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Civil Engineering

ZONING MAP AMENDMENT (202300004)

TO: Rebecca Ragsdale
Planning Manager
Albemarle County Community Development

FROM: Kendra Moon, PE
Line and Grade Civil Engineering

DATE: May 15, 2023
Revised September 5, 2023
Revised October 27, 2023
Revised November 3, 2023

RE: Cornerstone Community Church
Zoning Map Amendment Application

PROJECT DETAILS

Applicant:	Cornerstone Community Church | Tony Schiavone, Lead Pastor
Consultant:	Line and Grade Civil Engineering | Kendra G. Moon, PE
Name of Project:	Cornerstone Community Church
Short Description:	Rezoning of R1 to C1 for religious assembly and office use
Proposed Site:	1395 Stony Point Road, Charlottesville, VA 22911

PROPERTY DETAILS

Parcel ID Number:	07800-00-00-058K0
Short Parcel ID:	78-58K
Total Acres:	3.58 ac
Owner:	James A Dettor Jr. and Peggy W Dettor
Current Tenant:	Single family residential
Magisterial District:	Rivanna
Zoning:	R1 Residential
Proffered:	No
Overlays:	EC, Dam Break Inundation Zone, FHO, Scenic Byway, *Pending: WPO Buffer*
Comprehensive Plan Area:	Neighborhood 3- Pantops
Comprehensive Plan Use:	Parks and Green Systems
Comprehensive Plan Use:	Urban Density Residential
Land Use:	Single family residential
Surrounding Uses:	Mixed commercial and residential to north; multifamily residential to east; commercial to south and west

EXECUTIVE SUMMARY

Cornerstone Community Church (CCC) would like to formally request a Zoning Map Amendment (ZMA) from R1 to C1 at parcel 78-58K in Albemarle County, Virginia. The subject parcel has long been a single-family residential property owned by the Dettor family. Recently the church has put the property under contract for purchase as a part of the church's intention to relocate their community's primary place of congregation. Given the context of this parcel's location, the proposed ZMA is consistent with the Comprehensive Plan and is of no substantial detriment to surrounding parcels or public facilities.

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Site Mapping

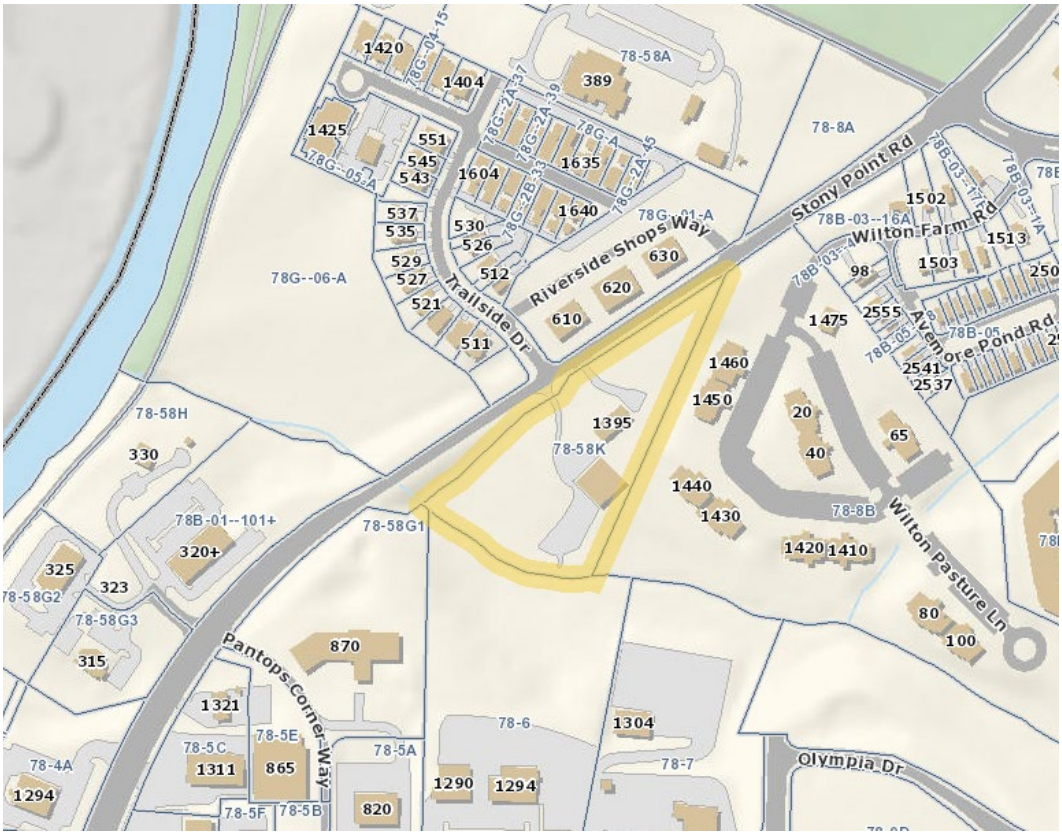


Image 1 – Subject parcel, source: Albemarle County GIS



Image 2 – Aerial image showing parcel in context, source: Google

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BACKGROUND

The subject property is currently an R1 zoned parcel with an existing single-family residence, located on the east side of Stony Point Road just across from a mixed-use development known as Riverside Village. There are currently four structures on site including a house, a carport, a large garage[1], and a frame shed (see 2020 Topographic Survey, Appendix A). The site also has a large gravel lot and two entrances to the property off Stony Point Road, with an existing left turn lane for the northern-most entrance. The property is served by private well and public sewer, and it is within the Entrance Corridor Overlay district and the Flood Hazard Overlay district. However, there are pending changes related to the flood hazard limits and stream buffers that are notable.

FLOOD HAZARD LIMITS

Although the current GIS floodplain limits are shown to reach onto this property, FEMA's recently released Draft Flood Hazard Limits shows the revised 100-yr floodplain not encroaching beyond Stony Point Road, rendering this property entirely outside the limits of this overlay once adopted.

