



To: John Fenton, Building Inspector
Town of Amenia

Date: January 8, 2015

Memorandum

Project #: 29011

From: Amanda DeCesare, P.E.

Re: Silo Ridge Field Club – Floodplain Permit

§67-13 Application for permit.

The applicant offers the following information as appropriate:

A. The proposed elevation, in relation to mean sea level, of the lowest floor (including basement or cellar) of any new or substantially improved structure to be located in Zones A1-A30, AE or AH, or Zone A if base flood elevation data is available. Upon completion of the lowest floor, the permittee shall submit to the local administrator the as-built elevation, certified by a licensed professional engineer or surveyor.

- Not applicable; there are no proposed residential structures within the floodplain.

B. The proposed elevation, in relation to mean sea level, to which any new or substantially improved nonresidential structure will be flood-proofed. Upon completion of the flood-proofed portion of the structure, the permittee shall submit to the local administrator the as-built flood-proofed elevation, certified by a professional engineer or surveyor.

- Not applicable; there are no proposed nonresidential structures within the floodplain.

C. A certificate from a licensed professional engineer or architect that any utility flood-proofing will meet the criteria in § 67-16C, Utilities.

- The applicant will provide certification that any utility flood-proofing will meet the criteria in § 67-16C if there are any proposed utilities within the floodplain.



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D. A certificate from a licensed professional engineer or architect that any nonresidential flood-proofed structure will meet the flood-proofing criteria in § 67-18, Nonresidential structures.

- The applicant will provide certification that any nonresidential flood-proofed structure will meet the criteria in § 67-16C if there are any proposed nonresidential structures within the floodplain.

E. A description of the extent to which any watercourse will be altered or relocated as a result of proposed development. Computations by a licensed professional engineer must be submitted that demonstrate that the altered or relocated segment will provide equal or greater conveyance than the original stream segment. The applicant must submit any maps, computations or other material required by the Federal Emergency Management Agency (FEMA) to revise the documents enumerated in § 67-6, when notified by the local administrator, and must pay any fees or other costs assessed by FEMA for this purpose. The applicant must also provide assurances that the conveyance capacity of the altered or relocated stream segment will be maintained.

- Not applicable; there are no proposed watercourse alterations or relocations within the floodplain.

F. A technical analysis, by a licensed professional engineer, if required by the local administrator, which shows whether proposed development to be located in an area of special flood hazard may result in physical damage to any other property.

- The floodplain consists of the floodway and floodway fringe. The floodway is the channel of a stream that must be kept free of encroachment so that the 1-percent annual chance flood can be carried without substantial increases in flood height. The floodway fringe encompasses the portion of the floodplain that could be COMPLETELY obstructed without increasing the water-surface elevation of the 1-percent annual chance flood by more than 1-foot at any point. FEMA d detailed hydrologic and hydraulic analysis to determine the floodway and floodplain limit. The typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in the excerpt from FEMA Flood Insurance Study (36027CV001A) – please refer to Figure 1. Under FEMA standards, there can be encroachment in the



Memorandum

ENTIRE floodway fringe and therefore, the proposed project grading can be performed in the Cascade Amenia Brook floodway fringe.

No development is proposed within the floodway area and no structure is proposed within the floodway fringe area. The proposed work within the floodway fringe area will yield a net zero decrease in flood storage volume. The attached Flood Storage Analysis Plan, FP-1, shows the pre- and post-development flood storage (effective and proposed). The drawing also depicts the effective 100-year floodplain limit and proposed 100-year floodplain limit at base flood elevation 511' (NAVD 88). The attached Allowable Floodplain Encroachment per FEMA Plan, FP-2, and shows the floodway fringe in which encroachment is permitted.

The proposed project does not alter the Cascade Amenia Brook, and no structure or utility is proposed to be within the floodway. If in the future any utility or structure is proposed to be located in the floodway fringe, it will be designed to the applicable flood-proof standards.

In conclusion, under FEMA National Flood Insurance Program (NFIP) regulation and Town Code Chapter 67, the entire floodway fringe is subject to encroachment. However, there are no structures or utilities proposed to be located in the floodway fringe, and the proposed cut/fill will yield a net zero decrease in flood storage. Therefore, the project will not adversely impact the floodplain, and will comply with FEMA and Town floodplain requirements.

