Appendix 3

Adopted Conservation Findings / Conservation Analysis

This Conservation Analysis describes a conventional subdivision plan that has since been superseded by the Proposed Action discussed in this DEIS.

See the discussion regarding this Conservation Analysis and corresponding Conservation Findings in DEIS Chapter 1, at pages 2, 3 and 10

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that has since been superseded by the Proposed Action discussed in this DEIS.
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Conservation Findings in DEIS Chapter 1, at pages 2, 3 and 10

TOWN OF AMENIA

4988 Route 22, AMENIA, NY 12501
TEL: 845-373-8860, x118 FAX: 845-373-9147

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AUG 10 2023
Amenia Town Clerk

TOWN OF AMENIA PLANNING BOARD

Resolution # 9 for 2023

Resolution Adopting Conservation Findings

August 9, 2023

WHEREAS, Keane Stud LLC (the "Applicant") proposes to undertake a conventional subdivision of four (4) existing parcels of land in the Rural Agricultural ("RA") District consisting of a total of ±704.9 acres in the Town of Amenia, Dutchess County, New York and identified as tax parcel numbers 132000-7166-00-403720 and 132000-7167-00-515033, 570145, and 212034 (the "Project Site" or "Site") to create thirty-one new lots (the "Project") as follows:

- Twenty-Six (26) new residential lots (Lots 1 – 26);
- One (1) lot with existing residential and farm buildings (Lot 27);
- Two (2) vacant lots (Lots F-1 & F-2);
- One (1) lot with existing equestrian facilities (Lot G-1); and
- One (1) lot with an existing residential building and farm building fronting on Prospect Avenue (Lot G-2); and

WHEREAS, in its review of a preliminary sketch plan for a conventional major subdivision of RA lands pursuant to Town of Amenia Code § 105-9, the Planning Board is required, pursuant to Zoning Law § 121-19(A)(2), to assess the need for a conservation subdivision; and

WHEREAS, in addition, the Planning Board is required to make certain findings based on a conservation analysis conducted pursuant to Zoning Law § 121-20(A)(4); and

WHEREAS, the Applicant has submitted a conservation analysis entitled "Keane Stud Subdivision Conservation Analysis" and prepared by Rennia Engineering Design, PLLC dated October 19, 2021, last revised May 5, 2023 which the Planning Board has reviewed and considered in making its conservation findings.

NOW, THEREFORE, BE IT RESOLVED, that in accordance with Zoning Law §§ 121-20(A)(2) and (4), the Planning Board makes and adopts the attached conservation findings for the Project; and

BE IT FURTHER RESOLVED, that pursuant to Zoning Law § 121-20(A)(4), the Planning Board's adopted conservation findings shall be subject to revision based upon further analysis of the Project Site and information developed in the course of the SEQRA process; and

BE IT FURTHER RESOLVED, that a copy of this Resolution shall be filed in the office of the Town of Amenia Town Clerk within five (5) days of the date of this Resolution, and shall be mailed to the Applicant within the same five (5) day period.

The foregoing resolution was voted upon with all members of the Planning Board voting and signing as follows:

The adoption of the foregoing Resolution was moved by Tony R., seconded by John S., and duly put to vote, which resulted as follows:

	Yes	No	Abstain	Absent
Robert Boyles, Jr. Chairman	✓			
John Stephanopoulos	✓			
James Walsh				✓
Nina Peek				✓
Matthew Deister	✓			
Neal Kusnetz				✓
Anthony Robustelli	✓			

Dated: August 9, 2023
Amenia, New York

Judith Westfall

Judith Westfall, Secretary

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TOWN OF AMENIA PLANNING BOARD

CONSERVATION FINDINGS/KEANE STUD SUBDIVISION

August 9, 2023

RECEIVED
AUG 10 2023
Amenia Town Clerk

Proposed Conventional Subdivision:

Keane Stud LLC (the "Applicant") proposes to undertake a conventional subdivision of four (4) existing parcels of land in the Rural Agricultural ("RA") District consisting of a total of ±704.9 acres in the Town of Amenia, Dutchess County, New York and identified as tax parcel numbers 132000-7166-00-403720 and 132000-7167-00-515033, 570145, and 212034 (the "Project Site" or "Site") to create thirty-one new lots (the "Project") as follows:

- Twenty-Six (26) new residential lots (Lots 1 – 26);
- One (1) lot with existing residential and farm buildings (Lot 27);
- Two (2) vacant lots (Lots F-1 & F-2);
- One (1) lot with existing equestrian facilities (Lot G-1); and
- One (1) lot with an existing residential building and farm building fronting on Prospect Avenue (Lot G-2).

No development is proposed at this time with the exception of the roads proposed to serve the Project.

Conventional Subdivision Finding Required:

In its review of a preliminary sketch plan for a conventional major subdivision of RA lands pursuant to Town of Amenia Code § 105-9, the Planning Board is required, pursuant to Zoning Law § 121-19(A)(2), to assess the need for a conservation subdivision:

> "Any applicant for a conventional major subdivision (as defined in the Subdivision Law[1]) in the RA, RR, or SR Districts shall submit to the Planning Board a conservation analysis as described in § 121-20A below. **If the Planning Board determines, based upon the conservation analysis, that a proposed conventional subdivision may adversely affect the Town's rural landscape or natural resources, the Planning Board may require the applicant to submit a plan for a conservation subdivision….**and may require that such a plan be approved as an alternative to a conventional subdivision."

Conservation Findings Required:

In addition, the Planning Board is required to make certain findings based on a conservation analysis conducted pursuant to Zoning Law § 121-20(A)(4):

> **"The determination as to which land has the most conservation value and should be protected from development by conservation easement shall be**

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made by the Planning Board, which shall make written findings supporting its decision (the "conservation findings"). The Planning Board shall not endorse any application that does not include a complete conservation analysis sufficient for the Board to make its conservation findings. The Planning Board's conservation findings shall be subject to revision based upon field analysis of the site and information developed in the course of the SEQRA process."

The Applicant has provided the Planning Board with a conservation analysis as required by Zoning Law § 121-20(A)(1). The analysis done by the Applicant includes the basic information required by the Zoning Law for conservation findings, including inventory maps, a description of the Site, and an analysis of the conservation value of various site features. Additional information is provided that is not required for or necessary for the Planning Board to rely upon for its conservation findings.

Planning Board Findings:

Having considered the baseline conditions for the Project Site summarized below and for the reasons set forth herein:

1. The Planning Board finds that, based on the conservation analysis undertaken by the Applicant, a conservation subdivision will not be required pursuant to Zoning Law § 121-19(A)(2). The Applicant may propose a conventional subdivision consistent with the proposed sketch plan subject to these Findings.

2. The Planning Board finds that the conservation analysis undertaken by the Applicant, entitled "Keane Stud Subdivision Conservation Analysis" and prepared by Rennia Engineering Design, PLLC dated October 19, 2021, last revised May 5, 2023 (the "Conservation Analysis"), is sufficient for the Planning Board to make its conservation findings as required by Zoning Law § 121-20(A)(4) and to identify the lands on the Site to be protected from development.

3. The Planning Board further finds that the following areas within the Site have the most substantial conservation value and should be protected from development:

   - Wetlands and wetland buffer areas;
   - Stream corridors;
   - Scenic areas highly visible to the public, including, but not limited to land in the Scenic Protection Overlay District ("SPO"), the Stream Corridor Overlay District ("SCO"), the Resort Development Overlay District ("RDO"), the Aquifer Overlay District ("AQO"), and the predominant ridgeline/crestline for the Project Site;
   - Existing agricultural land use areas including prime agricultural soils; and soils of statewide importance;
   - Steep slope areas;
   - Forested ridge areas;
   - Sensitive wildlife habitat; and

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- Bog turtle protection areas.

4. The Planning Board further finds that the lands shown on the Keane Stud Subdivision - Conservation Area(s) Exhibit, prepared by Rennia Engineering Design, PLLC dated May 4, 2023, annexed hereto and made a part hereof (the "Conservation Map"), have the most conservation value and are the most important lands on the Site to protect from development.

5. The Planning Board further finds that the conservation uses and management guidelines for such land should be further defined during the Planning Board's SEQRA and subdivision reviews of the Project and acknowledges that deed restrictions (as proposed by the Applicant) may be an appropriate mechanism for protecting the lands shown on the Conservation Map in the proposed conventional subdivision so long as they are enforceable by the Town and a homeowner's association.

6. Finally, the Planning Board recognizes that it may revise these conservation findings based upon field analysis of the Site and additional information developed in the course of its SEQRA and subdivision reviews of the Project.

The Planning Board's findings herein are supported by the following reasons:

1. The Conservation Map includes preservation of environmentally sensitive lands on the Site, including wetlands and watercourses and their buffer areas, steep slopes, forested areas and the predominant crestline for the Site. In addition, most of other undeveloped lands comprising the Site will be protected from development. Development on each of the 26 proposed residential lots will be limited to a designated building envelope ranging in size from 2 acres to 6 acres. Overall, a total of 520.22± acres of the Project Site, or 73%, will be protected from development.

2. All buildings and structures will be located within the designated building envelopes. Outside of building envelopes, lots will be protected from development and those areas will only be used for agricultural or open space uses.

3. AM-10, a NYSDEC wetland partially contained within an existing Federal easement on project parcel #570145, has potential for bog turtle habitat. The Federal easement on the wetland is designed for the purposes of protecting this species in perpetuity. The Conservation Map includes a +300' buffer from the edge of wetland AM-10 to minimize possible impacts from development on potential bog turtle habitat.

4. According to the Applicant, approximately 529.6± acres of the Project Site are located within the Scenic Protection Overlay ("SPO") District. Of this acreage, approximately 307.8± acres of lands within the SPO District (are included on the Conservation Map and will be protected from development. The lands on the Site within the SPO District are a locally designated visual resource and are visible from public viewpoints, so the protection

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of lands within the SPO District from development will help to minimize visual impacts of the Project.

Baseline Conditions for the Site:

The following information regarding baseline conditions for the Site was provided by the Applicant and has been considered by the Planning Board for the limited purpose of making its conservation findings regarding identification of the most important lands on the Site to be protected from development, subject to further SEQRA and subdivision review. The Planning Board reserves its right to seek additional information from the Applicant as necessary to complete its review responsibilities.

The principal use of the Project Site has been for agriculture with a portion of the Site containing an existing equestrian facility. The Site primarily consists of agricultural lands, with several residential structures, large barns, and upland forest hardwood forest on the higher slopes and wetlands adjacent to agricultural fields on the lower slopes.

The Site is topographically and biologically diverse. The highest portion of the site is located in the southeastern corner of the parcel at an elevation of about 1226'. The lowest portion of the Site is in the southwestern corner and is at an approximate elevation of 514' at the outlet of a stream. The steepest portions of the Site are generally located within the eastern portion of the Project Site ~~among~~involving wooded slopes~~.~~ and extending to the eastern parcel boundaries~~, where no~~. No building envelopes or other development ~~will occur~~are proposed on these portion of the Site. The wooded slopes are to be protected from development.

-The following is a summary of existing land coverages present on the Project Site as provided by the Applicant:

- *Watercourses* The Project Site contains approximately +/- 9,2136 linear feet of watercourses, including three (3) unnamed streams all of which are classified C, indicating they are suitable for fishing. Of the three classified watercourses, two are located within the SCO. All watercourses are tributaries to the Wassaic Creek and are integral to the health of the onsite and offsite wetlands. Each watercourse has an intermittent flow regime, relying on the conservation and integrity of their headwaters to sustain the areas biodiversity.

    - Stream #1 begins in the upland eastern portion of the Project Site and flows west down the hillside towards the existing equestrian facilities to enter NYSDEC Wetland AM-10. Prior to entering Wetland AM-10, the stream is diverted through an existing culvert and is routed towards a small pond before emptying into Wetland AM-10. Once entering AM-10, the stream proceeds north through Wetland AM-10, flowing through two separate culverts spanning Wetland AM-10, and leaving the site to the north, eventually feeding into a series of off-site NYSDEC and federal wetlands. The portion of the stream located on the Project Site is approximately ±7,613 linear feet long. The stream width is variable with

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upland portions acting as drainage courses for upland areas and widening to match the width of the wetlands.

- Stream #2 begins in the equestrian paddocks in the southern portion of the Project Site and flows south off-site into Wetland AM-16. The portion of the stream located on the Project Site is approximately ±823 linear feet long.
- Stream #3 begins in the southeastern-most portion of the Project Site and flows directly south through several small federal wetlands before leaving the site and entering several off-site ponds, eventually flowing into NYSDEC Wetland AM-22. The portion of the stream located on the Project Site is approximately ±700 linear feet long.

- *Ponds* The Project Site contains several small freshwater ponds in wetlands (See below) and one pond comprising ± 0.64 acres that is located on the northwestern portion of proposed Lot 18.

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- *Paddocks* The Project Site contains approximately ±166.18 acres of paddock space on the southern portion of the Site used for existing equestrian activities. These paddock areas are covered in thick grasses and low-lying vegetation.

- *Forest* The Project Site contains approximately ±166.31 acres of contiguous forest and hedgerows. Forest coverage is primarily within the eastern and southern portions of the Project Site, consisting of several stands of unfragmented northern hardwood forest and mixed conifers. The mixture of oaks, hickories, hemlocks, white pine, maple, beech, and black cherry identified on site suggest a regional biome capable of supporting diverse natural communities. The variety of oaks and hickories provide perennial forage for animals while hemlocks and white pine act to stabilize the steep slopes and provide winter shelter. The majority of forest-covered land is located on the steepest portions of the Project Site and along the property boundaries, which are generally unsuitable for development. Large stands of fragmented forest exist in the northwest and southwest portions of the site surrounding Wetland #1 and southwest of proposed Lot #2 respectively.

- *Row Crops* The Project Site contains approximately ± 271.29 acres of active agricultural land used for row crops. Historical orthoimagery indicates the continued agricultural use of this land from 1936 to the present day.

- *Brush* The Project Site contains approximately ±50.41 acres of brush that vary in density and coverage throughout the Sitety. Much of the brush is found at the edge of wetlands (See below). Early- to mid-successional brush is generally found at the edge of forested lands, likely the result of clearing or disturbance that resulted from historic agricultural activity.

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- *Wetlands* The Project Site contains approximately ±38.58 acres of wetlands divided among two (2) federal wetlands and four (4) ACOE jurisdictional wetlands. Wetlands #5 and #6 are fed by Stream #1 and Wetland #2 is fed by Stream #2.
    - Wetland #1, also referred to as NYSDEC Wetland AM-8, is approximately ±16.55 acres and is located in the northwestern corner of project parcel #212034. Wetland #1 is divided into two separate areas by Old Route 22 and the majority of it is wooded, containing a large stand of northern hardwoods.
    - Wetland #2 is approximately ±0.46 acres and is fed by Stream #2 as it flows southwest from the equestrian paddocks and forms a small, forested palustrine wetland. The bulk of Wetland #2 extends to the southwest off of the Site.
    - Wetland #3 is approximately ±0.83 acres and is comprised of two (2) adjacent freshwater, forested wetlands in the southeastern corner of the Project Site. Wetland #3 is bisected by the north/south/east/west Project Site boundary.
    - Wetland #4 is approximately ±2.05 acres and is fed by Stream #1 flowing down from the upland portions of the Project Site to the east. Wetland #4 contains a small freshwater pond surrounded by palustrine wetlands.
    - Wetland #5, part of NYSDEC Wetland AM-10, is approximately ± 6.30 acres, is fed by Stream #1, and is primarily a palustrine wetland with several small freshwater ponds located within its boundaries. Wetland #5 has an existing farm road crossing, which is used to access the easterly areas of the fields from Depot Hill Road.
    - Wetland #6, also part of NYSDEC Wetland AM-10, is approximately ± 12.3 acres, is fed by Stream #1, and is primarily a palustrine wetland with several small freshwater ponds located within its boundaries. Wetland #6 begins on parcel #515886, just east of Depot Hill Road, and extends north through several project parcels and one additional non-project parcel (#430145) until extending beyond the northern most point of the Project Site. Wetland #6 has been provided with a U.S. Wetland Reserve Program Easement as detailed in File Map #12353 and maintains an existing agricultural crossing on the Site located on existing tax parcel #515033.

- *Impervious Coverage* The Project Site contains approximately ±7.17acres of existing impervious surface including buildings and roads.

- *Hedgerows* These linear strips of forest occur throughout the Project Site and are not considered as ecologically productive as the unfragmented forest; however, they benefit wildlife and property owners by controlling wind speed, reducing wind erosion, improving quality and quantity of sheltered crops, and reducing visual impairments from scenic corridors and noise coming from surrounding properties and roadways.

For its conservation analysis, the Applicant has provided the following information in its Threatened and Endangered Species/Habitat Suitability Assessment Report, prepared by Ecological Solutions and dated September 25, 2021. The NYSDEC's Environmental Resource

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Mapper identified three (3) possible threatened/endangered species that may be present on the Project Site: Bog Turtle, Timber Rattle Snake, and Hill's Pondweed. In addition, the New England Cottontail, a NYS species of special concern, may be present. The Applicant's assessment concluded as follows:

- *Bog Turtle* Habitat conditions for bog turtle on the Project Site include soft, saturated organic/mineral soil; perennial groundwater discharge; a plant community of low-growing, native flora (including sedges, rushes, grasses, forbs, mosses, and some low shrubs); tree canopy cover less than 50%; and fen indicator plants (including shrubby cinquefoil, grass-of-parnassus, and tamarack). AM-10, a NYSDEC wetland partially contained within a Federal easement on Project parcel #570145, has potential for bog turtle habitat.

- *Timber Rattlesnake* The Project Site was assessed for the presence of Timber Rattlesnake den, basking/gestating, and foraging habitat consistent with known location of the species. Based on the lack of southeast to southwest facing rock formations for basking, the Applicant's analysis concluded that the Project Site likely does not contain any suitable Timber Rattlesnake den areas. In addition, historic agricultural use of lands on the Site have limited the potential for suitable foraging space due to poor shade, rest, and prey opportunities in the fields.

- *New England Cottontail* The Project Site has suitable habitat for the New England cottontail including shrubby areas and thickets of native mid-to-late successional species in and around wetland areas; however, the presence of invasive shrubs, low-density tree cover in wetland areas, and a younger shrubland reduce the overall likelihood of this species habitation on the Site. Thus, while potential habitat does exist, these areas are fragmented with no existing connections or travel corridors to other habitat. These factors make it unlikely that the species exists on the Site.

- *Hill's Pondweed* As part of the DEIS prepared for the previously proposed Depot Hill Farm Development (2009) a full inventory of the site's ecological communities and their component flora was provided in a Natural Resource Survey prepared by Matthew Rudikoff Associates, Inc. (MDRA). The report documented 355 species of vascular plants none of which included any plants listed on the State or Federal-listed Endangered, Threatened, or Rare species list. The report notes that NYSDEC Natural Heritage Program indicated that there was only one instance of Hill's Pondweed recorded within the vicinity (Off-Site – Along NYS Route 22) of the Project Site. Follow up inspections conducted by MDRA confirmed the potential presence of pondweed at the offsite location, but failed to determine its exact species. The report concludes that the only pondweed observed on the Project Site was Curly Pondweed (not listed species), which was located in parcel #515886 (not in application).

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Keane Stud Subdivision

Conservation Analysis

PROJECT: **Keane Stud Subdivision**

Tax Map I.D. Numbers: **132000-7166-00-403720**
132000-7167-00-212034
132000-7167-00-515033
132000-7167-00-570145

APPLICANT: **Juan Torres**
5021 Route 44
Amenia, NY 12501

LOCATION: **Depot Hill Road**
Town of Amenia
Dutchess County, New York

DATE: **10/19/2021**
REVISED **1/5/2022**
7/25/2022
2/21/2023
5/5/2023

PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL▪ STRUCTURAL

6 Dover Village Plaza, Suite 5,P.O. Box 400,Dover Plains, NY12522
Tel: (845)877-0555 Fax: (845) 877-0556

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- Zoning Map Exhibit
- Overall Overlay Exhibit
- Resort Overlay Exhibit
- Scenic Visual Protection Zone Exhibit
- Stream Corridor Buffer Exhibit

APPENDIX B – ENVIRONMENTAL REPORTS/EXHIBITS:

- Threatened and Endangered Species/Habitat Suitability Assessment Report, dated 9/25/2021
- Overall Wetland Exhibit
- Wetland Crossing Exhibit
- Slopes Exhibit
- Prime Agricultural Soils & Soils of Statewide Importance Exhibit
- Archeological Map
- Existing Land Covers Exhibit
- Tree Coverage Exhibit
- Historic Dutchess Aerial Imagery
- National Flood Hazard FIRMette
- Recharge Calculation

APPENDIX C – WETLAND RESERVE PROGRAM DEED

- Wetland Reserve Program Easement #66-2C31-0OTXW

APPENDIX D – VISUAL ANALYSIS EXHIBITS

- Keane Stud Subdivision – Alternative Depot Hill Development/Conservation Subdivision, dated 2/21/2023
- Keane Stud (Visual Impact Analysis) – Zoning Compliance/Mitigation Measures Exhibit, dated 12/27/2022, revised 2/21/2023
- Keane Stud (Visual Impact Analysis) – Conceptual Viewshed Conditions Exhibit, dated 12/27/2022, revised 2/21/2023
- Building Envelope Siting Analysis, dated 1/25/2022, revised 2/21/2023
- Conceptual Site Plan Buildout for Proposed Lot 25, dated 6/21/2022

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APPENDIX E – ARCHAEOLOGICAL STUDIES:

- Phase IA/IB Cultural Resources Survey Depot Hill Farm Equestrian Community Project, dated August 2007
- Phase II Site Examination Depot Hill Farm Equestrian Community Project, dated May 2008
- Phase IB Cultural Resources Survey, Keane Stud Farm Residential Development Project, dated July 2022

APPENDIX F – ADDITIONAL CONSERVATION ANALYSIS EXHIBITS

- Keane Stud Subdivision – Conservation Resource Impact Analysis Summary
- Keane Stud Subdivision - Conservation Area(s) Exhibit, dated 5/4/2023
- Depot Hill Farm (2009) – Alternative Land Use, dated 12/19/2007

APPENDIX G – CONCEPTUAL SUBDIVISION PLANS

- Keane Stud Subdivision – Conceptual Subdivision Plan Set, dated 9/15/2021, revised 7/25/2022

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1.0 INTRODUCTION

1.1 Project Description/Location Data

The Keane Stud Subdivision project (alternatively referred to as the "Project") consists of subdividing four (4) existing parcels of land (alternatively referred to as the "Project Site"), consisting of a total of ±704.9-acres into:

- Twenty-Six (26) proposed new Residential-Agricultural parcels (Lots 1 – 26);
- One (1) Existing Equestrian Facility (to remain as agriculture) (Lot G-1);
- One (1) Existing Farm parcel that contains a federal wetland reserve easement This lot will maintain frontage on Prospect Avenue. (Lot G-2);
- Two (2) Forest Conservation parcels. (Lots F-1 & F-2);
- One (1) Existing Developed Farm Residential Parcel. (Lot 27)

This will result in a total of thirty-one (31) lots; twenty-six (26) of which could be subject to new residential-agricultural development, three (3) will continue to maintain their existing agricultural-residential uses, and two (2) new parcels will be preserved as conservation land. This represent a net gain of twenty-seven (27) new parcels.

The proposed new twenty-six (26) residential-agricultural development parcels (Lots 1-26) have been purposefully designed in such a way that they will promote existing and future agricultural uses. Lots are created from existing farmland, which mainly consists of open rolling fields divided by existing hedge rows and dirt/gravel agricultural roadways. These 26 lots will be created with deed restrictions that will limit any future residential development to only a small, carefully selected, portions of each proposed lot, where they will have the least impact on environmental/conservation resources identified throughout this document.

Outside of building envelops, lots will be protected by deed restrictions limiting those areas for agriculture or open space uses. These restrictions will run with the land in perpetuity and will act to incentivize future owners to find agricultural uses or open space for their land. The lot restrictions along with the proposed forest conservation parcels will act as a preservation tool to protect and maintain the rural-agricultural characteristics of the ±704.9-acre project area.

The proposed Project would be considered a major conventional subdivision, as defined by Amenia Zoning Code, and complies with all bulk regulation's requirements outlined for the Rural Agricultural (min. 10-acres) and Rural Residential (min. 5-acres) zoning districts. The proposed lots have been designed to comply with these bulk regulation requirements and will continue to be used for agriculture/open-space in the future through the use of deed restrictions, the preservation of existing agricultural facilities, and other conservation measures discussed throughout this document. In addition to the creation of these residential-agricultural lots, the proposed subdivision will result in the construction of 3 privately owned "rural lanes" (as specified in §105-22 of Amenia Town

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Code), horse trails running parallel to the proposed roadways, and all other associated roadway improvements (i.e.: stormwater management practices, culverts, etc.).

1.2 Conservation Analysis

The proposed subdivision is a major conventional subdivision, with all lots complying with Bulk Regulation requirements for the Residential Agricultural (RA) and Rural Residential (RR) zoning districts. As per §121-19. A(2) "Open Space Development Options":

*"Any applicant for a conventional major subdivision (as defined in the Subdivision Law[1]) in the RA, RR, or SR Districts shall submit to the Planning Board a conservation analysis as described in § **121-20A** below. If the Planning Board determines, based upon the conservation analysis, that a proposed conventional subdivision may adversely affect the Town's rural landscape or natural resources, the Planning Board may require the applicant to submit a plan for a conservation subdivision (see Subsection **B** below) and may require that such a plan be approved as an alternative to a conventional subdivision."*

As stated above, this document (Conservation Analysis) is required for major conventional subdivisions within the RA/RR zoning districts to assist the Planning Board in determining whether or not the proposed conventional subdivision will have an adverse impact on the Project Site's existing environmental/conservation resources.

To assist the Planning Board in their determination of impact, this document (conservation analysis) has been prepared, in accordance to the criteria outlined in §121-20.A "Conservation Analysis", to inventory existing environmental/conservation resources conditions on the Project Site. This document also provides additional information regarding viable alternatives to the currently proposed low-density conventional layout to assist the Board in determining whether or not a higher-density conservation subdivision layout will have a lesser impact on the Project Site. As such, this document has been divided into four main sections to assess existing resources and the potential impacts of the proposed subdivision:

- *§2.0 Zoning Analysis:* Identifies the zoning district the parcels are located within as well as all underlying zoning overlays district(s) which will influence the development of the Project Site.

- *§3.0 Conservation Analysis:* Provides an inventory of all existing environmental site conditions (i.e.: steep slopes, water bodies, land coverages, etc.) currently present on the Project Site.

- *§4.0 Density Calculations:* Analysis of the Project Site's zoning and environmental conditions to establish the maximum number of residential units that would be permitted through various viable alternative build-out options. This analysis also explores how various densities would result in differing impacts on pre-post construction conditions.

- *§5.0 Visual Impact Analysis:* Given the Project Site's prominent location on Depot Hill, presence within the Scenic Protection Overlay (SPO), and visibility from

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surrounding viewpoint and adjacent roadways/parcels, this section inventories existing viewshed conditions. This section also includes an analysis of how the conceptual buildout of the conventional subdivision layout and it's viable alternatives could affect existing viewshed conditions.

This document also includes "§6.0 *Proposed Conservation"*, which is used outline preservation efforts that will be incorporated into the Keane Stud conventional subdivision layout currently being proposed to lessen the impact on existing rural landscape and natural/conservation resources present on the Project Site.

Lastly, this document contains *"§7.0 Conclusion"*, which is used to summarize and inventory the most important existing environmental/conservation resources present on the Project Site, review how various viable alternative buildouts may effect said resources, and to outlined the specific benefits, in terms of conservation resource preservation, offered by the currently proposed Keane Stud conventional subdivision layout.

The outcome of the provided conservation analysis, from the perspective of a conventional major subdivision (Town of Amenia Zoning Code, §121-19.A(2)), is to identify the important environmental/conservation resources and rural attributes present on the Project Site and to determine whether or not the proposed low-density conventional layout provides comparable/better preservation of said resources/conditions than the high-density, conservation layout alternatives that could be implemented. Ultimately, the goal of this document is to provide the Amenia Planning Board with sufficient information to make a determination of lesser/comparable impact to existing conservation resources, via a written "conservation findings" statement (§121-20.A(4)), which would exempt the project from further conservation subdivision standards (§121-20, excluding subsection A) and allow the application to be reviewed through SEQR as a conventional subdivision.

1.3 Location Data

The Project Site is comprised of four (4) parcels (Parcel #: 132000-7166-403720, 515033, 570145, and 212034) in the Town of Amenia, Dutchess County, New York. The Project is located 100 miles north of New York City and is approximately 2.0 miles south of the Amenia Town Hall. The project parcels currently maintain frontage along Depot Hill Road, which runs through the middle of the Project Site. The project parcels also maintain frontage along Old NYS Route 22 (County Route 81) to the west and Powder House Road and Prospect Ave to the north. Large tracts of undeveloped forest are located along the sites southern and eastern borders.

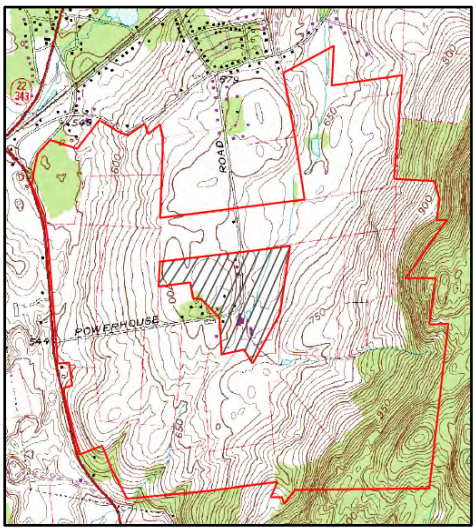


Figure 1.1: Location Map

2.0 ZONING ANALYSIS

The following is a summary of the zoning information used to develop the Conservation Analysis.

2.1 Zoning District for Project Site

The project parcels are located within the Rural Residential "RR" and Rural Agricultural "RA" zoning districts, as shown in Figure 2.1. Of the 704.9-acres approximately 676.6 are located within the RA district and 28.3-acres are in the RR district. As per the Town of Amenia Zoning Code §121-7 "Establishment of Districts", the intent of these zoning districts are:

Rural Residential "RR": "Allow residential uses in a rural setting, at a lower density than is allowed in the hamlets."

Minimum Lot Size (conventional subdivision layout): 5-acres

Minimum Lot Size (conservation subdivision layout): 8,000 SF (0.18-acres) to 40,000 SF (0.92-acres)*.

Rural Agricultural "RA": "Maintain the Town's working landscape by promoting agriculture, forestry, recreation, land conservation, and low-density residential uses, as well as compatible open space and rural uses, by encouraging such activities and discouraging large-scale residential development."

Minimum Lot Size (conventional)*: 10-acres

Minimum Lot Size (conservation subdivision layout): 8,000 SF (0.18-acres) to 40,000 SF (0.92-acres)*.

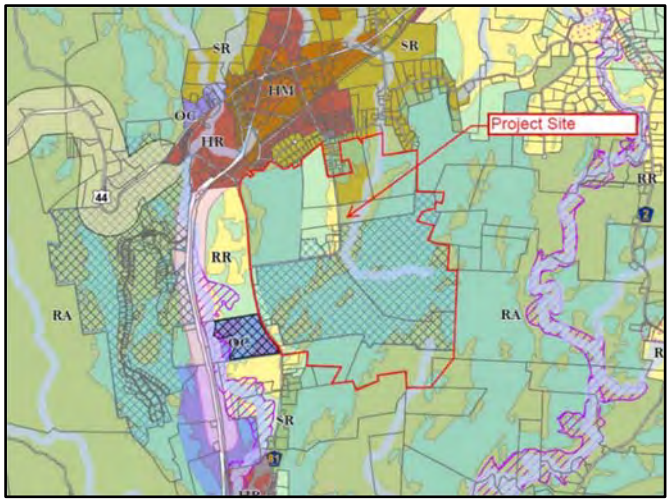
*Depending on the availability of common or municipal water and sewage disposal services. See Town of Amenia Zoning Code, §121 – Attachment 2 – Dimensional Table, §121-11.D

The proposed Keane Stud conventional subdivision layout is in compliance with RR/RA bulk regulation requirements and achieves intent of Rural Agricultural and Rural Residential zoning districts, as described above. In many instances, the proposed lots double the acreage requirement for their corresponding zoning districts. More so, the proposed subdivision will also help "maintain the Town's working landscape" by including agricultural-open space provisions (§6.0 Proposed Conservation Efforts), such as deed restrictions, conservation parcel(s), and the preservation of existing agricultural facilities. Furthermore, the proposed conventional subdivision layout is intentionally low-density, proposing less lots than the Project Site could conventionally support (See §4.3 Permissible Conventional Subdivision Layout).

Alternatively, if the proposed subdivision were to be developed using a conservation layout, similar results could be achieved, due to conservation subdivision and open space requirements (§121-20). In exchange for open space, conservation subdivisions amend the density requirements established for the RA/RR zoning districts to permit a greater number of residential lots/units. This increase in density is directly at odds with the low-density intent of the RA/RR districts, which were intended to "discourage large-scale residential development".

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Figure 2.1: Zoning Map w/ Overlays



2.2 Zoning Overlays for Project Site

As highlighted in Figure 2.1, the Project Site is located within four (4) Overlay Districts which have influenced the design of the proposed Project. The Project Site is located in the following zoning overlays: Scenic Visual Protection Zone (SPO), Stream Corridor Overlay District (SCO), Resort Development Overlay District (RDO), and Aquifer Overlay District (AQO). Additional information regarding each overlay district has been provided below:

2.2.A Scenic Visual Protection Zone (SPO)

Per the Town of Amenia Zoning Code §121-14.1 "Scenic Protection Overlay District (SPO)" the SPO is intended to "preserve the attractive rural, historic, and agricultural qualities of the town by regulating the land uses within designated scenic areas to protect the Town's scenic beauty and rural character". This special protection extends to areas visible from or within scenic road corridors, the Harlem Valley Rail Trail, and other important scenic viewsheds. See attached SPO Exhibit in Appendix A.

A large portion of the Project Site is located within the Scenic Protection Overlay District. While the Project Site is not located within close proximity of any of the Town of Amenia's "scenic roadways", as described in the above referenced section, it does contain "scenic areas visible from public viewpoints" due to its prominent location on Depot Hill. As such, any potential development, including both conventional and conservation subdivision layouts, within certain areas of the Project Site would be subject to additional SPO Site Plan Review criteria.

SPO Site Plan Review Requirements

As per §121-14.1.D, projects located within the SPO require site plan approval for the following actions:

(1) Construction of any structure or any addition to a structure where the size of the new structure or addition will be greater than 500 square feet in footprint area, including residential structures.

(2) Within any one-year period, in any location that is visible from a publicly accessible place (as defined in § 121-74) when there are no leaves on the trees:

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(a) Filling or excavation of an area in excess of 5,000 square feet.
(b) Clear-cutting of more than 5,000 square feet of vegetation on any parcel.
(c) Grading or other alteration of more than 5,000 square feet of the natural landscape, including construction of roads and driveways.

While many projects within the SPO require Site Plan review due to the criteria outlined above, several exceptions have been outlined §121-14.1.E:

(1) Agricultural uses, except for agricultural structures with a footprint exceeding 10,000 square feet.
(2) The repair and maintenance of existing structures.
(3) Activities carried out pursuant to a site plan or special use permit approved prior to the enactment of this section and still in effect.
(4) Clearing and grading associated with construction of unpaved hiking trails.
(5) Any other activity not included in Subsection **D** above.

The proposed subdivision itself will not result in any new construction, except for the construction of the proposed "rural lanes" which will receive Site Plan review. As such, the project is generally not affected by the SPO, failing to meet the thresholds outlined above.

In the future, owners of the proposed lots with land located within the SPO will be required to obtain Site Plan approval for all activities exceeding the thresholds outlined above. This would be required for all future development on the Project Site, including a buildout of the existing parcels as is, or as subdivided in either a conventional or conservative layout.

In general, proposed building envelops (Appendix D - Building Envelope Siting Analysis) have been sited to comply with §121-14.1.F "General Standards", with future compliance to site specific SPO design criteria to be determined during the required Siter Plan Review with the Amenia Planning Board.

For additional information on the sites Scenic/Visual resources see §5.0 Visual Impact Analysis.

2.2.B Stream Corridor Overlay District (SCO)

Per the Town of Amenia Zoning Code §121-14 "Stream Corridor Overlay District (SCO)" the SCO is designed to protect the town's stream corridors by preserving their scenic character, biodiversity, and water quality. This district regulates the land uses within stream corridors to protect water quality, scenic resources, and the overall community appearance in addition to reducing the risk of flood damage.

The SCO includes all land lying within 150' of the top of the bank on each side of all streams classified by the New York State Department of Environmental Conservation (NYSDEC) and identified on the Town of Amenia's "Hydrological Overlay District" Map. The project contains portions of two streams referenced in the above-referenced map:

- *Unnamed Stream #1:* Beginning in the upland eastern portions of the site and flowing east-west through an existing pond and into NYDEC Wetland AM-10. Unnamed Creek

#1 flows south-north through Wetland AM-10 through 3 of the 4 project parcels until reaching Wetland AM-11 off-site.

The eastern portion of the stream is only partially defined, with portions of the water course directed through an existing culvert, which was installed prior to this application for agricultural purposes.

The south-north flowing portion of the stream contains two existing agricultural crossings. The existing crossings were installed prior to this application. The crossing is proposed to be preserved and enhanced as part of the construction of two Rural Lanes proposed as part of the conventional subdivision.

- *Unnamed Stream #2:* Beginning in the southeastern upland portions of the site and flowing south off-site until entering Wetland AM-22. The identified stream is located within proposed Forest Area 1 and will not be affected by the proposed subdivision.

See attached SCO Exhibit in Appendix B.

Areas identified above located within the SCO will need to comply with additional setback requirements, as specified in §121-14.D:

- No principal structure shall be located within 100' of the watercourse.
- No accessory structure 200 S.F. or larger shall be located within 50' of the watercourse.

*These setbacks shall not apply to docks, piers, bridges, and other structures which by their nature must be located on, adjacent to, or over the watercourse

In general, the proposed project will not result in any new construction within the SCO, except for the construction of the proposed "rural lanes" and enhancements to be made to the existing stream crossings over Stream #1, which as outlined above, is exempt from the additional requirements outline for the SCO.

For the purpose of this subdivision proposed building envelopes will be located outside of the designated SCO areas.

2.2.C Resort Development Overlay District (RDO)

Per the Town of Amenia Zoning Code §121-18 "Resort Development Overlay District (RDO)" the RDO is designed to provide use and design flexibility to encourage resort development on appropriate large properties, where such development fits into the rural character of the town and protects its scenic, historic, and environmental resources.

The RDO provides a procedure for master planned development of more than 200 acres, following rezoning by the Town Board, to promote tourism, recreation, and open space protection. In exchange for more flexible use and density than is allowed by underlying zoning, the town looks to achieve significant protection of open space resources.

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Of the 4 project parcels only parcel #403720 is located within the Resort Development Overlay District.

As stated previously, the proposed project is a conventional subdivision and complies with all the bulk regulations provided for the RR and RA zoning districts. The proposed project will be completed in one phase and will not need to utilize the additional design flexibility offered from being located within the RDO.

2.2.D Aquifer Overlay District (AQO)

Per the Town of Amenia Municipal Code §121-15 "Aquifer Overlay District (AQO)" the AQO was created to protect the health and welfare of residents of the Town of Amenia by minimizing the potential for contamination and depletion of the Harlem Valley's aquifer system. The entire Town of Amenia is located within the aquifer overlay, which has been broken into two main aquifers: The Valley Bottom Aquifer and the Upland Aquifer. See attached AQO Exhibit in Appendix B.

The Project Site contains both of the identified aquifers:

- Primary Valley Bottom Aquifer: located in the eastern portion of the Project Site. The primary valley bottom aquifer makes up the bulk of the Project Site.
- Upland Aquifer: located within the eastern portion of the Project Site. The upland aquifer is mostly located within the proposed Forest preservation areas.

With the Project Site being located entirely within the AQO, additional calculations will be required for any proposed development to assess whether or not consumption of water exceeds the natural recharge rate of the site.

Additionally, the Project Site is subject to additional restrictions such as, the limited placement of underground fuel/storage tanks, mitigation practices if consumption exceeds recharge rates, and requiring a Special Use Permit for new uses, for which the proposed project will already be required to obtain.

2.3 Amenia Comprehensive Plan

The Town of Amenia Comprehensive Plan is a guiding document used to establish community goals and provide an outline on how to achieve them. As specified in the Town of Amenia Zoning Code §121-12.A(1), major conventional subdivisions within the RA and RR zoning district should be reviewed to see if they would be in "conflict with the goals of the Amenia Comprehensive Plan". If its determined that a proposed conventional layout is in conflict with these provisions, the applicant could be encouraged to pursue other "open space development options".

The most recent version of the document was published July 19, 2007 and contains a "Vision" statement as well as several "Goals" that should be pursued to fulfill said vision. Throughout the document, including in the Vision and Goals sections, are numerous references to "agricultural beauty", "open space preservation" (through various methods),

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and encouraging more housing development. Copies of these sections have been provided below, with specific phrases underlined to highlight these references:

Vision

"We want Amenia to grow into a diverse, vital and business-friendly community of agriculture, small businesses and homes all located in an appealing setting with great natural beauty; a unique unity of six different, clean, well-preserved historic town hamlets (Amenia, Wassaic, Amenia Union, South Amenia, Smithfield, and Leedsville); and amenities that attract residents, travelers, shoppers, diners and vacationers." – Town of Amenia Comprehensive Plan – "Vision" pg. 5

"*Goals*

1) *To achieve a broad-based balance between the rural, historic, and agricultural beauty of the town as it is and the need for appropriate and smart economic growth and development.*
2) *To establish a business-friendly attitude and commitment that:*
    a. *will attract and support the development of retail, small business, service businesses and even light industry,*
    b. *will create employment opportunities (especially for young people), and*
    c. *will increase tax revenues.*
3) *To develop and encourage the growth of agriculture as a profitable business within the context of preserving open space.*
4) *To encourage more housing – low, affordable, moderate-income, high-end, and rental – to create a genuinely multigenerational community:*
    a. *a vital place with good schools for growing families, and*
    b. *a safe place for young people to grow up and to which they will want to return because of the employment opportunities they have here;*
    c. *an attractive, safe place for elderly people.*
5) *To maximize our strengths and attract tourists, shoppers, athletes, lovers of good food and wine, historians, and other money-spenders.*
6) *To forge a strong positive public consensus about the future of Amenia so that we will live up to the commitments we make, enforce the laws/regulations we have, and consistently support community pride."* – Town of Amenia Comprehensive Plan – "Goals" pg. 5-6

Based on the highlighted sections provided above, the Amenia Comprehensive Plan, as it relates to subdivisions, encourages:

- All forms of residential development, especially those that have designed to preserve open space.
- The preservation of existing agricultural lands/open space in a way that's encourages commercial and/or community farming.
- The preservation and expansion of the Town's already establish hamlet areas, which typically support higher density, mixed-use, residential and commercial development.

The proposed Keane Stud Conventional Subdivision layout is not in conflict with, and in many cases supports, both the Vision and Goals outlined in the Town of Amenia Comprehensive Plan.

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3.0 CONSERVATION ANALYSIS

The following is a summary of the environmental conditions/research information required for the Conservation Analysis.