WATER PROTECTION ORDINANCE (WPO) BUFFER

The County recently conducted an onsite evaluation of the stream at the south of this property and found it to be perennial (see County Stream Evaluation, Appendix D). Therefore, per County code section 17-600, a stream buffer shall be established. Although GIS has not yet been updated to show this buffer, this application considers it to be established and has included it in the Site Development Diagram which is to be proffered as part of this application, see Appendices B and D. Note that the existing gravel parking lot encroaches within 15 ft of the stream, but this proffer will remove parking from the stream buffer entirely. An additional proffer has been included to provide a mitigation plan for the disturbed areas within the stream buffer.

PROPOSAL

Cornerstone Community Church is in need of a permanent home, as they are currently leasing space from the Stonefield Regal Cinemas to host their services. The rezoning of the subject property to C1 Commercial will help to facilitate their near-term and long-term goals as a pillar of the community. The church foresees that they will 'grow into' the property in phases.

PHASE 1

In the first phase, Cornerstone will mostly use the site as-is with minimal improvements required to account for the increased use of the site. The existing carport and frame shed will be removed, along with the rear 27 feet of the garage structure. The remaining portion of the garage will be retrofit for church seating, the residence may be used for an employee dwelling (a parsonage, of sorts) or for youth group meetings, the existing parking lot will removed from within the stream buffer and expanded in areas outside of the stream buffer, public water will be brought to the site, stormwater management improvements will be made, and the northern-most entrance to the site will be closed. This phase will allow for the church to settle into a permanent location and stabilize their congregation after this move.

PHASE 2

Phase 2 is a vision for the future of what the site can become. Currently envisioned is an expansion to the church (current garage) structure, an additional office/commercial building up to 3-stories, outdoor recreational areas, and expanded parking. Please see the Site Development Diagram in Image 3 below for proposed general locations of buildings and parking areas. Parking is largely intended to be located to the side of the buildings in accordance with Entrance Corridor guidelines; however, the parking and building envelopes overlap to allow for limited handicap spaces or drive aisles to be included between buildings as necessary. The exact future uses and partnership opportunities for the site are not yet known, which is why the church would like to keep their options open with a C1 zoning designation (see Future Uses in the next section for more information). It is anticipated that these uses will be missional and focused on making a positive impact on the surrounding community.

[1] It is worth noting that the existing garage has been built within the required R1 rear setback for accessory structures, and that it has an enclosed addition for which there is no record of a building permit.

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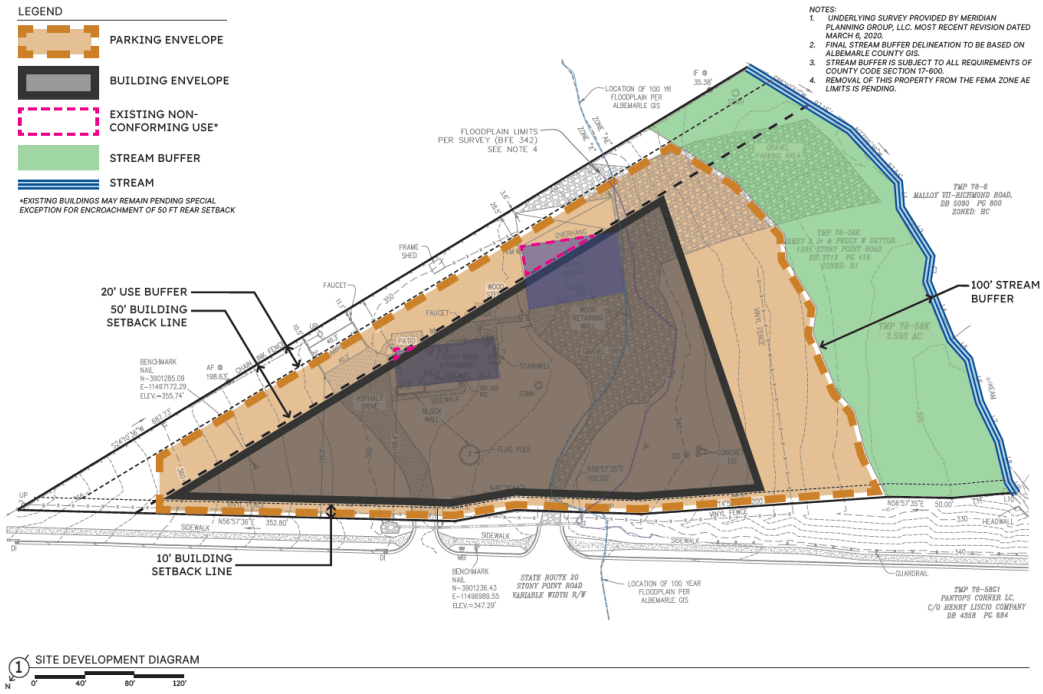


Image 3 – Site Development Diagram

Special Exception

With a rezoning to C1, the remaining garage structure and residence will be in violation of the required 50 ft rear setback adjacent to residential parcels. A special exception is requested alongside this application to reconcile the noncompliant rear setbacks of these existing building locations. Please see the special exception request for more information.

Shared Parking Agreement

This site is limited in its availability for parking due to the stream buffer, existing building locations, and desirable parking placement to the side rather than the front of buildings. It is acknowledged that a shared parking agreement will be needed in the future for the addition of a commercial or office building, as there is not enough space on site to meet the needs of the church *and* an office. However, the peak use of an office/commercial building and church do not coincide, as an office/commercial building will typically be used 8am to 6pm during the weekdays or on Saturdays, while the peak use of the church will be on Sundays. This is seen as a beneficial arrangement to reduce unnecessary paved areas. In the future if a more parking-intensive use is proposed, a parking exception will be required.