The applicant shall provide the following information as appropriate. Additional information may be required on the permit application form.

G. In Zone A, when no base flood elevation data is available from other sources, base flood elevation data shall be provided by the permit applicant for subdivision proposals and other proposed developments (including proposals for manufactured home and recreational vehicle parks and subdivisions) that are greater than either 50 lots or five acres.

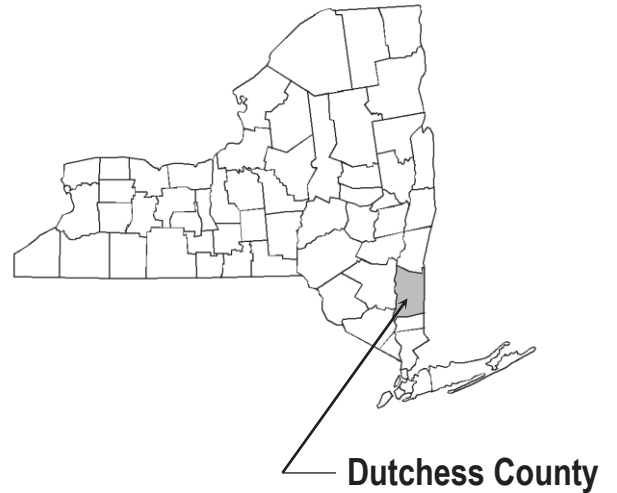
- Not applicable.

FLOOD INSURANCE STUDY



VOLUME 1 OF 4

DUTCHESS COUNTY, NEW YORK (ALL JURISDICTIONS)



COMMUNITY NAME	COMMUNITY NUMBER	COMMUNITY NAME	COMMUNITY NUMBER
AMENIA, TOWN OF	361332	PAWLING, VILLAGE OF	361517
BEACON, CITY OF	360217	PINE PLAINS, TOWN OF	361141
BEEKMAN, TOWN OF	361333	PLEASANT VALLEY, TOWN OF	360221
CLINTON, TOWN OF	361334	POUGHKEEPSIE, CITY OF	360222
DOVER, TOWN OF	361335	POUGHKEEPSIE, TOWN OF	361142
EAST FISHKILL, TOWN OF	361336	RED HOOK, TOWN OF	361143
FISHKILL, TOWN OF	361337	RED HOOK, VILLAGE OF	361614
FISHKILL, VILLAGE OF	360218	RHINEBECK, TOWN OF	361144
HYDE PARK, TOWN OF	361338	RHINEBECK, VILLAGE OF	361999
LAGRANGE, TOWN OF	361011	STANFORD, TOWN OF	361145
MILAN, TOWN OF	361339	TIVOLI, VILLAGE OF	361507
MILLBROOK, VILLAGE OF	360219	UNION VALE, TOWN OF	361146
MILLERTON, VILLAGE OF	360220	WAPPINGER, TOWN OF	361387
NORTHEAST, TOWN OF	361340	WAPPINGERS FALLS, VILLAGE OF	360223
PAWLING, TOWN OF	361341	WASHINGTON, TOWN OF	361147