3.1 Wetlands & Watercourses

There are three (3) watercourses and seven (6) wetland areas that are present within the Keane Stud Subdivision project parcels. Provided below is a summary of these features:

3.1.A Watercourses

The Project Site contains three (3) watercourses, which have been identified by New York State Department of Environmental Conservation (NYSDEC):

1) *Stream #1, C:* Beginning in the upland eastern portion of the Project Site and flowing west down the hillside towards the existing equestrian facilities to enter NYSDEC Wetland AM-10. Prior to entering the wetland, the stream is diverted through an existing culvert and is routed towards a small pond before emptying into the wetland. Once entering AM-10 the stream proceeds north through the wetland, flowing through two separate culverts spanning the wetland, and leaving the site to the north, eventually feeding into a series of off-site NYSDEC and federal wetlands. The portion of the creek located on the Project Site is approximately ±7,613 linear feet long.

   The stream width is variable with upland portions acting as drainage courses for upland areas and widening to match the width of the wetlands.

   The stream maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing.

   National Wetland Inventory Classifications: R4SBC, R2UBH, R3UBH

   The stream is located within the Stream Corridor Overlay District “SCO”.

2) *Stream #2, C:* Beginning in the equestrian paddocks in the southern portion of the Project Site and flowing south off-site into Wetland AM-16. The portion of the stream located on the Project Site is approximately ±823 linear feet long.

   The stream maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing.

   National Wetland Inventory Classifications: R4SBC

3) *Stream #3, C: Beginning* in the southeastern-most portion of the Project Site, the stream flows directly south through several small federal wetlands before

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leaving the site and entering several off-site ponds, eventually flowing into AM-22. The portion of the stream located on the Project Site is approximately ±700 linear feet long.

The stream maintains a NYSDEC Classification of C, indicating that the watercourse is best used for fishing.

National Wetland Inventory Classifications: R4SBC

The stream is located within the Stream Corridor Overlay District "SCO".

Of the three classified watercourses identified above, two are located within the Stream Corridor Overlay District as identified in the previous section. All watercourses are tributaries to the Wassaic Creek and are integral to the health of the onsite and offsite wetlands. Each watercourse has an intermittent flow regime, relying on the conservation and integrity of their headwaters to sustain the areas biodiversity. The quality of habitat, recreation space, and aesthetic value of the project area is directly tied to the preservation of the site's woodlands, wetlands, and watercourses. The wetlands in particular are dependent on healthy, intact stream systems to provide their plant and animal life with consistently clean, nutrient rich water.

3.1.B Wetlands

There are six (6) wetlands identified on the Project Site. Of the 6 identified wetlands, two (2) of the wetlands are New York State Department of Conservation (NYSDEC) regulated wetlands and the remaining five (4) are U.S. Army Corps of Engineers (ACOE) jurisdictional wetlands. The wetlands are identified in Wetland & Watercourses Exhibit in Appendix C and have been summarized below:

1) *Wetland #1:* Wetland #1, also referred to as NYSDEC Wetland AM-8, is located in the northwestern corner of project parcel #212034 and divided into two separate areas by Old Route 22. The majority of the wetland is wooded, containing a large stand of northern hardwoods. The wetland was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   National Wetland Inventory Classifications: PFO1/SS1E, PEM1E

   Total Wetland Area = ±16.55 acres

2) *Wetland #2:* Wetland #2 is fed by Stream #2 as it flows southwest from the equestrian paddocks and forms a small, forested palustrine wetland. The bulk of the ACOE jurisdictional wetland extends offsite and was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   National Wetland Inventory Classifications: PFO1C

   Total Wetland Area = ±0.46 acres.

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3) *Wetland #3:* Wetland #3 is comprised of two (2) adjacent freshwater, forested wetlands in the southeastern corner of the Project Site. Wetland #3 is an ACOE jurisdictional wetland and bisected by the Project Site boundary. The wetland was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   National Wetland Inventory Classification: PFO1E

   Total Wetland Area = ±0.83 acres

4) *Wetland #4:* Wetland #4 is fed by Stream #1 flowing down from the upland portions of the Project Site to the east. The wetland contains a small freshwater pond surrounded by palustrine wetlands. The wetland is an ACOE jurisdictional wetland and was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   National Wetland Inventory Classifications: PEM1C, PEM1E, PUBHh, PUBHx

   Total Wetland Area = ±2.05 acres.

5) *Wetland #5:* Wetland #5, part of NYSDEC Wetland AM-10, is fed by Stream #1 and primarily a palustrine wetland with several small freshwater ponds located within its boundaries. The wetland has an existing farm road crossing, which is used to access the easterly areas of the fields from Depot Hill Road. The wetland was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   National Wetland Inventory Classifications: PEM1Cd, PEM1E, PUBHx, PSS1C

   Total Wetland Area = ± 6.30 acres

6) *Wetland #6:* Wetland #6, also part of NYSDEC Wetland AM-10, is fed by Stream #1 and primarily a palustrine wetland with several small freshwater ponds located within its boundaries. The wetland begins on parcel #515886, just east of Depot Hill Road, and extends north through several project parcels and one additional non-project parcel (#430145) until extending beyond the northern most point of the Project Site. The wetland was delineated by Ecological Solutions, LLC and surveyed by Kirk Horton, LS on or before August 2021.

   The wetland has been provided with a U.S. Wetland Reserve Program Easement as detailed in File Map #12353.

   The wetland maintains an existing agricultural crossing located on project parcel #515033

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National Wetland Inventory Classifications: PEM1Cd, PEM1E, PUBHx, PSS1C

Total Wetland Area = ± 12.39 acres

The proposed project will not impact any of the wetlands. The project utilizes buffers and carefully chosen building envelopes that will ensure the wetlands are preserved, protected and unfragmented. Just as the wetlands are dependent on the quality of watercourses, so too is the health of the site's streams tied to the wetlands' success. Preservation of the project area's wetlands ensures that excess nutrients, sediment, and contamination is filtered from the watercourses as well as buffering against periodic flooding. The site's groundwater is partially recharged by infiltration from wetlands, protecting against potential drought and excessive aquifer discharge. Additionally, wetlands provide the local and regional ecosystem with vital habitat, nesting sites, and forage for perennial and migratory species.

3.2 Slopes Exhibit

The Project Site is primarily composed of meandering hills, while containing significant topographical features within the eastern regions of the Project Site. The highest portion of the site is located in the southeastern corner of the parcel at about 1226'. The lowest portion of the parcel is in the southwestern corner and is approximately 514' at the outlet of Stream #2. The steepest portions of the site are generally located within the eastern portion of the Project Site among wooded slopes, and the eastern parcel boundaries, where development is not anticipated to occur. The slopes exhibit, included in Appendix B, delineates the project area by percent slope as shown in Figure 3.1.

Figure 3.1 Slopes Table

Minimum Slope	Maximum Slope	Area (acres)	Percentage of Project Site (%)
0%	15%	483.36	69.0%
15%	30%	169.97	24.1%
30%	100%	48.46	6.9%

As shown on the table provided above, approximately 69.0% of the Project Site has a topography of 0-15%, which provides adequate grade for a variety of uses and construction activities (i.e.: parking areas, septic systems, etc.) The remaining 31.0% of the steeper portions of the Project Site are generally located outside of ideal development areas and will be preserved as part of Conservation Areas.

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3.3 Tree Areas

The Project Site contains unfragmented woodland and hedgerows identified in Appendix B and have been summarized below.

Contiguous Forest

Forest coverage is primarily within the eastern and southern portions of the Project Site, consisting of several stands of unfragmented northern hardwood forest and mixed conifers. The bulk of land containing forest coverage are located among the steepest portions of the Project Site and along the property boundaries, which are generally unsuitable for development. Additionally, large stands of fragmented forest exist in the northwest and southwest portions of the site surrounding Wetland #1 and southwest of proposed Lot #2 respectively.

Hedgerows

There are numerous hedgerows throughout the site that previously acted as property boundaries. These linear strips of forest are not considered as ecologically productive as the unfragmented forest but provide benefits to wildlife and property owners. Hedgerows control wind speed, reduce wind erosion and improve the quality and quantity of the sheltered crops. They also act as visual and sound buffers, reducing visual impairments from scenic corridors and noise coming from surrounding properties and roadways. As a result, the existing tree rows will be preserved to line the proposed roadways and new parcel borders.

The site contains approximately ±166.31 acres of contiguous forest and hedgerows.

The proposed project outlines the conservation of the site's hedgerows, fragmented, and contiguous forest to preserve the character of the site and continuity of the area's natural communities. As identified by the Threatened and Endangered Species Habitat Suitability Assessment Report prepared by Ecological Solutions on 9/25/2021, the site's eastern and southern portions are predominantly mixed upland forest. The steep slopes have remained undisturbed based on orthoimagery dating back to 1936, indicating a mature, upland hardwood forest with mixed conifers. The mixture of oaks, hickories, hemlocks, white pine, maple, beech, and black cherry identified on site suggest a regional biome capable of supporting diverse natural communities. The variety of oaks and hickories provide perennial forage for animals while hemlocks and white pine act to stabilize the steep slopes and provide winter shelter. The site's existing hedgerows serve to reduce wind erosion, noise pollution, and act as a visual buffer to the surrounding area. Preservation of the upland forest and hedgerows is integral in sustaining the biodiversity of the greater ecological community and provide scenic and recreation opportunities.

3.4 Archeological Features

As discussed in previous sections of this analysis, the Project Site has been in active use since before 1936 and has been regularly farmed and enhanced with various residential and agricultural improvements.

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NYSHPO

The New York State Historic Preservation Office (SHPO) online Cultural Resource Information System (CRIS) was consulted to determine if there were any National Register and Archeological Sensitivity areas associated with the Project Site. Based on a review of CRIS, it appears the Project Site is located within an Archaeological Sensitive Area.

As part of the previously proposed Depot Hill Farm Development (2009), a Phase 1A/1B Cultural Resource Survey (2007) was conducted for lands proposed to be improved on parcel #403720. During the course of the survey, three prehistoric sites were discovered, with NYSOPRHP recommending avoidance is possible and a Phase II Site Examination Study if not. Due to the sites being located in a proposed improvement area, a Phase II Study (2008) was authorized. The study reviewed the three identified sites and concluded that the three sites did not contain sufficient artifact diversity or density to warrant performance of an archaeological data recovery or inclusion in the National Register of Historic Places.

In preparation for the SEQRA review, an additional Phase 1A/1B Cultural Resources Survey was prepared for the project parcels/areas that were not studied during the above referenced survey/testing. Shovel and Intensive Surface Inspection testing was conducted within the building envelopes established for the proposed for the subdivision by Birchwood Archaeological Services in July 2022. The study identified one precontact archaeological site within the previously proposed Lot 17 building envelop. As per the recommendations of Birchwood, the Lot 17 building envelop was redesigned to avoid the site, which will ensure the site is not disturbed by residential construction activities.

For additional details on the archeological investigation(s), refer to the various Archaeological Studies included in Appendix E of this report.

3.5 Former Disturbance

The Project Site has been continually utilized and developed since at least 1936, with much of its area experiencing periodic land use change. Based on Dutchess County Orthoimagery, included in Appendix B, the change in land cover, use, and development can be seen from 1936-2020.

The historically agricultural use of much of the Project Site's open space, located in the northwest (proposed parcels #21-27) and eastern portions of the site (proposed parcels #10-19), persist to the present day. The equestrian use of the southwestern parcel originated sometime between 1980-1990 with the construction of a new road and several equestrian barns.

Since 1936, the project area has been naturally divided by the steep, wooded slopes to the east and southeast. These steep slopes were unsuitable for development into arable land or residential space and as such have remained largely undisturbed throughout the period captured by orthoimagery. With the exception of the woods in the northwestern

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(AM-8), northeastern (AM-10), and southeastern corners of the project area, the forest on-site is contiguous and unfragmented. Hedgerows were visibly established as property/field boundaries sometime in the 1940's.

Additionally, the onsite freshwater wetland, AM-10, experienced significant disturbance between 1935-1955. During which time it was likely filled in or cut off from Stream #1 resulting in noticeable drying of the area and loss of wetland vegetation.

Overall, it is evident from Historic Orthoimagery, the history of the site, and general land use trends in the area, that the site has seen significant disturbance since its inception, and as such contains no significant native or undisturbed habitat outside of the eastern contiguous forest.

3.6 Land Coverages

The following is a summary of existing land coverages present on the Project Site:

Figure 3.6 Existing Land Cover

Existing Land Cover – PRELIMINARY	
Land Cover Type	Acres
Pond	0.64
Paddock	166.18
Forest	166.31
Row Crops	271.29
Brush	50.41
Grass	4.43
Wetlands	38.58
Impervious	7.17
TOTAL	**704.9**

Watercourses

The Project Site contains approximately +/- 9,2136 linear feet of watercourses, including three (3) unnamed streams all of which are classified C, indicating they are suitable for fishing. All existing watercourses will be preserved as part of this project.

Ponds

The Project Site contains one (1) pond that totals approximately ± 0.64 acres, excavated and used for agricultural purposes.

Paddocks

The Project Site contains approximately ±166.18 acres of paddock space for use in equestrian activity. These paddock areas are covered in thick grasses and low-lying vegetation for equestrian grazing and movement.

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Forest
The Project Site contains approximately ± 166.31 acres of forest that vary in connectivity, quality, and density across the property. The forests located within the eastern and southern portions of the property maintain connectivity with a larger stand of trees beyond the project boundaries and is said to be unfragmented. These large, forested tracts will be preserved as part of this project. The remaining forest is fragmented by the roads running around and through the site and mark the historical property boundaries of the Project Site.

Row Crops
The Project Site contains approximately ± 271.29 acres of active agricultural land used for row crops. Historical orthoimagery indicates the continued agricultural use of this land from 1936 to the present day. It is likely that the site was an active farm before the time period described, based on the observable disturbance of the project area.

Brush
The Project Site contains approximately ±50.41 acres of brush that vary in density and coverage throughout the property. Much of the brush is found at the edge of wetlands #1, 3, 5, and 6. Early- to mid-successional brush is found at the edge of forests, likely the result of clearing or disturbance that resulted from agricultural activity.

Grass
The Project Site contains approximately ±4.43 acres of grass surrounding the properties buildings, facilities, and amenities. The large areas of grass are found in the central portion of the site where the bulk of the equestrian facilities are located.

Wetlands
The Project Site contains approximately ±38.58 acres of wetlands divided among two (2) federal wetlands and four (4) ACOE jurisdictional wetlands. Wetlands #5 and #6 are fed by Stream #1 and Wetland #2 is fed by Stream #2. All wetland areas located on the Project Site will be preserved.

Impervious
The Project Site contains approximately ±7.17acres of impervious surface that include buildings and the dirt, gravel, and paved roads that connect the sites amenities. A majority of the existing roads are improved farm lanes, dirt roads and existing town roads running through the site.

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3.7 Prime Agricultural Soils and Soils of Statewide Importance

Based on a review of the United States Department of Agriculture's Web Soil Survey, the entire project contains soils that are prime or statewide important farm soils.

Figure 3.3 Agricultural and Prime Soils

Project Site Soils					
Prime Agricultural Soils	**Acres**	**Percentage (%)**	**Soils of Statewide Importance**	**Acres**	**Percentage (%)**
Copake Gravelly Silt Loam, undulating (CuB)	1.64	0.2%	Stockbridge Silt Loam, 8 to 15 percent slopes (SkC)	186.93	26.5
Georgia Silt Loam, 0 to 3 percent slopes (GsA)	0.54	>0%	Sun Silt Loam (Su)	6.90	1.0
Georgia Silt Loam, 3 to 8 percent slopes (GsB)	77.67	11.0			
Massena Silt Loam, 3 to 8 percent slopes (MnB)	58.68	8.3			
Stockbridge Silt Loam, 3 to 8 percent slopes (SkB)	26.63	3.8			
TOTAL	**165.16**	**23.5%**	**TOTAL**	**193.83**	**27.5%**

Prime Agricultural Soils

The Project Site contains approximately +/- 165.16 acres of prime agricultural soils CuB, GsA, GsB, MnB, and SkB. These soils are generally found along the western edge of Lots #21-27, the southern paddock Lots #1-8, and the northeastern Lots #17-19. Land usage for these areas is primarily row crop and horse paddocks.

Soils of Statewide Importance

The Project Site contains approximately +/- 193.83 acres of statewide important soils SkC and Su. These soils comprise the bulk of Lots #21-27, 6, 8, 11, and Wetland #2 on Lot #18. Land usage for these areas is primarily row crop, horse paddocks, and wetland.

3.8 Flora and Fauna

A review of New York State Department of Environmental Conservation's (NYSDEC) Environmental Resource Mapper identified three (3) possible threatened/endangered species that may be present on the Project Site: Bog Turtle, Timber Rattle Snake, and Hill's Pondweed. The New England Cottontail, a NYS species of special concern, was also examined. Based on this assessment, a certified biologist, Michael Nowicki from Ecological Solutions, LLC., surveyed the property in 2021 and documented no instances or evidence of the above referenced species and outlined mitigation measures that may

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be taken to mitigate the impact that the proposed project may have on said species. A Threatened and Endangered Species Habitat Suitability Assessment Report, dated 9/25/2021, was prepared discussing the results of Mr. Nowicki's field investigation. In regards to Hill's Pondweed, previously provided species/habitat documents (Depot Hill Farm – 2009), were reviewed and it was determined that there was no instance or evidence of the species is located on the Project Site. A copy of the reports are included in Appendix B. A summary of the report has been provided below:

Bog Turtle
The Project Site was assessed for the presence of habitat characteristics consistent with the 2017 bog turtle federal recovery plan. Per the Ecological Solutions report the following conditions exist: soft, saturated organic/mineral soil; perennial groundwater discharge; a plant community of low-growing, native flora (including sedges, rushes, grasses, forbs, mosses, and some low shrubs); tree canopy cover less than 50%; fen indicator plants (including shrubby cinquefoil, grass-of-parnassus, and tamarack).
The report concluded that AM-10, a NYSDEC wetland partially contained within a Federal easement on project parcel #570145, has potential for bog turtle habitat. The Federal easement on the wetland is designed for the purposes of protecting this species and as such will remain untouched throughout the project. Furthermore, building envelops have been sited +300' away from the edge of wetland ensuring that residential construction will not effect potential bog turtle habitat.

Timber Rattlesnake
The Project Site was assessed for the presence of Timber Rattlesnake den, basking/gestating, and foraging habitat consistent with known location of the species. Per the Ecological Solutions report the following conditions exist: dense, forested hills with steep slopes; Hollis-Chatfield Rock outcrop soils; large open fields used for agriculture and equestrian facilities.
The report concluded that based on the lack of southeast to southwest facing rock formations for basking, the site likely does not contain any suitable Timber Rattlesnake den areas. Additionally, the consistent agricultural use of the bulk of the lowland areas have limited the potential for suitable foraging space due to poor shade, rest, and prey opportunities in the fields.

If practical, the report suggests that proposed ground disturbance activities not associated with agriculture should occur between the period of November 1 through March 31, when this species is not active.

New England Cottontail
The Project Site was assessed for the presence of New England Cottontail habitat and found suitable shrubby areas and thickets of native mid- to late-successional species in and around wetland areas. The presence of invasive shrubs, low-density tree cover in wetland areas, and a younger shrubland detracted from the overall likelihood of this species habitation on site.

The report concluded that potential habitat does exist on the Project Site, however, these areas are fragmented with no existing connections or travel corridors to other habitat.

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These factors make it unlikely that the species exist on site and the patches of suitable habitat will remain due to their association with wetland areas.

Hill's Pondweed

As part of the DEIS prepared for the previously proposed Depot Hill Farm Development (2009) a full inventory of the site's ecological communities and their component flora was provided in a Natural Resource Survey prepared by Matthew Rudikoff Associates, Inc. (MDRA). The report documented 355 species of vascular plants none of which included any plants listed on the State or Federal-listed Endangered, Threatened, or Rare species list. The report notes that NYSDEC Natural Heritage Program indicated that there was only one instance of Hill's Pondweed recorded within the vicinity (Off-Site – Along NYS Route 22) of the Project Site. Follow up inspections conducted by MDRA confirmed the potential presence of pondweed at the offsite location, but was unable to determine its exact species. The report concludes that the only pondweed observed on the Project Site was Curly Pondweed (not listed species), which was located in parcel #515886 (not in application). Its apparent absence, lack of disturbance within existing wetland areas, and siting of building envelops away from wetland areas, will ensure that any Hill's Pondweed will not be affected by the proposed project.

Refer to Appendix B for the Threatened and Endangered Species/Habitat Suitability Assessment Report.

3.9 Summary of Environmental/Zoning Site Resources

The following table is a summary of the conservation/zoning resources, specified in §121-20 of the Amenia Zoning Code and discussed above, present on the Project Site.

Figure 3.4 Summary of Conservation Resources

Summary of Conservation Resources		
Quantity	**Acres**	**Percentage of Project Site**
Environmental Resources		
Conservation Analysis Items		
NYSDEC Wetland Areas (acres)	35.24 ac	4.99%
USACOE Wetland Areas (acres)	3.34 ac	0.47%
Stream (LF)	9,136 LF	N/A
Slopes 15-30%	169.97 ac	24%
Slopes 30+%	48.46 ac	6.90%
Prime Farmland Soils	165.16 ac	23.43%
Soils of Statewide Importance	193.83 ac	27.50%
Land Cover Types		
Pond	0.64 ac	>0.01%
Paddock	166.18 ac	23.50%
Forest	166.31 ac	23.60%
Row Crops	271.29 ac	38.50%
Brush	50.41 ac	7.10%
Grass	4.43 ac	0.06%
Wetlands	38.58 ac	5.50%

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Impervious	7.17 ac	1.01%
Zoning Resources		
Zoning Districts		
Rural Agricultural "RA"	676.62 ac	96.0%
Rural Residential "RR"	28.302 ac	4.00%
Overlay Districts		
Scenic Protection Overlay (SPO)	530 ac	75%
Aquifer Overlay District (AQO)	704.9 ac	100%
Stream Corridor Overlay (SCO)	60.75 ac	8.60%
Resort Development Overlay (RDO)	457.77 ac	65%

4.0 DENSITY CALCULATIONS/ALTERNATIVE SUBDIVISIONS LAYOUTS

Based on a review of the Town of Amenia Zoning Code, there are multiple ways that the project parcels could be subdivided or developed. In order to establish the true conservation value offered by the proposed Keane Stud conventional subdivision layout, provided in this section are examples of viable alternative subdivisions/developments that could be implemented on the Project Site. These alternative options include density calculations comparing what is currently proposed for the Project Site to what the Town of Amenia Zoning Code permits.

This analysis includes viable alternative conventional subdivision layouts, conservation subdivision layouts, and large-scale residential/mixed-use developments, such as the previously proposed Depot Hill Farm Development (2009) designed for the largest of the four (4) existing parcels (#403720), which would be permitted using conservation subdivision and overlay districts bonuses. In general, this section of the Conservation Analysis is used to examine the scale of the proposed project vs. what would be permissible on the Project Site based on provisions provided in the Town of Amenia Zoning Code.

Post Development Density Impacts

This section also explores the potential post-development impacts of each scenario and how said impacts would affect conservation resources. These impacts include:

- Water Usage/Demand
- Wastewater Generation
- Impervious Surface Coverage
- Energy Usage
- Traffic Generation
- Required High-Density Infrastructure (i.e; Roads, Water/Wastewater Treatment)
- Number of Residents
- Total Site Disturbance
- Noise
- Municipal Solid Waste Generation
- Draw on Public Services/Emergency Infrastructure

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These impacts typically scale directly with the number of residential lots/units (density) and the type of use(s) proposed; with higher density projects resulting in a greater impact to a particular resource than lower density projects. While it is impossible to provide a precise metrics on how a particular buildout scenario may affect these impacts, as the buildout of new lots would be largely influenced by the future owner's personal preference, generalizations can be made to demonstrate what potential impacts could be and how they would scale depending on density. In reviewing the following density analysis, the following assumptions are made regarding potential development:

- All residential lots are assumed to be provided with a single-family residence (unless otherwise specified).
- All single-family residences are assumed to be constructed with four (4) bedrooms, with an occupancy of one (1) person per bedroom.
- Only residential uses have been assessed as part of this analysis, with non-residential use components (RDO Development) expected to add to potential impacts.
- Water/Wastewater demand/generation is assumed at 110 gallons per day (gpd) per bedroom. (NYSDEC Typical Per-Unit Hydraulic Loading Rates)
- Single family homes: 0.75 trips per residence in AM; 1.01 trips per residence in PM. (6th Edition of the ITE Trip Generation Report)
- Municipal Solid Waste Generation is calculated at a rate of 4.09 lbs/person/day (2018 Disposal Rate – 2023 Draft NYS Municipal Solid Waste Management Plan)
- Electricity consumption for residential units is assumed 10,632 kilowatt-hours (kWh) per household. (2021 Average Annual Electricity Consumption – U.S. Energy Information Administration)

As documented below, the proposed conventional subdivision provides a lower density than what is permitted by zoning, and is in greater conformance with the intent of the Amenia Zoning Code, the RA and RR zoning intent and the Town of Amenia Comprehensive Plan. The various other subdivision alternatives and associated density calculations have been provided below:

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4.1 Current Proposal "Rural Agricultural" Conventional Subdivision Layout

As stated throughout this document, the project is a conventional subdivision, focused on agriculture and land preservation that proposes:

- Twenty-Six (26) proposed new Residential-Agricultural parcels (Lots 1 – 26);
- One (1) Existing Equestrian Facility (to remain as agriculture) (Lot G-1);
- One (1) Existing Farm parcel that contains a federal wetland reserve easement This lot will maintain frontage on Prospect Avenue. (Lot G-2);
- Two (2) Forest Conservation parcels. (Lots F-1 & F-2);
- One (1) Existing Developed Farm Residential Parcel. (Lot 27)

Total New Developable Lots: 26 Lots
Anticipated Residential Population: 104 residents
Water Demand/Wastewater Generation: 11,440 gpd
Peak AM/PM Traffic Generation: AM: 19.5, PM: 26.3
Municipal Solid Waste Generation: 425.36 lbs/day
Annual Electricity Consumption: 276,432 kWh

The proposed conventional subdivision for Keane Stud provides a layout of 26 new lot, which have been designed to promote farms in a small farming community. This number is far less than the number of lots that could be created as of right (i.e.: conventional subdivision) or as part of a conservation subdivision. The proposed rural agriculture subdivision not only minimizes density to less than 50% of a standard conventional subdivision, it also ensures the preservation and protection of the existing wetlands, forests, and agricultural lands, through the use of additional conservation measures, such as those outlined in §6.0 "Proposed Conservation" of this document. Keane Stud is a small farming community, and as an "Agricultural" conventional subdivision, provides the benefits of a Conservation Subdivision in terms of protecting important natural resources while limiting the number of units.

4.2 No Action/No Build

This alternative would entail the continued use of the site as an equestrian facility with three existing residences on parcel #403720 and row crops/fields and agricultural practices on parcels #212034 & 515033, and 57014, at least while under current ownership disposition and holdings. In this instance there would be no greater impact of to environmental or conservation elements. However, three separate entities are under control of the fully conforming parcels, each of which could be sold and developed individually. Were the Project Site to be undeveloped by this application, the continuation of existing agricultural uses, including the equestrian facility, would be uncertain.

Additionally, excluding parcel #403720 which already maintains three existing residences (7 bedrooms total), each parcel would at a minimum be permitted an as-of-right single-family residences, with each one capable of supporting an accessory dwelling unit and any accessory structure typical to residential use. In this scenario, these residences, assuming they are not constructed within the SPO, would not require Planning Board approval, only the necessary building permits from the Amenia Building Department. The

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parcel could also be developed with any number of commercial agricultural facilities (i.e: barns, livestock, processing facilities, as defined in the Amenia Zoning Code §121-74 Definitions 'Agriculture', without site plan approval. Examples of what a buildout such as this may look like for parcel #212034 has been provided in the "Zoning Compliance/Mitigation Measures Exhibit", "§3.1 No-Subdivision Buildout Scenario" in Appendix D.

Total Developable Lots: 3 Lots + 1 Existing Developed Lot w/ 3 Residences
Anticipated Residential Population: 19 residents (3 new, 3 existing residences)
Water Demand/Wastewater Generation: 2,090 gpd (19 total bedrooms)
Peak AM/PM Traffic Generation: AM: 4.5, PM: 6.1
Municipal Solid Waste Generation: 77.71 lbs/day
Annual Electricity Consumption: 63,792 kWh

4.3 Permissible Conventional Subdivision Layout

As stated above, the proposed 26 residential-agricultural lots (31 lots total) are less than the number of lots that could be created via a typical conventional subdivision, which are typically designed to maximize the number of lots created in compliance with bulk regulation requirements. Based on the determined "net acreage", as described in Town of Amenia Zoning Code §121-20.B(1), of the project parcels, a conventional subdivision of these parcels would be able to support, more lots than currently proposed. Calculations provided below:

Net Acreage (acres) = (Total Site Acreage - (Wetland(s) + Water Course(s) + Floodplain(s) + Slopes over 30% + (0.5 x Slopes 15%-30%))

Net Acreage x 0.85 (roads, irregular lot shape)

(RR Zoned Land) Net Acreage = (676.62 – 36.53 - 0.0 - 0.0 - 48.46 - (0.5 x 169.97))*0.85=430.7 Net RR Acres

430.7 acres/10-acres per lot* = **43.07 or 43 residential lots**

(RA Zoned Land) Net Acreage = (28.302 – 0.0 - 0.0 - 0.0 – 0.0 - (0.5 x 0.0))*0.85=24.1 Net RA Acres

24.1 acres/5-acres per lot = **4.82 or 5 residential lots**

Total Permissible Conventional Subdivision Layout Lots
Total Lots = 48-lots
Anticipated Residential Population: 192 residents
Water Demand/Wastewater Generation: 21,120 gpd
Peak AM/PM Traffic Generation: AM: 36, PM: 48.5
Municipal Solid Waste Generation: 785.28 lbs/day
Annual Electricity Consumption: 510,336 kWh

In order to accommodate the maximum density conventional subdivision buildout described above, the proposed subdivision would result in additional conservation resource impacts. As demonstrated above, the additional lots would result in greater demand for water and electricity and generate additional wastewater, traffic, and solid

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waste. The number of units under this scenario would also result in additional impacts to the scenic corridor, increased land disturbance including disturbance to forests lands, disturbance to steep slopes, greater burden on community and emergency services, such as the fire.

Furthermore, as defined in §121-74 of the Amenia Zoning Code, a conventional subdivision "does not set aside land as permanently protected open space". In this scenario the conventional layout would not be require to place protections on any additional agricultural or open space protection measures; although such protections may be determined necessary by the Planning Board during SEQR review.

4.4 Depot Hill Farm Development

4.4.A Formerly Proposed Development

Between 2008-2009 the previous owner of project parcel #403720 proposed the development of 137 single family residences managed under a condominium association. The proposed development was located on 481.44-acres and utilized the Town of Amenia's Resort Overlay District (RDO) to increase the density of the site. In exchange for the increased density, the development would place 80% of total land area under conservation easement and require that no more than 15% of the total site area be covered in impervious surface. The RDO also outlined additional provisions, including requirements for the clustering and siting of residential units, open space buffers, and additional density/dimensional standards.

The proposed development was a multi-phase construction project that would have resulted in the construction of 4 new roadways, 137 single-family residences, with each residence being an average ±2,600 SF, and residential garages provided for each single-family unit. The proposed development also outlined plans to construct a wastewater treatment plant, composting facility, and water tower to accommodate the anticipated increase in density. The Depot Hill development also called for the preservation of the existing equestrian facility, which would be incorporated into the programing of the association.

The proposed development was clustered in many of the existing agricultural fields and would've resulted in 2.9-miles of new roadways being constructed to serve the residences. The development would have also focused the construction of the proposed neighborhoods in areas located within the SPO. In general, the proposed development provided significantly higher density that what is typically permitted within the RA and RR zoning districts.

Total Units = 137 single family + Private Community Center.
Anticipated Residential Population: 548 residents
Water Demand/Wastewater Generation: 60,280+ gpd (increased by RDO Uses)
Peak AM/PM Traffic Generation: AM: 102.8, PM: 138.4 (increased by RDO Uses)
Municipal Solid Waste Generation: 2,241.32+ lbs/day (increased by RDO Uses)
Annual Electricity Consumption: 1,456,584+ kWh (increased by RDO Uses)

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4.4.B Resort Development Overlay Required Alternative

As part of the above-referenced Depot Hill Farm Development, several alternative site layouts/uses were examined for the site, using the benefits offered by the RDO. The proposed alternative layout outlined plans for a resort that incorporates a 200-guest spa/wellness facility, 400-seat performing arts facility, and ±170 condominium units.

This alternative proposal developed as part of the Depot Hill project would be located entirely on one (#403720) of the proposed project parcels and would be permitted under the Resort Development Overlay District. The proposed alternative resort project would result in a significantly denser level of development for the Project Site than what is currently proposed.

Total Units = +/- 170 condominium units, plus Spa/Wellness Center, and 400 seat performing arts facility.

Anticipated Residential Population: 680 residents
Water Demand/Wastewater Generation: 74,800+ gpd (substantially increased by RDO Uses)
Peak AM/PM Traffic Generation: AM: 127.5, PM: 171.7 (substantially increased by RDO Uses)
Municipal Solid Waste Generation: 2,781.2+ lbs/day (substantially increased by RDO Uses)
Annual Electricity Consumption: 1,807,440+ kWh (substantially increased by RDO Uses)

Both options above promote large-scale development, would result in increased impacts to our land and water resources, and more so contradict the vision of our Comprehensive Plan.

The required alternative layout for the Depot Hill Farm is depicted in the attached "Depot Hill Farm (2009) – Alternative Land Use" exhibit located in Appendix F.

4.5 Conservation Subdivision Layout

An alternative conservation subdivision could be prepared for the Project Site. The intent of the conservation subdivision is to provide flexibility in preserving important natural resources while increasing density and reducing minimum setback/area requirements for bulk regulations. Based on the calculations provided below, a conservation subdivision would drastically increase the number of lots that could be created from the project parcels:

4.5.A Conservation Subdivision – Density Calculations

Based on the "density calculations" provided in §121-20.B of the Town of Amenia Zoning Code, a conservation subdivision for the project parcels could support the following number of lots:

Net Acreage (acres) = (Total Site Acreage - (Wetland(s) + Water Course(s) + Floodplain(s) + Slopes over 30% + (0.5 x Slopes 15%-30%))

Net Acreage x 0.85 (roads, irregular lot shape)

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(RR Zoned Land) Net Acreage = (676.62 – 36.53 - 0.0 - 0.0 - 48.46 - (0.5 x 169.97))*0.85=430.7 Net RR Acres

430.7 acres/5-acres per lot*= **86.14 or 86 residential lots**

(RA Zoned Land) Net Acreage = (28.302 – 0.0 - 0.0 - 0.0 – 0.0 - (0.5 x 0.0))*0.85=24.1 Net RA Acres

24.1 acres/3-acres per lot*=**8 residential lots**

*Max. Density for Conservation Subdivision. RA = 5 ac/du RR = 3 ac/du

For a total of 94 residential lots {without density bonus}

Anticipated Residential Population: 376 residents
Water Demand/Wastewater Generation: 41,360 gpd
Peak AM/PM Traffic Generation: AM: 70.5, PM: 94.9
Municipal Solid Waste Generation: 1,537.8 lbs/day
Annual Electricity Consumption: 998,562 kWh

4.5.B Conservation Subdivision – Density Calculations w/ Density Bonuses

In addition to the 94 residential lots calculated above, §121-20.C 'Density Bonuses' outlines additional bonuses that could be used to increase the permitted number of residential units. As the intention of the proposed Keane Stud Conventional Subdivision is to preserve existing agricultural operations and open space, several of these density bonuses could be applied to the Project Site, significantly increasing the total number of residential lots, which could be created. Of the four density bonuses allotted for conservation subdivisions, the two underlined below could be readily applied to the project parcels based on current proposed project intentions:

1) Public access to the protected open space on the property providing a significant recreational benefit to the Town = +25% Density Increase {Not Applicable}
2) Preserves at least 60% of the parcel as working farmland = +25% Density Increase
3) Preserves permanent open space 20% over the required (50%) = +40% Density Increase
4) Density Transfer {Not Applicable}

Total Increase in Density = 65%
94 residential lots x 165% permitted density

Total Units = 155.1 or 155 Residential Lots

Anticipated Residential Population: 620 residents
Water Demand/Wastewater Generation: 68,200 gpd
Peak AM/PM Traffic Generation: AM: 116.3, PM: 156.6
Municipal Solid Waste Generation: 2,535.8 lbs/day
Annual Electricity Consumption: 1,647,960 kWh

The Conservation Subdivision helps protect natural resources by requiring the preservation of at least 50% of the land as open space. Density bonuses granted for

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additional conservation efforts and dedicated open space land (§121-20.C). However, these density increases, which are required to offset the high cost of providing high-density residential infrastructure (i.e: treatment plants, sidewalks, lighting, utility upgrades, etc.), will result in greater impacts to existing conservation resources due to the increase in the number of people that will need to be served by the development.

4.6 Conservation/Depot Hill Subdivision Alternative Buildout

As discussed above, both the Conservation Subdivision layout and the proposed Depot Hill Development allow a greater number of residential lots/units on the project parcels than what is currently proposed as part of the Keane Stud Conventional Subdivision. However, as the Project Site consist of four (4) separate parcels, the true maximum residential lot/unit buildout potential would need to incorporate the density bonusses permitted for parcel #403720, being located within the Resort Development Overlay (RDO) district, as well as the maximum number of lots that each of the additional three parcels (#212034, 515033, 570145) could support as part of a conservation subdivision.

To analyze the true buildout potential of the project parcels and to highlight the conservation benefits provided by the currently proposed “agriculture” conventional subdivision, a buildout scenario has been prepared combining the previously proposed Depot Hill Development with separate conservation subdivision layouts prepared for the three (3) parcels not included within the RDO. The combination of the RDO and Conservation Subdivision development will allow for the creation of 171 residential lots/units. A copy of the Conservation/Depot Hill Subdivision Alternative Build-Out Plan has been included in Appendix D. Additional information regarding the development of said alternative development has been outlined below:

4.6.A Depot Hill Development on Parcel #403720:

As discussed above, project parcel #403720 is located within the Resort Development Overlay District, which offers an unspecified increase in density in exchange for certain restrictions outlined in §121-18 “Resort Development Overlay”. With parcel #403720, being directly adjacent to the other project parcels, the design of this previously proposed 137 residential unit development, with accessory facilities, such as garages for each residence, 24,000 SF composting facility, wastewater treatment plant, and numerous additional roadways, would still be applicable to the Project Site. This previously proposed development could be seamlessly incorporated into the design of the separate conservation subdivisions outlined for the remaining three project parcels.

4.6.B Conservation Subdivision on Parcels #212034, 515033, 570145

As stated above, the three remaining project parcels are not located within the RDO and as such are not allotted the same density benefits outlined as part of the Depot Hill Development. However, each of the three remaining separate parcels, all of which have more than sufficient acreage for the RA and RR zoning districts, may be individually

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subdivided. In this alternative buildout scenario, each parcel has been evaluated against conservation subdivision criteria to assess the number of lots it could support. Using the Conservation Subdivision calculations outlined above, each of the remaining parcels could support the following number of lots:

- Parcel #212034
  Total Buildable Acreage = (154.99 $_{\text{total project area}}$ – 16.55 $_{\text{wetlands}}$ – 0.833 $_{\text{slopes >30\%}}$ - (0.5 x 14.14 $_{\text{slopes >15\% but <30\%}}$) X 0.85 $_{\text{road/lot irregularities}}$ = 110.9 Net RR Acres

  130.53 acres / 5-acres per lot* =22.2 or 22 residential lots

- Parcel #515033
  Total Buildable Acreage = (40 $_{\text{total project area}}$ – 6.19 $_{\text{wetlands}}$ – 0.80 $_{\text{slopes >30\%}}$ - (0.5 x 10.33 $_{\text{slopes >15\% but <30\%}}$) X 0.85 $_{\text{road/lot irregularities}}$ = 23.7 Net RR Acres

  130.53 acres / 5-acres per lot* = 4.7 or 5 residential lots

- Parcel #570145
  Total Buildable Acreage = (62.1 $_{\text{total project area}}$ – 12.39 $_{\text{wetlands}}$ – 0.24 $_{\text{slopes >30\%}}$ - (0.5 x 14.49 $_{\text{slopes >15\% but <30\%}}$) X 0.85 $_{\text{road/lot irregularities}}$ = 35.89 Net RR Acres

  130.53 acres / 5-acres per lot* = 7.2 or 7 residential lots

Total Residential Lots for these three parcels = 34 residential lots*

**Base density. The base density established for the three project parcels does not include any additional density bonuses outlined §121-20.C and referred to in §5.4 "Conservation Subdivision Layout" of this document. Given the intent of the of the proposed Keane Stud Conventional Subdivision, which focuses on preservation of agricultural activities/land and open space, the alternative buildout could feasibly obtain said bonuses. It is anticipated that a buildout of this type could incorporate a bonus density of 65% (preservation of 60% of parcel as working farmland: bonus 25%, preservation of permanent open space than is required (50%): 10% bonus for 5% additional open space for an additional 40% bonus), increasing the total number of lots from 34 to 56 lots.*

4.5.C Alternative Depot Hill/Conservation Subdivision Buildout Design

Combining both the Depot Hill Development (137 units) and the Conservation Subdivision (34 units) calculations above, this alternative layout would be able to support:

A total of 171 residential lots/units

Anticipated Residential Population: 684 residents
Water Demand/Wastewater Generation: 75,240+ gpd (Not including non-residential RDO uses)
Peak AM/PM Traffic Generation: AM: 128.3, PM: 172.7 (Not including non-residential RDO uses)
Municipal Solid Waste Generation: 2,797.56+ lbs/day (Not including non-residential RDO uses)
Annual Electricity Consumption: 1,818,072+ kWh (Not including non-residential RDO uses)

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A feasible alternative buildout has been developed to demonstrate how the higher density alternatives could be constructed on the Project Site. In designing this alternative buildout, the following design parameters have been implemented:

- The entirety of the previously proposed Depot Hill Farm Development, including the 137 residential units, roadways and accessory structures/use would be constructed on parcel #403720. This development is less than what RDO provisions could support.
- Conservation subdivision parcels vary from ±1-5 acres. Parcels sizes are similar to adjacent subdivided parcels (i.e., Amenia Heights). As discussed in §121-19.B, there is no maximum lot size for a conservation subdivision parcels. Minimum lot size would be 8,000 SF with the construction of the Depot Hill Wastewater Treatment Plant and Water Tower (common sewer/water).
- The alternative Depot/Conservation lot layouts have been designed to comply with rural siting principles and open space design guidelines. In general, the proposed alternative layout:
    - Clusters proposed lots together along the borders of existing parcels to avoid development in the middle of open fields and to maximize the availability of contiguous agricultural lands and open space.
    - Residential developments have been sited away from existing neighborhoods to avoid unnecessary disturbance to existing residences.
    - Proposed roadways and property lines have been designed to follow existing agricultural roadways, stonewalls, hedgerows present throughout the existing parcels.
    - Avoids development along crestlines and in heavily vegetative areas.
- A minimum of 50% of each parent conservation subdivision parcel (#212034 = 65%, 515033 = 52%, 570145 = 62%) is shown within a designated conservation area. This does not include land within proposed parcels which could be preserved as additional agricultural/open space through conservation easement, for which 80% of Depot Hill Farm development land shall be placed under.
- Proposed development has been sited away from existing wetlands, waterways, forested, and steeply sloped areas.