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The subject parcel is designated as both Urban Density Residential and Parks & Green Systems within the Pantops Master Plan. Additionally, it is located within a designated Neighborhood Service Center. Refer to Image 4, below.

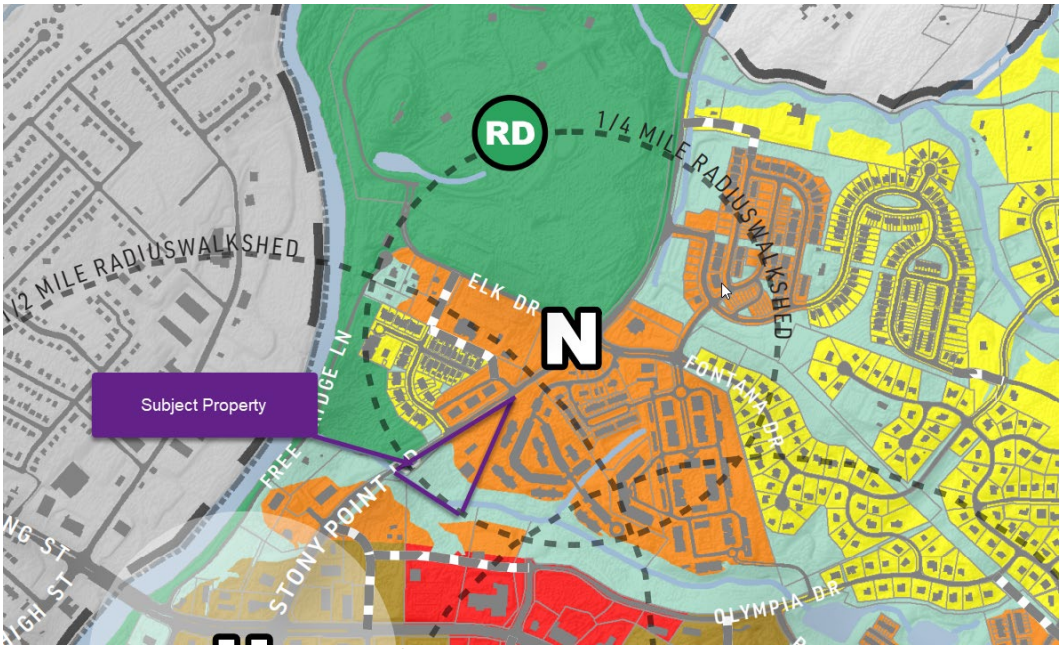


Image 4 - Comprehensive plan designation of subject property, source: Pantops Master Plan 2019

We will start by analyzing the consistency with the Urban Density Residential and Neighborhood Service Center designations, and the Parks & Green Systems designation will be discussed separately. The proposed uses and form are consistent with guidelines for these designations.

Future Uses

Religious assembly is one of the primary uses designated within Urban Density Residential zones, with office as a secondary use. While the current proposal is for a church and future office building, it is acknowledged that a rezoning to C1 would allow for any of the by-right uses to be built in the future should the church sell this property or lease space to another business to help fund their expansion. There are a few uses that are not apparently consistent with the Comprehensive Plan and will be proffered out. Please refer to the Future Use Table in Appendix B for a complete list of by-right uses in C1 zoning, with the strikethrough indicating uses the applicant commits to not including as a considered land use. In general, uses that are not to be proposed on this site are those that are not walkable (e.g., furniture store) or are out of scale for a neighborhood center (e.g., indoor theaters).

The uses that are included are consistent with the comprehensive plan in that they are walkable and small-scale uses that support day-to-day activities within a neighborhood.

Standards of Development

The development will follow guidance from the Comprehensive Plan, Entrance Corridor guidelines, and Zoning Ordinance in terms of setbacks (with the exception of the existing structures to remain), required tree canopy coverage, building massing, and proportions. A maximum building height of 45 ft is proposed for the site (see draft proffer statement). The maximum building footprints planned are below 25,000 sf per guidance from the Comprehensive Plan, and new building(s) are proposed to be built along Stony Point Road so that there is potential for future commercial or retail space to serve the community. Only the building height is proffered, not the size, as the site constraints will naturally limit the size of the building on this property. Given the triangular shape of the parcel, the setbacks, and the limited availability for both buildings and parking, not to mention Entrance Corridor guidelines for the acceptable locations of parking, it is highly unlikely that any single building will exceed a 25,000 sf footprint.

Parks and Green Systems

Parks & Green Systems are identified as an additional Comprehensive Plan land use on this parcel, though no public parks or pedestrian connections are identified within this site. As the Parks & Green Systems areas are currently mapped, the development is not consistent with this designation. A portion of an

existing building and the parking lot are both proposed within this district. However, it is highly likely that the delineation of this district will change in the near future. The district was created to coincide with sensitive environmental features such as stream buffers, floodplains, and steep slopes. Currently the Parks & Green Systems designation coincides entirely with FEMA's 2005 floodplain limits (see Appendix C for 2005 FEMA map), but this designation is not consistent with the current FEMA Draft Flood Hazard Limits which will soon replace the current FEMA maps once approved (see Image 5, below).