EFFECTIVE:
May 2, 2012

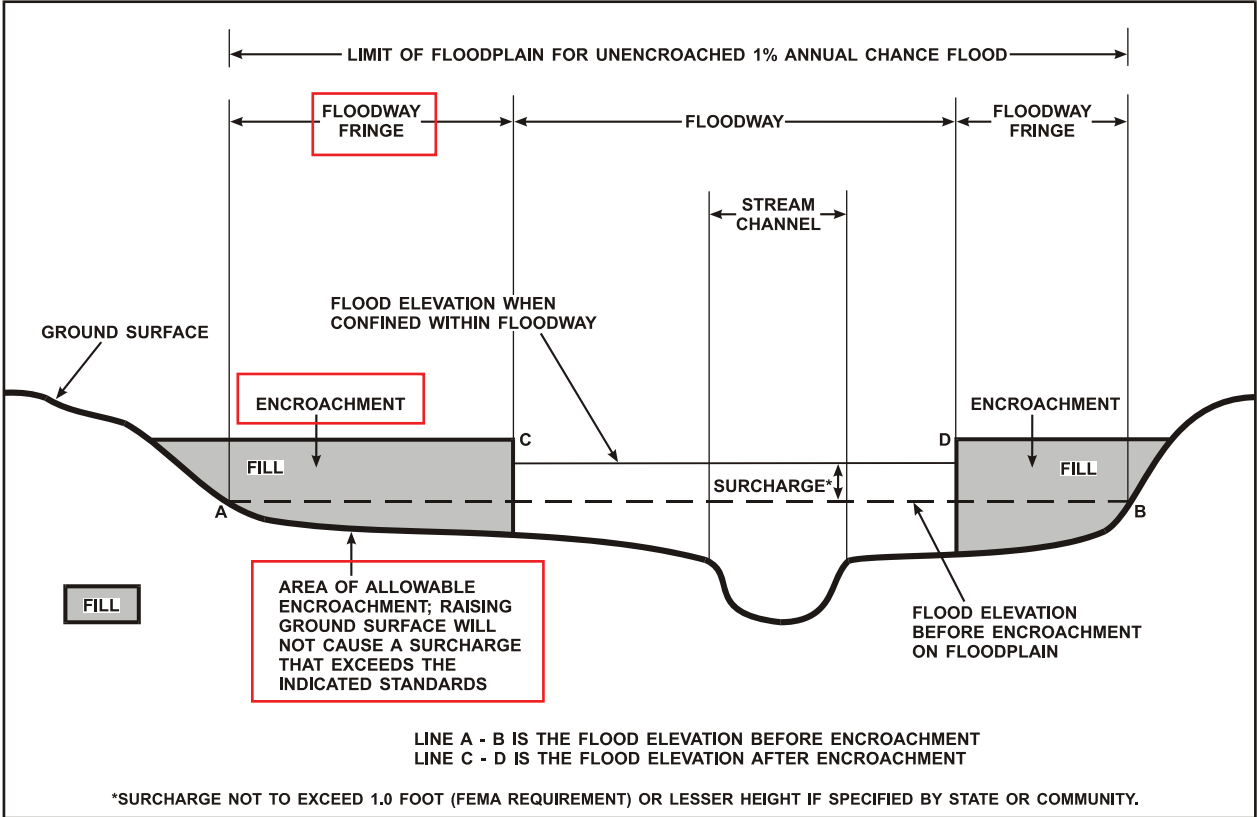


Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
36027CV001A

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "Without Floodway" elevations presented in Table 10 for certain downstream cross sections of Branch 1 Great Spring Creek, Branch 1 Sprout Creek # 1, Branch 1 Wappinger Creek Reach 1, Branch 2 Wappinger Creek Reach 1, Branch 6 Wappinger Creek Reach 1, Branch 7 Wappinger Creek Reach 1, Branch 9 Wappinger Creek Reach 1, Branch 10 Wappinger Creek Reach 1, Casper Kill Creek, Clove Creek, East Branch Wappinger Creek Reach 1, Fishkill Creek, Great Spring Creek, Sprout Creek # 1, Sylvan Lake Outlet, Tributary 1 to Fishkill Creek, Wappinger Creek Reach 1, Wells Brook, and Whortle Kill Reach 1 are lower than the regulatory flood elevations in that area, which must take into account the 1-percent annual chance flooding due to backwater from other sources.