Although this 171 residential unit alternative development layout allows for greater development potential than 26 residential lots proposed as part of Keane Stud Conventional Subdivision, it fails to meet the objective of the sponsor, who's intentions for the site is to keep it low-density residential with a focus on preserving agricultural lands and open space through private ownership. A copy of the "Alternative Depot Hill Development/Conservation Subdivision" plan, depicting this viable higher density alternative, has been included in Appendix D.

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4.6 Density Summary

As discussed above and summarized below, the site could support a variety of different development options, all of which could support more residential lots than currently proposed:

Figure 4.1 Project Site Density Potential

Project Site Density Potential						
	Proposed Conventional Subdivision	**No Build / No Action**	**Permissible Conventional Subdivision**	**Conservation Subdivision ---------- w/ Density Bonus**	**Depot Hill Farm/ Conservation Subdivision Alternative Buildout**	**RDO – Depot Hill Alternative Land Use (2009)**
Total Residential Units	26 new agricultural development parcels lots 1 equestrian/ agricultural parcel 1 existing developed (ag) residential parcel 1 existing farm parcel w/ Fed. Wetland Easement 2 conservation parcels	4 residential lots w/ existing equestrian facilities	48 residential lots	94 residential lots 155 residential lots	137 residential lots (Depot Hill) + 34 residential lots (Conservation Subdivision) = 171 total residential lots	170 townhouse units 200 guest hotel/spa 400-seat performing arts center

In general, the intent of conservation subdivisions and the Resort Development Overlay district is to preserve existing open space, by allowing for flexibility in bulk regulations requirements. Typically, this flexibility in bulk regulation requirements allow for an increase in density, allowing for a greater number of residential lots/units than would be typical for its underlying zoning district. As demonstrated above, this increase in density typically results in greater impacts to the number of residents, water demand/wastewater generation, vehicle trips, municipal solid waste generation, and annual electricity consumption.

In addition to the impacts above, it can be inferred that higher density development will result in:

- Reduced Lot Size = Reduced Lot Value: New lots associated with a conservation subdivision are typically smaller than those permitted with a conventional subdivision. Smaller lots are typically more costly to create, requiring additional infrastructure (i.e: roads, wastewater infrastructure, electrical grid upgrades) to make feasible, which would ultimately result in the creation of more lots to offset the cost of providing said improvements.
- Flexibility in Permitted Uses: As demonstrated above, conservation subdivisions/RDO development may also alter the uses permitted on the site, which may be allowed, but is at odds with the intent of the underlying zoning district, which is to create low-density residential uses.

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- Greater Use of Public/Emergency Service Infrastructure: More residents/residences will require more public infrastructure to maintain the security, safety, and happiness of new residences. Additional emergency service infrastructure, which may or may not be provided as part of a potential development, would be required to accommodate the increase in the number of people, with the need scaling depending on the density of development.
- Noise, Light Pollution, and Other Related Impacts: There are numerous other related impacts that scale with the number of units provided. Noise generated form the Project Site would be expected to increase depending on the number of residents. Same with light pollution, as each new residence constructed would be provided its own set of light fixtures. In general, other impacts, which would be more fully identified during the Planning Board approval process for each particular buildout scenario as part of SEQR, would also scale depending on the number of residential units proposed.

As demonstrated throughout this section, the various other viable alternatives that could be constructed on the Project Site will have differing impacts depending on the proposed density. In general, this section of the analysis finds that land preservation benefits offered by Conservation Subdivision/RDO alternative layouts require higher density in order to be viable. As shown above, these specially design, higher density layouts may result in even greater impact to conservation resources than the low-density layouts intended for the RR and RA zoning districts. The current proposal for a "Rural Agriculture" conventional subdivision provides significantly fewer residential lots than what the Project Site could potentially support under all other scenarios. This low-density layout has a demonstrably lesser impact to the conservation resources discussed above.

A summary of these impacts has been included in the "Conservation Resource Impact Analysis Summary" included in Appendix F of this report.

5.0 VISUAL IMPACT ANALYSIS

The four parcels that make up the Keane Stud Subdivision Project Site are located in a very prominent part of the Town of Amenia and, as such, are highly visible from adjacent areas. As discussed in initial meetings with the Planning Board, the highly visible nature of the Project Site would need to be addressed as part of the Conservation Analysis. It is important to note that the proposed project is not building out any of the lots created by this subdivision. In the future, any improvements to these lots will have to comply with the town zoning code and require Site Plan review and approval from the Town of Amenia Planning Board. The Keane Stud Subdivision itself would result in very little disturbance to the site, which would only include the development of the two new rural lanes, their associated stormwater management practices, the planting of additional hedgerows, and any other non-residential improvements identified during Preliminary Subdivision review.

It was determined during the 3/23/2022 Planning Board meeting that the proposed project would need to evaluate how a potential buildout of all the lots may affect the viewshed of

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the project parcels. As such, this Conservation Analysis includes Visual Impact Analysis which has been divided into five (5) separate parts:

- Visual Intent of the Underlying Zoning Districts
- Existing Viewshed Conditions:
- Pre-Post Conventional Subdivision Buildout Scenarios
- Proposed Viewshed Conditions (Conceptual Renderings)
- Proposed Visual Impact Mitigation

Several exhibits have been prepared in support of the above referenced sections and included in Appendix D – Visual Impact Analysis of this report.

The exhibits address, from a visual impact perspective, what existing viewshed conditions of the site are from these viewpoints, how the proposed project is in compliance with various zoning provisions within the Town of Amenia Zoning Code, what a potential buildout of the proposed Keane Stud conventional subdivision and alternative forms of development could look like, and how the project is proposing to mitigate any potential impacts on the viewshed.

5.1 Visual Intent of Underlying Zoning Districts

Within the Town of Amenia, development is guided by two documents; the Comprehensive Plan, which serves as a guiding document for the town, and the Zoning Code, which provides specific criteria for proposed development to abide by. Each document provides guidance on how development should look, depending on the type of project and which zoning district(s) it is located within.

Town of Amenia Comprehensive Plan

As stated above, the Town of Amenia Comprehensive Plan, adopted in 2007, is a guiding document outlining a vision for the Town and the goals they should work to accomplish in order to achieve it. As summarized in the "Zoning Compliance/Mitigation Measures Exhibit (§1.1 Town of Amenia Comprehensive Plan)", the comprehensive plan places a heavy emphasis on the preservation of open space and the continuation of agricultural uses, both of which, when incorporated into a project's design, have a significant visual impact. As outlined in the analysis, the low-density design of the subdivision and additional conservation/visual mitigations efforts being proposed (see §5.5 Proposed Visual Impact Mitigation), the proposed conventional subdivision is in compliance with the visual intent of the Town Comprehensive Plan.

Town of Amenia Zoning Code

Building off of the Town of Amenia Comprehensive Plan, the Town's Zoning Code is a more in-depth document, often times dictating what proposed development should visually look like. For this project three particular items in the zoning code outline

recommendations/requirements for how the proposed subdivision should look. These include:

- Rural Residential/Rural Agricultural Zoning District (§121-7)
- Scenic Protection Overlay District (§121-14.1)
- Rural Siting Principals (§121-31)

As discussed in the "Zoning Compliance/Mitigation Measures Exhibit (§1.2-1.4)" the proposed conventional subdivision has been designed to comply with the above-referenced sections of zoning code. The exhibit demonstrates the low-density layout proposed is in compliance with the visual intent of the RA and RR zoning districts. Furthermore, the exhibits identify how the proposed building envelopes (See "Building Envelope Siting Analysis") have been designed to comply with the recommend siting provisions outlined Rural Siting Principals and Scenic Protection Overlay district sections of the Town zoning code. The exhibit also outlines how the majority of the proposed building envelops are located within the SPO, which will allow the Planning Board to conduct a detail Site Plan review of the development of each lot.

5.2 Existing Viewshed Conditions

As discussed above, the Project Site is highly visible from certain areas of the Town. During preliminary discussions with the Planning Board, three (3) viewpoints were identified having the most prominent view of the site:

- Viewpoint #1: NYS Route 44 Scenic Overlook
- Viewpoint #2: NYS Route 22
- Viewpoint #3: Old Route 22 (CR 9)

*Additional viewpoints identified by the Amenia Planning Board, which maintain a less prominent view of the Project Site, were also evaluated for visual impact within the "Conceptual Viewshed Conditions Exhibit".

In order to establish how a potential buildout of the subdivision may affect the viewshed, these three viewpoints were reviewed in the analysis, within the Zoning Compliance/Mitigation Measures Exhibit (§2.0 Existing Viewshed Conditions), documenting existing conditions from each perspective. For each of the three viewpoints, view line profiles were developed identifying the location of existing vegetation and demonstrating that existing changes in topography, which obscures the view of many of the proposed lots depending on which viewpoint the Project Site is being observed from.

The exhibit also contains photos of the Project Site from each of the viewpoints, which shows existing vegetation partially/fully obscuring view of the Project Site. The exhibit also notes the presence of existing agricultural structures which will remain and be expanded if the lots are developed. Neighboring development is also highlighted in the

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exhibit, demonstrating that other, significantly denser forms of development, are visible from the same viewpoints without determinant to the viewshed.

5.3 Pre-Post Conventional Subdivision Buildout Scenarios

As stated throughout this document, the proposed subdivision is a conventional, non-realty subdivision. Conventional, non-realty subdivisions typically do not include the design of additional infrastructure or site improvements, as the lot involved in these types of subdivisions adhere to the bulk regulation requirements for the underlying zoning district and contain sufficient acreage to support their own water and wastewater infrastructure. As such, future owners of the proposed lots may develop their parcel however they want, as long as the proposed development conforms with what is permitted by zoning.

In order to demonstrate this, the provided "Zoning Compliance/Mitigation Measures Exhibit (§3.0 Pre-Post Conventional Subdivision Buildout Scenarios)" reviews several "Potential Buildout Scenarios" for the project parcels. Again, due to the conventional nature of the proposed subdivision, all scenarios depicted in the analysis are conceptual, as the future development will be decided by the property owners.

5.3.A Buildout Scenario #1-3

Conceptual Buildout Scenarios #1-3 were developed for Lots 21-26 to show various forms of buildout that could occur, both pre and post subdivision. These lots were specifically chosen by the Planning Board for review, due to their prominence. The intention of these Buildout Scenarios is to demonstrate that:

1) The existing, un-subdivided, parcels have the potential to be developed in ways that could significantly impact the existing viewshed, without requiring a review from the Amenia Planning Board.
2) That the parcels to be created by subdivision, would be limited to residential and/or agricultural uses. The exhibit demonstrates that future property owners could only use the parcels for agricultural uses, and that any future residential use proposed for the lots would require review and approval from the Amenia Planning Board.

Provided below are the three buildout scenarios depicted:

- Scenario #1: No Subdivision – Agricultural Livestock Processing Facility: No subdivision. Existing parcel is developed as a livestock processing facility. No Planning Board approval required.
- Scenario #2: Conventional Subdivision – Partial Residential Buildout w/ Agricultural Parcels: Subdivision completed as proposed. Lots developed as a mix of agricultural and residential uses. Planning Board approval required for residential uses, but not for agricultural. Planning Board approval required for 50% of development.

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- Scenario #3: Conventional Residential Subdivision w/ Accessory Agricultural Use: Subdivision completed as proposed. All proposed lots contain a residence, some with agricultural structures. Planning board approval required for all lots.

As demonstrated by the exhibits, a scenario where the parcels are not subdivided may result in as much, or greater, disturbance and effect on the viewshed as a scenario where the lots are subdivided. The exhibit shows the buildout of each lot is ultimately determined by each individual property owner and uses can vary.

5.3.B Lot 25 Conceptual Buildout Scenario:

During the 3/23/2022 Planning Board meeting the Board reviewed the Conceptual Buildout Scenarios #1-3 and requested additional details on the proposed lots potential development. As stated above, most development on the proposed lots, excluding agricultural uses, will require Site Plan approval from the Planning Board due to building lots being located within the Scenic Protection Overlay District. As such, the Planning Board will get the opportunity to review each lot prior to their development, which will allow them to ensure compliance with the SPO and other provisions included in the Town of Amenia Zoning Code.

The “Lot 25 Conceptual Buildout Exhibit”, has been prepared to demonstrate the level of detail that will be required prior to development of each of the proposed lots. The exhibit shows all nonagricultural uses shall be clustered within established building envelopes, while the vast majority of the site shall remain either open space or be used for agricultural/open-space activities such as the growing of crops or livestock/equestrian paddocks. It should be noted that the exhibit depicts a conceptual buildout of the subdivision lot and is not a depiction of actual proposed construction. All future property owners shall be allowed to determine, with approval from the Planning Board, the use and configuration of each lot. A copy of the “Conceptual Site Plan Buildout for Proposed Lot 25 Exhibit” has been included in Appendix D of this report.

5.4 Proposed Viewshed Conditions (Conceptual Renderings)

As discussed above, the proposed project is a conventional subdivision, and as such, no new residences, agricultural facilities, infrastructure, or any other improvements are currently proposed (excluding new roadways and additional plantings). However, as requested during the 3/23/2022 Planning Board meeting, conceptual renderings have been prepared for the Project Site to show what a full residential buildout could look like on the project parcels from the various viewpoints discussed above. A copy of these renderings are provided in the “Conceptual Viewshed Conditions Exhibit”, which is included in Appendix D of this report.

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5.4.A Keane Stud Conventional Subdivision

To better analyze how a potential buildout of the conventional subdivision may affect existing viewshed conditions, Lunar Studio: Architectural Renderings & Illustrations, has prepared conceptual renderings depicting a residential/agricultural buildout on the proposed parcels. To evaluate the impact of what a full buildout of the proposed subdivision may look like from scenic viewpoints/adjacent properties and roadways, renderings depict:

- Residential structures ±3,000 SF. All residential structures are located in proposed building envelopes.
- A mix of Agricultural Structures, Uses, and Fields; Similar in size to existing.
- All proposed Roadways/Driveways.
- Existing structures present on and around the Project Site.
- Existing vegetation and hedgerows.
- Proposed landscaping and hedgerows, with proposed planting placed at 50' intervals.

As any and all proposed structures can only be conceptualized, the different renderings contain several differences in terms of layout, coloring, and proposed vegetation. The variation depicted in the provided renderings offers a more accurate representation of what a full buildout of the site might entail as final buildout details of individual lots will ultimately be decided by the property owner and the Planning Board.

The proposed conventional subdivision is keeping with the intent of the underlying zoning districts; prompting low density, open space, and agricultural uses, while also continuing to maintain the scenic viewshed. Provided renderings demonstrate:

- The potential buildout of individual sites will have no, or little, effect on the viewshed, as potential construction will be similar to what is already present on site or on neighboring parcels.
- Existing agricultural practices will be adequately retained due to the controlled layout of building lots/envelopes, which preserve existing agricultural field, hedgerows, and crestlines.
- Much of the potential development for the proposed lots will be difficult to identify due to existing and proposed landscaping improvements, as well as changes in topography from various viewpoints which further obscure visibility of development.
- The only proposed improvements to be constructed as part of this subdivision are the two new rural lanes.

While the full buildout of the proposed conventional subdivision can only be conceptualized, it is evident form the above-referenced renderings that the potential

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future development that may occur on the individual lots will have a marginal effect on even the most sensitive viewshed/viewpoints. In many instances the renderings depict a viewshed that is in greater compliance with the intent of the Amenia Comprehensive Plan and Zoning Code discussed above.

5.4.B Depot Hill/Conservation Subdivision Alternative Buildout Scenario

To compare the visual impact of the proposed low-density conventional subdivision layout to some of the higher density alternatives that could be constructed on the project parcels, several additional renderings have been included in the "Conceptual Viewshed Conditions Exhibit (§3.0 Alternatives Buildout Scenario Conservation/Depot Hill Subdivision)" conceptualizing their buildout. Utilizing the conceptual "Alternative Depot Hill Development/Conservation Subdivision Plan", outlined in §4.5.C and included in Appendix D of this report, Genesis Studios, Inc. prepared several additional renderings of this viable alternative buildout from multiple high-visibility viewpoints identified by the Amenia Planning Board during the January 11, 2023, meeting. To evaluate what this alternative development may look like from identified scenic viewpoints/adjacent properties and roadways, renderings depict:

- The full buildout of the previously proposed Depot Hill Farms Development (2009), include all 137 residential structures and their accessory garages, as well as additional structures and roadways depicted in the Master Development Plan.
- ±2,600 SF residences are modeled after those designed by David Salmela, as part of the original Depot Hill Farm (2009) proposal.
- Residences shown for the conservation subdivision lots are ±3,000 SF and are shown within established building setbacks.
- A 22-lot conservation subdivision on ±154-acre parcel #212034. 15 residences and intermittently provided accessory structures are shown gaining access via a ±1,200 LF cul-du-sac road. 7 additional residential lots are shown with direct access via Depot Hill Road. ±100-acres are shown as undeveloped conservation space.
- A 5-lot conservation subdivision on ±40-acre parcel #515033. Proposed residential lots would be provided access via the same rural lane currently proposed as part of the Keane Stud conventional subdivision, which has been slightly modified to connect to proposed Depot Hill Development roadways. ±20-acres are shown as undeveloped conservation space.
- A 7-lot conservation subdivision on ±62-acre parcel #570145.Proposed Lot 1 would be accessed via an existing drive off of Prospect Avenue. Lots 2-7 would be provided access via a new ±700 LF cul-du-sac road constructed off of the rural lane. ±38-acres are shown as undeveloped conservation space.

As outlined in §4.5.C, the renderings provided in this analysis depict a viable alternative to the Keane Stud Conventional Subdivision currently proposed. As with the conventional

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subdivision, this alternative buildout scenario is in compliance with conservation subdivision open space requirements, RDO development criteria, and rural siting principals. However, given the scale of proposed project compared to what could be constructed, the alternative buildout scenario provides a greater impact to existing visual resources. The renderings demonstrate that the high-density, 171 residential units cluster development, has more residences that are visible from sensitive viewpoints than the 26 new developable lots. The renderings also highlight how said cluster development would be more difficult to screen than the more dispersed conventional layout proposed, which also preserve large portions of the site from development.

5.5 Proposed Visual Impact Mitigation Measures

In addition to the items discussed above, the "Zoning Compliance/Mitigation Measures Exhibit (§4.0 Proposed Visual Impact Mitigation Measures)" also outlines additional measures being proposed as part of this conventional subdivision. These measures will help mitigate any potential effect that the proposed subdivision buildout may have to existing viewshed conditions. These include:

- Conservation Areas
- Agricultural Preservation
- Building Envelopes
- Hedgerow and Agricultural Roadways

As this is a conventional subdivision, no additional mitigation measures are necessarily required. The above-referenced additional mitigation features have been incorporated into the subdivision design voluntarily in an effort to preserve the rural/agricultural nature of the existing site. Rather than trying to maximize density, as other previously proposed developments have done, the current layout offers lower density, additional agricultural features, and dedicated open space. In general, the proposed voluntary mitigation measures lessen the impact that any potential buildout of the proposed subdivision may have on the viewshed.

Additional information on the proposed mitigation measure can be found in "§6.0 Proposed Conservation Efforts" of this report.

The analysis explores the impact of the proposed subdivision, as well as viable alternative developments, impacts on existing viewshed conditions. The analysis shows how the 26 new "residential-agricultural" lots continue to not only promote agriculture in the Amenia community but maintain the rural character, and offer the Planning Board the greatest control over future buildout conditions. This is not only the applicant's intent, but the visual intent of the underlying zoning districts and comprehensive plan. In general, the analysis demonstrates that the proposed layout offers the least amount of impact to existing visual

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conditions compared to the higher-density alternative layouts the site could accommodate.

6.0 PROPOSED CONSERVATION MEASURES

The proposed Keane Stud Subdivision complies with all bulk regulation's requirements outlined for the Rural Agricultural (min. 10-acres) and Rural Residential (min. 5-acres) zoning districts, and as such would typically be defined as a conventional subdivision. As defined by the Town of Amenia Zoning Code, a conventional subdivision is:

"A land subdivision that complies with the minimum lot size requirements shown on the Dimensional Table and does not set aside land as permanently protected open space."

Atypical of an average conventional subdivision, the proposed Keane Stud layout has been developed to include certain conservation measures in order to maintain the sites existing open space as well as its existing rural-agricultural landscape. These measures also provide enhance protections to the site's existing environmental/conservation resources.

These measures, while not required as part of the conservation analysis or for a conventional subdivision layout, are important to note as they will contribute to the overall protection of the conservation resources identified for the Project Site. Additionally, these measures further support the idea that the low-density layout as currently proposed will not result in any adverse impact to the Town's rural landscape or existing natural resources and may proceed without having to pursue any form of high-density alternative.

The following section discusses said conservation measures being incorporated into the Keane Stud Subdivision and how they will benefit the site.

6.1 Conservation Areas

While not required for a traditional conventional subdivision, the proposed layout for the Project Site includes the creation of two (2) forest conservation areas and the preservation/protection of an existing US Wetland Reserve Program (WRP) Easement, which will not be affected by future residential development:

6.1.A Forest Conservation:

Two "forest areas" have been identified on the plat, located along the eastern border of the Project Site. The proposed forest areas will be preserved and offer significant open space:

Forest Conservation Area 1: 90.8-acres
Forest Conservation Area 2: 18.6-acres

In addition to providing a large amount of open space to remain undeveloped, these parcels will also work to preserve sensitive habitat. The proposed areas contain

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significant stands of contiguous, mature forest, populated by a mix of conifers and upland hardwood species. Based on Dutchess County Orthoimagery, (See Appendix B - Historic Dutchess Aerial Imagery) the forest hasn't experienced any significant disturbance since at least 1936 and is part of a large tract of unfragmented woodland extending beyond the limits of the Project Site.

Per the September 2021 Threatened and Endangered Species Habitat Suitability Assessment Report by Ecological Solutions, LLC. (Appendix B), the canopy is dominated by a mixture of oaks, hickories, hemlock, white pine, and maples with American beech and black cherry occurring in lower densities. Oaks are considered a keystone species in northeastern ecosystems and black oak, chestnut oak, red oak, and white oak can all be found among the slopes. These trees provide soil stabilization, shelter and nesting areas, forage, and aesthetic benefits to the forest.

The mature forest provides a number of ecosystem services to its natural communities and to the Town of Amenia. Pines are a favored tree for foraging woodpeckers and the varied canopy creates ample birdwatching opportunities. Deer, squirrel, turkey, butterflies, owls, ferns, flowers, and fungi are only a fraction of the wildlife within the under- and over-story. The large trees and underbrush control erosion, filter the air, support local and regional biodiversity, and provide recreation to community members and visitors alike.

Preserving these large, undisturbed forest tracts ensures the steeper portions of the Project Site will not be subject to heavy disturbance, which may affect stormwater runoff that flows east- west down the slopes and into the wetland areas and agricultural lands in the western portion of the site. Preserving the forest will also maintain the visual conditions along the crestline of the Project Site and provide a significant natural buffer between the proposed subdivision and the properties to the east as recommended in the Rural Siting Principles (§121-31.F) and SPO (§121-14.1.F) development guidelines. Maintaining these large, forested areas will preserve significant flora and fauna, and keeping the forested area unfragmented will allow for these species to continue to move freely to forage and reproduce naturally. These forested areas also contain the headwaters of Stream #1, which flows and supports the existing Wetland Areas 5, 6A, and 6B to the east, which includes the wetland areas applied with a WRP Easement.

6.1.B Wetland Conservation

An existing US Wetland Reserve Program (WRP) Easement was established between the owners of the property and the United States of America in 2011 and the Easement will run with the property, should it change ownership in perpetuity. The purpose and intent of the Easement is to restore, manage, maintain, and enhance the functional value of the wetlands (NYSDEC AM-10), and other lands for the conservation of natural values

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including fish and wildlife and their habitat, water quality improvement, flood water retention, ground water recharge, open space, aesthetic values, and environmental education. The Natural Resources Conservation Service (NRCS) oversees the WRP and their intent is to give the Landowner the opportunity to participate in the restoration and management activities on the easement area.

While the existing wetland is already protected by the presence of the WRP Easement and additional NYSDEC Wetland buffers/restrictions, additional care has been taken to avoid potential impacts to the wetland. Proposed building envelopes for adjacent Lots 18-19, the two lots to be created from the parcel containing the easement, have been cited away from the wetland area, well beyond required. Furthermore, any future roadways/driveways within close proximity of the wetland will utilize existing agricultural roadways as their base in order to reduce disturbance to the adjacent wetland areas.

The complete Wetland Reserve Program Easement Deeds have been included in Appendix C for reference. Additional information on the limitation and requirements associated with the Easement area is included.

6.2 Building Envelopes

To mitigate potential impacts that a buildout of the proposed subdivision may have on agricultural lands and connectivity of various habitats, as well as the surrounding viewshed, the conservation subdivision has been designed to include carefully sited Building Envelopes (See Appendix D – Building Envelop Siting Analysis). Proposed building envelopes will be used to limit the areas that could be potentially developed, excluding agricultural uses and structures, to only 14.4% (101.5-acres) of the Project Site. The proposed building envelopes offer enhanced setbacks from what is typically permitted within the Rural Agricultural (RA) and Rural Residential (RR) zoning districts, which due to the conventional nature of the subdivision, would allow the potential owner of the proposed lots to develop the site in conformance with said setback regulations. By implementing building envelopes, the applicant is limiting the areas that the site could be developed significantly more than what is typical in a conventional subdivision.

In addition to limiting the development potential of the proposed lots, each building envelope has been prepared so that construction of any nonagricultural uses will have minimal effect on surrounding open space/agricultural resources, threatened/endangered species habitat, and the viewshed. As outline in the attached “Building Envelop Siting Analysis” (Appendix D), all proposed building envelopes have been carefully developed in a way that maximizes compliance with recommended siting guidelines in the Town of Amenia Zoning Code, including: §121-31 “Rural Siting Principals and §121-14 “Scenic Protection Overlay District”. The envelopes also locate potential development away from threatened and endangered species habitat and, per recommendations from the Planning Board, clusters visually sensitive envelopes (e.g.: Lots 21-26) within close proximity of

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one another in order to limit disturbance and preserve contiguous open space within highly visible areas of the Project Site. Provided building envelopes also limit development in a way that allows for contiguous open space areas, which increase the viability of agricultural practices and unfragmented habitat across the Project Site.

In general, the inclusion of building envelopes, which are typically not applied in conventional subdivisions, provides a number of conservation benefits. The self-imposed limitations, ensures a greater amount of open space, limits development to preestablished areas, and brings potential development for the proposed lots into greater compliance within the Town of Amenia's zoning code, which encourages low density and agricultural uses within the RR and RA zoning districts.

6.3 Agricultural Preservation

In addition to providing several conservation areas, the proposed subdivision will ensure that the existing agricultural use for the Project Site is not only preserved, but enhanced.

6.3.A Equestrian & Agricultural Use (Keane Stud Farm)

As state above, the intent of the Rural Agricultural and Rural Residential zoning districts is to promote low density residential and agricultural uses within their boundaries. As addressed in the previous section, the proposed layout offers significantly less density than what the site could support, but will also continue to support the existing equestrian use present on the project parcel (#403720).

Project parcel #403720 currently maintains an equestrian/agricultural facility. The facility includes several barns, silos, and additional agricultural buildings. In addition to the structures themselves, the facilities contain multiple large paddocks used to raise and train horses. These facilities will be preserved, within 52.26-acres of the existing parcel proposed to remain in active use as an equestrian facility.

6.3.B Expanded Equestrian Use

In addition to preserving the existing farm itself, the proposed subdivision also calls for the construction of ±11,751 linear feet of new horse trails along the proposed private rural lanes. These horse trails will not only be accessible to the residential lots proposed to be created from the existing equestrian facility parcel, but will expand equestrian capabilities to the other parcels included in this application. Installation of the proposed horse trails will encourage the preservation of existing equestrian uses, which is a key component in the maintaining agricultural diversity across the Project Site.

6.3.C Future Agriculture & Equestrian Use

In addition to the existing equestrian facilities outlined above, the project parcel contains large tracts of "working farmland" and existing open space, that are actively or could be used to grow a variety of row crops or used as pasture. As part of the proposed subdivision areas outside of established building envelopes for new Residential-

SEE NOTE ON PAGE 1

Agricultural development parcels (Lots 1-26), not including wetland areas and forest conservation parcels, will be preserved for the agricultural and open space uses. As outlined §121-20.C of the Amenia Zoning Code and highlighted in §4.6.B of this report, this would typically result in an increase in the number of permitted residential lots that can be created from the project parcels. As the number of residential lots proposed as part of the conventional subdivision does not require additional density bonuses, falling well below the development potential of the site (see §4.3 Permissible Conventional Subdivision Layout), this agricultural preservation is an added benefit that is not required.

Preserving approximately 359.1-acres of agricultural land on 26 parcels, in addition to the 52.22-acres to be dedicated to the existing equestrian use, the conventional subdivision proposes to preserve +411.32-acres for agriculture. This is largely in conformance with the RA and RR zoning districts that the Project Site is located within, which was specifically established to "*promote agricultural, low density residential use… and discourage large scale residential development"* as outlined in §121-7 of the Town of Amenia Zoning Code.

6.4 Hedgerows & Agricultural Roadways

In addition to the agricultural preservation and habitat conservation efforts outlined above, the proposed project will also actively work to preserve existing hedgerows and agricultural roadways. In the past, hedgerows were typically used to delineate property boundaries and farm fields and often ran parallel to agricultural roads used to access said fields. The proposed project has been designed in a similar manner, with proposed roadways and lots located along existing hedgerows. In many instances these existing hedgerows are adjacent to agricultural roadways (dirt or gravel), which were used to service the various fields found on the four existing parcels. As stated previously, new roadways will be located along these existing roadways, which minimizes overall site disturbance. This will not only help preserve additional existing vegetation and reduce disturbance, but also provide visual screening for both the roadways and proposed residences.

In addition to preserving existing hedgerows and agricultural roadways, the proposed project outline plans to provide a number of new hedgerows. These hedges will be located along proposed roadways and along the property boundaries of neighboring parcels. All proposed hedgerows will be continually maintained and cared for by the Homeowners Association. These new hedges will not only provide additional visual screening from neighboring parcels and nearby viewpoints but will also supplement the rural-agricultural feel of the proposed project.

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6.5 Deed Restrictions

As outlined in previous sections of this document, many of the lots proposed as part of this subdivision contain more than sufficient acreage to comply with the zoning district they are located in. In many instances, proposed lots contain more than double what is required by zoning, which means that several of the proposed parcel could have been two lots rather than one (See §4.3 Permissible Conventional Subdivision").

In order to ensure the preservation of significant amounts of open space, individual parcels created as part of this subdivision shall contain deed restrictions limiting the future subdivision of said parcels. Following the approval of this subdivision, each parcel created will be preserved in perpetuity, with future lot owners being unable to divide the parcel further, despite maintaining the necessary acreage to do so. With this additional provision, this proposed subdivision will be the last subdivision of the parcels, ensuring that all designated open space areas remain as shown in years to come.

In addition to limiting the future subdivision of proposed parcels, deed restrictions shall also be developed to ensure the preservation of open space by restricting uses and construction activities in areas outside of established building envelopes. Restrictions will stipulate that areas outside of building envelopes provided for new Residential-Agricultural development parcels (Lots 1-26) be reserved as agricultural/open space land. Said deed restrictions shall be applied to the parcel in perpetuity, with violations to the restrictions to be enforced by the HOA.

6.6 Conservation Area Summary

As summarized in Figure 6.1 - Proposed Conservation/Open Space/Agricultural Lands, the implementation of the proposed deed restrictions and various other conservation areas will result in 79.2% of the site being preserved as open space or agricultural lands.

Figure 6.1 Proposed Conservation/Open Space/Agricultural Lands

Conservation Areas	Acreage	% of Total Land
Keane Stud Equestrian Facility (G-1)	52.3	7.4%
Deed Restricted Open Space/Agricultural Areas	357.9	50.8%
Wetlands/Water course	38.6	5.5%
Forest Preservation Parcels (F1 & F2)	109.5	15.5%
Total	**559.5**	**79.2%**

SEE NOTE ON PAGE 1

The remaining lands, would be subject to future residential development via established building envelops (101.5-acres or 14.4% of the Project Site) or be used for the construction of the proposed rural lanes (20.7-acres or 2.9% of the Project Site). Also not included in conservation lands are lots containing existing agricultural and residential structures, which will either not be included be included in the HOA (Lot G-2) or will not include building envelops due to having already been developed with residences (Lot 27)

Conservation areas discussed above are depicted in the "Conservation Area(s) Exhibit" included in Appendix F of this report.

7.0 CONCLUSION

7.1 Comparison of Proposed Action vs. Alternatives

As specified in §121-19 "Open Space Development Options" a conventional major subdivision is required to submit a Conservation Analysis to determine whether or not the proposed action "may adversely affect the Town's rural landscape or natural resources". If it is determined that the proposed conventional layout will have an adverse impact, the Board may require the applicant to submit an Alternative Conservation Subdivision layout for review and approval to mitigate these potential adverse impacts.

Based on this analysis it does not appear that any viable alternative to the proposed conventional layout could be created which would offer the same conservation benefits currently proposed. As demonstrated throughout this document, and summarized in the attached "Alternative Buildout Scenario – Conservation Resource Impact Comparison Summary", located in Appendix F, viable alternatives do not offer any additional conservation benefit and in some instances will result in greater impact than currently proposed. A summary of these impacts has been provided below:

7.1.A Zoning Compliance

Established Districts

As outlined in §2.1 Zoning Districts for Project Site, project parcels are within the Rural Residential and Rural Agricultural Zoning Districts. The intent of these districts are:

- *Rural Agricultural: to maintain the Town's working landscape by promoting agriculture, forestry, recreation, land conservation, and low-density residential uses, as well as compatible open space and rural uses, by encouraging such activities and discouraging large-scale residential development.*
- *Rural Residential: to allow residential uses in a rural setting, at a lower density than is allowed in the hamlets.*

The intent of the project's sites underlying zoning districts is a major factor in the design of the proposed subdivision, which incorporates a low (lower than permissible, §4.3)

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density layout with developmental restrictions to promote continued agricultural and open space uses.

Viable alternatives to the proposed conventional layout would not only increase density, which is the opposite intent of the RR and RA districts, but require a more clustered design and additional infrastructure, which would be more appropriate for the town hamlets (See "Dutchess County – Hamlet Design Guidelines").

Overlay Districts
As discussed in "§2.2 Zoning Overlays for the Project Site" the project parcels are located within the Scenic Visual Protection (SPO), Stream Corridor (SCO), Resort Development (RDO), and Aquifer (AQO) Overlay Districts. Any proposed development for the project parcels would be required to demonstrate compliance with the various overlays during Site Plan review. However, the proposed layout, due to its limited density, providers greater compliance to the intent of the overlay districts, which generally stress the preservation of open spaces and rural/agricultural qualities of the Town. The overlays also focus on limiting the impact on existing environmental resources, such as water availability in the aquifer and overall land disturbance, which would be lessened by the low-density.

Comprehensive Plan
As reviewed in "§2.3 Amenia Comprehensive Plan", the Keane Stud Subdivision is not in conflict with the Goals and Vision outlined in the Comprehensive Plan. The subdivision focus on providing housing via new residential lots, while also incorporating into its design measures that would preserve and enhance the Towns rural/agricultural character. Other viable development alternatives, may be designed to also avoid being in conflict with Comprehensive Plan's goals/vision, but this would not detract from the proposed projects lack of conflict.

7.1.B Land Conservation
The proposed Keane Stud conventional subdivision has been designed specifically to preserve existing agricultural, open space, and other lands of conservation value. As currently designed, the proposed conventional layout offers significant land conservation measures that are typically only associated with higher-density conservation subdivisions, which they are either required to provide or do so to increase their maximum allowable density. With this in mind, the Keane Stud Subdivision layout provides:

- Building Envelops, restricting new nonagricultural development, to 14.4% (101.5-acres) of the total Project Site. These envelopes were sited specifically to increase habitat continuity, avoid lands with conservation value, cluster development together, and provide greater compliance with the Town of Amenia Zoning Code. (§6.3 "Building Envelops", "Building Envelope Siting Analysis" Appendix D)

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- Preservation of an existing equestrian (agricultural) facility within a 52.26-acre (7.4% of project parcels) parcel. (§6.4 "Agricultural Preservation")
- Preservation of existing wetland/watercourse areas comprising 5.5% (38.6-acres) of the Project Site.
- Two (2) separate forest conservation parcels preserving up 15.5% (109.5-acres) of the Project Site's densely forested lands.
- Deed restrictions to ensure that lands outside of building envelopes (52.3% of the Project Site or 411.4-acres), forested/wetland areas and proposed road right-of-way(s) be used for agricultural practices or open space.
- Total Proposed Conservation/Open-Space/Agricultural Lands comprising of 79.2% (559.5-acres) of the Project Site.

In comparison, higher density, Conservation Subdivisions, according to the Amenia Zoning Code §121-20 'Minimum area and configuration of open space', require that only 50% of the total Project Site be preserved as open space. §121-20.C outlines additional provisions where more land would be conserved, in exchange for an increase in the maximum allowable density.

If the portions of the Project Site located within Resort Overlay District provisions (see §2.2.C) were to be developed utilizing RDO density-permitted uses provisions, 85% of the Project Site would need to be preserved as open space. In exchange RDO provisions would increase permitted density, and would supersede RR and RU zoning intents to permitted a variety of different uses.

The proposed Keane Stud Subdivision layout offers comparable levels of land preservation as conservation subdivisions/RDO development, while providing less density than other viable alternatives.

7.1.C Density

The proposed Keane Stud Conventional Subdivision layout, as demonstrated in "§4.0 Density Calculations/Alternative Subdivisions Layouts" of this document, offers less density than what the project parcels could support. In all viable alternatives outlined, the number of lots that could be created is greater than what is currently proposed. More developable lots equate to more construction and post-development related impacts. Said impacts includes:

- *Traffic Generation:* Number of AM/PM trips on public roadways by new residents.
- *Water Demand/Wastewater Generation:* Amount of water used and wastewater generated per residence.
- *Increased Land Disturbance:* Amount of land disturbed for the construction of residences, accessory structures, and required infrastructure.
- *Greater Impervious Surface Coverage:* Amount of existing permeable cover type (i.e: fields, forest lands, etc.) removed and replaced by impervious materials (i.e: asphalt driveways, buildings, etc.)

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- *Energy Demand:* Every new residence will require a connection to the existing electrical grid, creating greater demand for energy. Additionally, utility infrastructure (i.e: wastewater treatment plants, solid waste disposal facilities) will also require additional energy to operate.
- *Noise, Odors, Solid Waste(s):* All typical noise, odors, and solid waste typical to residences are directly increased by the number of people present on a site.
- *Increased Loading on Community Services:* More residences result in a greater reliance/use of emergency services (i.e: police, fire, EMS), school systems, municipal services.

In all viable alternative layouts, density would be greater than currently proposed. The increase in density is directly related to the increase in post-development and construction related impacts discussed above. The fewer lots offered as part of the Keane Stud Conventional Subdivision layout would result in both fewer short-term construction and post-development impacts than the higher density alternatives.

7.1.D Visual Impact

The Project Site is located on Depot Hill, which is a very prominent area of the Town that is highly visible from adjacent areas and roadways, in particular Old Route 22, NYS Route 22, and a Scenic Overlook off of NYS Route 44. Due to this high visibility over 75% of the Project Site is located within the Scenic Protection Overlay (SPO) district. The intent of this overlay district is to provide special protection for “high visible scenic areas” in order “to preserve the attractive rural, historic, and agricultural qualities of the Town.” (Town of Amenia Zoning Code §121-14.1.A).

From a visual impact perspective its important to note the following commonalities between proposed and viable alternative developments:

- All Conventional, Conservation, and RDO development layouts will require development within the SPO due to the overlay district occupying 75% of the Project Site.
- All future development will result in construction of residences, agricultural, and accessory structures, within areas visible due
- All future development (i.e: residences, accessory structures, RDO amenities) will require Site Plan approval from the Amenia Planning Board prior to development.
- Adherence to SPO criteria and any mitigation to be required would be evaluated and approved by the Town of Amenia Planning Board during Site Plan review.
- Visually, parcels within the RA and RR zoning districts should promote “agriculture, forestry, recreation, land conservation, and low-density residential uses” and “discourage large-scale residential development” (Amenia Zoning Code §121-7).

SEE NOTE ON PAGE 1

In comparison the proposed Keane Stud Subdivision conventional layout has several components that make it less visually impactful that alternative developments. This includes:

- The proposed conventional subdivision has been designed with fewer lots than their viable alternatives. This means there would ultimately be less development on the Project Site, ergo less of a change to existing conditions.
- Alternatives development layouts implement clustering to preserve open space. However, this clustering is noticeably more visible from scenic viewpoints than a conventional layout, as they are more difficult to screen with proposed landscaping.
- Each proposed lot has been provided building envelops, which will control where future development is located. Each building envelop has been developed to show a general level of compliance to recommended rural siting, SPO, and open space principals/design criteria.

Based on the information provided above, it would appear that the Keane Stud Conventional Subdivision will be have comparable or lesser adverse impact to "rural landscape and natural resources" compared to other viable conservation subdivision layouts. Because of this, the currently proposed layout is the preferred option for the Project Site and no alternative layout would need to be adopted.

7.2 Specific Conservation Benefits Offer by the Proposed Project

The conventional subdivision proposed for the Project Site provides significant benefits for the Town of Amenia goal of preserving open space, while also offering significantly less density than what the Project Site could support via alternative means of development. The proposed "agricultural" conventional subdivision is in conformance with the Rural Agricultural and Rural Residential zoning districts, as well as the various additional overlay districts, recommended rural siting principals, and the Amenia Comprehensive Plan.

The provided Conservation Analysis identifies and addresses the preservation of lands included within this conventional subdivision application. Provided below is a summary of how the proposed subdivision and supporting Conservation Analysis have sufficiently identified and preserved lands of conservation value as required by §121-20.A. of the Town of Amenia Zoning Code:

- *Sensitive Lands to be Conserved:* The proposed subdivision has sited future development away from sensitive lands, such as wetlands, watercourses, steep slopes, and forested areas. As demonstrated by the attached Building Envelope Siting Analysis, proposed building envelopes have been located away from said sensitive areas to continue their preservation.

SEE NOTE ON PAGE 1

  - ±38.58-acres of Federal and State Wetlands will remain undisturbed. 100' and 300' protection buffer areas have been established and excluded from designated building areas.
  - The predominant crestline for the Project Site will be preserved in proposed conservation areas, further protecting the forest lands.
  - 9,136 Linear Feet of Stream Courses, with the exception of the utilization of an existing agricultural roadway stream crossing, shall remain undisturbed.
  - ±108.61-acres of heavily forested and steeply sloped area shall be preserved in Conservation Areas.
  - Restrictions will stipulate that areas outside of building envelopes provided for new Residential-Agricultural development parcels (Lots 1-26) be reserved as agricultural/open space land.
  - A total of 558.8-acres of the Project Site, or 79.2%, of the Project Site will be conserved as open, agricultural, or conservation area.
  - The low-density of the proposed subdivision and clustering of building lots, reduce habitat disturbance/fragmentation and preserves important wildlife corridors.
- *Agricultural Preservation:* The preservation, continuation, and expansion of existing agricultural uses has been largely incorporated into the design of the subdivision. Existing agricultural features and uses will be retained.
  - ±52.2-acres of agricultural/equestrian facilities will remain.
  - 12,133 Linear Feet of existing unimproved/improved agricultural roads will be utilized in the creation of the proposed "rural lanes" serving the site.
  - ±411.56-acres, ±58.4% of the entire Project Site will be reserved for agricultural/open space use only.
  - ±11,751 of equestrian paths will be provided along proposed rural lanes.
  - Existing hedgerows and stonewalls, typically used to delineate farm fields, shall be preserved and utilized to delineate proposed property boundaries.
- *Visual Impact:* As addressed by the multiple Visual Impact Analyses prepared for this project, the proposed subdivision will have a negligible effect to the existing viewshed.
  - Building envelopes, dictating the location of future development, have been sited to comply with rural siting, SPO, and open space development recommendations/requirements.
  - An additional ±4,331 linear feet of additional hedgerows is proposed to provide additional screening.
  - Proposed subdivision is in conformance with the Vision and Goals outlined in the Town of Amenia Comprehensive Plan.
  - The low-density conventional subdivision provides less visual impact from scenic viewpoints and adjacent roadways/properties than alternative, higher-density, conservation/RDO development.