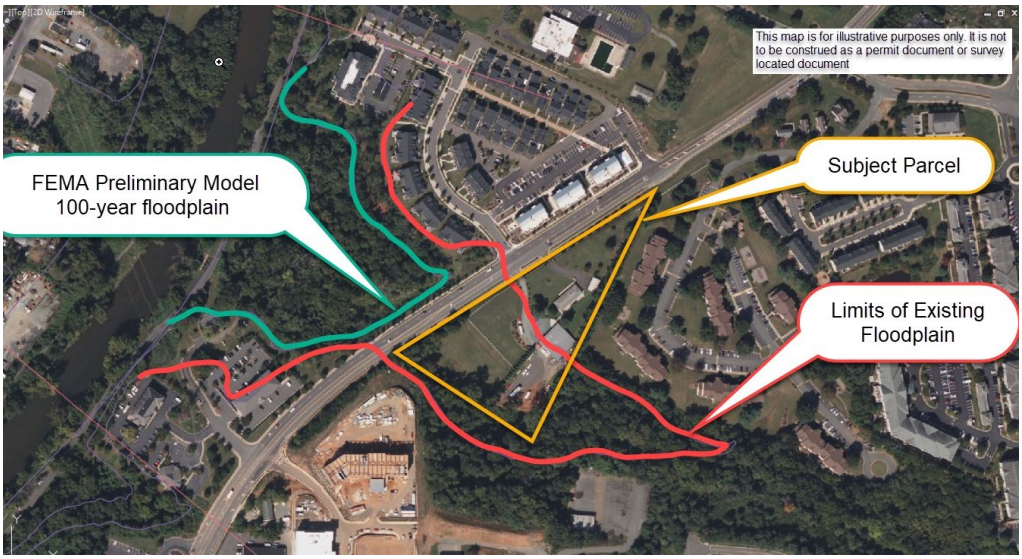


Image 5 – Sketch of existing versus proposed FEMA floodplain limits

In 2022 FEMA shared their Draft Flood Hazard Limits with jurisdictions and industry professionals. This update to the flood mapping removes the subject parcel from the 100 yr floodplain entirely. The revised flood limits are still awaiting a Letter of Final Determination from FEMA, at which point the Board has 60 days to adopt the revised limits. The exact timeline of this process is not known, though it is expected to be complete by 2024.

There is no reason to believe that FEMA's draft floodplain limits will significantly change before approval, it is just a matter of timing. This application assumes that the Flood Hazard Overlay will be removed from this parcel, and therefore the Parks & Greens Systems designation will be revised to coincide only with the new stream buffer limit. At that point, this plan will be in full compliance with the Comprehensive Plan.

Impacts on Public Safety Facilities, Public Transportation, Public Schools, Public Parks, Environmental Features, and Adjacent Properties

The proposed uses and future uses for this site are not expected to have a negative impact on public facilities or surrounding properties beyond the baseline impacts that are involved in any development (e.g., increased traffic, land disturbance). Potential impacts are evaluated in turn below.

IMPACT ON PUBLIC FACILITIES AND INFRASTRUCTURE

No negative impact is anticipated on public schools, parks, or safety facilities. There are two Montessori Schools along Stony Point Road, Darden Towe Park, and no safety facilities in the immediate vicinity. If anything, the possibility of small commercial or retail establishments within walking distance to these locations is a net positive.

Though this development may inherently increase the potential need for fire rescue response by an increase of density, the expansion of public water to this site helps to mitigate impacts. A new hydrant will be installed in front of the site, and the new buildings and water supply will comply with the International Fire Code.

Impacts to public water and sewer include the phased extension of ACSA's existing water main for the site to connect to public water, as mentioned, and an increased sewage flow to ACSA's existing sanitary line through the site. Conservative estimates of sewage demands (water demands can be

assumed approximately the same) are included in the table below. Please note that these demands are not cumulative but are examples of demands of the various uses that could be built on this site.

Table 1. Estimated Sewage Flows of Various Uses

Sewage Flows			
USE	DESIGN UNIT	QUANTITY	FLOW PER USE (GPD)
Church[2]	5 GPD per seat	300	1500
Office	15 GPD per person	135	2025
Schools (Daycare)	10 GPD per person	30	300
Shopping Centers	200 GPD per 1,000 SF	8	1600

1. Sewage flows estimated based off of 12VAC5-610-670.
2. Church is not included as a use on this list. Auditorium type theater was used instead, though this is conservative since the church currently only hosts one service on Sunday.

An increase in traffic is anticipated on this site. The current use as a single-family residence is estimated to generate 10-15 trips per day, though the proposed use as an office is estimated to generate 146 trips per day[2].

Potential future uses may generate more traffic for the site, with the highest trip generation likely being a pharmacy. See Table 2 below for potential future uses and their corresponding trip generations.

Table 2. ITE Trip Generation data for various possible uses

11TH EDITION TRIP GENERATION DATA				WEEKDAY TRAFFIC										
					AM PEAK HOUR ADJ. STREET TRAFFIC					PM PEAK HOUR ADJ. STREET TRAFFIC				
USE DESCRIPTION	ITE CODE	UNITS	QTY OF UNITS	VEHICLES PER DAY	% IN	% OUT	IN	OUT	TOTAL TRIPS	% IN	% OUT	IN	OUT	TOTAL TRIPS
General Office	710	1,000 sf GFA	13.5	**146**	88%	12%	18	3	**21**	17%	83%	3	16	**19**
Church	560	1 Seat	300	**270**	60%	40%	13	8	**21**	45%	55%	14	16	**30**
POSSIBLE FUTURE USES BELOW														
Hardware/Paint Store	*816*	*1,000 sf GFA*	*8*	***65***	*54%*	*46%*	*4*	*3*	***7***	*46%*	*54%*	*11*	*13*	***24***
Pharmacy	*880*	*1,000 sf GFA*	*8*	***721***	*65%*	*35%*	*15*	*9*	***24***	*49%*	*51%*	*33*	*35*	***68***
Walk-in Bank	*911*	*1 Employee*	*5*		*52%*	*48%*	*14*	*12*	***26***	*51%*	*49%*	*16*	*15*	***31***
Nursery (Garden Center)	*817*	*1,000 sf GFA*	*8*	***545***	-	-	-	-	***19***	-	-	-	-	***56***

Note: Gross floor area is assumed based on the maximum footprints suggested in the Comp Plan. Some uses are assumed to have only one story, while others are assumed to have multiple stories. Office and church sizes are shown per the current proposed concept plan.

A right and left turn lane warrant analysis were performed for this site based on the proposed office and church use, and it was found that no right turn lane or taper is warranted, though a left turn lane is warranted and is already existing.

