

February 6, 2024

Village of Croton on Hudson
Engineering Department
Stanley H. Kellerhouse Municipal Building
One Van Wyck Street
Croton On Hudson, NY 10520-2501

Attn: Mr. Daniel O'Connor, PE

Re: Steep Slope Application
Sec 067.08-002-001
Albany Post Road/Upland Lane

Dear Mr. O'Connor:

Introduction

It is proposed to develop the site located at the end of Upland Lane in the Village of Croton on Hudson and the Town of Cortlandt, NY. The proposed use of the development will be to construct a single-family residence, driveway, and support infrastructure. The 3-bedroom home will have an access driveway, disturbance of steep slopes as defined by both the Town and the Village will be required.

In the Village, .17 acres will be on slopes 15% to 30%, .17 acres will be on slopes greater than 30%. The limits of disturbance are shown on the Plans and shall be marked prior to the start of construction.

Steep Slope Evaluation

Please find below our explanation of how we are meeting the Village of Croton on Hudson's review standards for Section 195-4 Review Standards for our steep slope permit. Verbiage from the provisions will be outlined followed by our response thereafter.

1. *That the proposed activity and the manner in which it is to be accomplished are in accordance with the purpose and findings set forth in § 195-1 of this chapter.*

In proposing this Steep Slope Site Plan, we believe we are aligned with the Village's goals to "preserve, protect and conserve its steep slopes so as to maintain and protect the natural terrain and its vegetative features, preserve wetlands, water bodies and watercourses, prevent flooding, protect important scenic views and vistas, preserve areas of wildlife habitat, provide safe building sites and protect adjoining property by preventing surface erosion, creep and sudden slope failure."

The proposed project provides the owner with reasonable use of the property to develop a single-family home. All stabilization methods are in conformance with the latest editions of the NYS Department of Environmental Conservation "New York State Standards and



Specifications For Erosion And Sediment Control". In addition, any disturbances to steep slopes as defined by the Village of Croton on Hudson adhere to Chapter 195 of the Village Code. All proposed disturbances have been undertaken with consideration of the soils limitations characteristics contained in the Identification Legend, USDA Natural Resources Conservation Service mapping for Westchester County, NY.

2. *That the proposed activity and the manner in which it is to be accomplished can be completed without increasing the possibility of creep or sudden slope failure and will minimize additional erosion to the maximum extent practicable.*

The Plans have been developed to ensure slope stability during construction. The disturbance has been limited to the minimum required to construct the project. Stabilization measures have been proposed to ensure that slope failure does not occur during construction. Any graded slopes steeper than 3H:1V will be stabilized with erosion blankets. All stabilization measures are consistent with the NYS Department of Environmental Conservation "New York State Standards And Specifications For Erosion And Sediment Control".

3. *That the proposed activity and the manner in which it is to be accomplished will not adversely affect the preservation and protection of existing wetlands, water bodies, watercourses, floodplains, or any endangered species of flora or fauna.*

Any steep slope disturbance will not impact any wetlands, water bodies, watercourses, or floodplains. No endangered species of flora or fauna were identified during the preparation of the EAF.

4. *That the proposed activity and the manner in which it is to be accomplished can be completed in such a way so as not to adversely affect existing, proposed or potential future wells or sewage disposal systems.*

The project area will be served by a drilled well and on-site septic system. There are no existing wells or sewage disposal systems within close proximity to the disturbance, so there is no expected impact. The proposed well and septic system are away from any major slope disturbance.

5. *That the proposed activity and the manner in which it is to be accomplished are consistent with the principles and recommendation of the Village Comprehensive Plan adopted by the Village Board.*

The proposed slope disturbance is in conformance with the Village Comprehensive Plan and Chapter 195 of the Village Code of Croton on Hudson. The site is zoned residential and the proposed use is in conformance with requirements outlined in the code.

6. *Lot layout shall be designed so that sanitary sewage disposal systems entirely avoid areas of very steep slope and extremely steep slope and are in compliance with all standards and regulations of the Westchester County Health Department.*



The proposed residence will be serviced by an on-site septic system. The proposed design has been approved by the Westchester County Health Department (see WCHD file# C2023-07). The site of the proposed septic system will be built on a fairly flat area - avoiding areas of very steep slopes.

7. *The padding or terracing of building sites shall be evaluated on a site-by-site basis for appropriateness. The mounding of septic tile fields shall be minimized to the maximum extent practicable.*

The septic system design requires 1' to 3' of fill for the purpose of leveling the area. It will not impact or create any steep slopes.

8. *The alignment of roads and driveways shall follow the natural topography, minimize regrading and, in the case of roads, shall comply with design standards for maximum grades set forth in the Village Code.*

The proposed driveway was designed to best follow the natural topography of the site to minimize re-grading to the greatest extent possible.

9. *The natural elevations and vegetative cover of ridgelines shall be protected from disturbance to the maximum extent possible.*

It is proposed to have minimal tree removal maintaining much of the ridgeline vegetation.

10. *All regrading shall blend in with the natural contours and undulations of the land.*

The proposed grading ties into the natural topography of the property.

11. *Cuts and fills shall be rounded off to eliminate sharp angles at the top, bottom and side of regraded slopes.*

The grading will be done to minimize sharp angles at the top, bottom, and side of regraded slopes to provide smooth transitions between new and existing topography.

12. *The angle of cut and fill slopes shall not exceed the natural angle of repose of the soil or rock materials in the cut or fill, except where retaining walls or other structural stabilization is used. Generally for soils, cut and fill slopes should be not steeper than two horizontal to one vertical (fifty-percent slope).*

The maximum grade proposed is 2H:1V which is the typical angle of repose meeting the recommendations of the town code along with considerations for ongoing maintenance of the site. It may be possible that during construction boulders may be placed at the base of new slopes to provide further stabilization.



13. *Fill slopes shall avoid all slopes of two horizontal to one vertical (fifty-percent slope) or steeper. The toe of the fill slope shall not be located within 12 feet horizontally of the top of an existing or proposed cut slope.*

The proposed grading will not exceed 2H:1V slope and will blend naturally into the existing topography so as to avoid this condition.

14. *Tops and bottoms of cut and fill slopes shall be set back from existing and proposed property lines a distance at least equal to the lesser of three feet plus 1/5 of the height of the cut or fill or 10 feet.*

A small portion of the proposed grading along a portion of the driveway will be within 10' of the easterly property line, but stabilized by a low retaining.

15. *Tops and bottoms of cut and fill slopes shall be set back from structures a distance that will ensure the safety of the structure in the event of the collapse of the cut or fill slopes. Generally, such distance will be considered to be six feet plus 1/5 the height of the cut or fill but need not exceed 10 feet. Nevertheless, a structure may be built on a slope or at the toe of a slope if it is designed to retain the slope and to withstand the forces exerted on it by the retained slope.*

Other than retaining walls, the only other part of the project impacted is the southwest corner of the house where some filling is required by the foundation. However, the foundation will bear on virgin ground or bedrock.

16. *Measures for the control of erosion and sedimentation shall be undertaken in accordance with the New York Standards and Specifications for Erosion and Sediment Control (Empire State Chapter of the Soil and Water Conservation Society, 2005, most recent version including applicable updates or its successors) or its equivalent satisfactory to the approving authority.*

The Stormwater Pollution Prevention Plan (SWPPP) prepared for the project requires that the contractor follow the erosion control requirements of the NYSDEC general permit for stormwater discharges from construction activity. The Erosion Control Plan utilizes a silt fence and a stabilized construction entrance.

Yours Truly,

Joseph C. Riina, PE

/cm/Enc./sdc 21-22