SEE NOTE ON PAGE 1

- *Zoning Compliance:* The proposed subdivision is a conventional subdivision located in the Rural Residential (RR) and Rural Agricultural (RA) zoning districts, as well as several overlay districts. The subdivision complies with the intent and purpose of both zoning/overlay districts, as well as the vision and goals outlined in the Town of Amenia Comprehensive Plan.
    - The proposed lots (4 of which are existing) are 65% of the number of lots (48-lots) that would be permitted as part of a permissible conventional subdivision buildout.
    - The proposed subdivision does not utilize any density bonuses permitted by the RDO overlay district or other provisions outlined in the Town of Amenia zoning Code to increase the number of allotted lots.
    - The subdivision has been designed to maximize open space and preserve agricultural uses as intended with the establishment of each underlying district (§121-7)
    - Proposed lots have been designed to exceed the minimum acreage required for each zoning district.
    - Building envelopes have been voluntarily provided for each lot, ensuring greater conformity with zoning district intent, rural siting principals, and general open space preservation recommendations.
    - In support of the summary provided above, the following table provides additional information in regard to intended land use of the Project Site.
    - Siting of building envelopes requires most forms of nonagricultural

The proposed Keane Stud Subdivision is a conventional, non-realty, subdivision that has been designed to conform with the Town of Amenia's Zoning Code and promote the Vision and Goal outlined in Comprehensive Plan. Plans have intentionally been designed to have lower density than what is permitted by right and have been voluntarily enhanced with additional open space/agricultural protection measures. As demonstrated by this document, the Keane Stud conventional subdivision provides a greater degree of protection to scenic, environmental, agricultural, and open space resources, than other forms of land development. This Conservation Analysis supports the conclusion that the Keane Stud conventional subdivision is the most viable form of land preservation that could be prepared for the Project Site. Keane Stud achieves what is stated in the Rural Agricultural section: "maintain the Town's working landscape by promoting agriculture, forestry, recreation, land conservation, and low-density residential uses, as well as compatible open space and rural uses, by encouraging such activities and discouraging large-scale residential development."

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APPENDIX A

ZONING EXHIBITS

Zoning Map Exhibit

Overall Overlay Exhibit

Resort Overlay Exhibit

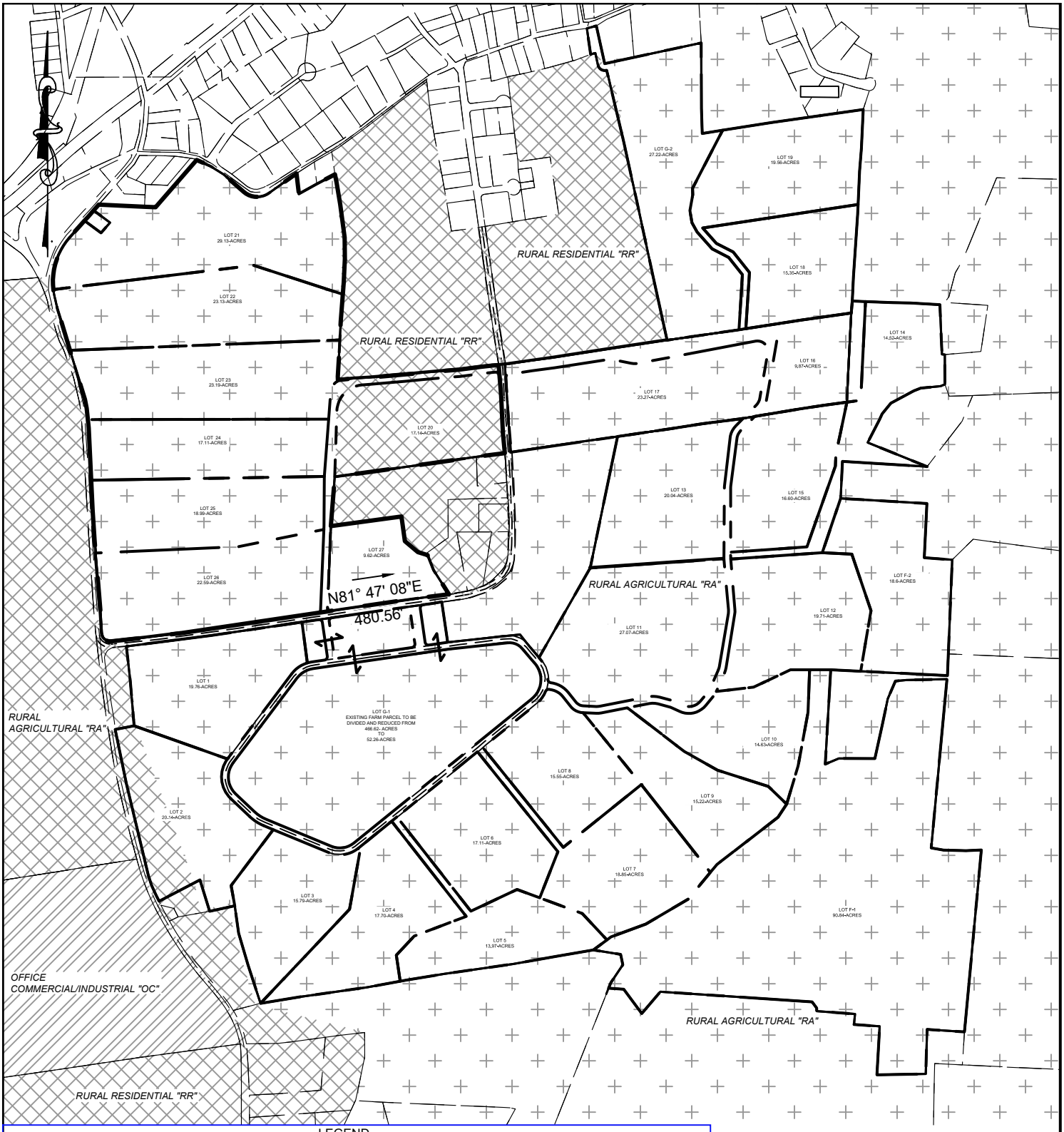
Scenic Visual Protection Zone Exhibit

Stream Corridor Buffer Exhibit

SEE NOTE ON PAGE 1

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LEGEND

PROPOSED LOTS | RURAL AGRICULTURAL "RA" | RURAL RESIDENTIAL "RR" | OFFICE COMMERCIAL "OC"

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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RENNIA ENGINEERING DESIGN, PLLC

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KEANE STUD SUBDIVISION CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

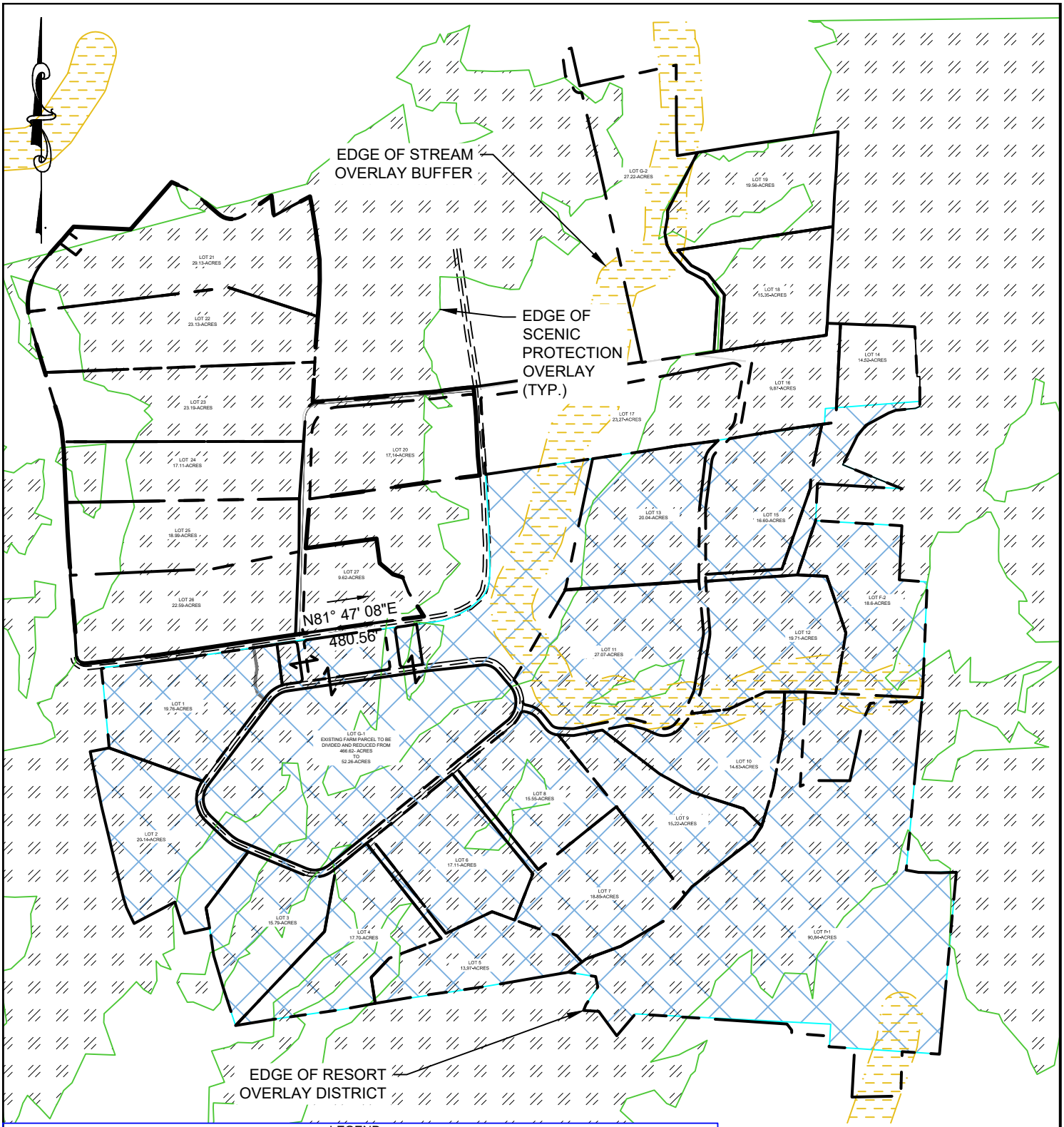
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DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	A1

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TOWN OF AMENIA DUTCHESS COUNTY, NY

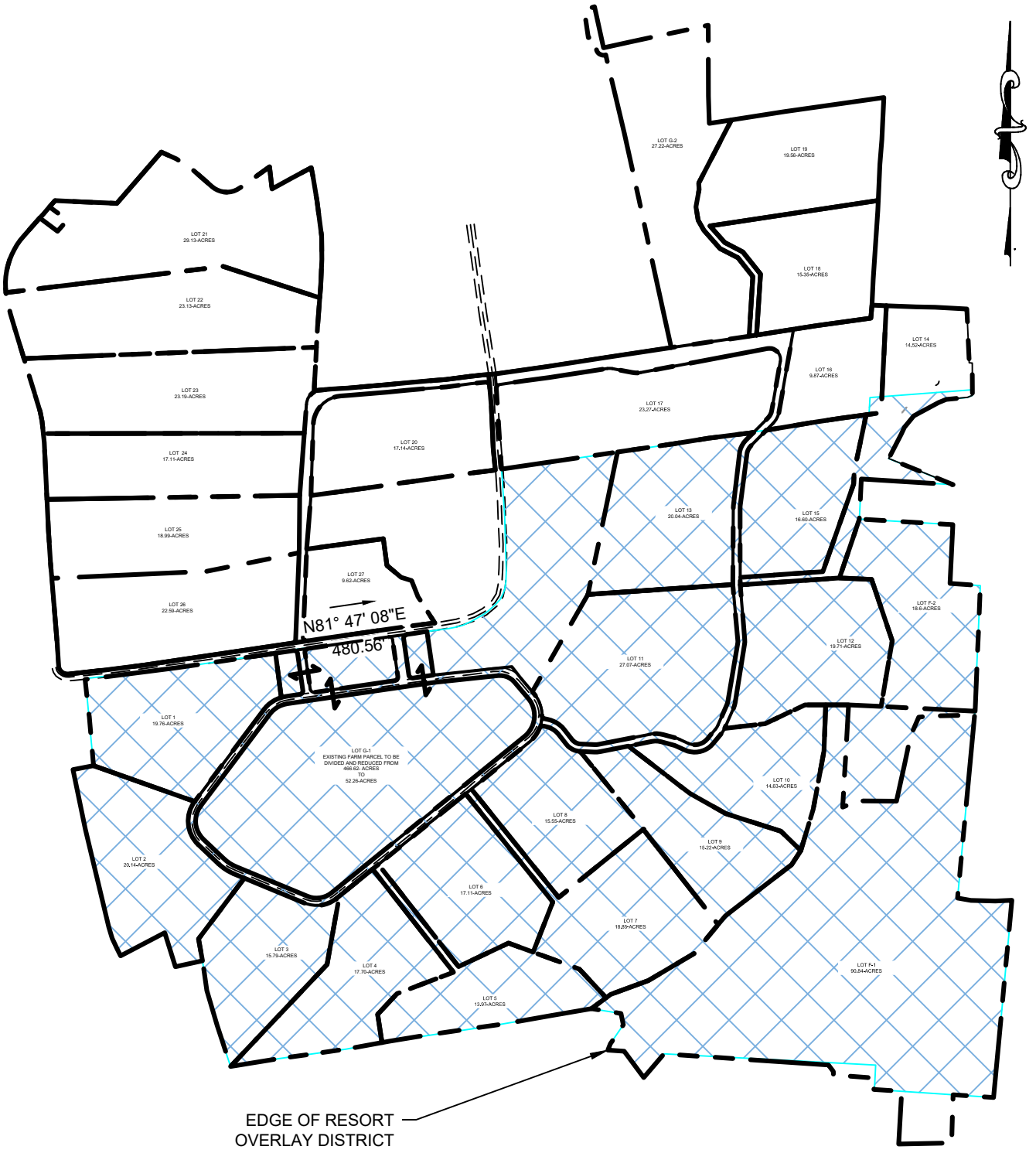
OVERALL OVERLAY EXHIBIT

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7/18/2022	1" = 1000'	RED	RED	#21-006	A2

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SEE NOTE ON PAGE 1



LEGEND

PROPOSED LOTS

RESORT OVERLAY

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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KEANE STUD SUBDIVISION
CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

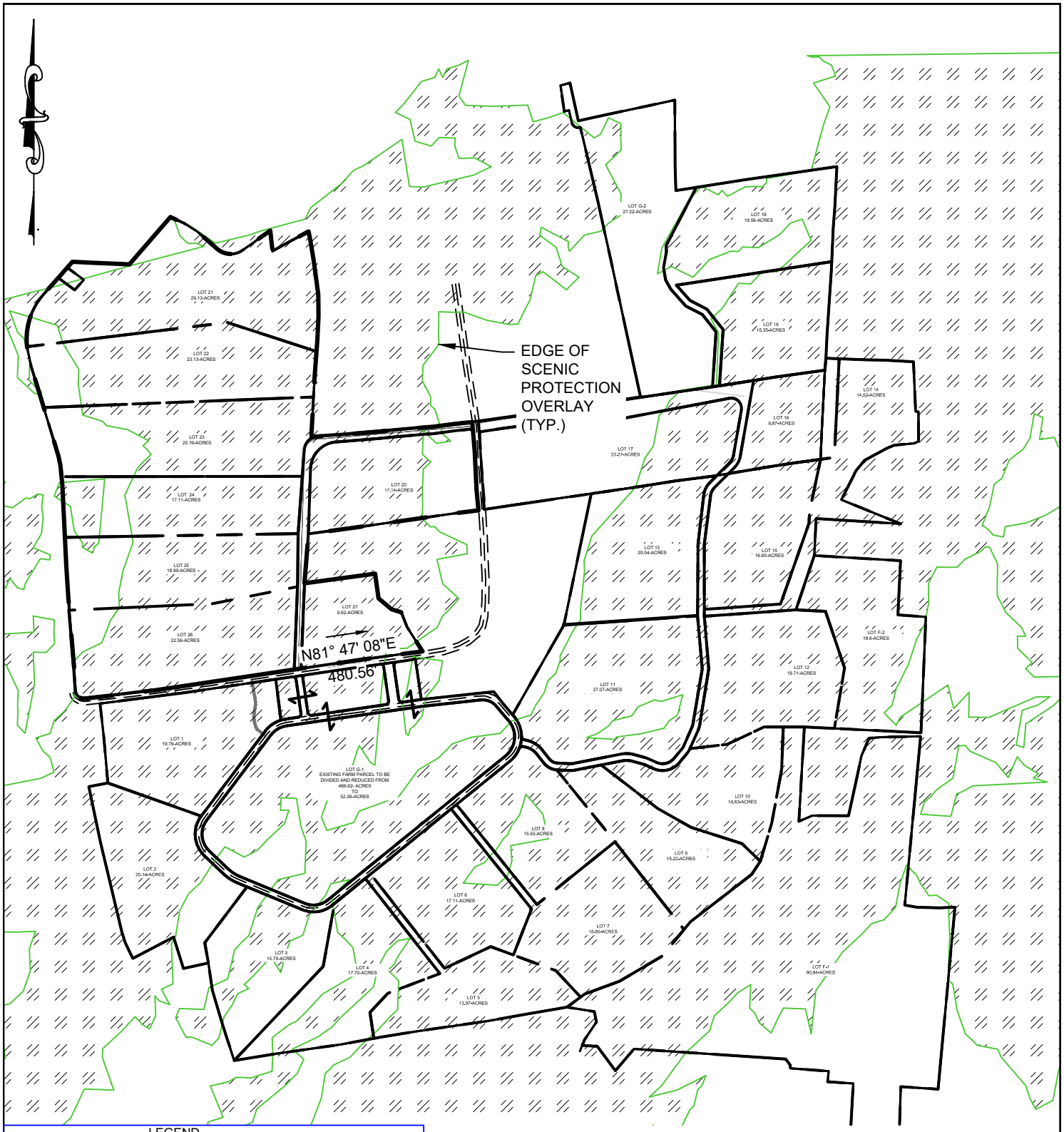
RESORT OVERLAY EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	A3

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LEGEND

PROPOSED LOTS

SCENIC PROTECTION OVERLAY

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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KEANE STUD SUBDIVISION CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

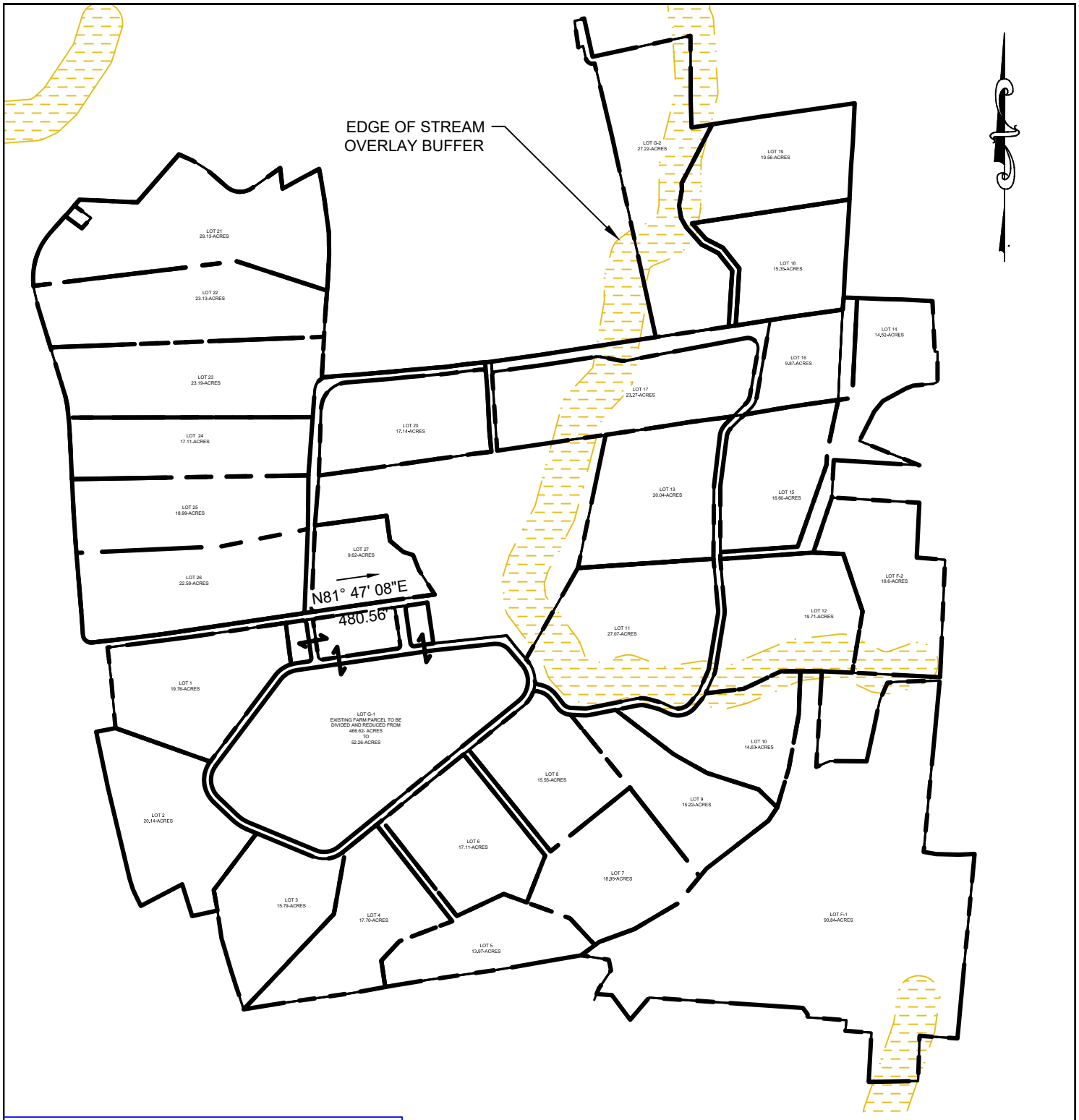
SCENIC PROTECTION OVERLAY EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	A4

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LEGEND

PROPOSED LOTS

STREAM BUFFER OVERLAY

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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KEANE STUD SUBDIVISION CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

STREAM CORRIDOR EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
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APPENDIX B

ENVIRONMENTAL EXHIBITS

Threatened and Endangered Species/Habitat Suitability Assessment Report, dated 9/25/2021

Overall Wetland Exhibit

Wetland Crossing Exhibit

Slopes Exhibit

Prime Agricultural Soils & Soils of Statewide Importance Exhibit

Archeological Map

Existing Land Covers Exhibit

Tree Coverage Exhibit

Historic Dutchess Aerial Imagery

Recharge Calculation

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SEE NOTE ON PAGE 1

Threatened and Endangered Species Habitat Suitability Assessment Report

Keane Stud Site
Depot Hill Road
Town of Amenia, New York

September 25, 2021

Prepared by:

Michael Nowicki
Ecological Solutions, LLC
121 Leon Stocker Drive
Stratton, VT 05360
(203) 910-4716

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1.0 INTRODUCTION

Ecological Solutions, LLC completed a threatened and endangered species habitat suitability assessment on the Depot Hill Farm site containing 4 parcels (site) totaling 713.3 acres located on Depot Hill Road in the Town of Amenia, Dutchess County, New York (*Figure 1*). The site is currently farms and generally agricultural lands with upland hardwood forest on the higher slopes and wetlands associated with and adjacent to the agricultural fields on the lower slopes.

The applicant is proposing to subdivide the site into 27 residential lots, 1 agricultural/equestrian lot, and 3 additional forest/wetland preservation areas. The existing lots are primarily used for agriculture, with one of the lots containing an equestrian facility, which will remain after the lands are subdivided. In addition to the residential lots, the proposed subdivision will also result in the construction of 3 privately owned "rural lanes", horse trails running parallel to the proposed roadways, and all other associated roadway improvements (i.e.: stormwater management practices, culverts, etc.). All proposed lots will be provided with their own wells and subsurface sewage disposal systems.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Assessment Form indicates that the bog turtle (*Glyptemys muhlenbergii*), the timber rattlesnake (*Crotalus horridus)*, and the New England cottontail (*Sylvilagus transitionalis*) may be located on or in the vicinity of the site (*Attachment 1*).

This assessment was completed to determine if suitable habitat exists on the site for the listed species. Habitat observed on the site during 4 days of field surveys in May and July 2021 is listed in Table 1.

TABLE 1
COVER TYPES IDENTIFIED ON THE SITE

1	Farm/Agricultural Fields/Ponds
2	Mixed Upland Forest
3	Wetland Complex/Tributaries

Farm/Agricultural Fields/Ponds –. The site contains several pastures, agricultural fields, and farm ponds located on the more level or rolling areas of the site but generally in close proximity to the farm houses and outbuildings.

Mixed Upland Forest - The steep slopes on the site are covered with upland hardwood forest and mixed conifers which as a mature forest type with rocky soils that are well drained. The canopy is dominated by a mixture of oaks, hickories, hemlock, white pine, and maples. The oaks include one or more of the following: black oak (*Quercus velutina*), chestnut oak (*Q. montana*), red oak (*Q. rubra*), and white oak (*Q. alba*).

SEE NOTE ON PAGE 1

American beech (*Fagus grandifolia*), and black cherry (*Prunus serotina*) are common associates occurring at low densities. Sizes of the trees vary from saplings to mature trees with a wide range of dbh and tree conditions including dead wood, crevices, and holes.

Wetlands - Wetlands on the site are complexes of forested wetland/wet meadow/fen areas with several ponds and watercourses also occurring.

Wetland A/B/C/D/E is a NYSDEC regulated wetland known as AM-10 that exists from the northern site boundary to the existing farm at the center of the site. This wetland is part of the US Wetland Reserve Program Easement and contains marsh and fen habitat with a farm crossing.

Three man made agricultural ponds are located on the site. The first pond is east of the farm and flows west via man made swale to the Wetland AM-10 complex. This swale starts upslope on the eastern end of the site. The second pond is west of NYSDEC wetland AM-10 and flows east into AM-10 near an artesian well. The third pond is on the northern end of the site and flows west to AM-10.

A small rich sloping fen occurs on the southern end of the site and is associated with a swale and old trail into the southern end of the site.

A large forested wetland - red maple swamp is located on the northwestern corner of the site. This is also a NYSDEC wetland designated as AM-8 and is adjacent to Old State Route 22.

SEE NOTE ON PAGE 1

2.0 HABITAT SUITABILITY ASSESSMENT/CONCLUSIONS

2.1 Timber Rattlesnake

The site was assessed to determine if any timber rattlesnake den sites or basking areas could potentially be found by reviewing the soils map and traveling through the site to suitable locations based on the soil survey. Requirements for timber rattlesnake dens generally include a southeast to southwest facing rock formation of either fractured ledge or talus with a nearby open basking area with sufficient rock cover for gestating females and post-emergence basking. Upon emerging from the den, timber rattlesnakes are very lethargic and basking area where the snakes can warm up is usually nearby. The eastern section of the site contains a densely forested hills with steep slopes encompassing substantial acreage with Hollis-Chatfield Rock outcrop soils (*Figure 2*).

No open rocky summit areas which are characteristics of timber rattlesnake den and basking areas were observed on the site. Rattlesnake movements are dependent upon availability of suitable basking/gestating areas, successful foraging, and mating activity. It is known that timber rattlesnakes, particularly females, may move considerable distances overland (generally migrate from 1.3 to 2.5 miles (2 to 4 km) from their den each summer) and may utilize any upland forest area during the summer season. In addition to potential den sites and associated basking area the site was assessed for potential foraging habitat. The bulk of the interior of the site contains large open field areas separated by hedgerows adjacent to the existing developed areas and therefore has limited potential foraging characteristics because of the lack of shade, rest, and prey opportunities and active farming operations.

The proposed project is to subdivide the existing site into 27 residential lots, 1 agricultural/equestrian lot, and 3 additional forest/wetland preservation areas. The existing lots are primarily used for agriculture, with one of the lots containing an equestrian facility, which will remain after the lands are subdivided.

Conclusion - The proposed activity is to subdivide the existing site into 27 residential lots, 1 agricultural/equestrian lot, and 3 additional forest/wetland preservation areas. Since the site is currently and has been in agricultural operation for decades the impact to potential habitat for this species is unlikely in the open agricultural field areas. The wooded slopes on the site will not be impacted. If practical, proposed ground disturbance activities that are not for agriculture will occur between the period November 1st through March 31st when this species is not active.

2.2 Bog turtle

The bog turtle is a semi-aquatic freshwater turtle that prefers open, shallow wetlands with soft soils that are saturated by perennial groundwater discharge. Habitat and associated flora vary throughout the bog turtle's range; however, in the northern part of its range (Connecticut, Massachusetts, New York, New Jersey, Pennsylvania) the bog turtle exhibits a strong preference for fens fed by calcium-rich groundwater from limestone, marble or other calcareous material. These palm-sized, secretive turtles spend much of their lives hidden in soft soils or under plant material, which serves as a refuge and aids in thermoregulation. The bog turtle is one of the few turtles that remain within its core wetland habitat to nest, typically selecting hummock-forming plants on which to deposit its eggs. Bog turtles living in groundwater-fed, calcareous

SEE NOTE ON PAGE 1

wetland habitats with low open vegetation may use areas of apparently less suitable habitat seasonally. Bog turtles are omnivorous and can live more than 50 years (Ernst et al. 1994). The U.S. Fish and Wildlife Service listed the bog turtle as *Threatened* in 1997 because of loss of habitat (USFWS 2001). It is listed as *Endangered* by the New York State Department of Environmental Conservation (NYSDEC).

Conclusion - The wetland communities were assessed for the presence of habitat characteristics consistent with the bog turtle federal recovery plan by others during 2017 (U.S. Fish and Wildlife Service, 2001): 1) soft, saturated organic and/or mineral soil; 2) hydrologic regime derived from perennial groundwater discharge; 3) plant community represented by a predominance of low-growing, native flora including sedges, rushes, grasses, forbs, mosses, and sometimes low shrubs; 4) tree canopy cover less than 50% allowing adequate sunlight to reach the ground, and 5)Fen indicator plants (calcicoles) including, shrubby cinquefoil (*Pentaphylloides floribunda*), grass-of-parnassus (*Parnassia glauca*), and tamarack (*Larix larcina*).

NYSDEC Wetland AM-10 located through the center of the site is shallow emergent marsh rich shrub fen complex and there is potential bog turtle habitat located in NYSDEC wetland AM-10 and in fact a Federal easement occupies this wetland for purposes of protecting this species.

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2.3 New England Cottontail

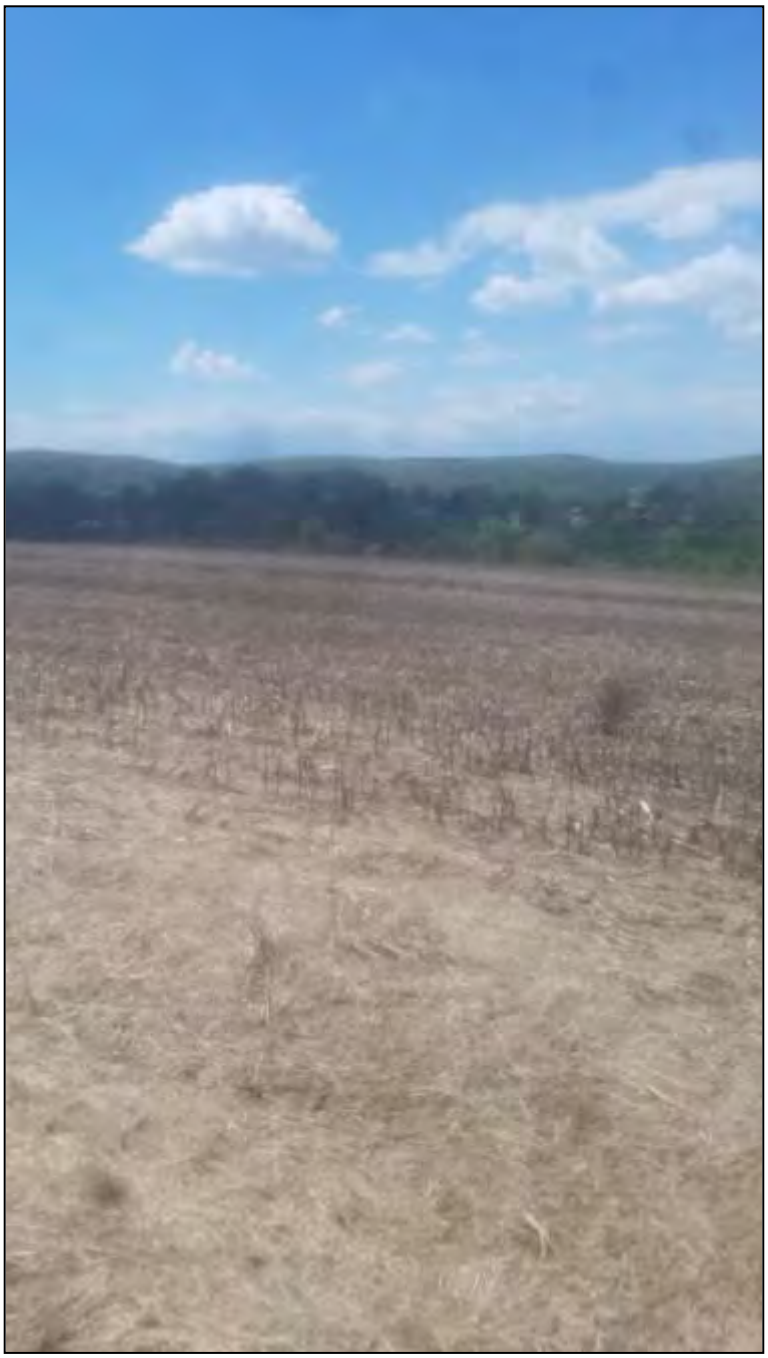
The New England cottontail is native to New England and eastern New York. In New York State, the New England cottontail populations are only found east of the Hudson River in Columbia, Dutchess, Putnam, and Westchester counties and is a mid- to late-successional species, preferring shrubby areas, thickets, and wetlands with some tree cover. Areas with older shrubland with good understory are often favorable. However, ideal habitat should contain native shrubs as too many invasive shrubs, such as Japanese barberry, can have a negative impact.

Conclusion - Separation from nearby similar habitats or fragmented habitat makes it unlikely that New England cottontail could utilize the potential habitat areas on the site such as the wetlands. Although potential habitat exists on the site they are in patches with no existing habitat connection or travel corridors. These brushy/patch areas however will remain on the site since they are associated with the wetlands on the site which will not be disturbed.

SEE NOTE ON PAGE 1

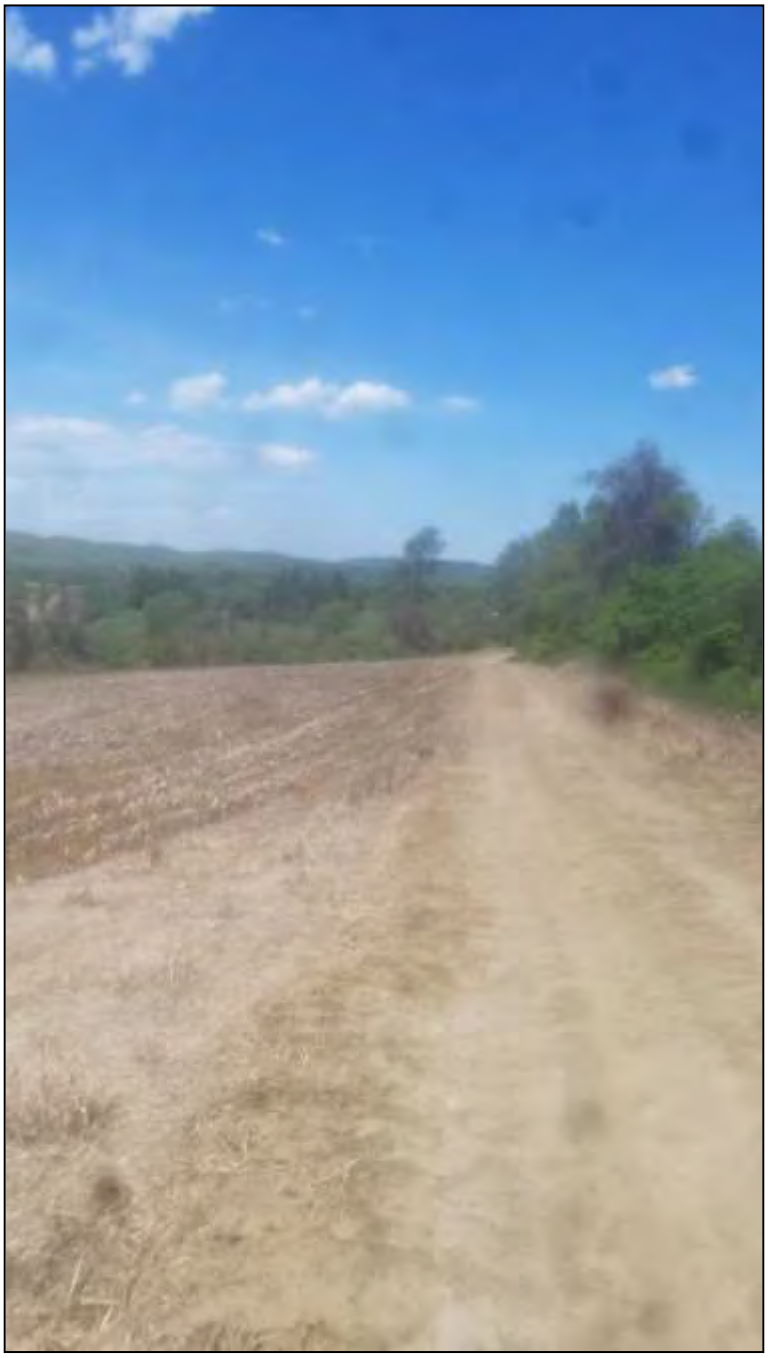
3.0 PHOTOGRAPHS

Agricultural land on the site.



SEE NOTE ON PAGE 1

Agricultural field with hedgerows.



SEE NOTE ON PAGE 1

Tributary delineated on the site.



SEE NOTE ON PAGE 1

Drainage course.



SEE NOTE ON PAGE 1

Tributary draining to man made pond and associated brushy habitat.



SEE NOTE ON PAGE 1

Forested wetland on the site.



SEE NOTE ON PAGE 1

4.0 REFERENCE

Stechert, R. 2001. Effectiveness of an experimental timber rattlesnake *(Crotalus horridus)* exclusion fence at Schunemunk Mountain, Town of Woodbury, Orange County, New York. Report to the Eastern Chapter of the New York Natural Conservancy and the New York State Department of Environmental Conservation. 23p.

Ernst, C.H., R.W. Barbour and J.E. Lovich. 1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington DC. 578 p.

USFWS. 2001. Bog turtle (*Clemmys muhlenbergii*), northern population recovery plan. U.S. Fish and Wildlife Service, Hadley, MA. 103 p.