IMPACT ON PUBLIC TRANSPORTATION

There is no impact on public transportation foreseen with this application. A transit stop exists just northeast of this site along Stony Point Road, and another southwest of this site. No additional transit stops are necessary.

IMPACT ON ENVIRONMENTAL FEATURES

The site is bordered to the southwest by a stream, which is a sensitive environmental feature that the proposed project will protect. A 100 ft stream buffer will be established, which is a significant improvement over the current non-existent stream buffer. The existing gravel parking lot within the limits of the stream buffer will be removed and replanted (see proffer statement).

The redesignation of this property from the floodplain limits has already been discussed, and the property has already been cleared of trees, so there are few existing trees to protect. Additional trees will be planted following the site plan phase to bring the site into compliance with screening, parking lot landscaping, and minimum tree canopy requirements, which will be a net positive impact on the environment.

[2] This is assuming that the church continues to only operate on Sunday and is omitted from the weekday trip generation calculations. If weekday services were to occur, the estimated daily trips for the site would be 416 trips per day.

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IMPACT ON ADJACENT PROPERTIES

Two of the adjacent properties are zoned Highway Commercial and are currently used for commercial purposes. This development will have a lighter footprint than both of those properties and is currently separated from the properties by a fair amount of vegetation, so no impact is anticipated. The third adjacent parcel is a multifamily residential property, which will be separated by a required use buffer, existing vegetation, and proposed screening near the current garage structure. Given the relatively low-impact uses proposed on this parcel, no impact is anticipated to adjacent residences.

List of Appendices:

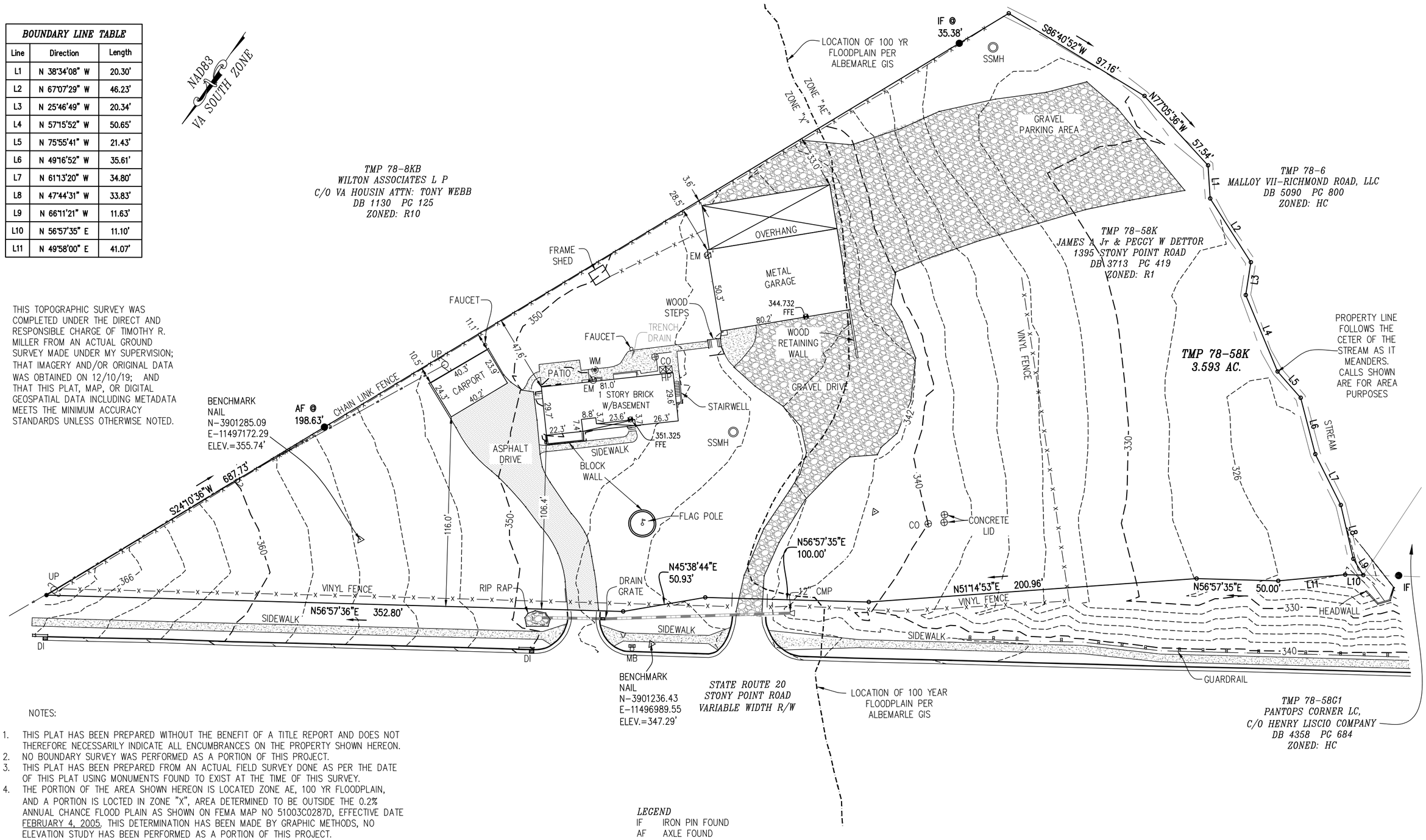
Appendix A: 2020 Topographic Survey
Appendix B: Future Use Table
Appendix C: 2005 FEMA Floodplain Map
Appendix D: County Stream Evaluation

Appendix A

2020 Topographic Survey

BOUNDARY LINE TABLE		
Line	Direction	Length
L1	N 38°34'08" W	20.30'
L2	N 67°07'29" W	46.23'
L3	N 25°46'49" W	20.34'
L4	N 57°15'52" W	50.65'
L5	N 75°55'41" W	21.43'
L6	N 49°16'52" W	35.61'
L7	N 61°13'20" W	34.80'
L8	N 47°44'31" W	33.83'
L9	N 66°11'21" W	11.63'
L10	N 56°57'35" E	11.10'
L11	N 49°58'00" E	41.07'

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF TIMOTHY R. MILLER FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON 12/10/19; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS THE MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.



