (0" of #57 gravel (check, under drain layer)}$$

$$\text{Media Porosity} = 0.4$$

$$\text{Media Storage Volume} = [296 \text{ sf} \times (3.25 \text{ ft} + 0.50 \text{ ft} + 0.00 \text{ ft}) \times 0.4]$$

$$= 444 \text{ cf}$$

$$\text{Ponding Depth} = 0.50 \text{ ft}$$

$$\text{Side Slopes} = 3:1$$

$$\text{Max. Water Surface Area} = 350 \text{ sf}$$

$$\text{Ponding Storage Volume} = [(350 \text{ sf} + 296 \text{ sf} / 2) \times 0.50 \text{ ft}]$$

$$= 162 \text{ cf}$$

$$\text{Total Storage provided} = 444 \text{ cf} + 162 \text{ cf}$$

$$= 606 \text{ cf}$$

$$P_c \text{ Provided} = (\text{ESD}_v \times 12) / (R_v \times D) \text{ Based on ESD}_v \text{ stored}$$

$$= (606 \text{ cf} \times 12) / (0.31 \times 14,450 \text{ sf})$$

$$= 1.62 \text{ n.}$$

$$\text{ESD}_v \text{ Provided} = 606 \text{ cf}$$

**M-9A SD Practice M-9 Enhanced Filter A**

$$\text{Enhanced Filter Area} = 296 \text{ sf}$$

$$\text{Enhanced Filter Depth} = 3 \text{ ft (R2 Gravel)}$$

$$\text{Gravel Porosity} = 0.4$$

$$\text{Storage Provided} = 355 \text{ cf}$$

$$P_c \text{ Provided} = (\text{ESD}_v \times 12) / (R_v \times D) \text{ Based on storage provided}$$

$$= (355 \text{ cf} \times 12) / (0.31 \times 14,450 \text{ sf})$$

$$= 0.94 \text{ n.}$$

$$\text{ESD}_v \text{ Provided} = 355 \text{ cf (Combined ESD}_v \text{ of filter + enhanced filter cannot exceed 1,008 cf)}$$

### Microscale & Non-Structural Practices

DA #	ESD Practice	DA	ESD <sub>y</sub>	Rev	P <sub>E</sub> Value	Q <sub>p</sub> Storage	Total Storage
	Micro-Bioretentation A	14,450 sf	606 cf	0 cf	1.62 in.	0 cf	606 cf
	Enhanced Filter A	14,450 sf	355 cf	355 cf	0.95 in.	0 cf	355 cf
Provided Totals:			961 cf	355 cf		0 cf	961 cf
Targets:			935 cf	213 cf	1.6 in.		
$P_E \text{ Achieved} = (12 \times ESD_y) / (R_v \times A) = (12 \times 961 \text{cf}) / (0.29 \times 24,463 \text{sf}) = 1.6 \text{ in.}$							

### **3.0 QUANTITATIVE ANALYSIS**

#### **3.1 CHANNEL PROTECTION VOLUME ( $CP_v$ )**

Management of the Channel Protection Storage Volume ( $CP_v$ ) is not necessary, as the micro-scale practice manages the target  $P_E$ , and therefore channel protection obligations are met through the Reduced Runoff Curve number Method.

#### **3.2 OVERBANK FLOOD PROTECTION VOLUME ( $Q_P$ )**

Management of the Overbank Flood Protection Volume ( $Q_P$ ) is not necessary. All Site Outfalls are adequate, as the stream channels have the capacity to accommodate the additional runoff from ultimate development. Additionally, all Site Outfalls are stable and show no signs of flooding, sedimentation, or erosion.

#### **3.3 EXTREME FLOOD VOLUME ( $Q_F$ )**

Management of the Extreme Flood Volume ( $Q_F$ ) is not necessary. All Site Outfalls are adequate, stable and show no signs of flooding, sedimentation, or erosion. There are no floodplains affecting the property.