SEE NOTE ON PAGE 1

Figure 1 Location Map



SEE NOTE ON PAGE 1

Figure 2 Soils Map



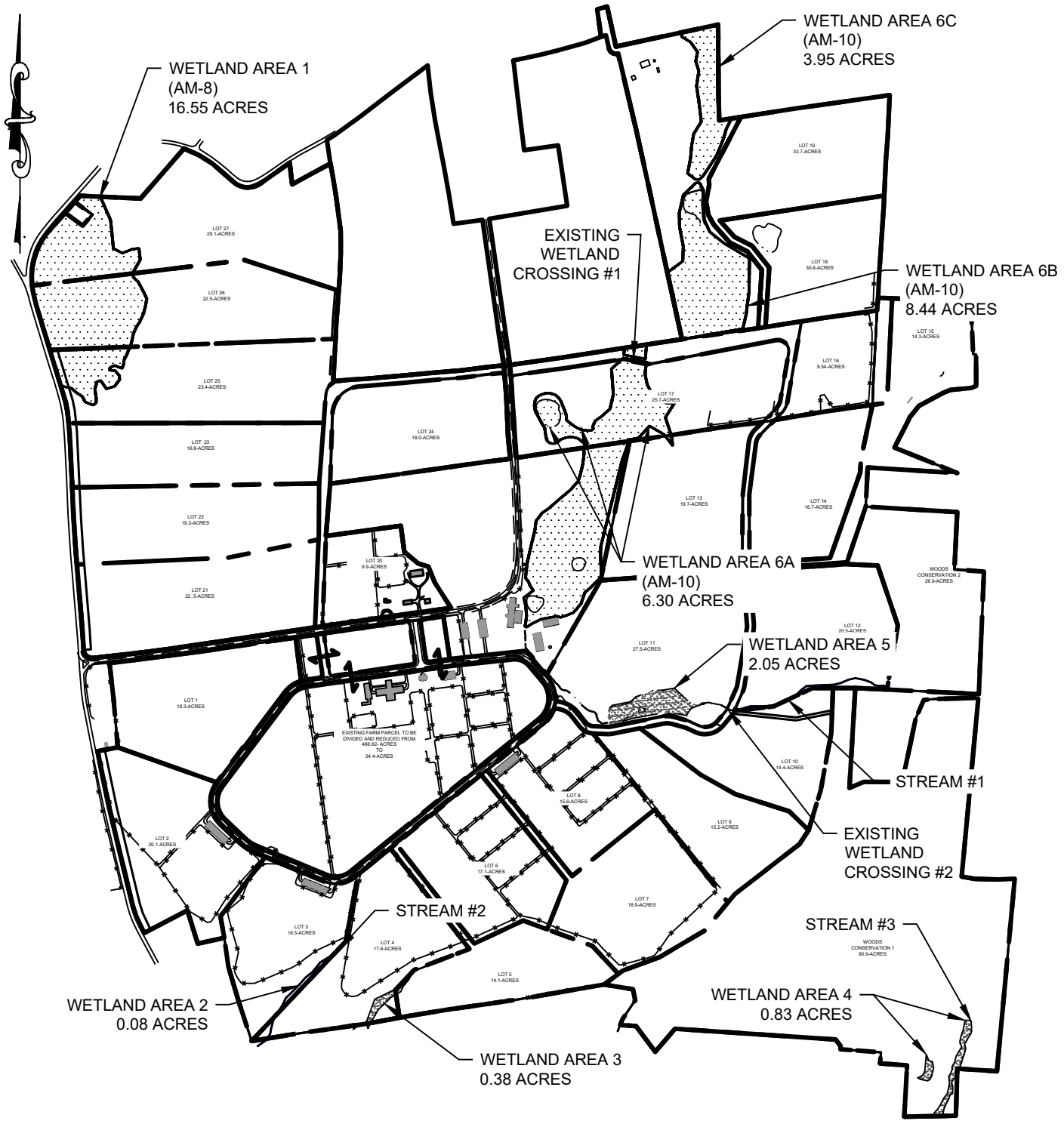
SEE NOTE ON PAGE 1

Map Unit Symbol	Map Unit Name
CrE	Charlton-Chatfield complex, steep, rocky
CtC	Chatfield-Hollis complex, rolling, very rocky
CtD	Chatfield-Hollis complex, 15 to 35 percent slopes, very rocky
CuB	Copake gravelly silt loam, undulating
CuC	Copake gravelly silt loam, rolling
GsA	Georgia silt loam, 0 to 3 percent slopes
GsB	Georgia silt loam, 3 to 8 percent slopes
GsC	Georgia silt loam, 8 to 15 percent slopes
HoE	Hollis-Chatfield-Rock outcrop complex, steep
HoF	Hollis-Chatfield-Rock outcrop complex, very steep
MnB	Massena silt loam, 3 to 8 percent slopes
NyA	Natchaug muck, 0 to 2 percent slopes
SkB	Stockbridge silt loam, 3 to 8 percent slopes
SkC	Stockbridge silt loam, 8 to 15 percent slopes
SkD	Stockbridge silt loam, 15 to 25 percent slopes
SkE	Stockbridge silt loam, 25 to 45 percent slopes
SmC	Stockbridge-Farmington complex, rolling, rocky
Su	Sun silt loam
Wy	Wayland silt loam

SEE NOTE ON PAGE 1

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SEE NOTE ON PAGE 1



LEGEND

PROPOSED LOTS

STREAM

NYSDEC WETLAND

FEDERAL WETLAND

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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KEANE STUD SUBDIVISION CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

OVERALL WETLAND & WATERCOURSE EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	B1

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LEGEND

PROPOSED LOTS

ONSITE WETLAND

0 200' 400'

1" = 200'
GRAPHIC SCALE

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

EXISTING WETLAND CROSSING EXHIBIT #1

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1"=200'	RED	RED	#21-006	B2

SEE NOTE ON PAGE 1

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LEGEND

PROPOSED LOTS

ONSITE WETLAND

0 200' 400'

1" = 200'
GRAPHIC SCALE

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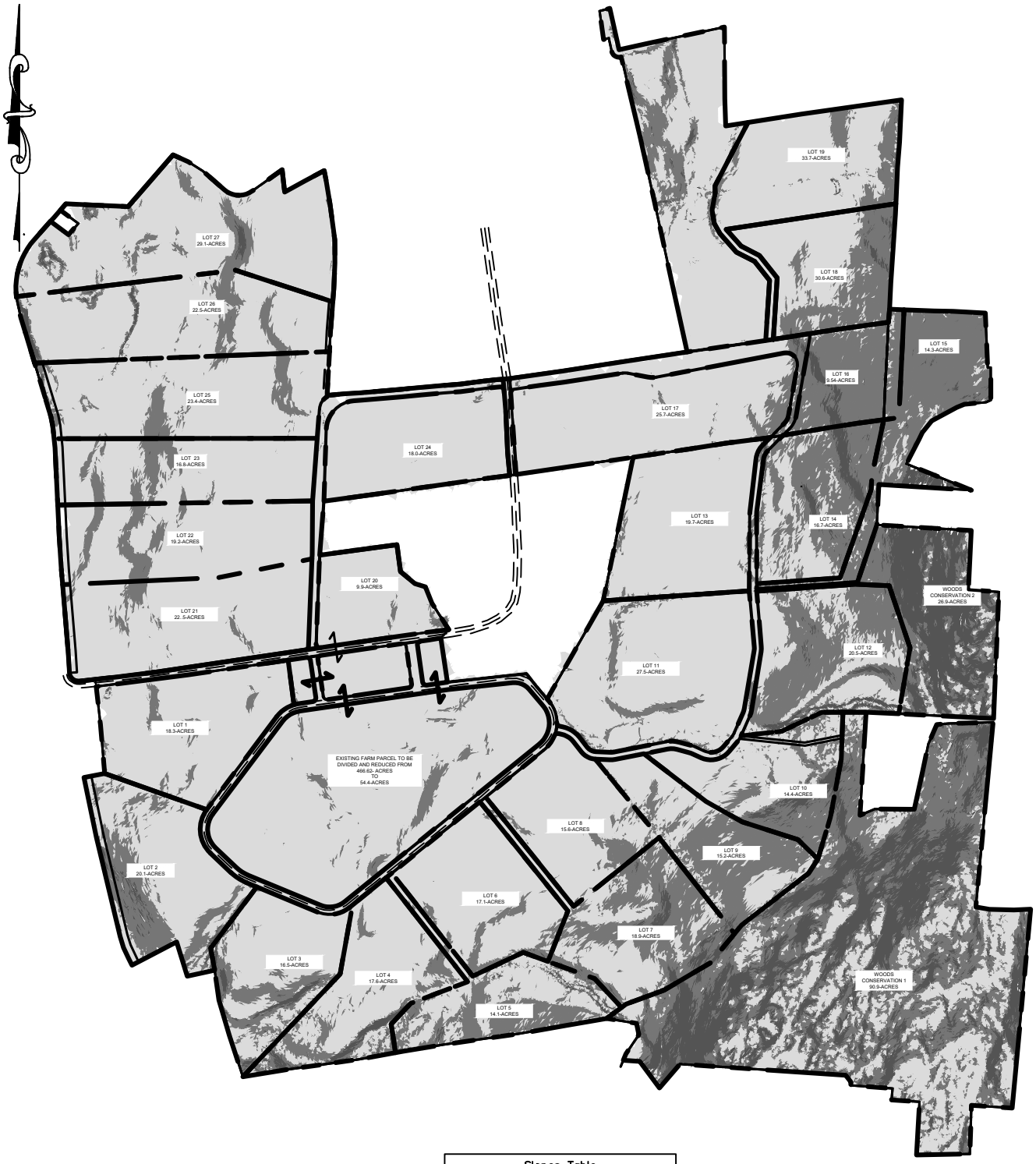
EXISTING WETLAND CROSSING EXHIBIT #2

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7/18/2022	1"=200'	RED	RED	#21-006	B3

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Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	15.00%	483.36	
2	15.00%	30.00%	169.97	
3	30.00%	100.00%	48.46	

PROPOSED LOTS

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

SLOPES EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	B4

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SOIL AREA

SOILS OF STATEWIDE IMPORTANCE (SSI)	SSI TOTAL ACRES	PRIME AGRICULTURAL SOILS (PAS)	PAS TOTAL ACRES
STOCKBRIDGE SILT LOAM, 8 TO 15 PERCENT SLOPES (SKC)	186.93	COPAKE GRAVELLY SILT LOAM, UNDULATING (CUB)	1.64
SUN SILT LOAM (SU)	6.90	GEORGIA SILT LOAM, 0 TO 3 PERCENT SLOPES (GSA)	0.54
		GEORGIA SILT LOAM, 3 TO 8 PERCENT SLOPES (GSB)	77.67
		MASSENA SILT LOAM, 3 TO 8 PERCENT SLOPES (MNB)	58.68
		STOCKBRIDGE SILT LOAM, 3 TO 8 PERCENT SLOPES (SKB)	26.63

LEGEND

PROPOSED LOTS

STATEWIDE IMPORTANCE

PRIME AGRICULTURAL

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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TOWN OF AMENIA DUTCHESS COUNTY, NY

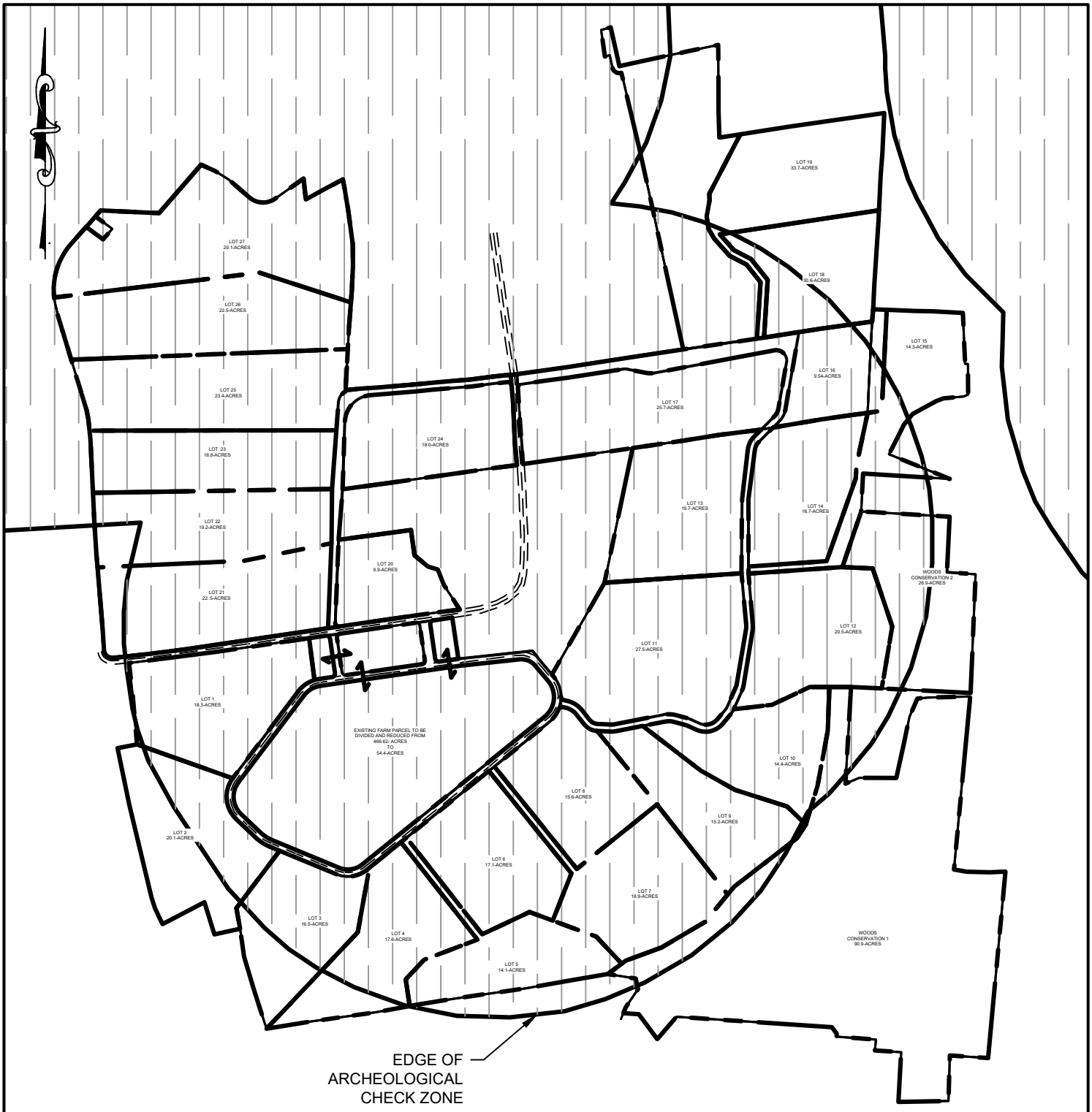
PRIME AGRICULTURAL AND FARM SOILS EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	1" = 1000'	RED	RED	#21-006	B5

SEE NOTE ON PAGE 1

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LEGEND

PROPOSED LOTS

ARCHEOLOGICAL CHECK ZONE

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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TOWN OF AMENIA DUTCHESS COUNTY, NY

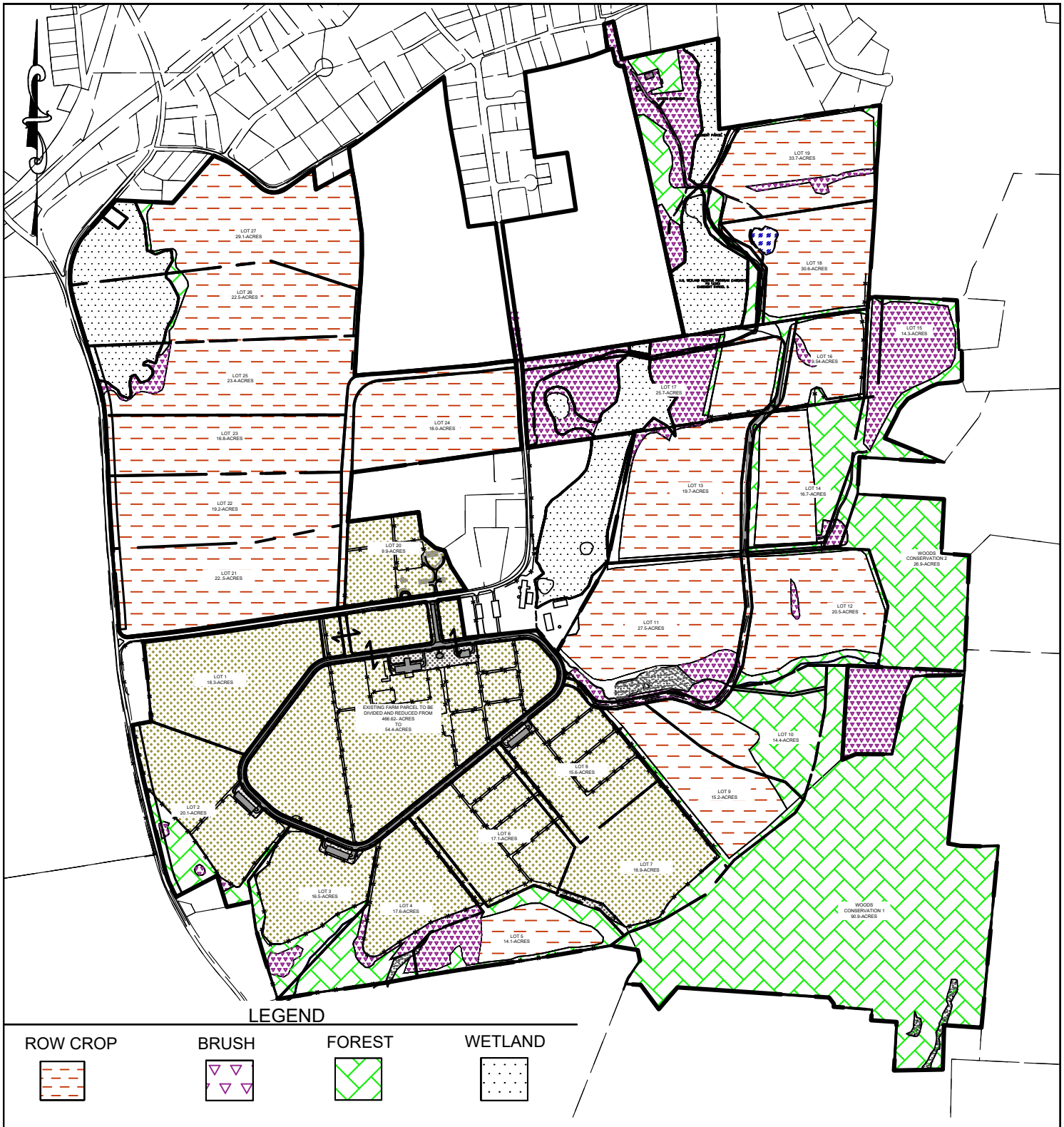
ARCHEOLOGICAL EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/ 8/2022	1" =1000'	RED	RED	#21-006	B6

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SEE NOTE ON PAGE 1



LEGEND

ROW CROP | BRUSH | FOREST | WETLAND

PADDOCK | IMPERVIOUS | GRASS | POND

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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TOWN OF AMENIA DUTCHESS COUNTY, NY

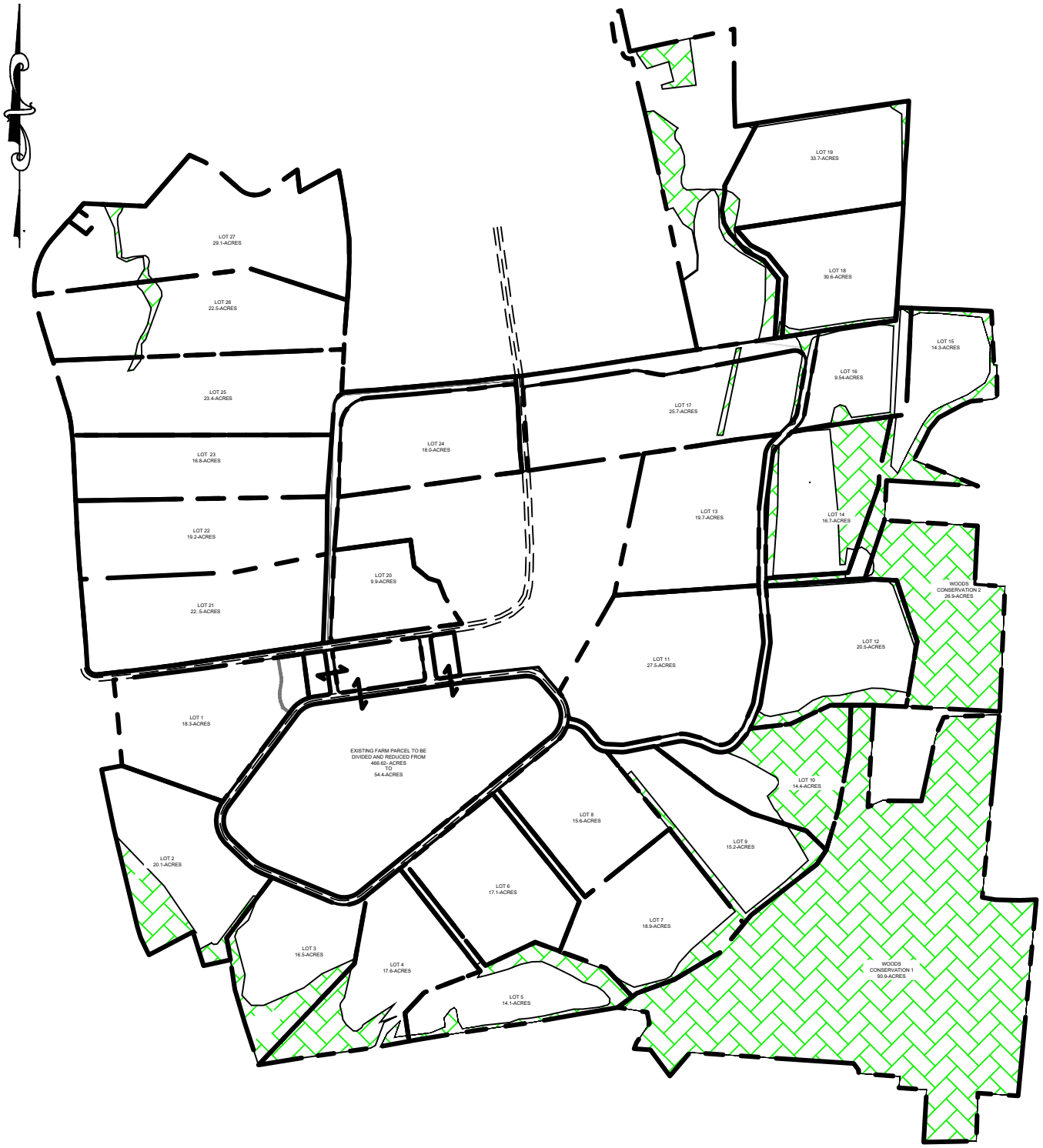
LAND COVERAGE EXHIBIT

DATE	DRAWN BY:	JOB NO.	SHEET NO.
7/18/2022	RED	#21-006	B7

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LEGEND

PROPOSED LOTS

FOREST

0 1,000' 2,000'

1" = 1,000'
GRAPHIC SCALE

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KEANE STUD SUBDIVISION CONSERVATION ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

FOREST COVERAGE EXHIBIT

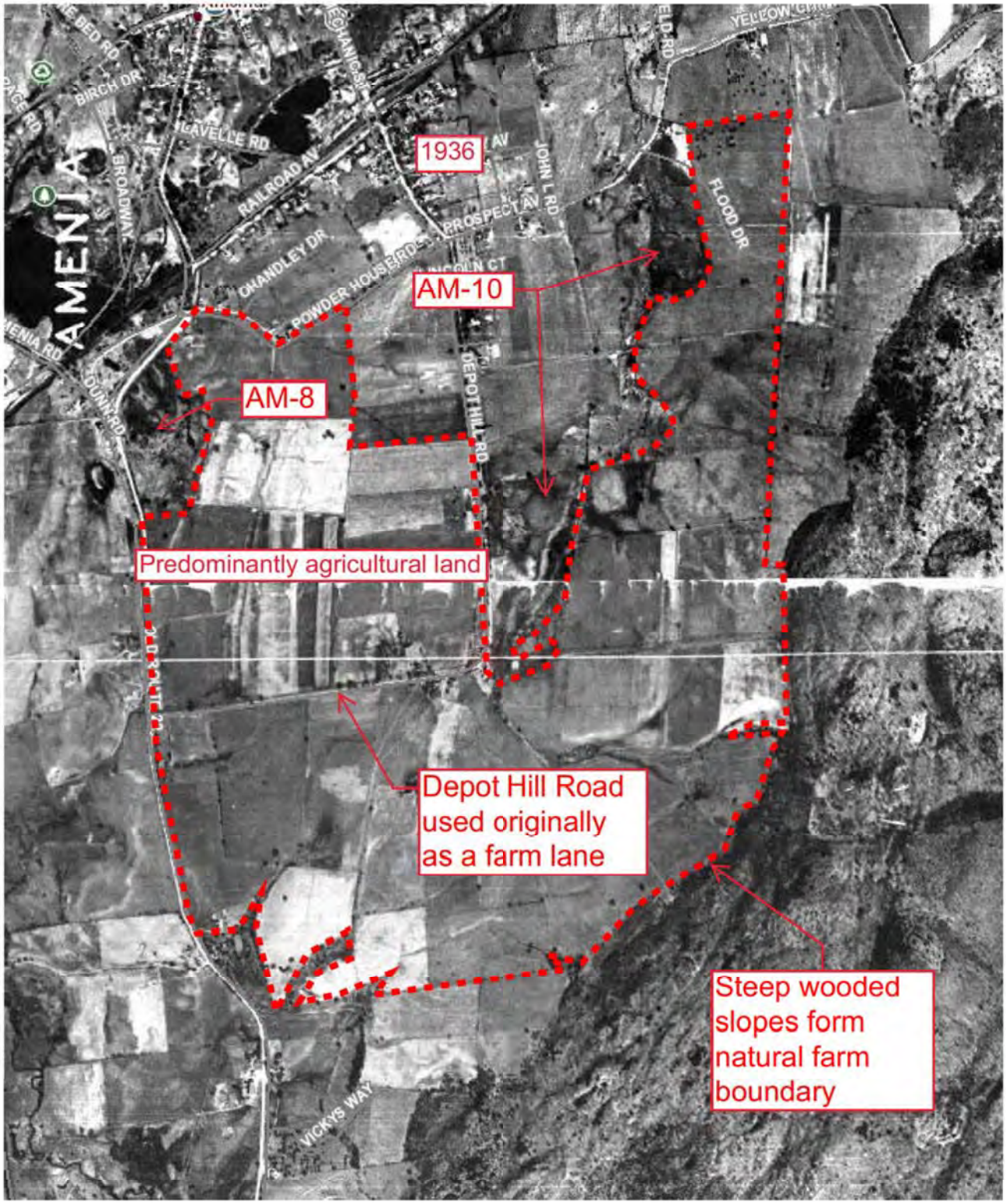
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7/18/2022	1" = 1000'	RED	RED	#21-006	B8

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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

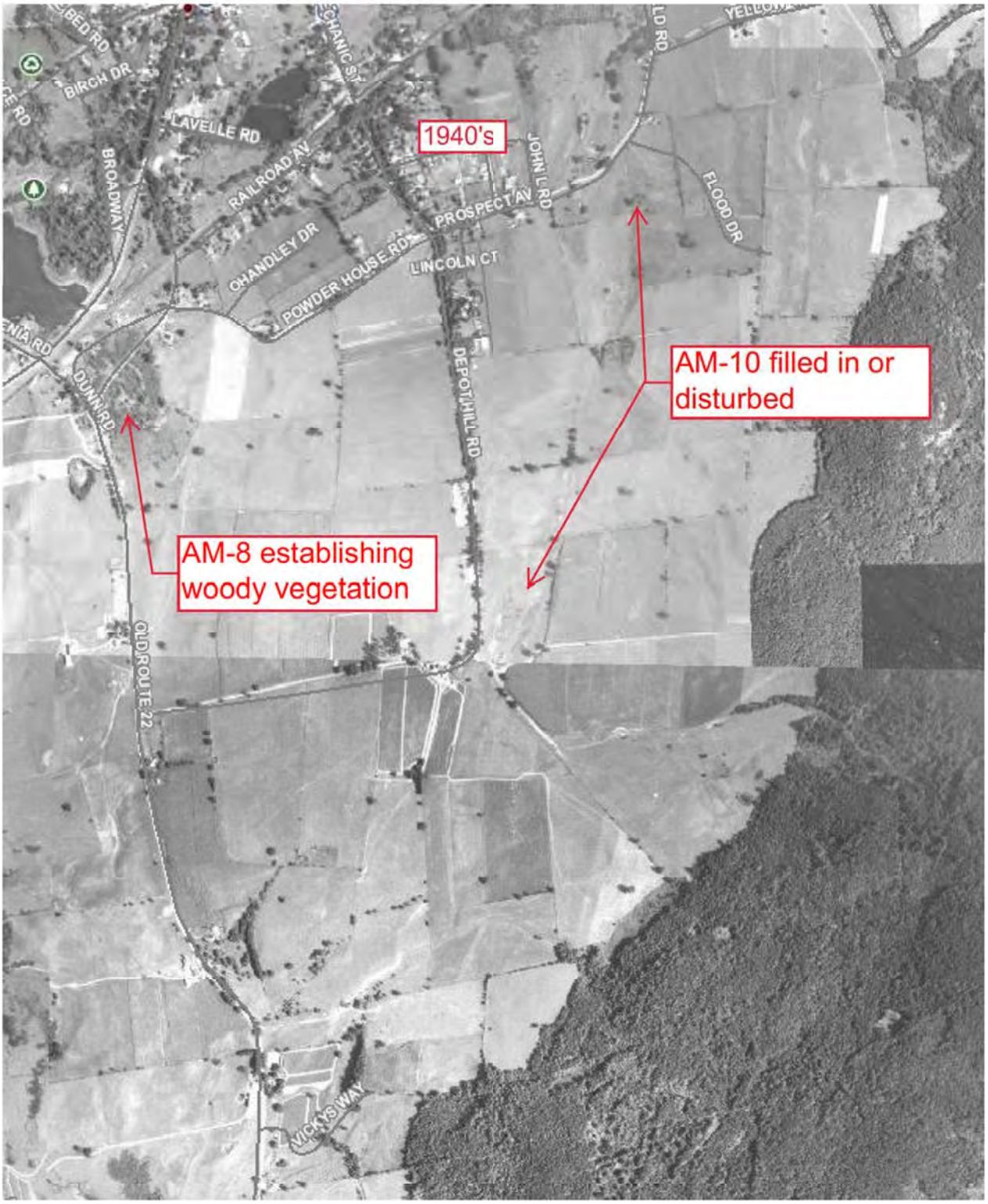


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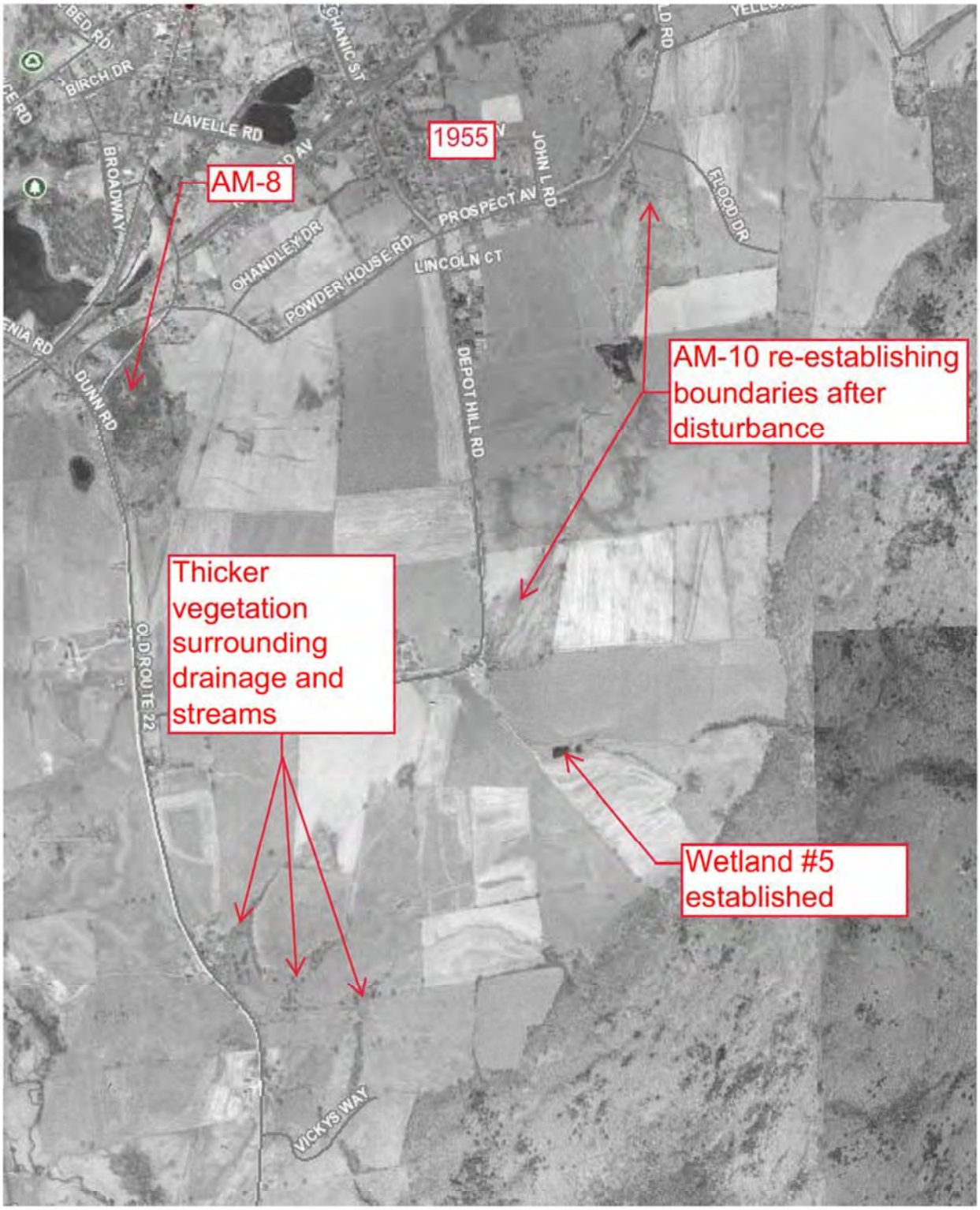