NOTES:

1. THIS PLAT HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT THEREFORE NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY SHOWN HEREON.
2. NO BOUNDARY SURVEY WAS PERFORMED AS A PORTION OF THIS PROJECT.
3. THIS PLAT HAS BEEN PREPARED FROM AN ACTUAL FIELD SURVEY DONE AS PER THE DATE OF THIS PLAT USING MONUMENTS FOUND TO EXIST AT THE TIME OF THIS SURVEY.
4. THE PORTION OF THE AREA SHOWN HEREON IS LOCATED ZONE AE, 100 YR FLOODPLAIN, AND A PORTION IS LOCTED IN ZONE "X", AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN AS SHOWN ON FEMA MAP NO 51003C0287D, EFFECTIVE DATE FEBRUARY 4, 2005. THIS DETERMINATION HAS BEEN MADE BY GRAPHIC METHODS, NO ELEVATION STUDY HAS BEEN PERFORMED AS A PORTION OF THIS PROJECT.
5. OWNER OF RECORD: JAMES A Jr & PEGGY W DETTOR
6. SOURCE OF TITLE: DB 3713 PG 419
7. VERTICAL DATUM: NAVD 88
8. CONTOUR INTERVAL: 2 FOOT

LEGEND

IF	IRON PIN FOUND
AF	AXLE FOUND
IS	IRON PIN SET
DI	DRAINAGE INLET
CO	SANITARY CLEAN-OUT
EM	ELECTRIC METER
HP	HEAT PUMP
OHE	OVERHEAD ELECTRIC
UP	UTILITY POLE
WM	WATER METER
SSMH	SANITARY SEWER MANHOLE
MB	MAILBOX

40 0 40 80 120
SCALE: 1"=40'

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COMMONWEALTH OF VIRGINIA
TIMOTHY RAY MILLER
Lic. No. 2065
3/6/20
LAND SURVEYOR

PHYSICAL AND TOPOGRAPHIC SURVEY
TAX MAP 78 PARCEL 58K
1395 STONY POINT ROAD
COUNTY OF ALBEMARLE, VA
SHEET: 1 of 1
DATE: DECEMBER 10, 2019
REVISED: FEBRUARY 05, 2020
REVISED: MARCH 06, 2020
FILE: TMP 78-58K-TOPO.DWG

Appendix B

Future Use Table

FUTURE USE TABLE

**Strikethrough indicates uses that will not be allowed on this site*

Sec. 22.2.1 - By right

a. Retail sales and service establishments

1 Antique, gift, jewelry, notion and craft shops.
2 Clothing, apparel and shoe shops.
3 ~~Department store.~~
4 Drug store, pharmacy.
5 Florist.
6 Food and grocery stores including such specialty shops as bakery, candy, milk dispensary and wine and cheese shops.
7 ~~Furniture and home appliances (sales and service).~~
8 Hardware store.
9 Musical instruments.
10 Newsstands, magazines, pipe and tobacco shops.
11 Optical goods.
12 Photographic goods.
13 Visual and audio appliances.
14 Sporting goods.
15 Retail nurseries and greenhouses.
16 Farmers' markets (reference 5.1.47).
17 ~~Laboratories/Research and Development/Experimental Testing; gross floor area of the establishment does not exceed 4,000 square feet per site; provided that the gross floor area of the establishment may exceed 4,000 square feet per site by special exception approved by the board of supervisors.~~
18 ~~Manufacturing/Processing/Assembly/Fabrication and Recycling; gross floor area of the establishment does not exceed 4,000 square feet per site; provided that the gross floor area of the establishment may exceed 4,000 square feet per site by special exception approved by the board of supervisors.~~
19 ~~Drive-through windows (reference 5.1.60). (Added 3-2-16)~~

b. Services and public establishments

1 Offices.
2 Barber, beauty shops.
3 Religious assembly use, cemeteries. (Amended 8-9-17)
4 Clubs, lodges (reference 5.1.02).
5 Financial institutions.
6 Fire and rescue squad stations (reference 5.1.09).
7 Funeral homes.
8 Health spas.
9 ~~Indoor theaters.~~
10 ~~Laundries, dry cleaners.~~
11 Laundromat (provided that an attendant shall be on duty at all hours during operation).
12 Libraries, museums.
13 Child day centers (reference 5.1.06).
14 (Repealed 2-6-19)
15 Tailor, seamstress.
16 (Repealed 2-6-19)
17 Water, sewer, energy and communications distribution facilities.
18 Public uses (reference 5.1.12).
19 Temporary construction headquarters and temporary construction storage yards (reference 5.1.18).
20 Dwellings (reference 5.1.21).
21 (Repealed 4-3-13)
22 ~~Automobile, truck repair shop excluding body shop.~~
23 Temporary industrialized buildings (reference 5.8).
24 Indoor athletic facilities.
25 (Repealed 5-5-10)
26 Stormwater management facilities shown on an approved final site plan or subdivision plat.
27 Tier I and Tier II personal wireless service facilities (reference 5.1.40).

c. If served by public water or approved central water supply

1 ~~Automobile service stations (reference 5.1.20).~~
2 Convenience stores.
3 Restaurants.

d. Uses permitted by right in the Rural Areas (RA) district pursuant to section 10.2.1, provided that the use is not served by either public water or an approved central water supply.

e. Any use listed in subsections 22.2.1(a)—(c) not served by either public water or an approved central water supply, provided that: (i) the use is within a structure lawfully existing or vested on February 6, 2019; (ii) no external change on the property occurs other than maintenance or signage changes; and (iii) the use is not subject to a special use permit issued under subsection 22.2.2(11).

