



**County of Albemarle
Department of Community Development**

Memorandum

To: Mariah Gleason, Community Development Planning and Zoning Review
From: Frank Pohl, PE, County Engineer, Community Development Engineering Review
Date: March 8, 2021 and updated April 30, 2021
Subject: SE2020-00002 – Ivy Proper – Critical Slopes Impact Review

The applicant's critical slope waiver request dated January 5, 2021 and last revised April 26, 2021 has been reviewed. The engineering analysis of the request follows:

Description of critical slope area and proposed disturbance:

The proposed critical slope impacts appear to have been created prior to 1937 for the construction of the railroad, based on historical aerial photography. The slopes are stabilized except for the outfall of a culvert serving the neighborhood north of the railroad. The site is partially paved but is mostly wooded with understory shrubs, groundcover and trees across the central to upper portion of the site. The development includes two parcels that total 0.87 acres (TMP58A2-14 and 58A2-20). The applicant requests a waiver to disturb critical slopes for the construction of a parking lot, retaining wall, and dumpster pad, and to install a force main to the sanitary sewer drainfield at the back of the site. The site is within a drinking water supply watershed but is not within a mapped floodplain.

Areas	Acres (sf)	
Total site	0.87 acres (37,897 sf)	
Critical slopes	5,820 sf (surveyed)	15.4% of total site
Critical slopes disturbed	4,375 sf	11.5% of total site 75.2% of total preserved slopes

Exemptions to critical slopes disturbance for driveways, roads and utilities without reasonable alternative locations [County Code § 18-4.2.6]: The proposed disturbance is not a listed exemption and therefore a waiver is required.

County Code § 18-4.2.5(a)(2) Considerations

Engineering staff offers the following analysis of the factors to be considered under *County Code* § 18-4.2.5(a)(2):

- “If the request pertains to a modification or waiver of the prohibition of disturbing critical slopes, the commission shall consider the determination by the county engineer as to whether the developer or subdivider will address each of the public health, safety and welfare factors so that the disturbance of the critical slopes will not pose a threat to the public drinking water supplies and flood plain areas, and that soil erosion, sedimentation, water pollution and septic disposal issues will be mitigated to the satisfaction of the county engineer.”

I have determined that the applicant has addressed each of the public health, safety and welfare factors so that disturbance of critical slopes will not pose a threat to the public drinking water supplies and floodplain areas. The applicant has also mitigated any soil erosion, sedimentation, water pollution and septic disposal issues to my satisfaction.

Erosion and sediment control measures will be required during construction, including sediment traps/basins, silt fence, diversions, a construction entrance, and temporary and permanent stabilization, and additional measures may be required if minimum measures are ineffective. Septic system design and operation will be reviewed and regulated by the Virginia Department of Health (VDH), which “*may revoke or modify any permit if, at a later date, it finds that the system would threaten public health or the environment.*”

- “The county engineer shall evaluate the potential for soil erosion, sedimentation and water pollution that might result from the disturbance of slopes of 25 percent or greater in accordance with the current provisions of the Virginia Department of Transportation Drainage Manual, the Commonwealth of Virginia Erosion and Sediment Control Handbook and Virginia State Water Control Board best management practices, and where applicable, Chapter 17 , Water Protection, of the Code.”

I have evaluated the potential for soil erosion, sedimentation and water pollution that might result from disturbance of the critical slopes, in accordance with the above provisions. The area of critical slope to be disturbed is relatively small and can be contained easily within the site. With the exception of the eroding channel, offsite stormwater does not drain over or through these slopes and the channel will be reinforced with riprap to prevent erosion. State and County standards for erosion and sediment controls will be required during construction and additional measures may be required if measures are ineffective.

County Code § 18-4.2.5(a)(3) Findings

Based on the findings required under *County Code* § 18-4.2.5(a)(3) for the granting of a critical slopes modification or waiver, Engineering staff offers the following analysis:

The commission may grant a modification or waiver if it finds that the modification or waiver:

- 1) would not be detrimental to the public health, safety or welfare, to the orderly development of the area, or to adjacent properties;

Staff does not find the waiver would be detrimental to the public health, safety or welfare, to the orderly development of the area, or to adjacent properties.

The only concern regarding this finding is that retaining walls will be constructed adjacent the railroad property. The applicant’s structural engineer has confirmed, however, that the walls can be constructed without impacting the railroad property and that vibrations from the railroad are not a structural concern. Furthermore, the Building Division requires inspections during construction to ensure they are constructed in accord with the approved design, which must meet building code standards.

- 2) would not be contrary to sound engineering practices; and

Staff does not find this request to be contrary to sound engineering practices.

3) at least one of the following:

- a. Strict application of the requirements of [section 4.2](#) would not forward the purposes of this chapter or otherwise serve the public health, safety or welfare;

Staff is unable to support this finding.

- b. Alternatives proposed by the developer or subdivider would satisfy the intent and purposes of [section 4.2](#) to at least an equivalent degree;

Staff supports this finding. Alternative site designs were submitted by the applicant and all alternatives result in comparable impacts to critical slopes. Please refer to applicant's narrative. Alternate #3 reflects the proposed design except there are 3 less parking spaces, which results in a reduction of critical slope disturbance by only 275 sf. Staff's opinion is that the reduced number of spaces does not result in a significant reduction of critical slope impacts. Staff therefore supports the applicant's final design.

- c. Due to the property's unusual size, topography, shape, location or other unusual conditions, excluding the proprietary interest of the developer or subdivider, prohibiting the disturbance of critical slopes would effectively prohibit or unreasonably restrict the use of the property or would result in significant degradation of the property or adjacent properties; or

Staff supports this finding. Staff recognizes the site has an unusual shape and believes that fill from the railroad construction created the critical slopes on this parcel. To meet entrance corridor requirements, the majority of parking is relegated and the dumpster was moved behind the building, both of which impact critical slopes. The entrance location was dictated by VDOT and the applicant is proposing shared parking to address parking requirements for the adjacent business. The building size could be reduced, but overall the development is within the density allowed by-right for the property's zoning district (C-1 Commercial). Also, the critical slopes to be impacted are not part of a stream network and are not within a buffer.

- d. Granting the modification or waiver would serve a public purpose of greater import than would be served by strict application of the regulations sought to be modified or waived.

Staff is unable to support this finding.

Based on the review above, Engineering staff recommends approval of the Critical Slopes waiver request with the following condition of approval:

1. Final design of the retaining walls must be submitted and is subject to the approval of the County Engineer and the Building Division prior to approval of the VSMP application.

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