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

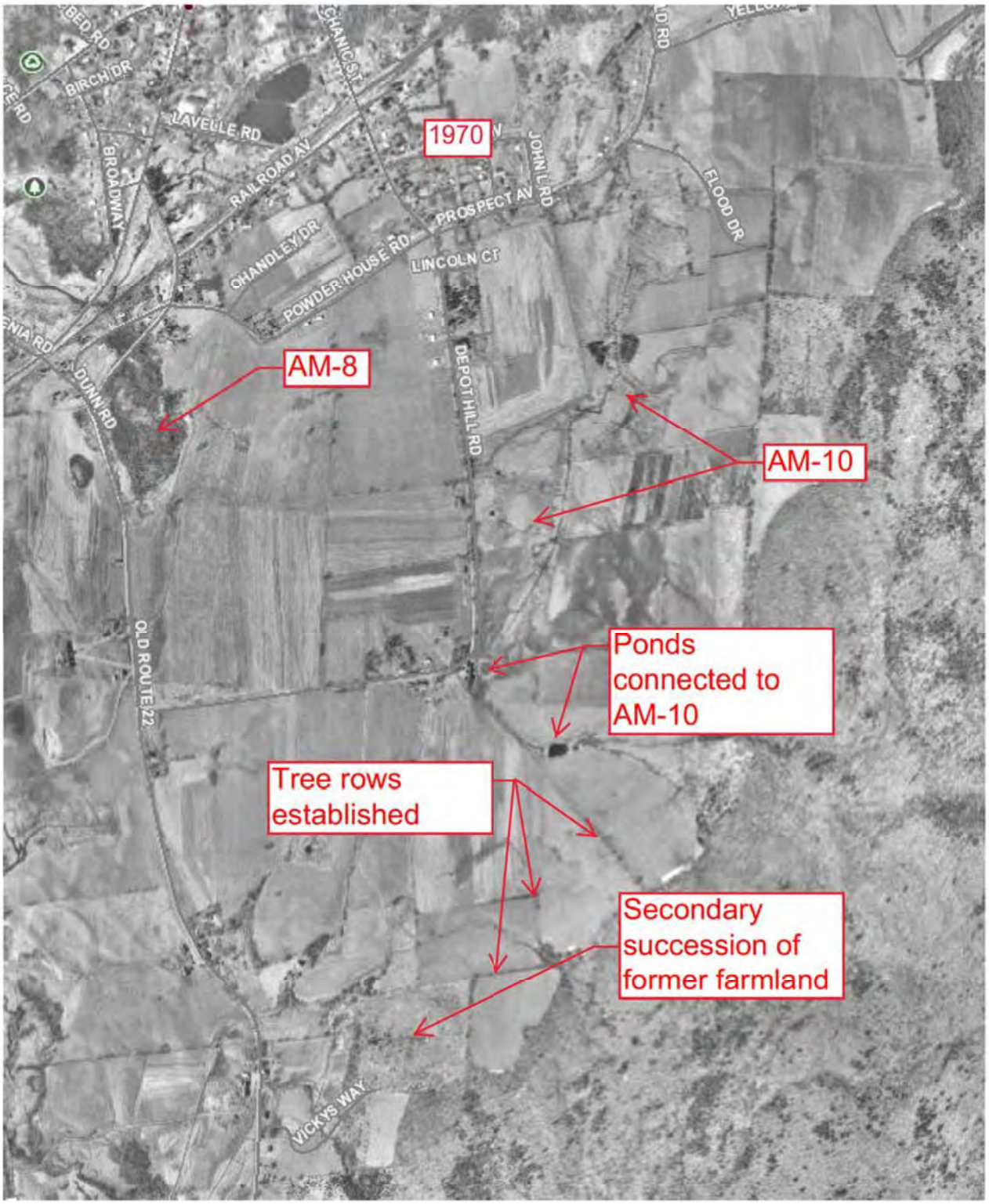


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

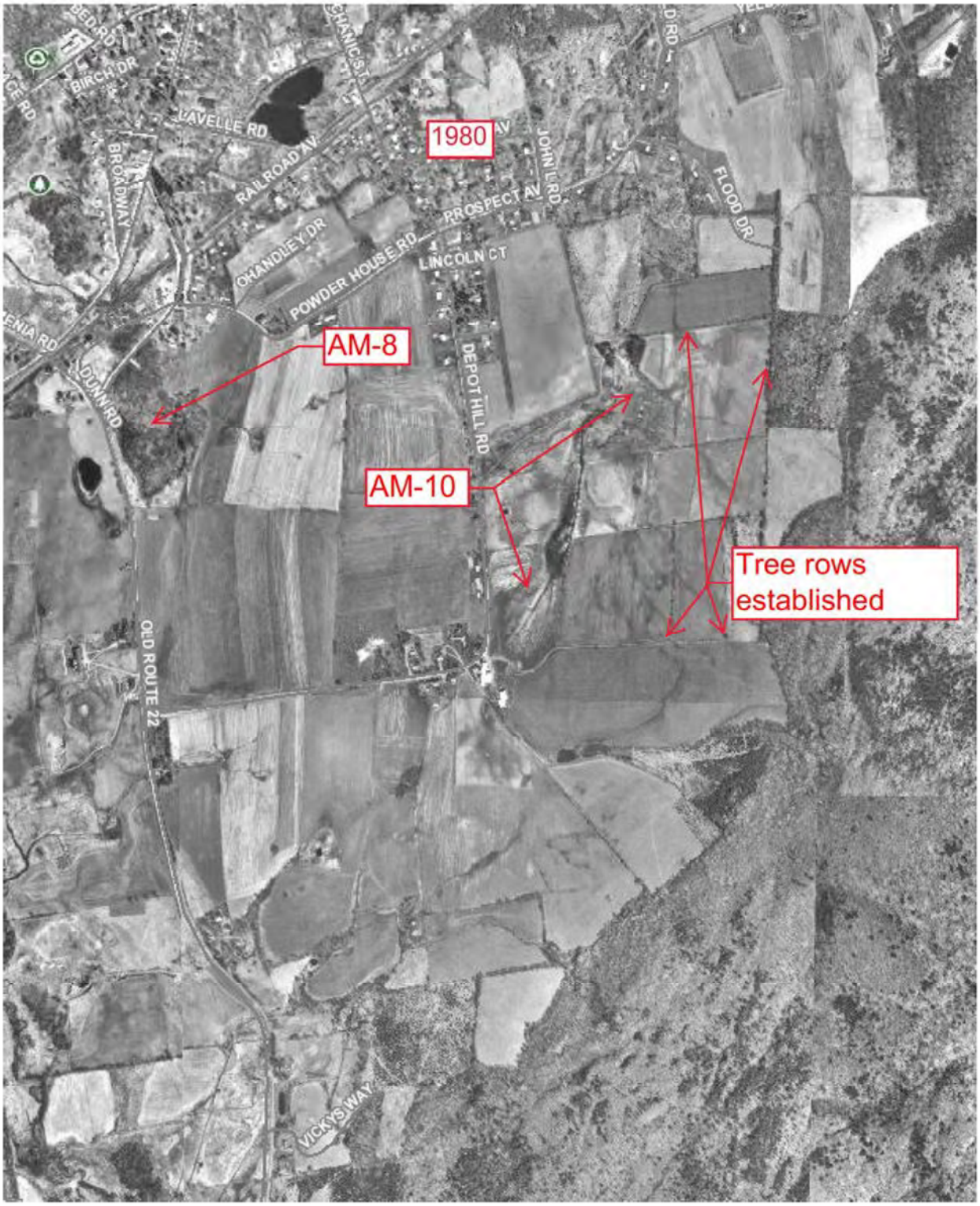


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

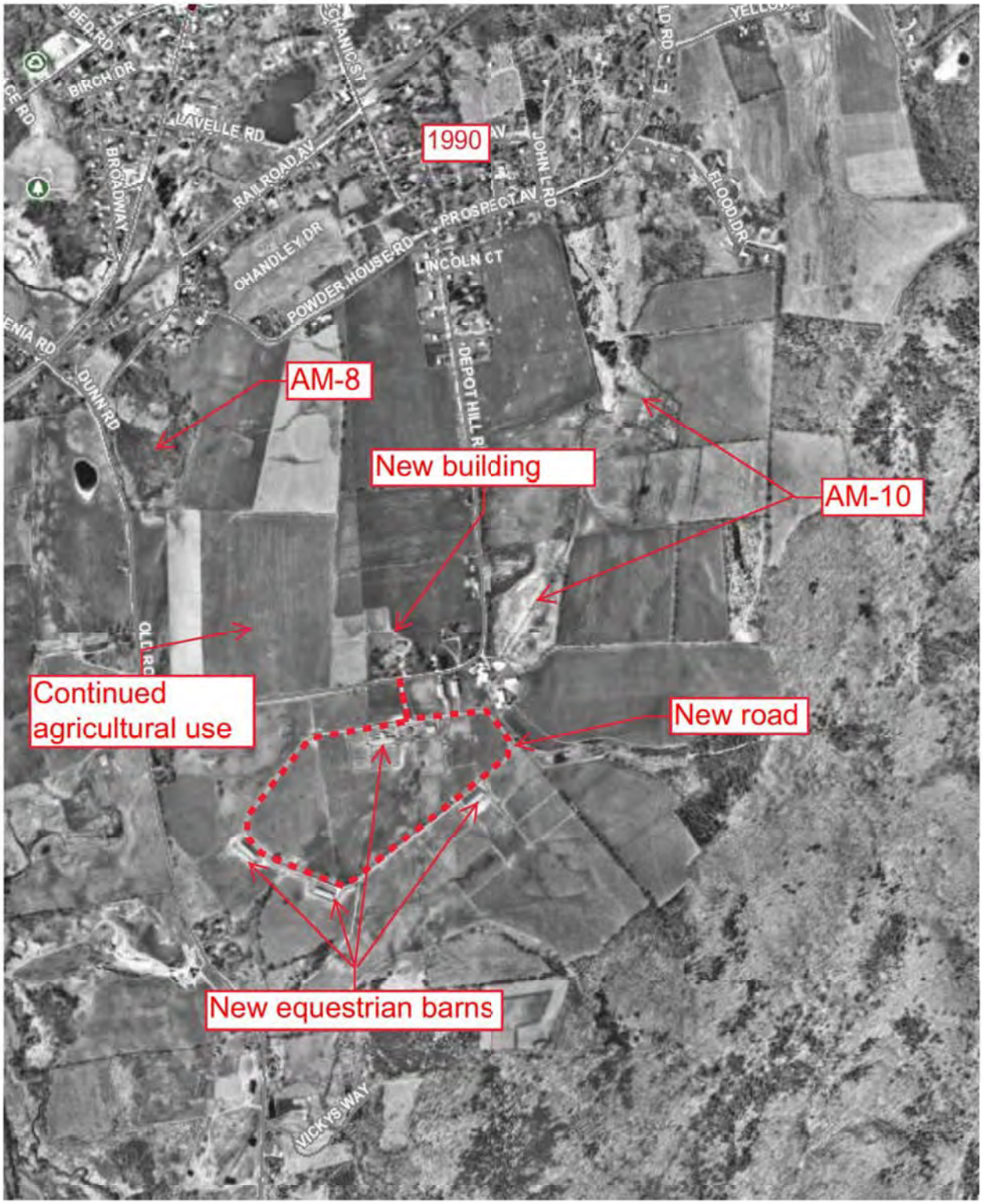


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

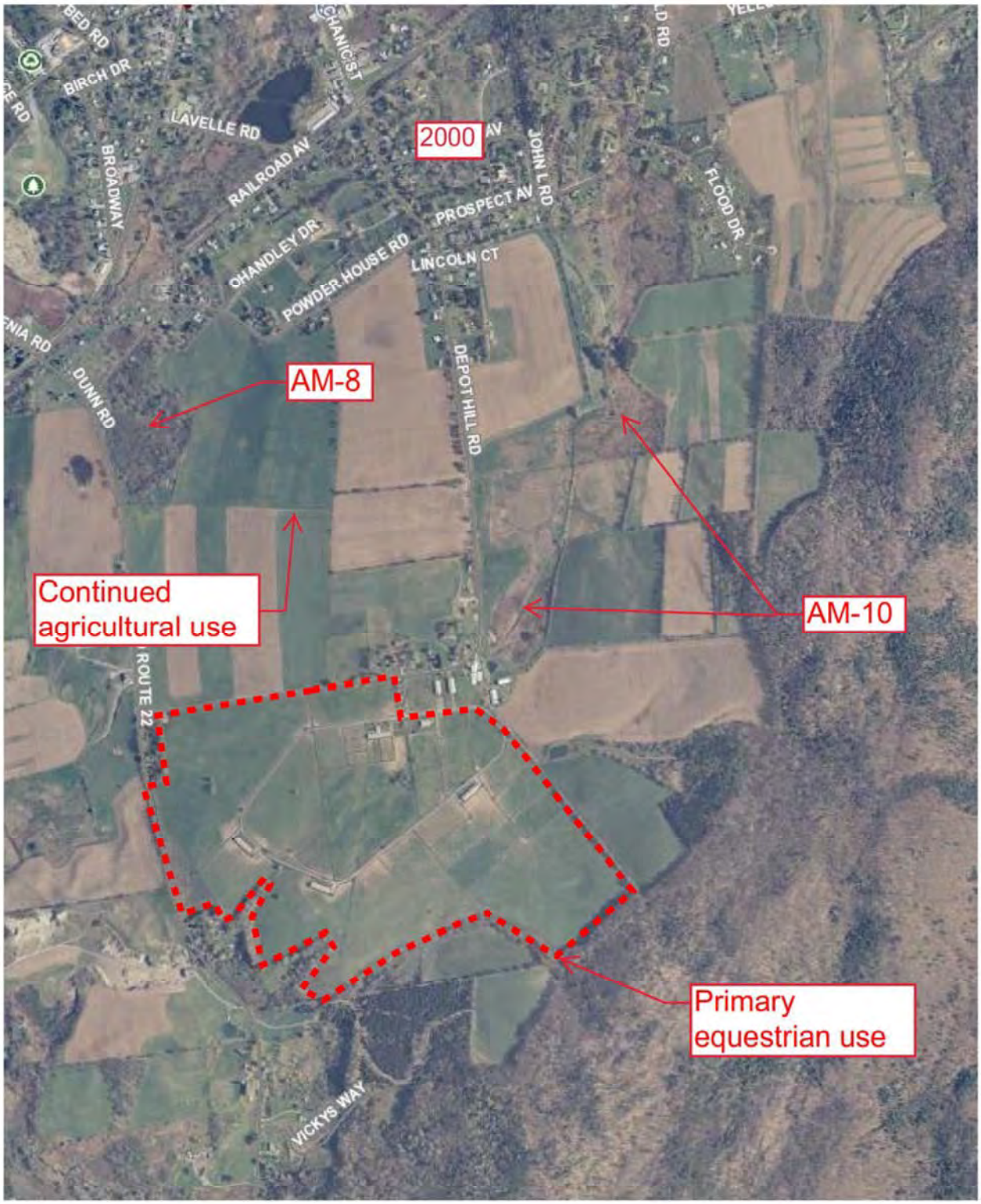


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020

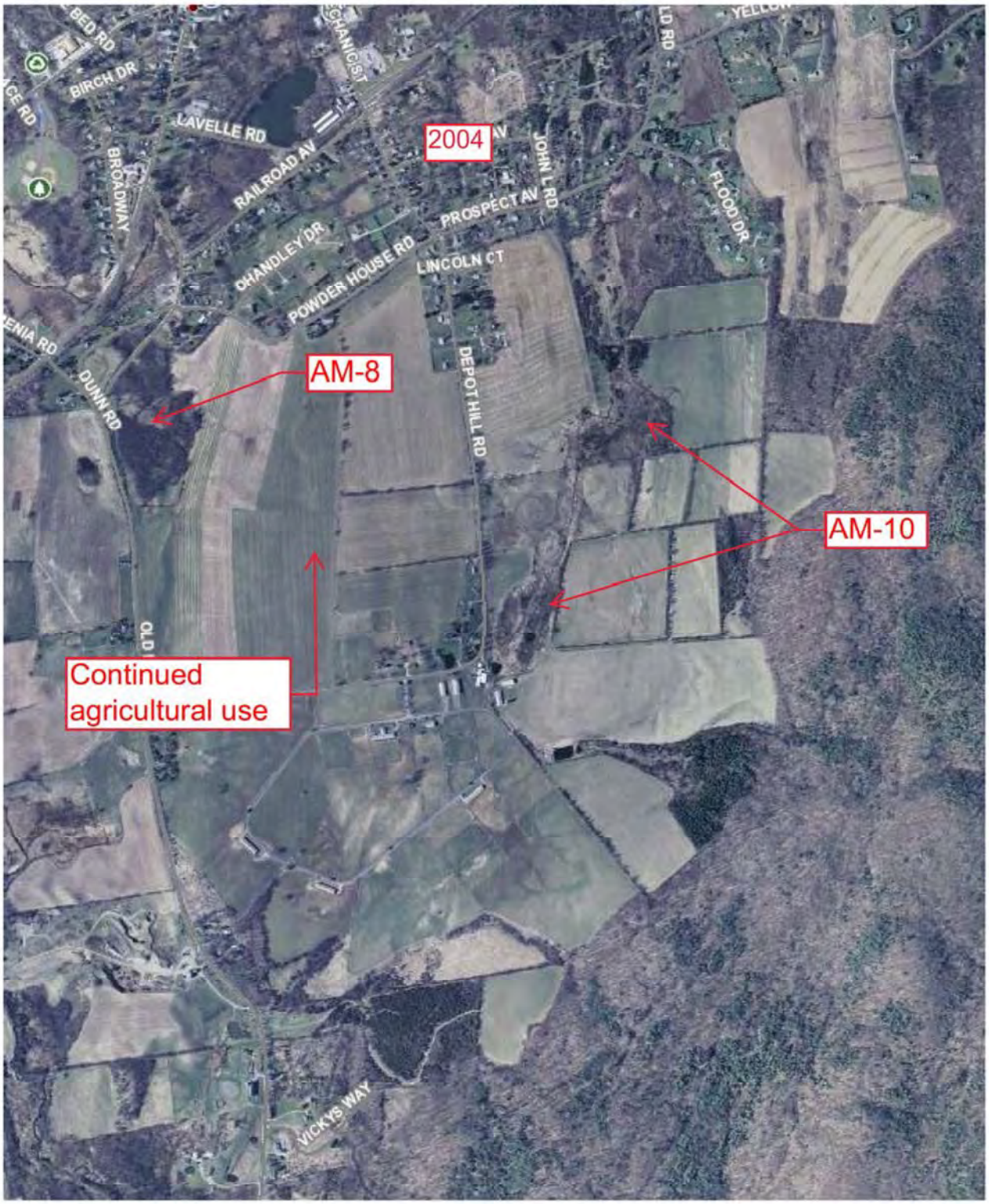


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1936 - 2020

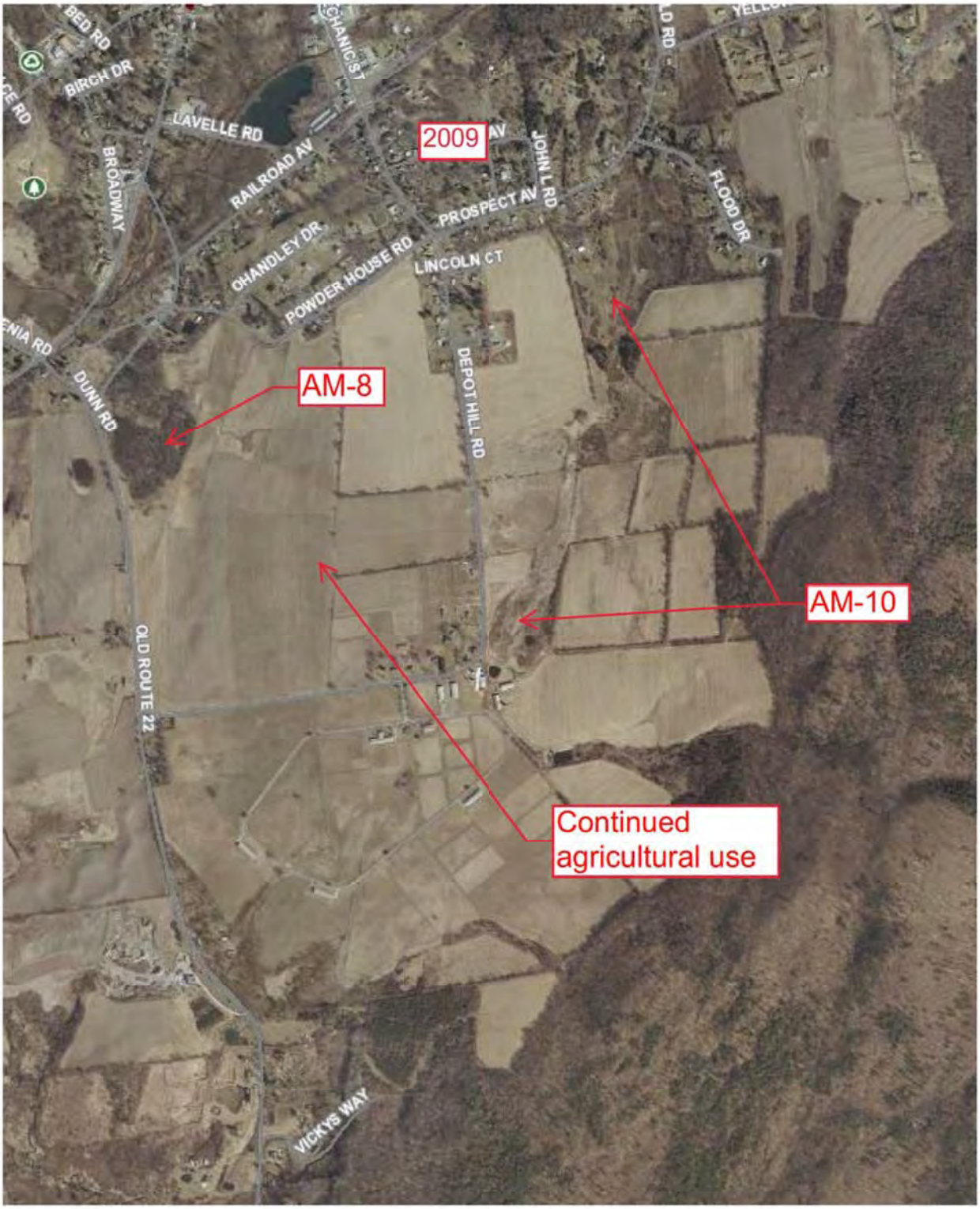


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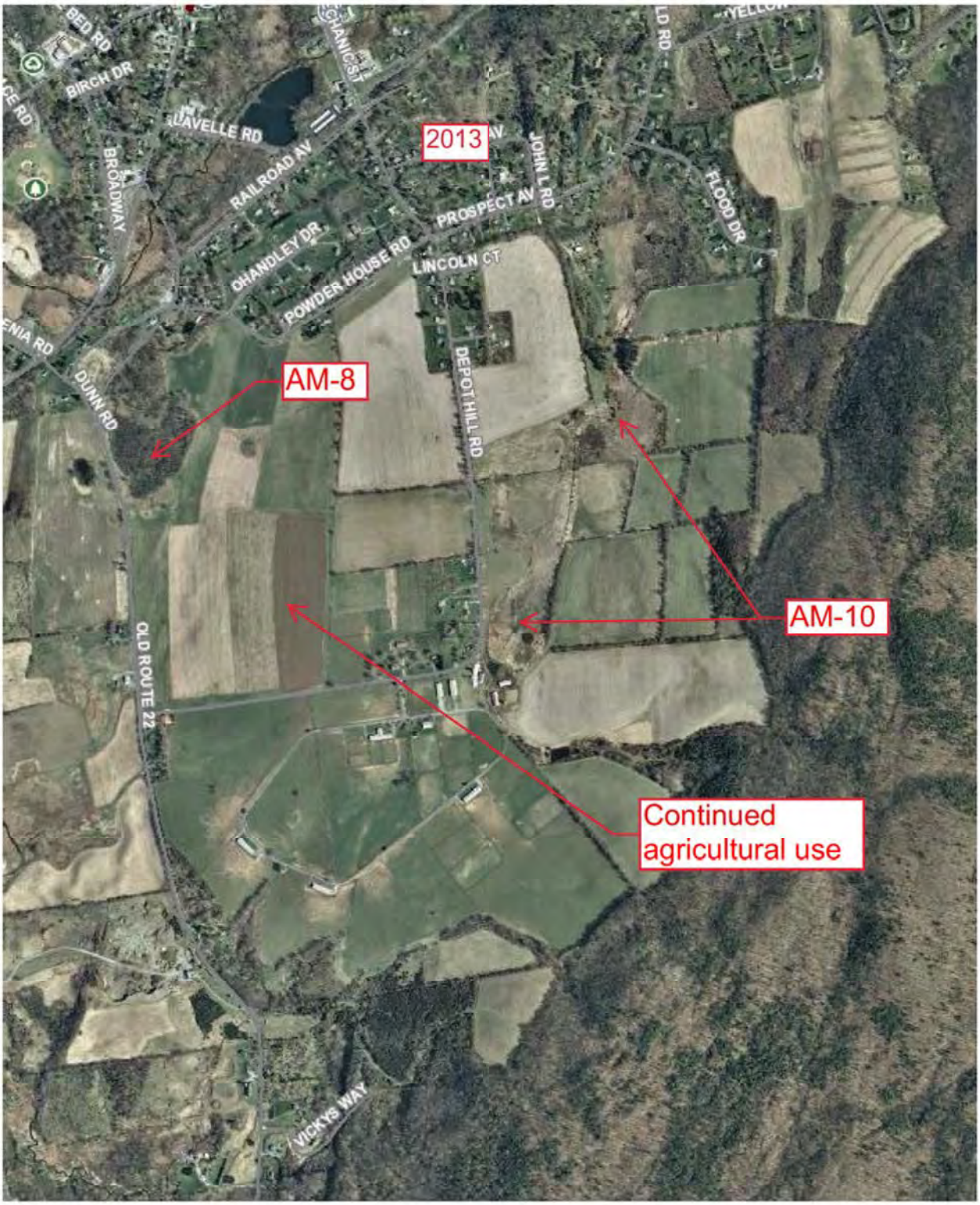


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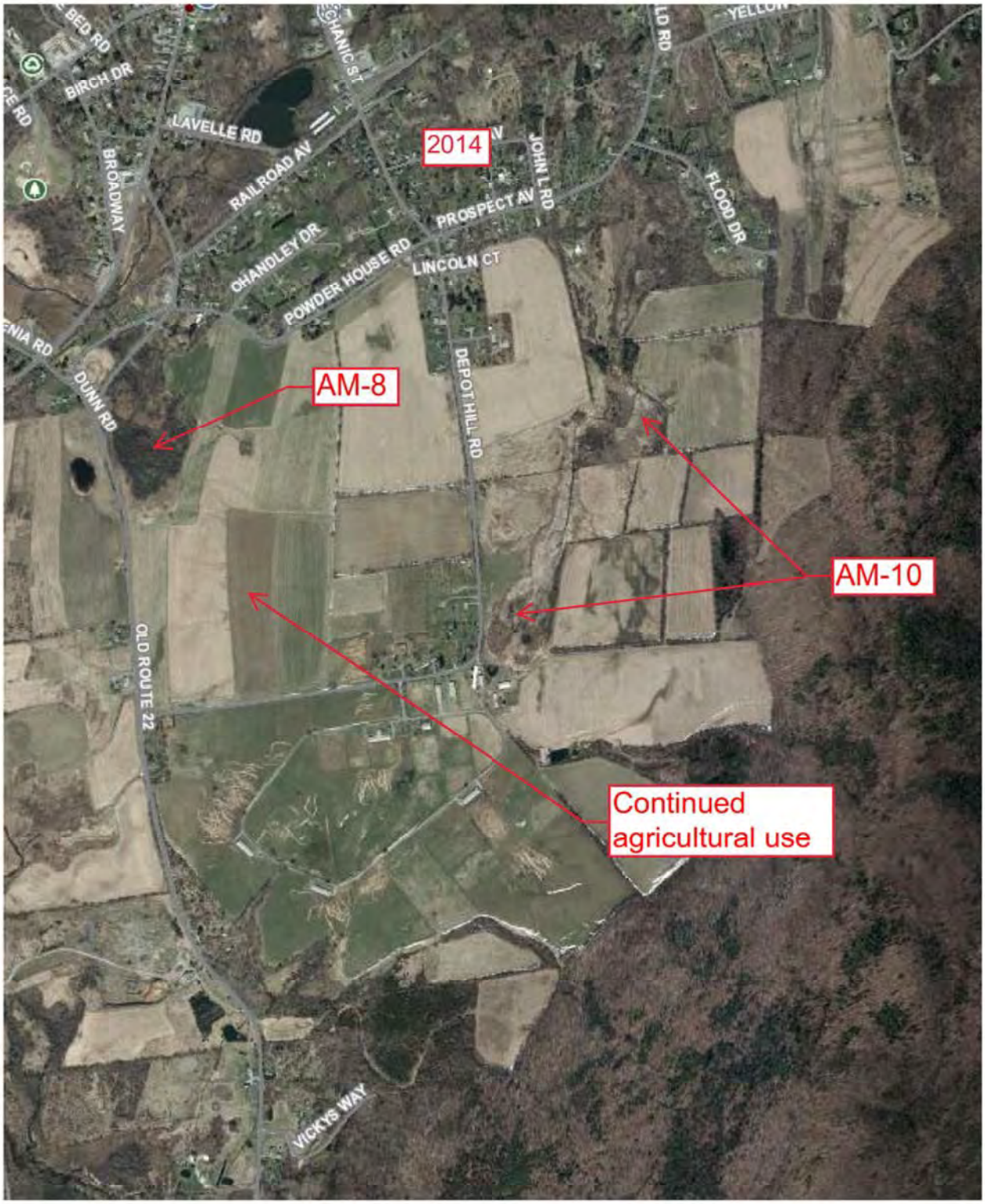


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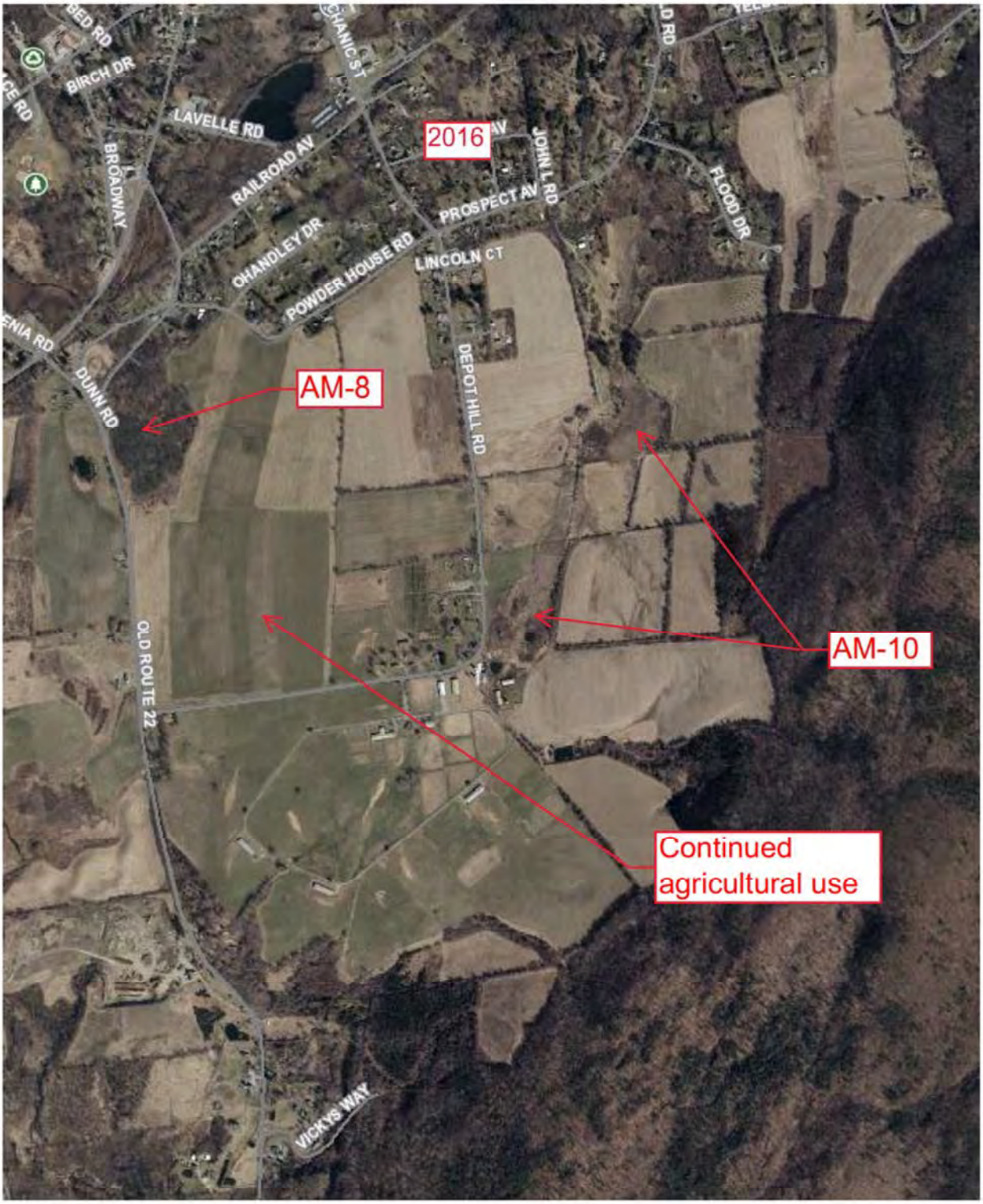


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1936 - 2020

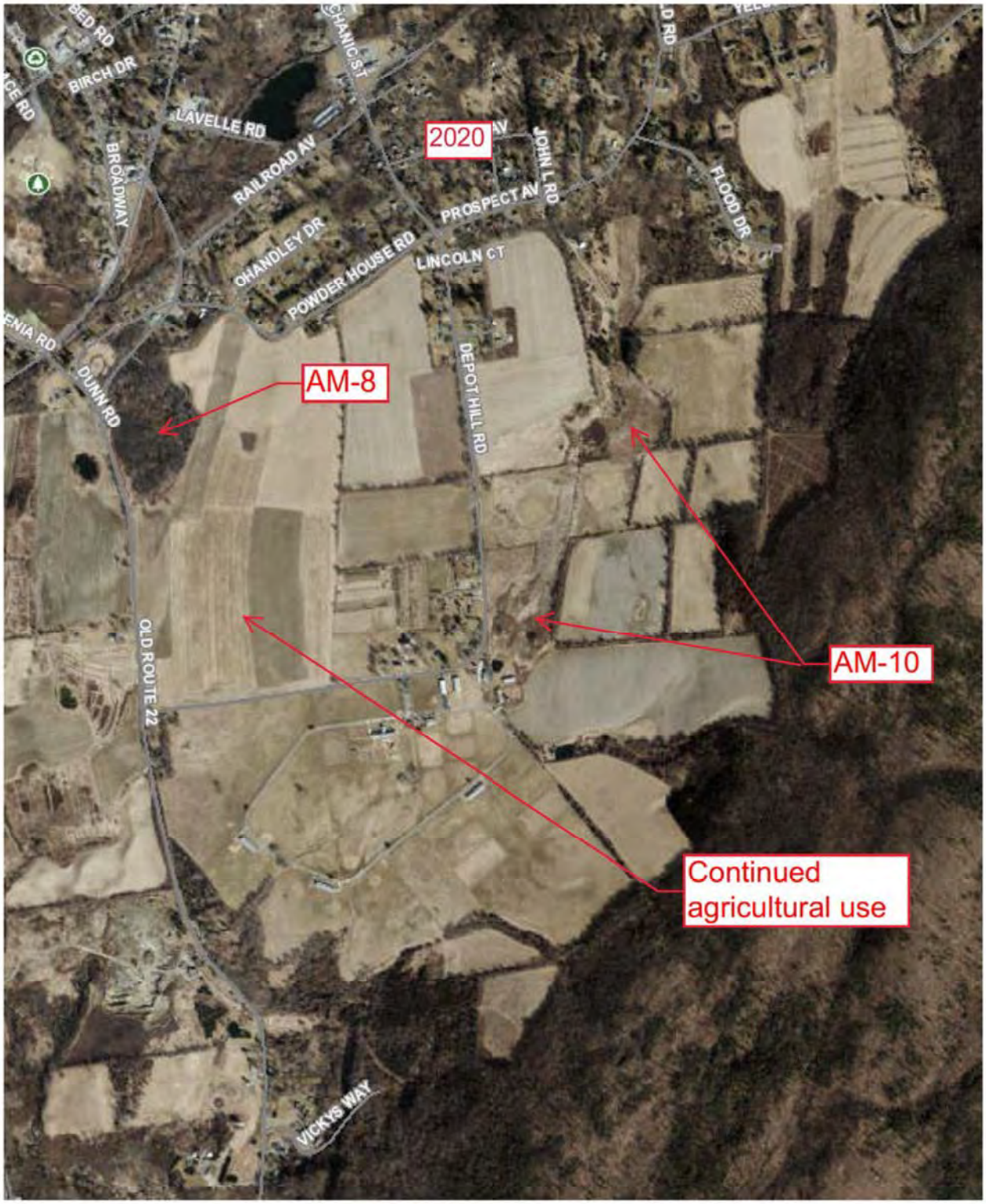


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DUTCHESS COUNTY AERIAL IMAGERY
Historic Orthophotography
1936 - 2020



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Keane Stud Annual Recharge - Summary by Soil Map Unit — Dutchess County, New York (NY027)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI	*Recharge Rate (in/yr)	Natural Recharge Rate
CrE	Charlton-Chatfield complex, steep, rocky	B	14.7	2.00%	14.7	18.01
CtC	Chatfield-Hollis complex, rolling, very rocky	B	3.2	0.40%	14.7	3.92
CtD	Chatfield-Hollis complex, 15 to 35 percent slopes, very rocky	B	34.4	4.70%	14.7	42.14
CuB	Copake gravelly silt loam, undulating	A	4.8	0.70%	20.2	8.08
CuC	Copake gravelly silt loam, rolling	A	18	2.50%	20.2	30.3
GsA	Georgia silt loam, 0 to 3 percent slopes	C	0.9	0.10%	7.6	0.57
GsB	Georgia silt loam, 3 to 8 percent slopes	C	82.5	11.30%	7.6	52.25
GsC	Georgia silt loam, 8 to 15 percent slopes	C	36.8	5.00%	7.6	23.31
HoC	Hollis-Chatfield-Rock outcrop complex, rolling	D	1.1	0.20%	4.2	0.39
HoF	Hollis-Chatfield-Rock outcrop complex, very steep	D	45.2	6.20%	4.2	15.82
MnB	Massena silt loam, 3 to 8 percent slopes	C/D	57.7	7.90%	7.6	36.54
NyA	Natchaug much, 0 to 2 percent slopes	B/D	13.7	1.90%	14.7	16.78
SkB	Stockbridge silt loam, 3 to 8 percent slopes	C	34.1	4.70%	7.6	21.60
SkC	Stockbridge silt loam, 8 to 15 percent slopes	C	198.8	27.30%	7.6	125.91
SkD	Stockbridge silt loam, 15 to 25 percent slopes	C	155.6	21.30%	7.6	98.55
SkE	Stockbridge silt loam, 25 to 45 percent	C	7	1.00%	7.6	4.43
Su	Sun silt loam	C/D	8.6	1.20%	7.6	5.45
Wy	Wayland silt loam	C/D	12.3	1.70%	7.6	7.79
	Totals for Area of Interest:		729.4	100%	acre feet	511.83
					cubic feet	22,295,097.00
					gallons	**166,767,325.56**

*Amenia, NY - Zoning Code Section 121-15,F

SEE NOTE ON PAGE 1

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Keane Stud Daily Water Use

Description	Avg. # of Units	Flow Rate per Unit (gal./day)	Total Flow (gallons)
Lounge Seating (weekends only)	25	20	500
Stables	35	50	1750
Keane Stud Office	4	15	60
Laundry	2	580	1160
5-Bedroom Residences (27)	135	110	14850
Grooming/Washing Stations	4	500	2000
		Total Daily Use:	**20320 GPD**

**NYSDEC Design Standards for Intermediately Sized Wastewater Treatment Systems 2014

Keane Stud Water Consumption***

Use	Total Flow (gallons)	Dilution Factor	Consumption / Day
Nonresidential Uses w. Subsurface Discharge	20320	6	121,920.00
		Total Daily Water Consumption	73,152.00 GPD
		Annual Consumption	**26,700,480.00 Gallons**

***Amenia, NY - Zoning Code Section 121-15,G

Net Recharge (gallons/year)	**140,066,845.56**

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APPENDIX C

WETLAND RESERVE PROGRAM DEED

Wetland Reserve Program Easement #66-2C31-0OTXW

SEE NOTE ON PAGE 1

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SEE NOTE ON PAGE 1

U.S. Department of Agriculture
Natural Resources Conservation Service
12/2009

NRCS-LTP-30
01/2010

37090034-6
Rhamelia

WARRANTY EASEMENT DEED IN PERPETUITY

p/o Grid #
7167-00-570145-0000

WETLANDS RESERVE PROGRAM
EASEMENT
NO. **66-2C31-0-OTXW**

Record and return to: Jamie L. Pope
SCHWERZMANN & WISE, P.C.
ATTORNEYS AT LAW
215 WASHINGTON STREET
P.O. BOX 704
WATERTOWN, NEW YORK 13601

THIS WARRANTY EASEMENT DEED is made by and between **RHAMELIA, INC., A NEW YORK CORPORATION, OF 79 GAY STREET, SHARON, CONNECTICUT 06069,** (hereafter referred to as the "Landowner"), Grantor(s), and the **UNITED STATES OF AMERICA**, by and through the Commodity Credit Corporation (CCC) (hereafter referred to as the "United States"), Grantee, Washington, DC 20250-1400* The Landowner and the United States are jointly referred to as the "Parties". The acquiring agency of the United States is the Natural Resources Conservation Service (NRCS), United States Department of Agriculture.

14 N. Independence Ave SW

Witnesseth:

Purposes and Intent. The purpose of this easement is to restore, protect, manage, maintain, and enhance the functional values of wetlands and other lands, and for the conservation of natural values including fish and wildlife and their habitat, water quality improvement, flood water retention, groundwater recharge, open space, aesthetic values, and environmental education. It is the intent of NRCS to give the Landowner the opportunity to participate in the restoration and management activities on the easement area. By signing this deed, the Landowner agrees to the restoration of the Easement Area and grants the right to carry out such restoration to the United States.

Authority. This easement deed acquisition is authorized by Title XII of the Food Security Act of 1985, as amended (16 U.S.C. §3837), for the Wetlands Reserve Program.

NOW THEREFORE, for and in consideration of the sum of **ONE HUNDRED FIVE THOUSAND ONE HUNDRED NINETY-FIVE AND 00/100** Dollars **($105,195.00),** the Grantor(s) hereby grants and conveys with general warranty of title to the UNITED STATES OF AMERICA and its assigns, (the Grantee), in perpetuity, all rights, title and interest in the lands comprising the easement area described in Part I and appurtenant rights of access to the easement area, but reserving to the Landowner only those rights, title, and interest expressly enumerated in Part II. It is the intention of the Landowner to convey and relinquish any and all other property rights not so reserved. This easement shall constitute a servitude upon the land so encumbered; shall run with the land for the duration of the easement; and shall bind the Landowner, (the Grantor(s)), their heirs, successors, assigns, lessees, and any other person claiming under them.

SUBJECT, however, to all valid rights of record, if any.

SEE NOTE ON PAGE 1

PART I. Description of the Easement Area. The lands encumbered by this easement deed, referred to hereafter as the easement area, are described on EXHIBIT A which is appended to and made a part of this easement deed.

TOGETHER with a right of access for ingress and egress to the easement area across adjacent or other properties of the Landowner. Such a right-of-way for access purposes is described in EXHIBIT B which is appended to and made a part of this easement deed.

PART II. Reservations in the Landowner on the Easement Area. Subject to the rights, title, and interest conveyed by this easement deed to the United States, including the restoration, protection, management, maintenance, enhancement, and monitoring of the wetland and other natural values of the easement area, the Landowner reserves:

A. Title. Record title, along with the Landowner's right to convey, transfer, and otherwise alienate title to these reserved rights.

B. Quiet Enjoyment. The right of the Landowner to enjoy the rights reserved on the easement area without interference from others.

C. Control of Access. The right to prevent trespass and control access by the general public subject to the operation of State and Federal law.

D. Recreational Uses. The right to undeveloped recreational uses, including undeveloped hunting and fishing and leasing of such rights for economic gain, pursuant to applicable State and Federal regulations that may be in effect at the time. Undeveloped recreational uses must be consistent with the long-term protection and enhancement of the wetland and other natural values of the easement area. Undeveloped recreational use may include hunting equipment, such as, tree stands and hunting blinds that are rustic and customary for the locale as determined by NRCS.

E. Subsurface Resources. The right to oil, gas, minerals, and geothermal resources underlying the easement area, provided that any drilling or mining activities are to be located outside the boundaries of the easement area, unless activities within the boundaries are specified in accordance with the terms and conditions of EXHIBIT C which is appended to and made a part of this easement deed, if applicable.

SEE NOTE ON PAGE 1

F. Water uses and water rights. The right to water uses and water rights identified as reserved to the Landowner in EXHIBIT D which is appended to and made a part of this easement deed, if applicable.

PART III. Obligations of the Landowner. The Landowner shall comply with all terms and conditions of this easement, including the following:

A. Prohibitions. Without otherwise limiting the rights of the United States acquired hereunder, it is expressly understood that the rights to carry out the following activities and uses have been acquired by the United States and, unless authorized by the United States under Part IV, are prohibited on the easement area:

1. haying, mowing, or seed harvesting for any reason;
2. altering of grassland, woodland, wildlife habitat or other natural features by burning, digging, plowing, disking, cutting or otherwise destroying the vegetative cover;
3. dumping refuse, wastes, sewage, or other debris;
4. harvesting wood products;
5. draining, dredging, channeling, filling, leveling, pumping, diking, impounding, or related activities, as well as altering or tampering with water control structures or devices, except as specifically set forth in EXHIBIT D, if applicable;
6. diverting or causing or permitting the diversion of surface or underground water into, within, or out of the easement area by any means, except as specifically set forth in EXHIBIT D, if applicable;
7. building, placing, or allowing to be placed structures on, under, or over the easement area, except for structures for undeveloped recreational use;
8. planting or harvesting any crop;
9. grazing or allowing livestock on the easement area;
10. disturbing or interfering with the nesting or brood-rearing activities of wildlife including migratory birds;
11. use of the easement area for developed recreation. These uses include but are not limited to, camping facilities, recreational vehicle trails and tracks, sporting clay operations, skeet shooting operations, firearm range operations and the infrastructure to raise, stock, and release captive raised waterfowl, game birds and other wildlife for hunting or fishing;
12. any activities which adversely impact or degrade wildlife cover or other habitat benefits, water quality benefits, or other wetland functions and values of the easement area; and
13. any activities to be carried out on the Landowner's land that is immediately adjacent to, and functionally related to, the land that is subject to the easement if such activities will alter, degrade, or otherwise diminish the functional value of the eligible land.

SEE NOTE ON PAGE 1

B. Noxious Plants and Pests. The Landowner is responsible for noxious weed control and emergency control of pests as required by all Federal, State, and local laws. A plan to control noxious weeds and pests must be approved in writing by the NRCS prior to implementation by the Landowner.

C. Fences. Except for establishment cost incurred by the United States and replacement cost not due to the Landowner's negligence or malfeasance, all other costs involved in maintenance of fences and similar facilities to exclude livestock shall be the responsibility of the Landowner. The installation or use of fences which have the effect of preventing wildlife access and use of the easement area are prohibited on the easement or easement boundary.

D. Use of water for easement purposes. The landowner shall use water for easement purposes as set forth in EXHIBIT D, which is appended to and made a part of this easement deed, if applicable.

E. Protection of water uses and water rights. As set forth in EXHIBIT D, if applicable, the Landowner shall undertake actions necessary to protect any water rights and water uses for easement purposes.

F. Taxes. The Landowner shall pay any and all real property and other taxes and assessments, if any, which may be levied against the land.

G. Reporting. The Landowner shall report to the NRCS any conditions or events which may adversely affect the wetland, wildlife, and other natural values of the easement area.

H. Survival. Irrelevant of any violations by the Landowner of the terms of this deed, this easement survives and runs with the land for its duration.

PART IV. Compatible Uses by the Landowner.

A. General. The United States may authorize, in writing and subject to such terms and conditions the NRCS may prescribe at its sole discretion, the use of the easement area for compatible economic uses, including, but not limited to, managed timber harvest, periodic haying, or grazing.

B. Limitations. Compatible use authorizations will only be made if, upon a determination by NRCS in the exercise of its sole discretion and rights, that the proposed use is consistent with the long-term protection and enhancement of the wetland and other natural values of the easement area. The NRCS shall prescribe the amount, method, timing, intensity, and duration of the compatible use.

SEE NOTE ON PAGE 1

PART V. Rights of the United States. The rights of the United States include:

A. Management activities. The United States has the right to enter the easement area to undertake, on a cost-share basis with the Landowner or other entity as determined by the United States, any activities to restore, protect, manage, maintain, enhance, and monitor the wetland and other natural values of the easement area. The United States may apply to or impound additional waters, in accordance with State water law, on the easement area in order to maintain or improve wetland and other natural values.

B. Access. The United States has a right of reasonable ingress and egress to the easement area over the Landowner's property, whether or not the property is adjacent or appurtenant to the easement area, for the exercise of any of the rights of the United States under this easement deed. The authorized representatives of the United States may utilize vehicles and other reasonable modes of transportation for access purposes. To the extent practical, the United States shall utilize the access identified in EXHIBIT B.

C. Easement Management. The Secretary of Agriculture, by and through the NRCS, may delegate all or part of the management, monitoring or enforcement responsibilities under this easement to any entity authorized by law that the NRCS determines to have the appropriate authority, expertise and resources necessary to carry out such delegated responsibilities. State or federal agencies may utilize their general statutory authorities in the administration of any delegated management, monitoring or enforcement responsibilities for this easement. The authority to modify or terminate this easement (16 U.S.C. §3837e(b)) is reserved to the Secretary of Agriculture in accordance with applicable law.

D. Violations and Remedies - Enforcement. The Parties, Successors, and Assigns, agree that the rights, title, interests, and prohibitions created by this easement deed constitute things of value to the United States and this easement deed may be introduced as evidence of same in any enforcement proceeding, administrative, civil or criminal, as the stipulation of the Parties hereto. If there is any failure of the Landowner to comply with any of the provisions of this easement deed, the United States or other delegated authority shall have any legal or equitable remedy provided by law and the right:

1. To enter upon the easement area to perform necessary work for prevention of or remediation of damage to wetland or other natural values; and,

SEE NOTE ON PAGE 1

2. To assess all expenses incurred by the United States (including any legal fees or attorney fees) against the Landowner, to be owed immediately to the United States.

PART VI. General Provisions.

A. Successors in Interest. The rights granted to the United States shall accrue to any of its agents or assigns. All obligations of the Landowner under this easement deed shall also bind the Landowner's heirs, successors, agents, assigns, lessees, and any other person claiming under them. All the Landowners who are parties to this easement deed shall be jointly and severally liable for compliance with its terms.

B. Rules of Construction and Special Provisions. All rights in the easement area not reserved by the Landowner shall be deemed acquired by the United States. Any ambiguities in this easement deed shall be construed in favor of the United States to effect the wetland and conservation purposes for which this easement deed is being acquired. The property rights of the United States acquired under this easement shall be unaffected by any subsequent amendments or repeal of the Wetlands Reserve Program. If the Landowner receives the consideration for this easement in installments, the Parties agree that the conveyance of this easement shall be totally effective upon the payment of the first installment.

C. Environmental Warranty. "Environmental Law" or "Environmental Laws" means any and all Federal, State, local or municipal laws, orders, regulations, statutes, ordinances, codes, guidelines, policies, or requirements of any governmental authority regulating or imposing standards of liability or standards or conduct (including common law) concerning air, water, solid waste, hazardous materials or substance, worker and community right-to-know, hazard communication, noise, radioactive material, resource protection, subdivision, inland wetlands and watercourses, health protection and similar environmental health, safety, building and land use as may now or at any time hereafter be in effect.

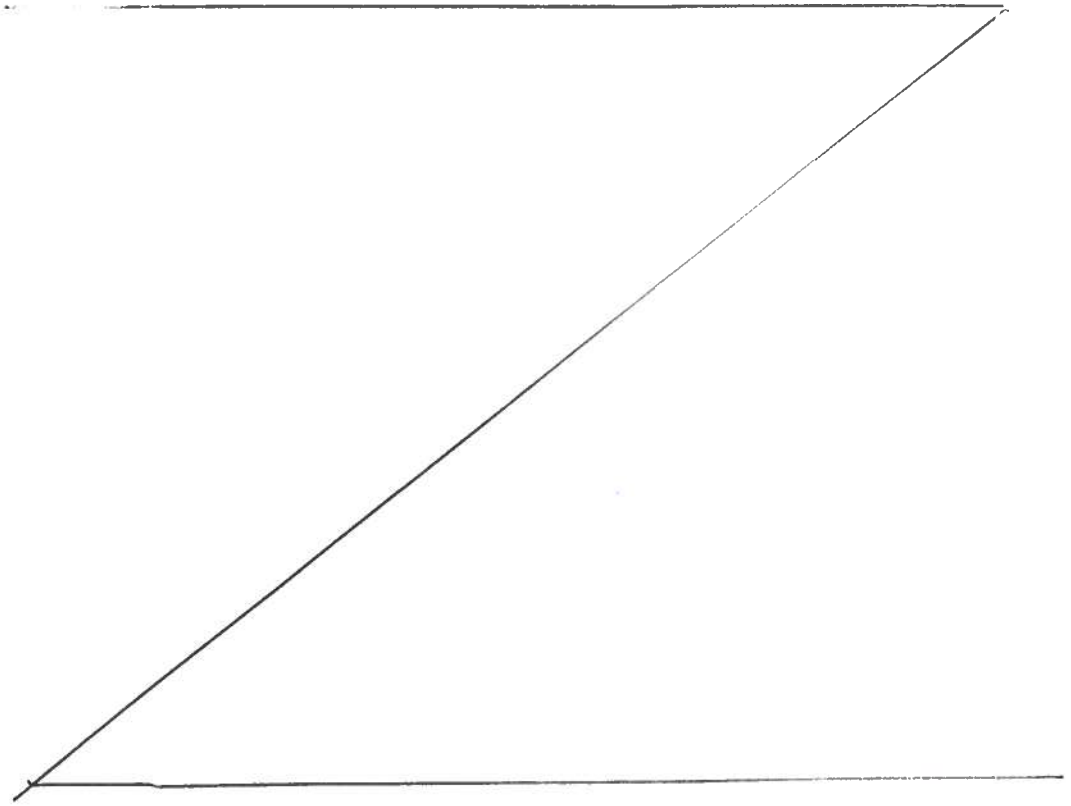
"Hazardous Materials" means any petroleum, petroleum products, fuel oil, waste oils, explosives, reactive materials, ignitable materials, corrosive materials, hazardous chemicals, hazardous wastes, hazardous substances, extremely hazardous substances, toxic substances, toxic chemicals, radioactive materials, infectious materials, and any other element, compound, mixture, solution or substance which may pose a present or potential hazard to human health or the environment.

SEE NOTE ON PAGE 1

Landowner warrants that it is in compliance with, and shall remain in compliance with, all applicable Environmental Laws. Landowner warrants that there are no notices by any government authority of any violation or alleged violation of, non-compliance or alleged non-compliance with or any liability under any Environmental Law relating to the operations or conditions of the Property. Landowner further warrants that it has no actual knowledge of a release or threatened release of Hazardous Materials, as such substance and wastes are defined by applicable Federal and State law.

D. General Indemnification. Landowner shall indemnify and hold harmless, the United States, its employees, agents, and assigns for any and all liabilities, claims, demands, losses, expenses, damages, fines, fees, penalties, suits, proceedings, actions, and cost of actions, sanctions asserted by or on behalf of any person or government authority, and other liabilities (whether legal or equitable in nature and including, without limitation, court costs, and reasonable attorneys' fees and attorneys' fees on appeal) to which the United States may be subject or incur relating to the easement area, which may arise from, but is not limited to, Landowner's negligent acts or omissions or Grantor's breach of any representation, warranty, covenant, agreements contained in this easement deed, or violations of any Federal, State, or local laws, including all Environmental Laws.