Appendix C

2005 FEMA Floodplain Map

National Flood Hazard Layer FIRMette

FEMA

78°27'22"W 38°2'27"N



78°26'44"W 38°1'59"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/8/2023 at 2:43 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix D

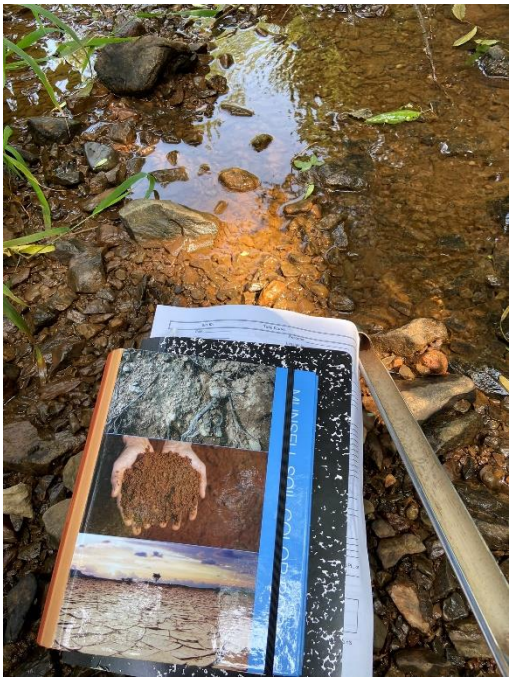
County Stream Evaluation

RE ZMA202300004 – Cornerstone Community Church. Perennial stream indicators suggest presence of a perennial stream E of Rt. 20 extending upstream. Features: bed /bank, riffle-pool sequence, .25-.5’ depth

photos: 7/26 – last precipitation, 7/21/23, 0.04”. No measurable precipitation 7/22-7/26. Fairfax score =33.

(Source met data: National Weather Service)









photos: 7/26 – last precipitation, 7/21/23, 0.04”.

No measurable precipitation 7/22-7/26.









Indicators suggest presence of perennial stream at *west inset* *between* Pewter Ct. and Olympia Drive.

Features: Wet Pond Outfall (WPO), GSP (Groundwater seep or spring, immediately left of WPO; perennial indicators =26.5 score @ WPO location), PIC (photos), WTL (wetland or marshy area approx. 50' above /left of WPO /appears perennial), HCT (headcut; minor, left of WPO), FSH (fish, ~4" length), RRC (riprap channel at WPO plunge pool, then natural, facing downstream). Area wooded. 0.25-.5' depth, width varies: 5' – 20'.

photos: 7/26 – last precipitation, 7/21/23, 0.04". No measurable precipitation 7/22-7/26.









photos: 7/26 – last precipitation, 7/21/23, 0.04".

No measurable precipitation 7/22-7/26.

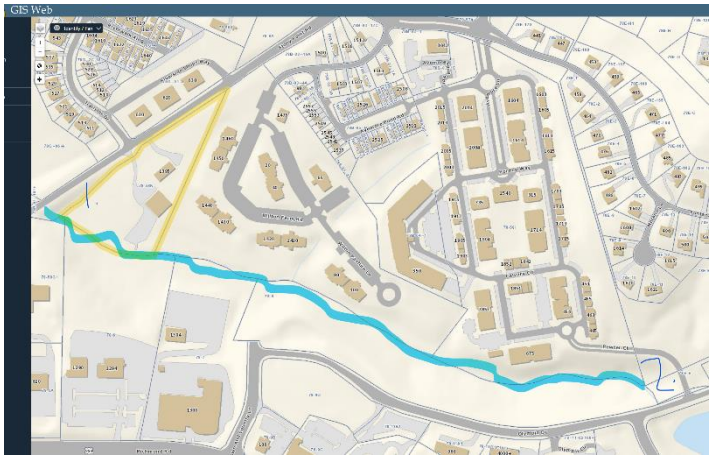
Image lower right (GIS): **1.** is location near Rt. 20; **2.** is location near Pewter Ct.-Olympia Drive. 7/26/23 Alb. County field evaluation appears to indicate perennial stream present along blue highlight, image lower right.

Fairfax county protocol field sheets, attached.









@ TCT. 20 (DOWNSTREAM)

Site ID: ZAN 2023.4 **Total Score:** 33

Date: 7.26.23 Recorder: JOHN ANDERSON

Time: 4:00 PM Evaluators: JOHN ANDERSON

ALBEMARLE COUNTY

Field Indicators:

I.) Streamflow and Hydrology	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall	0	1	2	(3)
2.) Presence of high groundwater table or seeps and springs	0	1	2	3
3.) Leaflitter in streambed	1.5	1	0.5	0
4.) Drift lines	0	0.5	1	1.5
5.) Sediment on debris or plants	0	0.5	1	1.5

Total Streamflow and Hydrology Points: 7.5

II.) Geomorphology	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0	1	2	(3)
2.) Substrate Sorting (USDA texture in streambed)	0	1	2	(3)
3.) Natural Levees	0	1	2	(3)
4.) Sinuosity	0	(1)	2	3
5.) Active or Relic Floodplain	0	1	2	(3)
6.) Braided Channel	0	(1)	2	3
7.) Recent Alluvial Deposits	0	1	(2)	3
8.) Bankfull Bench present	0	1	2	(3)
9.) Continuous Bed and Bank	0	1	2	(3)
10.) 2nd order or greater **channel** present	***Yes*** = 3		***No*** = 0	

Total Geomorphology Points: 22

NOTE: WOOD REMOVED — SOME FINE SUBSTRATE

III.) Streambed Soils				
1.) Redoxomorphic features present in sides of channel or head cut.	***Present*** = 0		***Absent*** = 1.5	
2.) Chroma	gleyed = 3	1 = 2	2 = 1	> 2 = 0