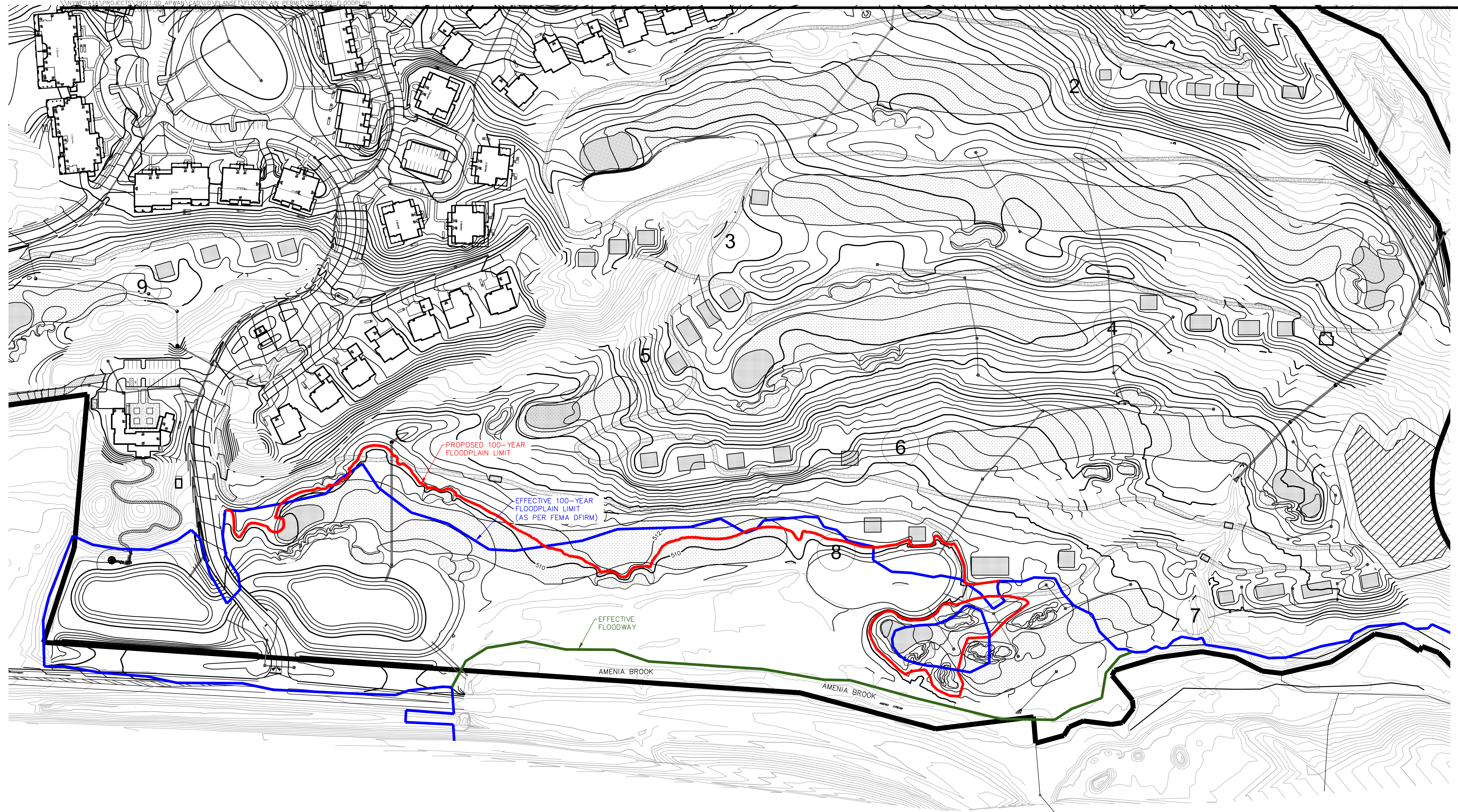
The area between the floodway and 1-percent annual chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent annual chance flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.



FLOODWAY SCHEMATIC

Figure 1

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No.	Revision	Date	Appr.

Designed by *JC* Drawn by *JC* Checked by *ACD*
 CAD checked by *ACD* Approved by *ACD*
 Scale 1" = 100' Date January 8, 2015
 Project Title

**Silo Ridge
Resort Community**

4651 Route 22
 Amenia, New York
 Issued for
Site Plan - Phase 1

Not Approved for Construction
 Drawing Title

**Flood Storage Analysis
Plan**

Flood storage analysis was performed based on the cut and fill analysis between the proposed surface and existing surface within the same 100-year floodplain elevation, 511' (NAVD 88), as per FEMA flood insurance study. Existing surface was utilized as base surface and compare with the proposed surface. The proposed development yield a net cut which indicate additional flood storage being created. Following are the result of the analysis.

Cut = 25211.43 Cu.Yd.
 Fill = 23866.65 Cu.Yd.
 Net = 1344.77 Cu.Yd. (Cut)

Drawing Number
FP-1
 Sheet of
 1 2
 Project Number
 29011.00

Saved Tuesday, February 03, 2015 4:49:29 PM. SCHEDULED Tuesday, February 17, 2015 3:31:47 PM. Cheong, Jason



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**Silo Ridge
Resort Community**

4651 Route 22
Amenia, New York
Issued for
Site Plan - Phase 1

Not Approved for Construction
Drawing Title
**Allowable Floodplain
Encroachment Per FEMA**

Drawing Number
FP-2
Sheet of
2 2
Project Number
29011.00