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SEE NOTE ON PAGE 1

TO HAVE AND TO HOLD, this Warranty Easement Deed is granted to the United States of America and its assigns forever. The Landowner covenants that he, she, or they are vested with good title to the easement area and will warrant and defend the same on behalf of the United States against all claims and demands. The Landowner covenants to comply with the terms and conditions enumerated in this document for the use of the easement area and adjacent lands for access, and to refrain from any activity not specifically allowed or that is inconsistent with the purposes of this easement deed.

Dated this 15 day of April, 2011.

Rhamelia, Inc., a New York Corporation

By: Samuel Bailey Title President

Samuel Bailey

ACKNOWLEDGMENT

STATE OF New York

COUNTY OF Dutchess

On the 15 day of April, in the year 2011, before me, the undersigned, personally appeared Samuel Bailey, personally known or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public Mary M Henschel

NOTARIAL SEAL

My Commission Expires 8/31/13

MARY M. HENSCHEL
NOTARY PUBLIC STATE OF NEW YORK
DUTCHESS COUNTY
NO. 4797629
COMMISSION EXPIRES 8/31/13

SEE NOTE ON PAGE 1

ACCEPTANCE BY GRANTEE:

I DENNIS A. DEWEESE (name), ACTING STATE CONSERVATIONIST (title), being the duly authorized representative of the United States Department of Agriculture, Natural Resources Conservation Service, do hereby accept this Conservation Easement Deed with respect to the rights and duties of the United States of America, Grantee.

Dated this 20 day of APRIL, 2011.

The United States of America
DENNIS A. DEWEESE, ACTING STATE CONSERVATIONIST
Natural Resources Conservation Service
U. S. Department of Agriculture

ACKNOWLEDGMENT

STATE OF NY

COUNTY OF ONONDAGA

On the 20 day of APRIL, in the year 2011, before me, the undersigned, personally appeared DENNIS A. DEWEESE - ACTING STATE CONSERVATIONIST, personally known or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.

KIMBERLEY A. STINSON
Notary Public
No. 01ST5089252
County of Madison, State of N.Y.
Commission Expires:
December 8, 2013

Notary Public

NOTARIAL SEAL

My Commission Expires 12/08/2013

This instrument was drafted by the Office of the General Counsel, U.S. Department of Agriculture, Washington, D.C. 20250-1400.

SEE NOTE ON PAGE 1

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its program and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (1202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 705-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (U.S.C. 522a). Furnishing this information is voluntary; however, failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other State or Federal Law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

SEE NOTE ON PAGE 1

LAND INTERESTS TO BE ACQUIRED
IN EASEMENT BY
UNITED STATES OF AMERICA
WETLANDS RESERVE PROGRAM (WRP) EASEMENT
RHAMELIA, INC.
TOWN OF AMENIA
DUTCHESS COUNTY, NEW YORK STATE
CONTRACT 66-2C31-0-0TXW

SURVEYOR'S DESCRIPTION

All those certain lots, pieces, or parcels of land situate, being portions of the property acquired by Rhamelia, Inc. by Deed Recorded in the Dutchess County Clerk's Office in Liber 22008 at Page 1382 on March 4, 2008, lying and being southerly of Prospect Avenue with all bearings being referred to True North at the 74 degree 30 minute Meridian of West Longitude (with a counter-clockwise Magnetic declination of 13 degrees 42 minutes 18 seconds from True North on October 14, 2010). All 36 inch long 5/8 inch diameter rebars with red plastic cap stamped "WRP-Easement, NRCS-NY" set by Hulbert Engineering and Land Surveying, P.C. being referred to as a 'set rebar', bounded and described as follows:

EASEMENT PARCEL 1

COMMENCING at a fence post of an existing 3 foot picket fence on the existing southerly road boundary of Prospect Avenue (50' R.O.W. width) at its intersection with the division line between said property owned by Rhamelia, Inc. on the west and the property now or formerly owned by Thomas and Maureen Sideris (Liber 22004, Page 884, Recorded January 22, 2004) on the east;

thence South 12 degrees 28 minutes 04 seconds East, along the last mentioned division line, a distance of 282.91 feet to a set rebar;

thence through said property owned by Rhamelia, Inc., generally following an existing field access lane, the following twelve (12) courses and distances:

1) South 42 degrees 24 minutes 00 seconds East, a distance of 129.14 feet to a point;
2) South 37 degrees 44 minutes 22 seconds East, a distance of 101.07 feet to a point;
3) South 26 degrees 30 minutes 44 seconds East, a distance of 71.63 feet to a point;
4) South 37 degrees 00 minutes 34 seconds East, a distance of 42.74 feet to a point;
5) South 45 degrees 26 minutes 48 seconds East, a distance of 78.77 feet to a point;
6) South 35 degrees 37 minutes 18 seconds East, a distance of 72.68 feet to a point;
7) South 26 degrees 45 minutes 45 seconds East, a distance of 103.47 feet to a point;
8) South 30 degrees 29 minutes 48 seconds East, a distance of 144.37 feet to a point;
9) South 19 degrees 01 minutes 35 seconds East, a distance of 35.97 feet to a point;
10) South 11 degrees 27 minutes 14 seconds East, a distance of 32.07 feet to a point;
11) South 06 degrees 05 minutes 33 seconds East, a distance of 133.86 feet to a point;
12) South 07 degrees 24 minutes 09 seconds East, a distance of 67.66 feet to a set rebar, said rebar being the POINT OR PLACE OF BEGINNING at NY State Plane, East Zone, NAD83 (CORS 2007), US Survey Feet Coordinate 1,097,097.97 Northing and 752,689.54 Easting;

RUNNING THENCE from said Point of Beginning, continuing through said property owned by Rhamelia, Inc., the following two (2) courses and distances:

1) North 09 degrees 53 minutes 58 seconds East, a distance of 380.36 feet to a set rebar;

EXHIBIT A

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2) North 04 degrees 54 minutes 35 seconds West, a distance of 601.28 feet to a set rebar at its intersection with the division line between said property owned by Rhamelia, Inc. on the south and the property now or formerly owned by Robert A., Jr. and Victoria R. Jasmin (Liber 1999, Page 682, Recorded September 30, 1997) on the north;

thence North 77 degrees 57 minutes 41 seconds East, along the last mentioned division line, a distance of 230.05 feet to a found 5/8 inch pipe, 0.9 foot above ground, at its intersection with the division line between said property owned by Rhamelia, Inc. on the west and the property now or formerly owned by Mountain Farm Ranch, LLC (Liber 22006, Page 5199, Recorded June 29, 2006) on the east;

thence along the last mentioned division line, the following four (4) courses and distances:

1) South 00 degrees 14 minutes 19 seconds East, a distance of 478.00 feet to a fence post of an existing 4 foot barbed wire fence;
2) South 01 degrees 46 minutes 19 seconds East, a distance of 183.00 feet to a fence post in said fence;
3) North 81 degrees 05 minutes 41 seconds East, a distance of 120.00 feet to a set rebar;

thence through said property owned by Rhamelia, Inc., the following three (3) courses and distances:

1) South 27 degrees 26 minutes 04 seconds West, a distance of 466.07 feet to a set rebar;
2) South 88 degrees 02 minutes 22 seconds West, a distance of 124.15 feet to a set rebar;
3) North 60 degrees 09 minutes 15 seconds West, a distance of 26.54 feet to a set rebar;
4) North 07 degrees 24 minutes 09 seconds West, a distance of 25.49 feet to the POINT OR PLACE OF BEGINNING. Containing 218,266 square feet or 5.0107 acres, more or less, as shown on the map referenced below.

EASEMENT PARCEL 2

COMMENCING at a fence post of an existing 3 foot picket fence on the existing southerly road boundary of Prospect Avenue (50' R.O.W. width) at its intersection with the division line between said property owned by Rhamelia, Inc. on the west and the property now or formerly owned by Thomas and Maureen Sideris (Liber 22004, Page 884, Recorded January 22, 2004) on the east;

thence South 12 degrees 28 minutes 04 seconds East, along the last mentioned division line, a distance of 282.91 feet to a set rebar;

thence through said property owned by Rhamelia, Inc., generally following an existing field access lane, the following thirteen (13) courses and distances:

1) South 42 degrees 24 minutes 00 seconds East, a distance of 129.14 feet to a point;
2) South 37 degrees 44 minutes 22 seconds East, a distance of 101.07 feet to a point;
3) South 26 degrees 30 minutes 44 seconds East, a distance of 71.63 feet to a point;
4) South 37 degrees 00 minutes 34 seconds East, a distance of 42.74 feet to a point;
5) South 45 degrees 26 minutes 48 seconds East, a distance of 78.77 feet to a point;
6) South 35 degrees 37 minutes 18 seconds East, a distance of 72.68 feet to a point;
7) South 26 degrees 45 minutes 45 seconds East, a distance of 103.47 feet to a point;
8) South 30 degrees 29 minutes 48 seconds East, a distance of 144.37 feet to a point;
9) South 19 degrees 01 minutes 35 seconds East, a distance of 35.97 feet to a point;
10) South 11 degrees 27 minutes 14 seconds East, a distance of 32.07 feet to a point;
11) South 06 degrees 05 minutes 33 seconds East, a distance of 133.86 feet to a point;

SEE NOTE ON PAGE 1

12) South 07 degrees 24 minutes 09 seconds East, a distance of 67.66 feet to a set rebar, said rebar being the Point of Beginning for the above described Easement Parcel 1;

13) South 09 degrees 31 minutes 01 seconds West, across said field access lane, a distance of 74.96 feet to a set rebar, said rebar being the POINT OR PLACE OF BEGINNING at NY State Plane, East Zone, NAD83 (CORS 2007), US Survey Feet Coordinate 1,097,024.05 Northing and 752,677.15 Easting;

RUNNING THENCE from said Point of Beginning, continuing through said property owned by Rhamelia, Inc., the following nine (9) courses and distances:

1) South 60 degrees 09 minutes 15 seconds East, a distance of 30.18 feet to a set rebar;

2) North 88 degrees 02 minutes 22 seconds East, a distance of 138.40 feet to a set rebar;

3) South 10 degrees 14 minutes 26 seconds West, a distance of 119.19 feet to a set rebar;

4) South 09 degrees 33 minutes 15 seconds East, a distance of 99.93 feet to a set rebar;

5) South 29 degrees 27 minutes 19 seconds East, a distance of 84.14 feet to a set rebar;

6) South 41 degrees 50 minutes 29 seconds East, a distance of 170.90 feet to a set rebar;

7) South 62 degrees 20 minutes 38 seconds East, a distance of 138.58 feet to a set rebar;

8) South 47 degrees 22 minutes 14 seconds East, a distance of 155.54 feet to a set rebar;

9) South 03 degrees 38 minutes 44 seconds West, a distance of 403.16 feet to a set rebar at its intersection with the division line between said property owned by Rhamelia, Inc. on the north and another property now or formerly owned by Rhamelia, Inc. (Liber 22008, Page 1382, Recorded March 4, 2008) on the south;

thence South 81 degrees 46 minutes 41 seconds West, along the last mentioned division line, a distance of 530.56 feet to remains of an existing fence post at its intersection with the division line between said property owned by Rhamelia, Inc. on the east and the property now or formerly owned by Richard and Eve Syms (Liber 22000, Page 3921, Recorded May 4, 2000) on the west;

thence North 12 degrees 22 minutes 19 seconds West, along the last mentioned division line, a distance of 477.00 feet to a set rebar;

thence through said property owned by Rhamelia, Inc., the following six (6) courses and distances:

1) North 53 degrees 07 minutes 28 seconds East, a distance of 124.93 feet to a set rebar;

2) North 02 degrees 02 minutes 16 seconds East, a distance of 99.34 feet to a set rebar;

3) North 15 degrees 33 minutes 09 seconds West, a distance of 59.40 feet to a set rebar;

4) North 09 degrees 15 minutes 43 seconds West, a distance of 87.23 feet to a set rebar;

5) North 01 degrees 11 minutes 44 seconds East, a distance of 244.50 feet to a set rebar;

6) North 25 degrees 07 minutes 50 seconds East, a distance of 51.54 feet to the POINT OR PLACE OF BEGINNING. Containing 427,582 square feet or 9.8159 acres, more or less, as shown on the map referenced below.

TOGETHER with access for ingress and egress described as follows:

BEGINNING at a fence post of an existing 3 foot picket fence on the existing southerly road boundary of Prospect Avenue, at its intersection with the division line between said property owned by Rhamelia, Inc. on the west and said property now or formerly owned by Thomas and Maureen Sideris on the east, at NY State Plane, East Zone, NAD83, US Survey Feet Coordinate 1,098,244.50 Northing and 752,162.48 Easting;

SEE NOTE ON PAGE 1

thence South 12 degrees 28 minutes 04 seconds East, along the last mentioned division line, a distance of 282.91 feet to a set rebar;

thence through said property owned by Rhamelia, Inc., generally following an existing field access lane, the following twelve (12) courses and distances:

1) South 42 degrees 24 minutes 00 seconds East, a distance of 129.14 feet to a point;
2) South 37 degrees 44 minutes 22 seconds East, a distance of 101.07 feet to a point;
3) South 26 degrees 30 minutes 44 seconds East, a distance of 71.63 feet to a point;
4) South 37 degrees 00 minutes 34 seconds East, a distance of 42.74 feet to a point;
5) South 45 degrees 26 minutes 48 seconds East, a distance of 78.77 feet to a point;
6) South 35 degrees 37 minutes 18 seconds East, a distance of 72.68 feet to a point;
7) South 26 degrees 45 minutes 45 seconds East, a distance of 103.47 feet to a point;
8) South 30 degrees 29 minutes 48 seconds East, a distance of 144.37 feet to a point;
9) South 19 degrees 01 minutes 35 seconds East, a distance of 35.97 feet to a point;
10) South 11 degrees 27 minutes 14 seconds East, a distance of 32.07 feet to a point;
11) South 06 degrees 05 minutes 33 seconds East, a distance of 133.86 feet to a point;
12) South 07 degrees 24 minutes 09 seconds East, a distance of 67.66 feet to a set rebar, said rebar being the Point of Beginning for the above described Easement Parcel 1;

thence continuing through said property owned by Rhamelia, Inc., along the southerly boundary of said Easement Parcel 1, the following three (3) courses and distances:

1) South 07 degrees 24 minutes 09 seconds East, a distance of 25.49 feet t a set rebar;
2) South 60 degrees 09 minutes 15 seconds East, a distance of 26.54 feet to a set rebar;
3) North 88 degrees 02 minutes 22 seconds East, a distance of 124.15 feet to a set rebar;

thence South 01 degrees 57 minutes 38 seconds East, continuing through said property owned by Rhamelia, Inc., a distance of 50.00 feet to a set rebar on the northerly boundary of the above described Easement Parcel 2;

thence along said northerly boundary of said Easement Parcel 2, the following two (2) courses and distances:

1) South 88 degrees 02 minutes 22 seconds West, a distance of 138.40 feet to a set rebar;
2) North 60 degrees 09 minutes 15 seconds West, a distance of 30.18 feet to a set rebar, said rebar being the Point of Beginning for said Easement Parcel 2;

thence continuing through said property owned by Rhamelia, Inc., the following fourteen (14) courses and distances:

1) North 01 degrees 28 minutes 19 seconds West, a distance of 17.56 feet to a point;
2) North 07 degrees 24 minutes 09 seconds West, a distance of 122.14 feet to a point;
3) North 06 degrees 05 minutes 33 seconds West, a distance of 133.16 feet to a point;
4) North 11 degrees 27 minutes 14 seconds West, a distance of 29.81 feet to a point;
5) North 19 degrees 01 minutes 35 seconds West, a distance of 32.64 feet to a point;
6) North 30 degrees 29 minutes 48 seconds West, a distance of 143.01 feet to a point;
7) North 26 degrees 45 minutes 45 seconds West, a distance of 102.57 feet to a point;
8) North 35 degrees 37 minutes 18 seconds West, a distance of 69.41 feet to a point;

SEE NOTE ON PAGE 1

9) North 45 degrees 26 minutes 48 seconds West, a distance of 78.53 feet to a point;

10) North 37 degrees 00 minutes 34 seconds West, a distance of 46.05 feet to a point;

11) North 26 degrees 30 minutes 44 seconds West, a distance of 71.50 feet to a point;

12) North 37 degrees 44 minutes 22 seconds West, a distance of 98.29 feet to a point;

13) North 42 degrees 24 minutes 00 seconds West, a distance of 133.67 feet to a point;

14) North 12 degrees 28 minutes 04 seconds West, a distance of 287.42 feet to a point on said southerly road boundary of Prospect Avenue;

thence North 75 degrees 07 minutes 45 seconds East, along the last mentioned road boundary, a distance of 20.02 feet to the POINT OR PLACE OF BEGINNING. Containing 34,831 square feet or 0.7996 acre, more or less, as shown on the map referenced below.

Subject to any Municipal, Public, or Private easements in existence or of record.

A map of the above described parcel, entitled "United States of America, Wetlands Reserve Program (WRP) Easement, Map of Land Interests to be Acquired in Easement from Rhamelia, Inc., Contract No. 66-2C31-0-0TXW, Tax Map No. 7167-570145, Town of Amenia, Dutchess County, New York State, Plat Completed December 14, 2010 ", Project No. 10149.01, prepared by Hulbert Engineering and Land Surveying, P.C., Raymond L. Hulbert, P.L.S. #050627, is being filed simultaneously herewith in the Dutchess County Clerk's Office and in the USDA, Natural Resources Conservation Service State Office in Syracuse, New York.

Raymond L. Hulbert

Raymond L. Hulbert, P.L.S. #050627

SEE NOTE ON PAGE 1

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APPENDIX D

VISUAL ANALYSIS EXHIBITS

Keane Stud (Visual Impact Analysis) – Zoning Compliance/Mitigation Measures Exhibit, dated 12/27/2022, revised 2/21/2023

Conceptual Site Plan Buildout for Proposed Lot 25, dated 6/21/2022

Building Envelope Siting Analysis, dated 1/25/2022, revised 2/21/2023

Keane Stud Subdivision – Alternative Depot Hill Development/Conservation Subdivision, dated 2/21/2023, revised 5/5/2023

Keane Stud (Visual Impact Analysis) – Conceptual Viewshed Conditions Exhibit, dated 12/27/2022, revised 2/21/2023

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Keane Stud Subdivision
Conservation Analysis

Visual Impact Analysis

Zoning Compliance/Mitigation Measures Exhibit

Dated: 6/21/2022

Revised 2/23/2023

(Conservation Analysis – Appendix D)

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INTRODUCTION – TABLE OF CONTENTS

Project Overview

The project consists of subdividing four (4) parcels of land that combined consist of ±704.925-acres. The subdivision will consist of the following:

- Lot G-1 - Existing Equestrian Facility (to remain as agriculture)
- Lot G-2 - Existing Farm parcel that contains a federal wetland reserve easement. This lot will maintain frontage on Prospect Avenue.
- Lots F-1 & F-2 – Proposed Forest Conservation parcels.
- Lots 1 - 26 – Proposed new Agricultural Development parcels.
- Lot 27 – Existing Developed Farm Residential Parcel.

The following document has been prepared as a companion piece to the Conservation Analysis – Appendix D (121-20.A) to assess the potential **Visual Impact** that the approval of the Keane Stud Subdivision may have on surrounding viewsheds and to discuss mitigation measures being implemented to minimize any possible effects.

In order to evaluate the potential visual impact that the subdivision may have on the Town of Amenia, several items have been analyzed by this document:

1. **Visual Intent of Underlying Town of Amenia Zoning/Overlay Districts**
2. **Existing Viewshed Conditions**
3. **Pre-Post Conventional Subdivision Buildout Scenarios**
4. **Proposed Visual Impact Mitigation Features**

Supporting Documentation:

- Keane Stud Subdivision – Conservation Analysis
- Conceptual Viewshed Conditions
- Building Envelope Siting Analysis
- Conceptual Lot 25 Site Plan

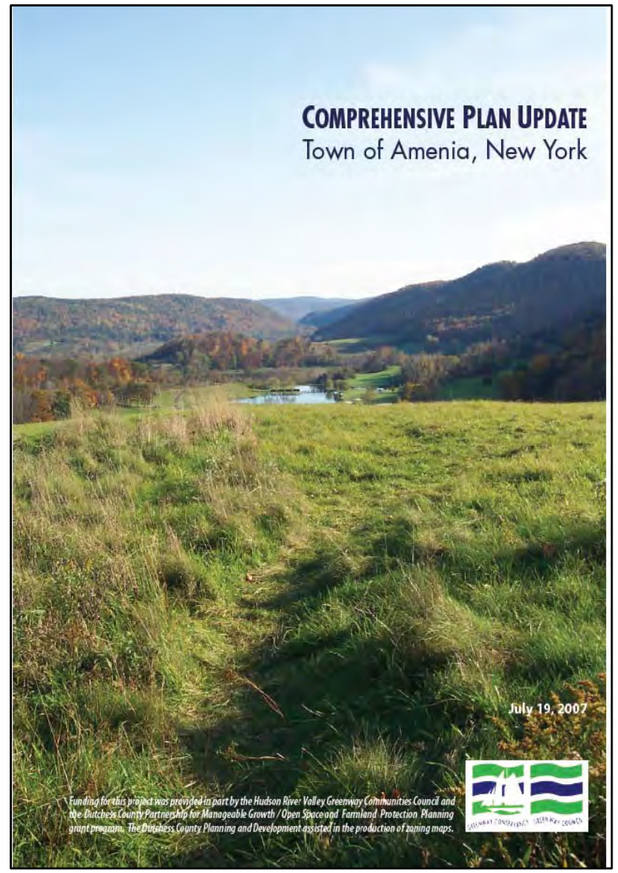
Visual Intent: *The proposed subdivision aims to create a low density, agrarian-based lot layout, which is focused on preserving open and agricultural spaces as well as sensitive habitats, while conforming with the vision and intent of the Town of Amenia Comprehensive Plan and Zoning Code.*

SEE NOTE ON PAGE 1

1.0 VISUAL INTENT OF UNDERLYING TOWN OF AMENIA ZONING/OVERLAY DISTRICTS

In 2007 Town of Amenia Comprehensive Plan was updated in order to guide future development within the Town of Amenia. This update included the development of a collective **VISION** for the town, which would be used to adopt provisions in the Town Zoning Code and guide future development. In addition to guiding the type of development, zoning provisions are also influence the look of development, both the structures themselves and the surrounding landscape. The following section has been prepared to analyze specific sections in the Town of Amenia Zoning Code and Comprehensive Plan to show that the proposed Keane Stud subdivision complies visual with the intent of said documents.

"We want Amenia to grow into a diverse, vital and business-friendly community of agriculture, small businesses and homes all located in an appealing setting with great natural beauty; a unique unity of six different, clean, well-preserved historic town hamlets (Amenia, Wassaic, Amenia Union, South Amenia, Smithfield, and Leedsville); and amenities that attract residents, travelers, shoppers, diners and vacationers."



To promote this **VISION**, several provisions were added to the Town of Amenia Zoning Code in order to guide future development. In relation to the desired **visual appeal** of the Town, these provisions include:

- Adoption of Rural Agricultural District (RA)/Rural Residential (RR) zoning districts.
- Adoption of Scenic Protection Overlay (SPO) District
- Adoption of Rural Siting Principals

The proposed ***Keane Stud Subdivision*** has been designed to conform and promote the Town's Comprehensive Plan ***Vision***, as well as the more detailed design criteria found in the Town of Amenia Zoning Code.

SEE NOTE ON PAGE 1

1.1 Town of Amenia Comprehensive Plan

The most recent version of the Town of Amenia Comprehensive Plan was published July 19, 2007 and contains numerous references to "agricultural beauty", "open space preservation" (through various methods), and voluntary reductions in density in exchange for greater flexibility in development. Visually, the proposed subdivision meets many of the goals outlined in the Comprehensive Plan and is general compliance with the communities adopted Vision for the Town.

Six (6) **GOALS** (pg.5) were developed as part of the comprehensive plan in order to achieve the Town's collective **VISION,** the following directly relate to establishing a preferred visual preference**:**

1. *To achieve a broad-based balance between the rural, historic, and agricultural beauty of the town as it is and the need for appropriate and smart economic growth and development.*

2. To establish a business-friendly attitude and commitment that:

a. will attract and support the development of retail, small business, service businesses and even light industry,

b. will create employment opportunities (especially for young people), and

c. will increase tax revenues.

3. To develop and encourage the growth of agriculture as a profitable business within the context of preserving open space.

4. To encourage more housing – low, affordable, moderate-income, high-end, and rental – to create a genuinely multigenerational community:

Keane Stud Subdivision Analysis:

- **Promotes agricultural lifestyle/beauty by encouraging equestrian and agrarian uses.**
- **Preserves open space by establishing conservation areas and a continued agricultural use.**
- **Voluntarily limits development w/ the implementation of Building Envelopes to reduce visual disturbance.**
- **Provides additional housing opportunities, while voluntarily reducing density and establishing open space areas.**
- **Offers multiple lots that can be used to support a variety of housing options and other uses permitted in RR, RA Zoning districts.**

In addition to the **GOALS** provided in begin section of the Comprehensive Plan, numerous other sections support the visual intent of the Keane Stud Subdivision:

PRESERVATION OF OPEN SPACE GENERALLY (pg.29)

Open space development includes, in addition to conservation subdivision, the strategic use of flag lots and limited development subdivisions to reduce density and protect open space in areas designated for protection. These techniques involve a trade-off in which a landowner makes voluntary reductions in allowable density and restrictions on the location of house sites in return for more flexibility in road frontage and road construction requirements.

OPEN SPACE (pg.57)

Open space is held in a variety of ownerships. Public agencies, such as town, county, and state governments, have title to parkland. Quasi-public agencies, such as institutions and churches, often own open space, although such open space is not necessarily protected as such. However, the greatest amount of open space is owned by private individuals who hold title to farms and forests throughout the Town. They are the stewards of the Amenia's open space resources.

OPEN SPACE PRESERVATION (pg.59)

Open space within a community may be preserved through several different approaches:

- *Preservation of environmentally constrained and environmentally significant areas such as steep slopes, wetlands, floodplains, and priority biodiversity conservation areas.*
- *Preservation of agricultural uses or, failing that, of agricultural lands, including prime and important agricultural soils.*

SEE NOTE ON PAGE 1

1.2 Rural Agricultural (RA) & Rural Residential (RR) Zoning Districts

Zoning Districts Intent (§121-7: "Establishment of Districts"):

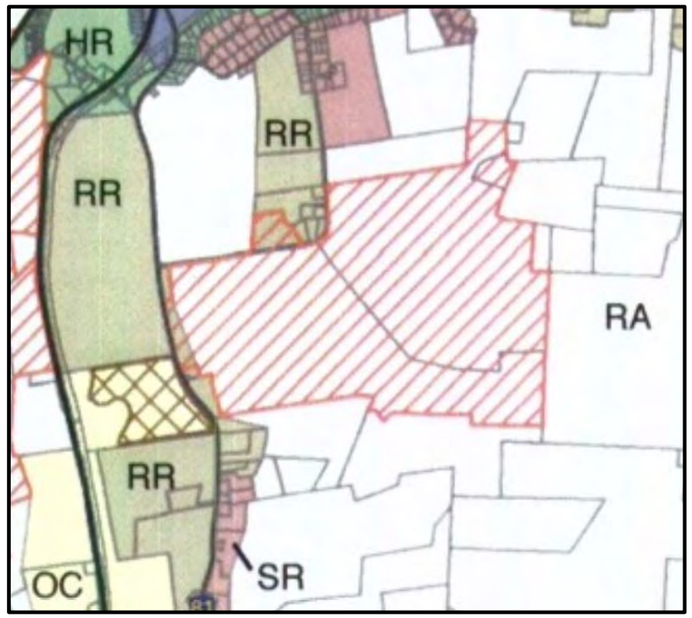
The proposed subdivision is located in two separate zoning districts, Rural Agricultural District (RA) and Rural Residential (RR), which were established to promote low-density residential and agricultural uses:

Rural Agricultural District: The purpose of this district is to maintain the Town's working landscape by promoting agriculture, forestry, recreation, land conservation, and low-density residential uses, as well as compatible open space and rural uses, by encouraging such activities and discouraging large-scale residential development.

* Minimum Lot Size = 10-acres

Rural Residential District: The purpose of this district is to allow residential uses in a rural setting, at a lower density than is allowed in the hamlets.

* Minimum Lot Size = 5-acres



Keane Stud Subdivision Analysis:

Following the approval of the Keane Stud Subdivision, all proposed lots will conform with the acreage criteria and permitted uses that were established for the Rural Agricultural and Rural Residential Zoning Districts, ensuring that density will remain as intended by the implementation of said districts:

Rural Residential District: # of Lots = 2, Min/Max Acreage = 9.63 to 17.29-acres
Rural Agricultural District: # of Lots = 27, Min/Max Acreage = 10.10 to 54.03-acres

Total Lots Permitted (As-of-Right) = 69 Lots
Total Lots Proposed = 29 Lots (including 4 existing)

Visual Impact: **By decreasing the number of lots by over 50% of what the code allows, the proposed plan reduces density and preserves the visual corridor, which equates to greater compliance with intent of RR/RA Zoning Districts. The proposed subdivision will also promote agriclutral practices ensuring that the viewshed remains as inte**

SEE NOTE ON PAGE 1

1.3 Scenic Protection Overlay (SPO) District (§121-14.1)

As part of 2007 rezoning effort, the Town of Amenia established the Scenic Protection Overlay (SPO) District, which covered a large portion of the upland areas of the site. This was later revised in 2011 to encompass a vast majority of the Keane Stud parcels. The SPO was created to achieve the following:

"Special protection of scenic road corridors, the Harlem Valley Rail Trail, and highly visible scenic areas is necessary to preserve the attractive rural, historic and agricultural qualities of the Town. The purpose of this section is to regulate land uses within designated scenic areas to protect the Town's scenic beauty and rural character. This section is intended to apply to those areas that are visible to the public and that substantially retain their scenic character and/or that lie within important scenic viewsheds."

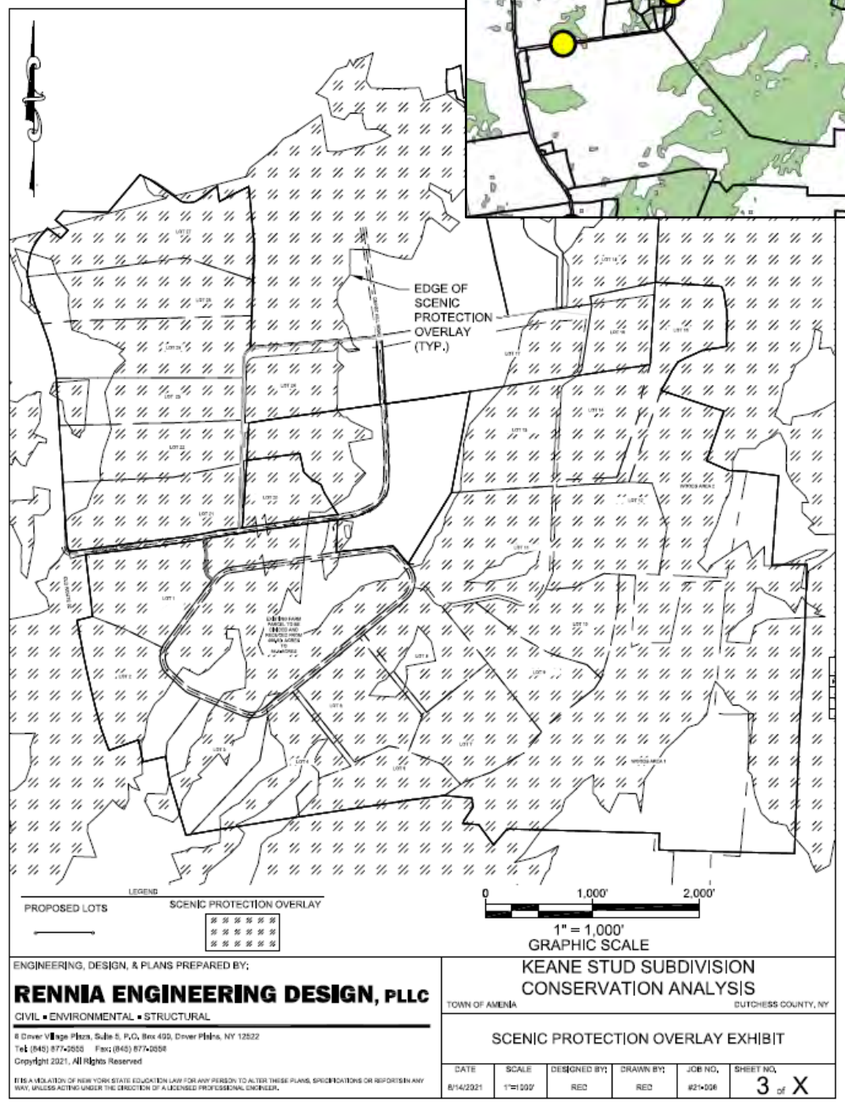
In general, presence within the Scenic Protection Overlay (SPO) District requires Site Plan Approval for the following activities:

- Construction of any structure or any addition to a structure where the size of the new structure or addition will be greater than 500 square feet in footprint area, including residential structures. Within any one-year period, in any location that is visible from a publicly accessible place (as defined in § 121-74) when there are no leaves on the trees:
  - Filling or excavation of an area in excess of 5,000 square feet.
  - Clear-cutting of more than 5,000 square feet of vegetation on any parcel.
  - Grading or other alteration of more than 5,000 square feet of the natural landscape, including construction of roads and driveways.

**Notable exceptions to Site Plan approval requirement include to construction of agricultural structures that do not exceed 10,000 SF.*

***Right:** Limits of 2007 Scenic Protection Overlay (SPO)District. **Bottom**: 2011 revisions to zoning code established the SPO district on majority of project site.*





Keane Stud Subdivision Analysis:

With respect to visuals, all proposed Building Envelopes (see "Proposed Visual Impact Mitigation Features") are located in the SPO, requiring any future development (excluding agricultural uses) shall be required to:

- **Obtain Site Plan Approval from the Planning Board.**
- **Comply with enhanced architectural/screening/visual mitigation measures outlined in §121-14.1 of Town of Amenia Zoning Code.**
- **Comply with all Town of Amenia Site Plan/zoning regulations.**

SEE NOTE ON PAGE 1

1.4 Rural Siting Principals (§121-31)

"The following guidelines have apply, to the extent practical, to the siting of nonresidential uses that are subject to site plan or special permit approval and to the siting of residences in new subdivisions or other developments: These guidelines are recommended but not required for the siting of individual residences on existing lots." The Keane Stud subdivision has elected to utilize the recommended Rural Siting Principals outlined above in the development of the Building Envelopes Siting Analysis, which is used to justify the location of proposed building envelopes developed for each of the lots.

A. Wherever feasible, retain and reuse existing old farm roads and lanes rather than constructing new roads or driveways.
Keane Stud: Three new "rural lanes" are proposed as part of the project, which will result in 9,261 linear feet of new roadway. Proposed roadway locations has been designed to follow existing agricultural roads/hedgerows in order to minimize disturbance, preserve existing agricultural features, retain existing trees and vegetation, and blend the proposed roadways into the surrounding landscape.

B. Preserve stone walls and hedgerows.
Keane Stud: Proposed property lines and roadways have been designed to following existing hedgerows and stonewalls allowing said features to be preserved and utilized in the natural delineation of proposed parcels and road rights-of-ways.

C. Avoid placing buildings in the middle of open fields.
Keane Stud: Building envelopes have been established for each proposed lot, limiting the area of potential development. Proposed building envelopes have been placed in accordance to Rural Siting Principal "C", along the edge of existing vegetation, adjacent to existing or proposed roadways, and in areas where existing topography partially/fully screens potential development from viewpoints.

D. Use existing vegetation and topography to buffer and screen new buildings if possible, unless they are designed and located close to the road in the manner historically found in the Town.
Keane Stud: See Rural Siting Principal "C".

E. Minimize clearing of vegetation at the edge of the road, clearing only as much as is necessary to create a driveway entrance with adequate sight distance.
Keane Stud: The proposed parcels shall be served by new/existing Rural Lane(s) (private roadways), which will be constructed as part of the proposed subdivision and receive additional hedgerow plantings (see "Proposed Visual Impact Mitigation Features"). Additional development, as established with the proposed Building Envelopes, shall be limited to areas adjacent to, but not disturbing existing vegetation. Driveways serving individual parcels shall be designed to preserve additional roadway plantings provided.

F. Site buildings so that they do not protrude above treetops and crestlines of hills as seen from public places and roads.
Keane Stud: Siting of potential buildings shall be limited to established Building Envelopes, which have been designed to minimize disturbance of existing vegetation, avoid crestlines or hills present within the project site, and avoid clearing of construction areas. The highest crestline of the project site shall be preserved as part of Conservation Lots F1 & F-2.

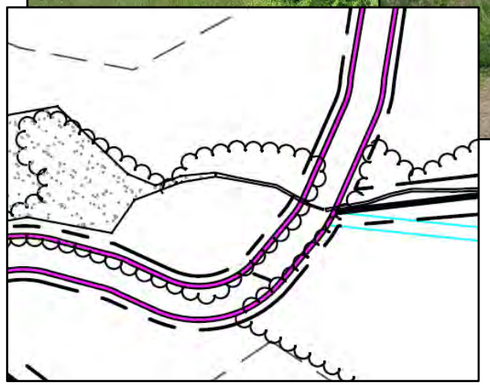
G. Minimize crossing of steep slopes with roads and driveways.
Keane Stud: See Rural Citing Principal(s) "A". Existing agricultural roadways are found throughout the site, most of which run with the existing topography, minimizing disturbance and construction efficiency. Proposed rural lanes will utilize existing agricultural roadways for construction, minimizing crossing of steep slopes. Driveways serving individual development on proposed lot shall be reviewed as part of SPO site plan approval for compliance.

SEE NOTE ON PAGE 1

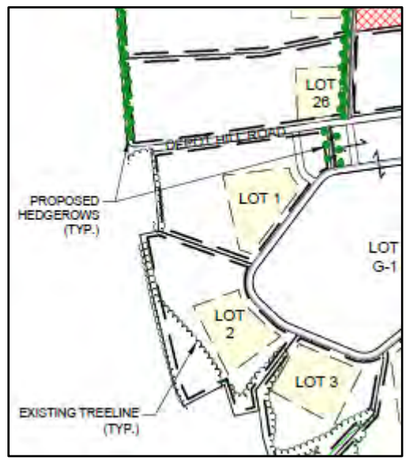


R.S.P. A: ***Left & Bottom 1:*** Existing Agricultural Road. ***Bottom 2****: Proposed Rural Lane to utilize existing agricultural road.*





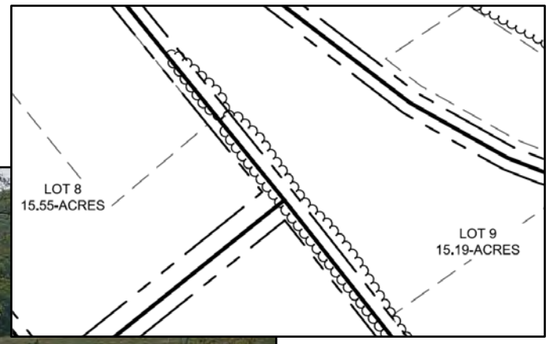
R.S.P. E & G: ***Bottom:*** *Existing agricultural roadway to be converted to private roadway and enhanced to Rural Lane standards. Min. vegetation clearing required.*



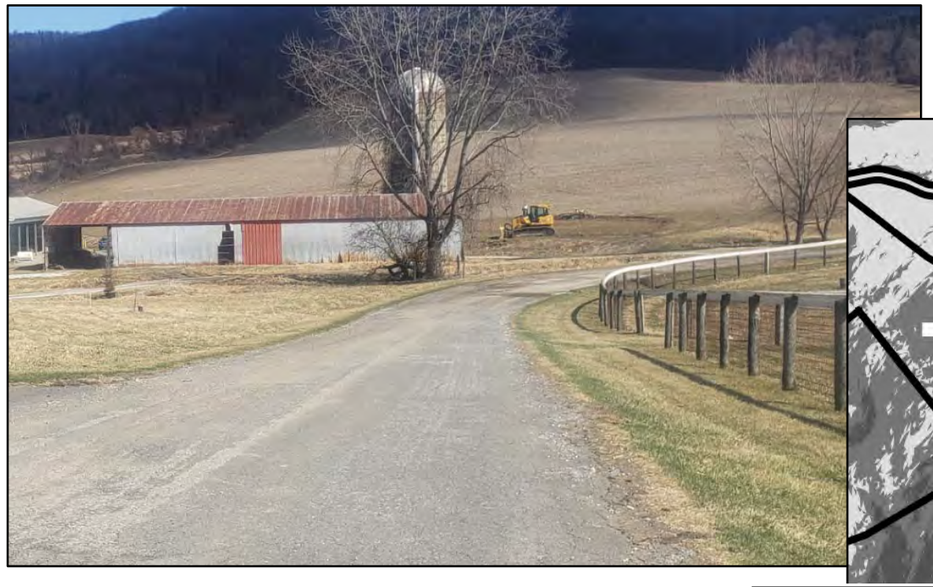
R.S.P. C & D: ***Top:*** *Excerpts from Keane Stud – Building Envelope Analysis identifying where nonagricultural structures may be located.*

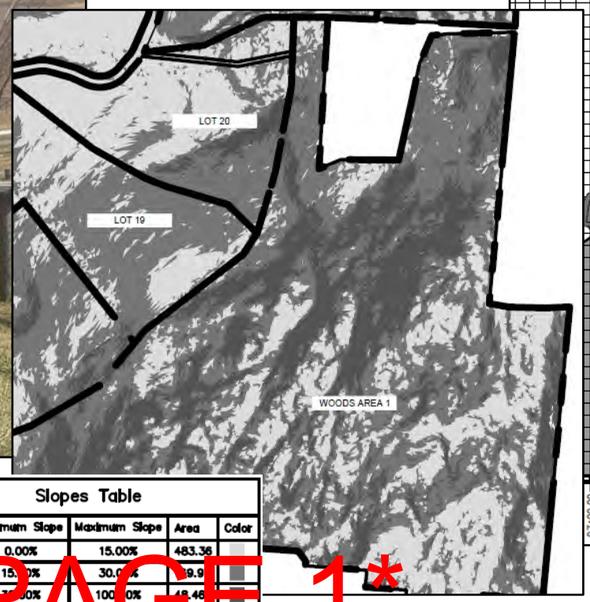
R.S.P. B: ***Bottom:*** Existing Hedgerows used to delineate agricultural fields. ***Right*****:** Proposed property boundary to follow existing hedgerows.