Total Streambed Soils Points: _____

IV.) Vegetation	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0	1	(2)	3
2.) Presence of Periphyton/green algae	0	1	2	3
3.) Iron Oxidizing Bacteria/Fungus	0	0.5	1	(1.5)

4.) Wetland Plants in Streambed (Skip if no plants present in streambed)

SAV = 3 | Mostly OBL = 1.5 | Mostly FACW = 1 | Mostly FAC = 0.5 | Mostly FACU, UPL, or None = 0

Total Vegetation Points: 5.5

Comments:

Front Page Total 34 points

V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0	0.5	1	1.5
2.) Bivalves	0	1	2	3
3.) EPT taxa	***Present*** = 3			***Absent*** = 0

Total Benthic Macroinvertebrates Points: 3

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0	0.5	1	1.5
2.) Amphibians	0	0.5	1	1.5

Total Vertebrates Points: 0

Total Score: 33

Benthics/Amphibians Found:

Weather NATIONAL WEATHER SERVICE WEBSITE - CVILLE
Rain Gauge_____ Date of Last Rainfall 7/21/23 Rainfall Amount 0.04"

Reach Description
Upstream: TRB HCT GRC RCU POF SDO ARB RPA Other: POF PIC
Downstream: TRB HCT GRC RCU POF SDO ARB RPA Other: POF PIC
Comments:

Storm Network Connections and Watershed Observations
DOWNSTREAM OF OLYMPIA DR - SWM (WETPOND)

Riparian Buffers Width

		>25 feet	26-50	51-75	76-100	100+
LB:	Distance	T	T	T	T	0
	Cover type:	(Tree)	Shrub	Herbaceous	Lawn	Other:
	Dominant Species:					
RB:	Distance	H	H	L	L	L
	Cover type:	Tree	Shrub	(Herbaceous)	(Lawn)	Other:
	Dominant Species:					

Riparian Buffer Comments
(LB) 0 = RESIDENTIAL HOUSES, NO EXPOSED SOIL

Other Observations and Comments:

Is the reach perennial? (YES) NO

Photo #	Direction (US, DS, LB, RB)	Notes

CORNERSTONE COMMUNITY CHURCH

Site ID: TNA2023-0000? **Total Score:** 26.5

Date: 4.50 Recorder: JOHN ANDERSON

WED Time: 7.26.23 Evaluators: JOHN ANDERSON

Field Indicators:

@ NW INT. PEWTER CT. & OLYMPIA DR. @ SWM OUTFALL.

I.) Streamflow and Hydrology	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall (LAST RAIN?)	0	1	2	3
2.) Presence of high groundwater table or seeps and springs	0	1	2	3
3.) Leaflitter in streambed	1.5	1	0.5	0
4.) Drift lines	0	0.5	1	1.5
5.) Sediment on debris or plants	0	0.5	1	1.5

Total Streamflow and Hydrology Points: 7.0

II.) Geomorphology	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0	1	2	3
2.) Substrate Sorting (USDA texture in streambed)	0	1	2	3
3.) Natural Levees	0	1	2	3
4.) Sinuosity	0	1	2	3
5.) Active or Relic Floodplain	0	1	2	3
6.) Braided Channel	0	1	2	3
7.) Recent Alluvial Deposits	0	1	2	3
8.) Bankfull Bench present	0	1	2	3
9.) Continuous Bed and Bank	0	1	2	3
10.) 2nd order or greater **channel** present	***Yes*** = 3		***No*** = 0	

Total Geomorphology Points: 13

III.) Streambed Soils				
1.) Redoximorphic features present in sides of channel or head cut.	***Present*** = 0		***Absent*** = 1.5	
2.) Chroma 10YR 4/4	gleyed = 3	1 = 2	2 = 1	> 2 = 0

Total Streambed Soils Points: 1.5

IV.) Vegetation	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0	1	2	3
2.) Presence of Periphyton/green algae	0	1	2	3
3.) Iron Oxidizing Bacteria/Fungus	0	0.5	1	1.5

4.) Wetland Plants in Streambed (Skip if no plants present in streambed)

SAV = 3 | Mostly OBL = 1.5 | Mostly FACW = 1 | Mostly FAC = 0.5 | Mostly FACU, UPL, or None = 0

Total Vegetation Points: 2

Comments:

Front Page Total 25 points

V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0	0.5	1	1.5
2.) Bivalves	0	1	2	3
3.) EPT taxa	***Present*** = 3			***Absent*** = 0

Total Benthic Macroinvertebrates Points: 0

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0	0.5	1	1.5
2.) Amphibians	0	0.5	1	1.5

Total Vertebrates Points: 1.5

Total Score: 26.5

Benthics/Amphibians Found:

NATIONAL WETLAND SERVICE WEBSITE. CVILLE

Weather
Rain Gauge_____ Date of Last Rainfall 7/21/23 Rainfall Amount 0.04"

Reach Description
Upstream: TRB HCT GRC RCU POF SDO ARB RPA Other: WPO, GSP PIC, WIL (HCT, LEFT)
Downstream: TRB HCT GRC RCU POF SDO ARB RPA Other: PIC, FSA, PRC
Comments:

Storm Network Connections and Watershed Observations
(W) 60" SWM WET POND OUTFALL. ALSO, PERENNIAL/SPRING FLOW, LEFT OF OUTFALL HEADWALL.

Riparian Buffers Width

		>25 feet	26-50	51-75	76-100	100+
LB:	Distance	T	T	O	O	O
	Cover type:	Tree	Shrub	Herbaceous	Lawn	Other:
	Dominant Species:					
RB:	Distance	T	T	T	O	O
	Cover type:	Tree	Shrub	Herbaceous	Lawn	Other:
	Dominant Species:					

Riparian Buffer Comments
O = ROADS
(LB) OLYMPIA DR.
(RB) PEWTER PT.

Other Observations and Comments:

Is the reach perennial? **YES** **NO**

Photo #	Direction (US, DS, LB, RB)	Notes