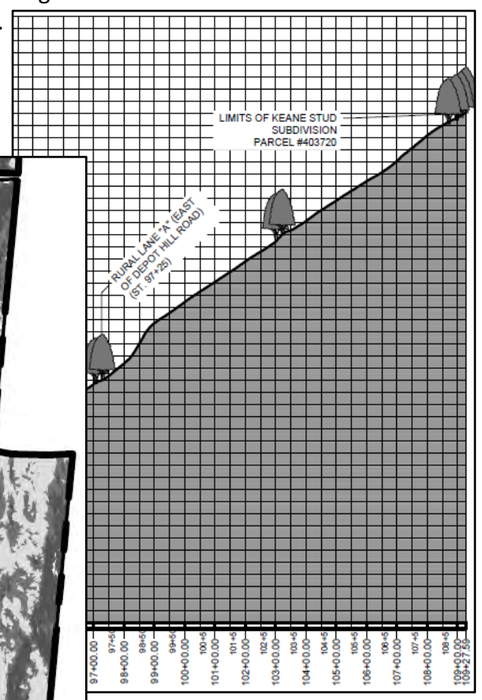




R.S.P. F & G: ***Bottom:*** *Steeper portions of the site & highest crestline preserved as Conservation Lot.* **Right:** Proposed Rural Lanes to be located along existing agricultural roads, away from crestlines.







Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	15.00%	483.36	
2	15.00%	30.00%	39.9	
3	30.00%	100.00%	48.48	

SEE NOTE ON PAGE 1

2.0 EXISTING VIEWSHED CONDITIONS

The Keane Stud Subdivision parcels are located along Depot Hill road, and are situated between a lowland valley with agricultural fields to the west and evergreen covered mountains to the east. The project parcels are located in the middle of these two different landscapes, containing a mixture of both, but is primarily comprised of farm fields, equestrian facilities, and other agricultural uses/landscapes.

With the project site containing such large amount of land, as well as being located on a hill, the site is visible from several scenic roadways and viewpoints within the Town of Amenia, hence why so much of the project site is within the Scenic Protection Overlay District. It was determined during the 3/23/2022 Planning Board meeting that the proposed project would need to evaluate how a potential buildout of all of the lots may effect the viewshed of the project parcels. In order to evaluate how the proposed subdivision may effect existing viewsheds, three areas have been identified as having the most direct view of the project site:

Viewpoint #1 - NYS Route 44 Scenic Overlook:

Viewpoint 1 maintains the greatest visibility of the project site and is located approximately 1.5-miles to the west of the center point of the project parcels. The public viewpoint, also referred to as “scenic overlook” on local maps, is located off NYS Route 44 (designated “scenic roadway”). While the majority of NYS Route 44 does not provide views of the project site, approximately ±3,820 LF, beginning just north of the scenic overlook and ending at the intersection of NYS Route 44 and West Lake Amenia Road, maintain full-intermediate views of the majority of the project site. This particular viewpoint has been analyzed serval times over the years as part of multiple projects due to its elevated position and prominent location.

Viewpoint #2 – NYS Route 22

Viewpoint 2 is located along NYS Route 22 (also a designated “scenic roadway”). For the most part, the project parcel is not visible along NYS Route 22, with changes in topography and a thick vegetative buffer obscuring the project site. There is approximately ±2,100 LF of NYS Route 22, located between the Amenia Fish and Game Association (parcel #854868) to the north and the former Amenia Landfill (parcel #885633 & 882575) to the south, which contain intermittent view of the western portion of the project parcels due to a change in topography. Even along this minimal stretch of roadway, views of the project site are irregular and mostly blocked by existing deciduous vegetation.

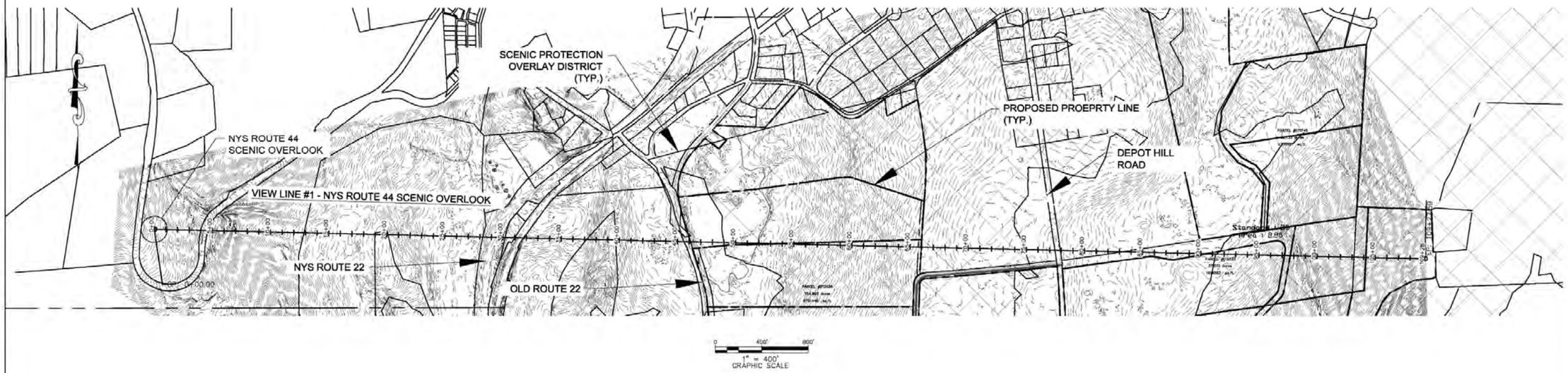
Viewpoint #3 – Old Route 22 (CR 9)

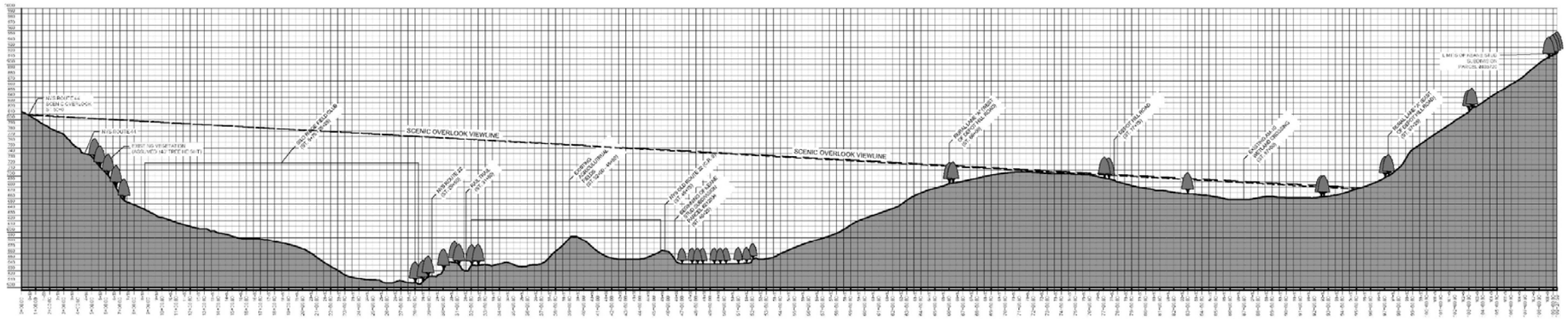
Viewpoint 3 is located along Old Route 22 also referred to as County Route 9. The roadway runs along the westernmost edge of the project site (#403720, 212034) for ±5,500’, intersecting with Depot Hill Road midway. South of Depot Hill Road, the project site is largely obscured from Old Route 22 by a mix of existing forest and residential lots. To the north of Depot Hill Road intersection, Old Route 22 existing agricultural fields on the project site become visible.

SEE NOTE ON PAGE 1



SEE NOTE ON PAGE 1





View point #1, displayed in Figure 2b, from the identified viewpoint the majority of the project site is visible. The western portion of the project site, along the side of a hill, is fully visible from the viewpoint. This visibility remains until the crest of the hill, which occurs just west of Depot Hill Road. Proceeding east, visibility of the project site decreases as the hillside blocks visibility of Depot Hill Road, the proposed rural land, several of the proposed parcels, and other lowland area of the project site. Upland portions of the project site become visible as the topography of the parcel levels off and begins to increase once more.

DATE	REVISION

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KEANE STUD SUBDIVISION
TOWN OF AMENIA DUTCHESS COUNTY, NY
VIEW LINE PROFILE
NYS ROUTE 44 SCENIC OVERLOOK

DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
1/5/2022	1"=400'	RED	RED	RAR	21-006	VL 1

SEE NOTE ON PAGE 1



Figure 2c provides additional existing condition imagery of the project site, highlighting many of the adjacent residential and resort uses. As shown in the exhibit, many of the existing higher density (±0.5-1-acre) residential lots along the northern portions of Depot Hill Road are clearly visible from the viewpoint, but are not intrusive to agricultural views. This exhibit also highlights how portions of the Silo Ridge Community remain visible from the viewpoint.

RENNIA ENGINEERING DESIGN, PLLC
CIVIL • ENVIRONMENTAL • STRUCTURAL
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Tel: (845) 877-0555 Fax: (845) 877-0556
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KEANE STUD SUBDIVISION
VISUAL ANALYSIS
TOWN OF AMENIA DUTCHESS COUNTY, NY

NYS ROUTE 44 SCENIC OVERLOOK VIEWSHED - 2

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/29/2021	NTS	RED	RED	RAR	21-006	VS 2

SEE NOTE ON PAGE 1



Figure 2d displays existing conditions (i.e. agriculture, equestrian facility) as well as the proposed layout of the conventional subdivision. The majority of proposed property lines are located along existing hedgerows and as such, several of the proposed lots and the longest of the proposed rural lanes will be obscured from view.

SEE NOTE ON PAGE 1

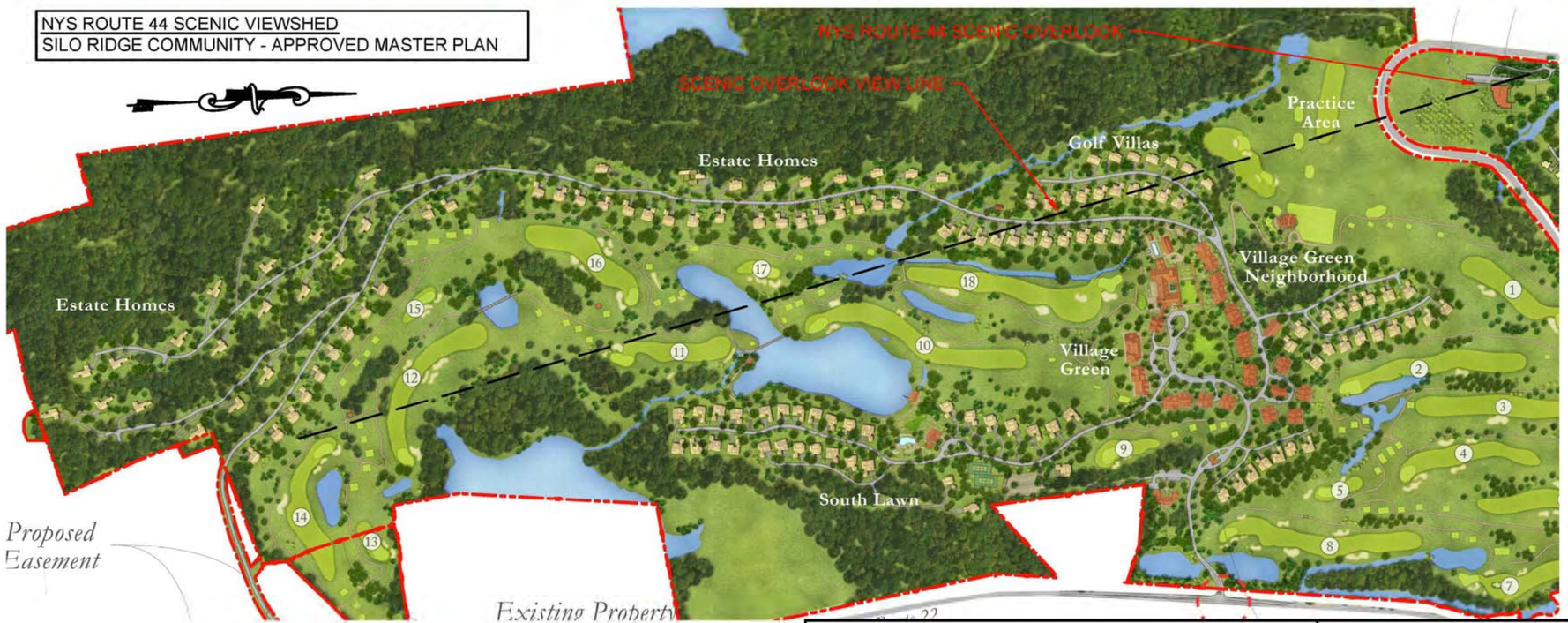
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CIVIL • ENVIRONMENTAL • STRUCTURAL
6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0666 Fax: (845) 877-0666

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NYS ROUTE 44 SCENIC OVERLOOK VIEWSHED

DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
12/29/2021	NTS	RED	RED	RAR	21-006	VS 1





Above is the view overlooking the Silo Ridge development; **Left** is the Silo Ridge development Plan for reference.

Figure 2e provides additional imagery of the approved Silo Ridge Community development in relation to the approved Master Plan. Once the buildout of the site is completed, as per the approved Master Plan, a greater number of the approved ±159 single family, 65 multi-family units, and amenity structures will be visible from the scenic viewpoint.

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VISUAL ANALYSIS
TOWN OF AMENIA DUTCHESS COUNTY, NY

NYS ROUTE 44 SCENIC OVERLOOK VIEWSHED - 3

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/29/2021	NTS	RED	RED	RAR	21-006	VS 3

SEE NOTE ON PAGE 1

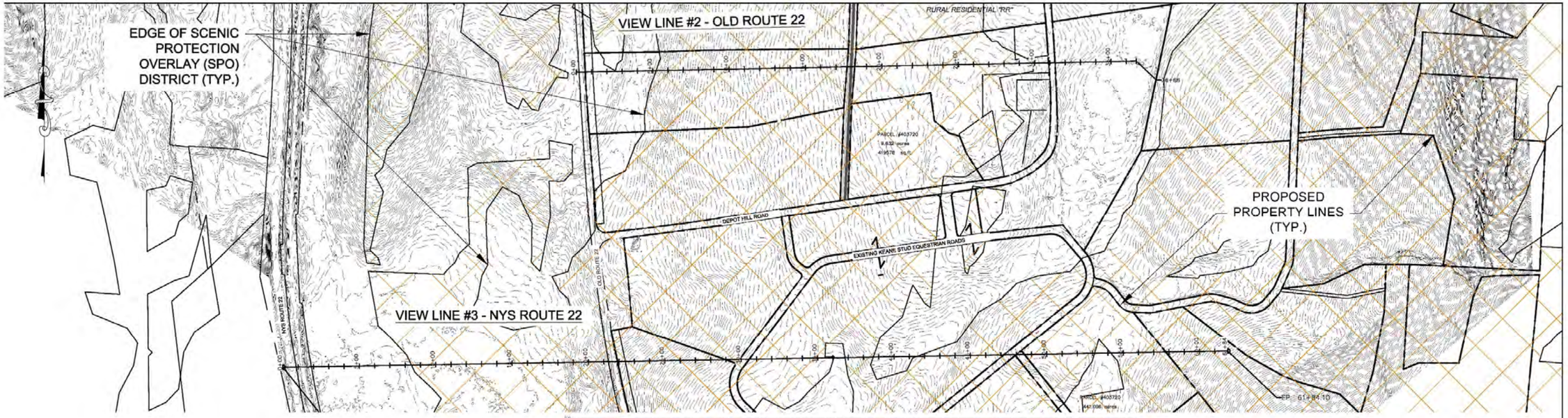
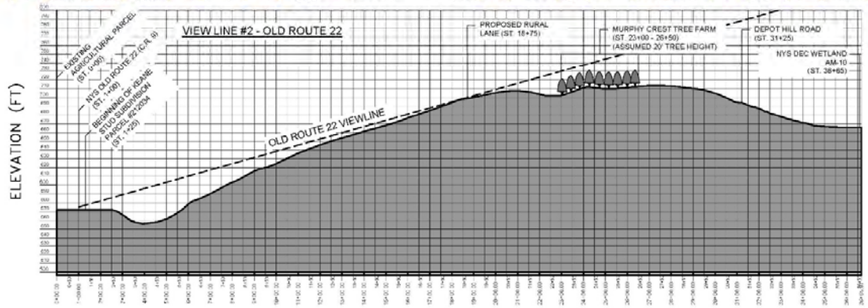


Figure 2f(1): is taken from the northern portion of Viewpoint #3 and shows a view line profile along this viewpoints most visible portion. As shown on the exhibit, the portion of the project site immediately adjacent to Old Route 22 is entirely visible. However, at the crest of the hill visibility of the rest of the project site ceases as changing topography completely obscures areas to the east of Depot Hill Road.



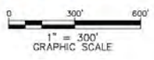
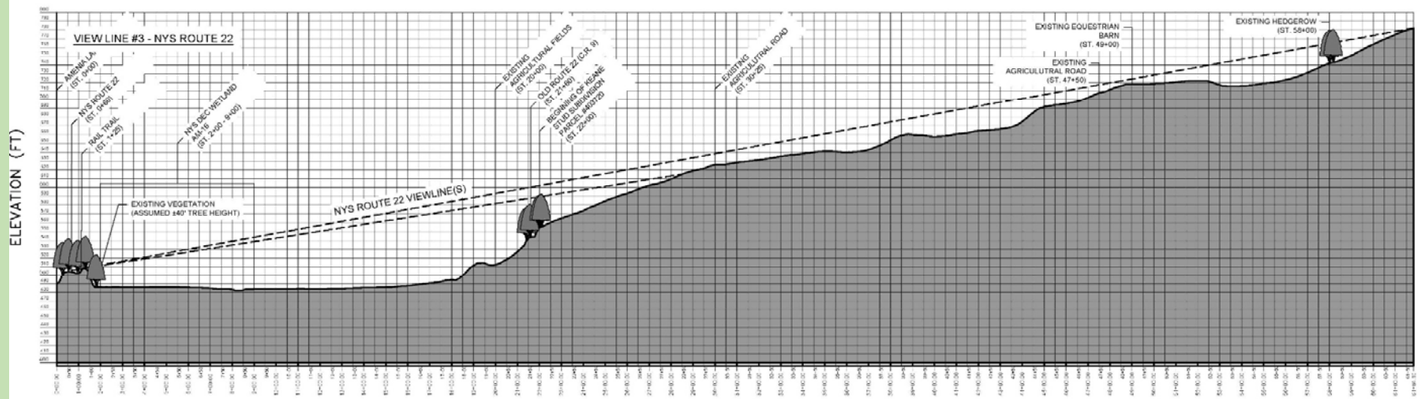


Figure 2f(1)(left): Provides viewline profile from Old Route 22.
Figure 2f(2)(bottom): Provides viewline profile from NYS Route 22.

Figure 2f(2): provides a view line analysis of the project site from the most visible portion of Route 22. As shown in the profile, an existing berm existing along the eastern side of Route 22 which obscures view of the lowland areas of the project site. When looking above the berm, the eastern most portion of the project site (proposed forest conservation areas) are visible, but changing topography between the easternmost point and Route 22 create lapses in visibility.



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KEANE STUD SUBDIVISION
TOWN OF AMENIA DUTCHESS COUNTY, NY
VIEW LINE PROFILE
NYS ROUTE 22/OLD ROUTE 22

DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY	JOB NO.	SHEET NO.
1/5/2022	1"=300'	RED	RED	RAR	21-006	VL 2

SEE NOTE ON PAGE 1

Figure 2g.1 – Old Route 22

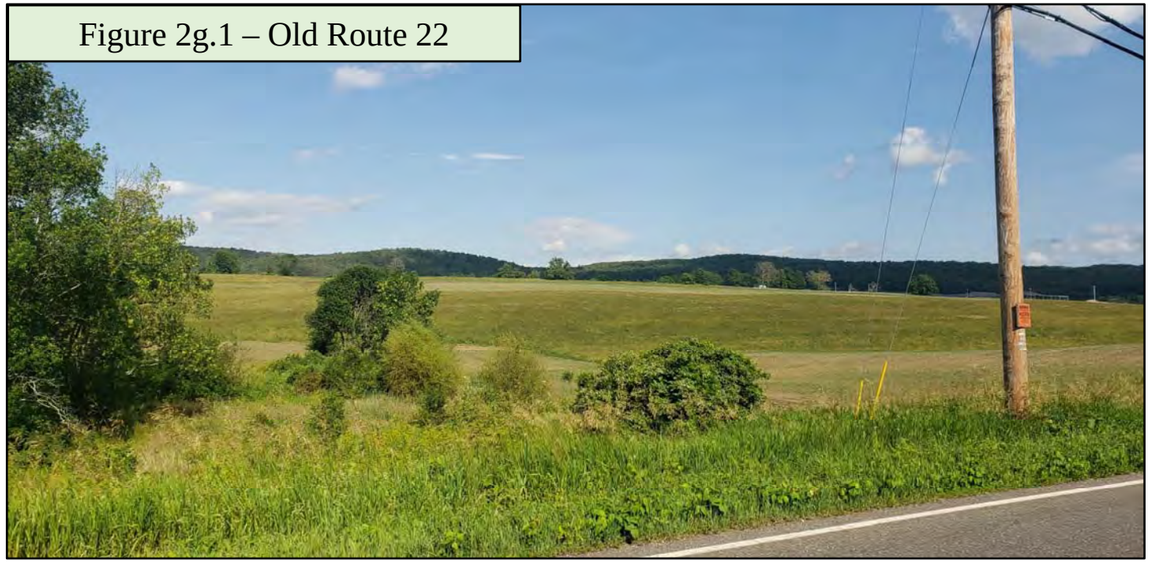


Figure 2g.1: *Directly adjacent to the site, Old Route 22 forms the western boundary of the project site. Along this stretch of road, less than ¼ of the proposed parcels are visible. With the implementation of building envelopes the vast majority of agricultural fields will remain following the completion of the subdivision.*

Figure 2g.2 – NYS Route 22 North



Figure 2g.2: *The western most lots are located along a hillside, which is currently used as agricultural fields. Clustering of building envelopes and a sustained agricultural use associated with the subdivision will ensure existing farms fields remain and continue to be visible form Old Route 22.*

Figure 2g.3 – NYS Route 22 North



Figure 2g.3: *The existing Keane Stud Equestrian facility, which will remain post subdivision, is the most visible feature along Old Route 22. The site, which is used to board and train horse and contains numerous large structures, all of which blend in with the natural landscape, associated with said use. Also significantly visible is the crestline of the project site. Currently covered with evergreen trees, this area will be preserved, with no development permitted in these areas.*

Figure 2g.4 – Depot Hill Road



Figure 2g.4: *Old Route 22 – Depot Hill Road Intersection. Existing parcels (4) currently maintain frontage along Depot Hill Road. Once the subdivision several new Rural Lanes will be constructed connecting to Depot Hill Road. These rural lanes will maintain the same "country road" feel as Depot, with the proposed lots having minimal impact to traffic levels and visibility.*

SEE NOTE ON PAGE 1

Figure 2h.1 – NYS Route 22 North



Figure 2h.1*: Running South-North, NYS Route 22 runs parallel of the project site and is approx. ±0.5 miles from the closest property line. The eastern boundaries of Route 22 maintains an extensive vegetative buffer along its eastern side obscuring view of the project site from the majority of the roadway. This visual obstruction is supplemented by dramatic changes in elevation created by the construction of the roadway, which completely block views of the project site along the northern stretches*

Figure 2h.2 – Project Site 1



Figure 2h.2*: Along NYS Route 22, the site is most visible from View Point #3, which is the entrance to the to the former Town of Amenia Landfill. While extensive vegetation and changes in topography obscures the bulk of the project site, a small amount of the westernmost portions are visible in areas where existing vegetation is thinnest.*

Figure 2h.3 – Project Site 2



Figure 2h.3*: The site is only partially visible from this stretch of NYS Route 22, with visibility of the site becoming completely obstructed depending on viewers height and angel of viewing.*

Figure 2h.4 – Project Site 3



Figure 2h.4*: Even in the stretch of Route 22 where vegetation is thinnest, only intermittent views of the project site are allotted. When visible, only a couple of the existing agricultural facilities and fields can be seen through existing vegetation. The proposed subdivision will retain similar levels of visibility, even after construction where potential development will mirror what is already present.*

SEE NOTE ON PAGE 1

3.0 PRE-POST CONVENTIONAL SUBDIVISION BUILDOUT SCENARIOS

The proposed Keane Stud Subdivision, is a conventional, nonreality, agricultural subdivision, with each lot designed to have sufficient acreage and dimensional configuration to comply with the Bulk Regulation requirements of their underlying zoning district(s). As such, subdivided lots can be utilized for any of the use permitted in their underlying zoning district.

In order to analyze what sort of effect that the proposed subdivision and the subsequent buildout of the induvial lots may have on the project site, conceptual **"Build-out Scenarios"** have been developed showing various ways the site could be built-out pre and post conventional subdivision conditions. Each conceptual scenario, although not currently proposed, should be viewed as viable option for the project site, which would have varying impacts on the on the existing viewshed.

Use Category	Use Districts								Section Reference
	RA	RR	HM	HR	SR	HC	OC	M	
Residential Uses									
Single-family dwelling	P*	P*	P*	P*	P*	S	S	—	
Two-family dwelling	S	S	P	P	S	S	S	—	§ 121-12A
Multifamily dwelling (conversion)	S	S	PS	S	—	S	S	—	§ 121-12B
Multifamily dwelling (new)	S[1]	S[1]	PS	S	—	S	S	—	§ 121-12B
Accessory apartment	P	P	P	P	P	S	S	—	§ 121-12C
Mobile homes/mobile home parks	See § 121-44.								
Upper-floor apartments in mixed-use building	—	—	PS	PS	—	S	S	—	
Residential care facility	S	S	S	S	—	—	—	—	§ 121-52
Solar energy systems									

Top: An excerpt of the Town of Amenia's Zoning Code Zoning District Use Table. Existing and proposed lots will conform to RR/RA zoning district requirements.

Bottom: Excerpt from Conservation Analysis analyzing potential number of residential units that could be constructed depending on the type of approval being requested.

Project Site Density Potential					
	Proposed Conventional Subdivision	Max. Conventional Subdivision	Conservation Subdivision ---------- w/ Density Bonus	Depot Hill Farm/ Conservation Subdivision Alternative Buildout	RDO – Depot Hill Alternative Land Use (2009)
Total Residential Units	26 new agricultural development parcels lots 1 equestrian/ agricultural parcel 1 existing developed (ag) residential parcel 1 existing farm parcel w/ Fed. Wetland Easement 2 conservation parcels	69 residential lots	94 residential lots 155 residential lots	137 residential lots (Depot Hill) 34 residential lots (Conservation Subdivision **171 total residential lots**	170 townhouse units 200 guest hotel/spa 400-seat performing arts center

Build-out Scenario(s)

1. No-Subdivision Buildout Scenario
2. Conventional Subdivision – Partial Residential Buildout
3. Conventional Subdivision – Full Residential Buildout
4. Lot 25 Conceptual Buildout

SEE NOTE ON PAGE 1

3.1 No-Subdivision Buildout Scenario

No-Subdivision Buildout Scenario:

The following “buildout scenario” is being used to highlight development that could be constructed on the existing parcel(s), without the site being subdivided. Focusing on an Agricultural Use buildout, this exhibit highlights how the existing parcel could be built out to support a livestock processing facility, which could be constructed without the need for site plan review. The “proposed” farm would be able to support numerous agricultural barns to house livestock, without requiring Site Plan review, as long as the footprint is less than 10,000 SF.

In this scenario:

- Scenic Protection Overlay District (SPO) site plan review requirements would be void, due to agricultural use.
- Numerous livestock barns could be constructed to support cattle farm operations throughout the project site within scenic areas.
- Livestock processing facility along Old Route 22 could be used to process and ship out livestock with tractor trailers, implementing a large parking area with loading docks.
- Two (2) residential can be constructed as-of-right within each parcel
- An agricultural based commercial component, such as a farm stand could be constructed, again without site plan review.

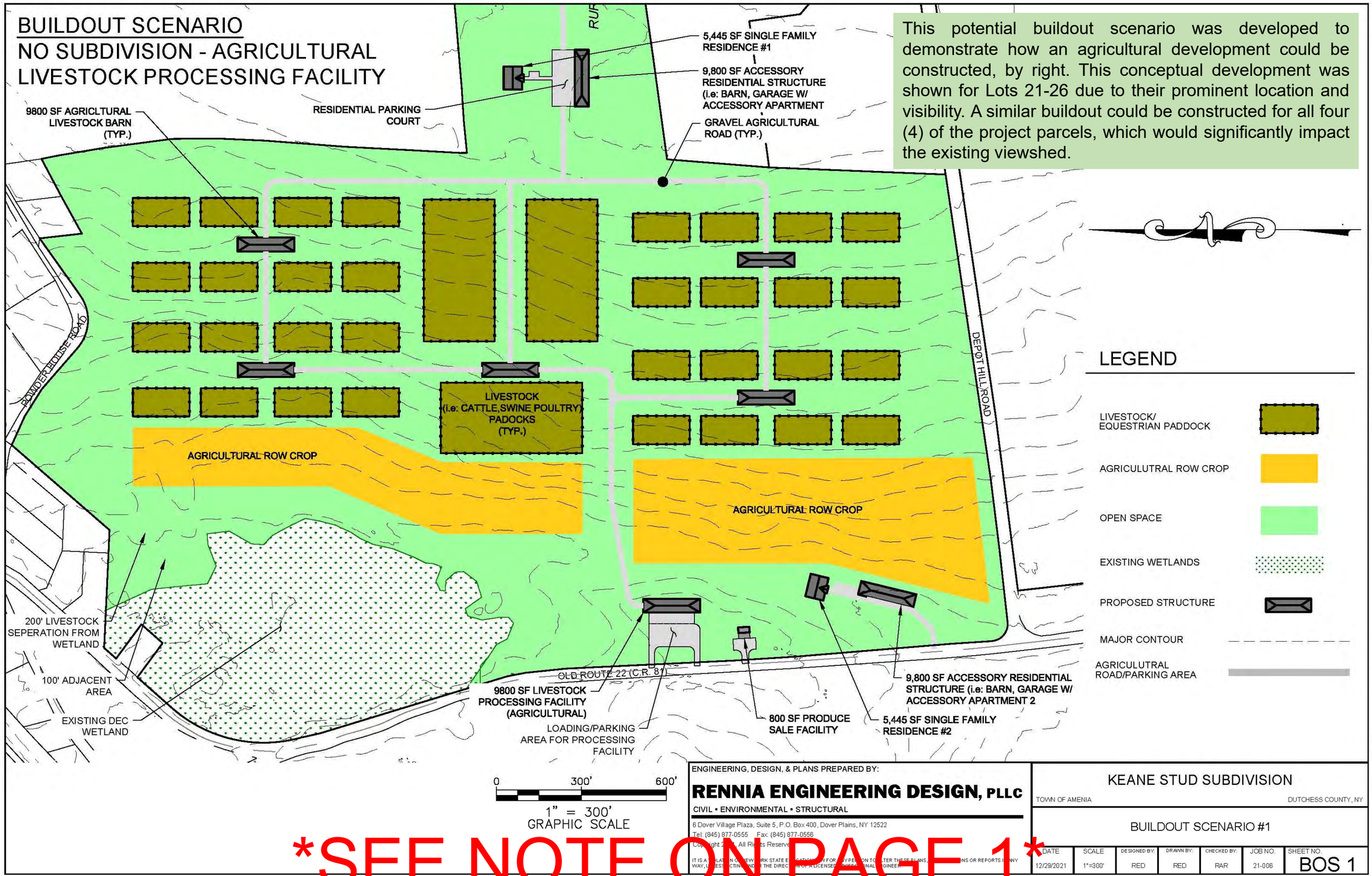
Keane Stud Analysis:

This level of development would be very visible from adjacent viewpoints, more so than the proposed conventional subdivision, and may result in even greater levels of disturbance and impervious area without any form of site plan review.

This layout could be duplicated in all four (4) project parcels, none of which would require Town of Amenia Planning Board approval.

SEE NOTE ON PAGE 1

Conceptual Buildout Scenario Exhibit



This potential buildout scenario was developed to demonstrate how an agricultural development could be constructed, by right. This conceptual development was shown for Lots 21-26 due to their prominent location and visibility. A similar buildout could be constructed for all four (4) of the project parcels, which would significantly impact the existing viewshed.

SEE NOTE ON PAGE 1

3.2-3 Keane Stud Subdivision Potential Buildout Scenario(s)

Scenario #2: Conventional Subdivision – Partial Residential Buildout:

Scenario #2 highlights a low-density residential/agricultural use of the site. As permitted uses will not change as a result of the conventional subdivision, single-family dwellings and agriculture would still be the most likely sort of development to be constructed on the proposed lots.

- Permitted to develop like Scenario #1, but would be limit by accessibility and the number of acres available for agriculture.
- Accessibility provided by privately controlled Rural Lane, limiting accessibility of tractor trailers needed for animal processing facility.
- Single-family residence would be subject to Planning Board approval and would need to comply with SPO requirements.
- Agricultural uses accessory to a residential use are subject to limitations in the number of animals permitted on the site, as outlined §121-49 “Keeping of Animals”.

Keane Stud Analysis: **Scenario #2 shows reduces the level of development that can be generated by the proposed subdivision, as the subdivision of land does not inherently mean that the land would be used for residential purposes. Additionally, individual lots could be left undeveloped by the property, opting for fields and pasture than development.**

Scenario #3: Conventional Subdivision – Full Residential Buildout:

Scenario #3 highlights a scenario where all proposed lots are to be used for residential use. In this scenario, the Planning Board and other related Town agencies maintain most control over the proposed parcels, with all residential uses being required to obtain Site Plan approval due to SPO requirements.

- All residential uses required to obtain Site Plan approval due to SPO requirements.
- All residences would need to comply with building envelope requirements, clustered towards the proposed Rural Lane.
- Planning Board can request additional screening for each residence during site plan review.
- Agricultural uses accessory to a residential use are subject to limitations in the number of animals permitted on the site as outlined in §121-49.

Keane Stud Analysis: **Buildout of Scenario #3 would ultimately result in more controlled disturbance to the land and scenic vistas as development would be more closely controlled by the Planning Board, which would be able to set certain visual standards, other uses would be exempt from, and could be applied on a site-by-site basis.**

SEE NOTE ON PAGE 1

BUILDOUT SCENARIO 2

CONVENTIONAL RESIDENTIAL SUBDIVISION -PARTIAL RESIDENTIAL BUILDOUT W/ AGRICULTURAL PARCELS



This potential buildout scenario was developed to demonstrate how a mix of residential or agricultural development could be constructed. As shown above, subdivided lots could potential be used solely for agriculture and contain no residential use. This was shown on this area of the subdivision, based on Planning Board input due to the area's prominent location and visibility.

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522

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KEANE STUD SUBDIVISION
VISUAL ANALYSIS

TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDOUT SCENARIO #2

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/29/2021	1"=300'	RED	RED	RAR	21-006	BOS 2

SEE NOTE ON PAGE 1



This potential buildout scenario was developed to demonstrate how a mixed residential and agricultural development could be constructed. Future lot owners construct both residential and agricultural uses on the project parcels, which would require Planning Board approval. This was shown on this area of the subdivision, based on Planning Board input due to the area's prominent location and visibility.

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RENNIA ENGINEERING DESIGN, PLLC
CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL
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VISUAL ANALYSIS
TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDOUT SCENARIO #3

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
12/29/2021	1"=300'	RED	RED	RAR	21-006	BOS 3

SEE NOTE ON PAGE 1

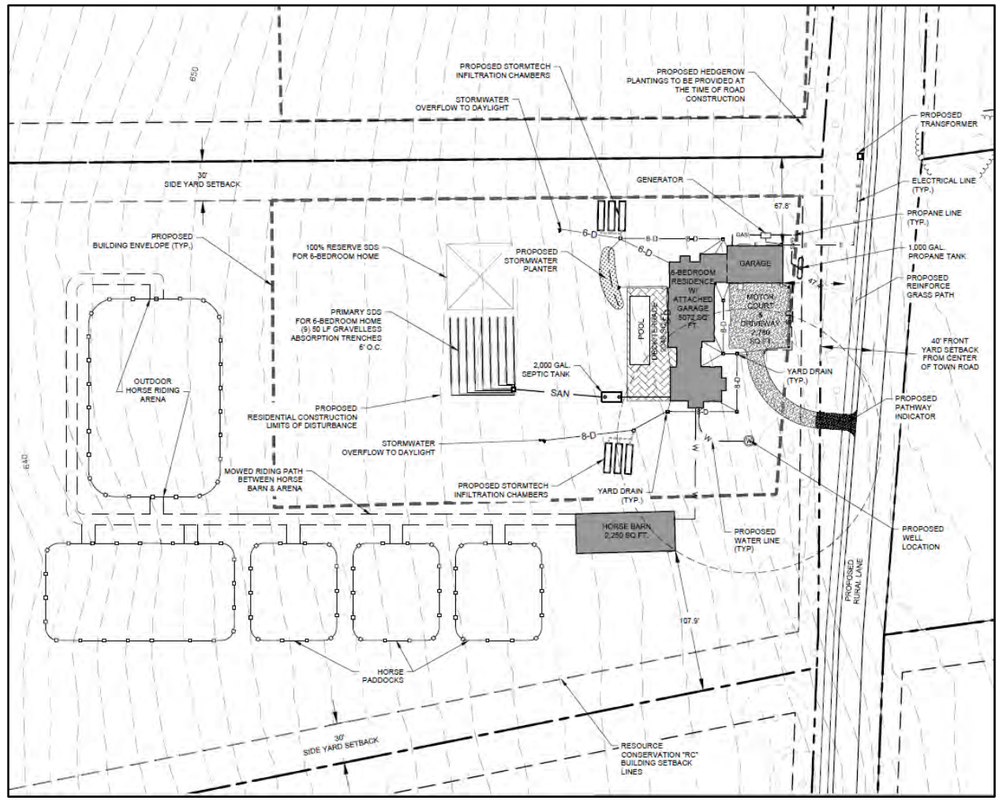
3.4 Lot 25 Conceptual Buildout

The majority of the proposed project parcels and all of the provided building envelops are located in areas of the site that are a part of the Scenic Protection Overlay (SPO) District. As such, the majority of all development, excluding agriculture, will require site plan review prior to construction. During the site plan review the Town of Amenia Planning Board will have the authority to review any proposed development for compliance with Site Plan, SPO, and other zoning/development requirements.

Lot 25 Conceptual Buildout

In order to simulate the level of development that may occur on each of the proposed lots, a Conceptual Site Plan has been prepared demonstrating the level of detail will be provided for each of the proposed lots prior to development. The provided Conceptual Buildout shows the construction of a single-family residence, with associated amenities, as well as equestrian facilities. As required by the SPO, the Planning Board will have the purview to review all proposed development, excluding agricultural buildings and uses. Several highlights from this Conceptual Buildout are:

- Single-family residence and associate amenities must be constructed within the established building envelopes.
- Each residential structure will receive its own subsurface wastewater treatment system and well, which will require approval from the Dutchess County Department of Behavioral and Community Health.
- Planning Board will be able to require additional landscaping and screening as outlined in for the SPO.
- Planning Board may require building elevations for the proposed structures. Architectural styles will need to comply with SPO requirements.



Above: *Excerpts from the Conceptual Site Plan used to show potential development of proposed building lots. Development of proposed lots will included detail designs for driveways, septic/water systems, landscaping, stormwater management, etc.*

This is a more detailed potential buildout scenario, which illustrates how lot 25 of the Keane Stud Subdivision could be developed. This was shown on this area of the subdivision, based on Planning Board input due to the area's prominent location and visibility.

SEE NOTE ON PAGE 1

4.0 PROPOSED VISUAL IMPACT MITIGATION MEASURES

To reduce the potential impact of the proposed development on the surrounding viewshed and scenic viewpoints, several visual mitigation measures have been implemented with the design of the subdivision. Each measure aims to maintain aesthetic quality within the Scenic Protection Overlay District while conforming to the Town of Amenia's zoning regulations and vision.

4.1 Conservation Areas:

- Preserves open space by establishing conservation areas.
- Forest Preserve Areas are located in most visible location from surrounding viewpoints due to their higher elevations.
- Provides overall continuity with the character of the Town and surrounding landscape.
- Provides unfragmented wildlife corridors.

4.2 Agricultural Preservation:

- Promotes agricultural lifestyle/beauty by encouraging equestrian and agrarian uses.
- Provides additional housing opportunities, while voluntarily reducing density and establishing open space areas.
- Offers multiple lots that can be used to support a variety of housing options and other uses permitted in RR/RA Zoning districts.
- Minimum of 60% of lots area is intended for agriculture.



4.3 Building Envelopes:

- Voluntarily limits development w/ the implementation of Building Envelopes to reduce visual disturbance.
- Offers multiple lots that can be used to support a variety of housing options and other uses permitted in RR/RA Zoning districts.
- Preserves treelines, vegetation, and are screened by natural topography.



4.4 Hedgerows & Agricultural Roadways:

- Preserves hedgerows and provides new vegetative buffers to screen potential development.
- Proposed rural lanes follow existing farm roads to reduce impact.

SEE NOTE ON PAGE 1

4.1 Conservation Areas

- **Not required for a traditional conventional subdivision.**
- **Proposed layout includes the creation of two (2) forest conservation areas, which will not be developable.**
- **Maintain the existing Wetland Reserve Easement**
- **These areas will preserve natural foliage and habitat on site and screen potential development.**

Forest Conservation:

Two “forest areas” have been identified on the plat, located along the eastern border of the project site. The proposed forest areas will be preserved and offer significant open space:

Forest Conservation Area 1: 90.9-acres
Forest Conservation Area 2: 18.6-acres

Keane Stud Analysis: In addition to preserving existing forest habitat, the proposed forest conservation parcels are located along the highest crestline of the site, ensuring no development will occur in the most visible portions of the project site and will prevent the fragmentation of wildlife corridors & habitats.



Wetland Conservation

- Existing US Wetland Reserve Program (WRP) Easement established between the owners of the property and the Federal Government in 2011 will remain in place.
- The purpose and intent of the Easement is to restore, manage, maintain, and enhance the functional value of the wetlands (NYSDEC AM-10).
- The Natural Resources Conservation Service (NRCS) oversees the WRP and their intent is to give the Landowner the opportunity to participate in the restoration and management activities on the easement area.

Keane Stud Analysis: In addition to preserving wetland habitat, the existing wetland easement may be used for water quality improvement, flood water retention, ground water recharge, and the preservation of open space, which offers significant aesthetic/visual value.

SEE NOTE ON PAGE 1

4.2 Building Envelopes

Building envelopes for all uses except for agriculture have been established for the proposed nonreality subdivisions lots in order to ensure compliance with Scenic Protections Overlay district requirements, Rural Siting Principals recommendations, and the general intent of the Rural Agricultural (RA) Rural Residential (RR) zoning districts, in the event that development is proposed for the lots.

All established Building Envelops maintain numerous visual benefits that will help mitigate/screen potential development for the proposed lots from view of sensitive viewpoints, including:

- Being located along existing tree lines.
- Clustered with adjacent building envelopes to preserve contiguous open space.
- Located outside of wetland/wetland adjacent/wetland buffer areas present throughout the project site.
- Located within divots in natural topography for screening purposes.
- Located along edges of existing agricultural fields.
- Enhanced building setbacks from neighboring parcels and adjacent roadways.



SEE NOTE ON PAGE 1

4.3 Agricultural Preservation

In addition to providing several conservation areas, the proposed subdivision will ensure that the existing agricultural use for the project site is not only preserved, but enhanced by preserving agricultural practices on existing lots and requiring it on proposed lots.

Equestrian & Agricultural Use

Project parcel #403720 currently maintains an equestrian/agricultural facility. The facility includes several barns, silos, and additional agricultural buildings. In addition to the structures themselves, the facilities contain multiple large paddocks used to raise and train horses. These facilities will be preserved, with 54.7-acres of the existing parcel proposed to remain in active use as an equestrian facility.

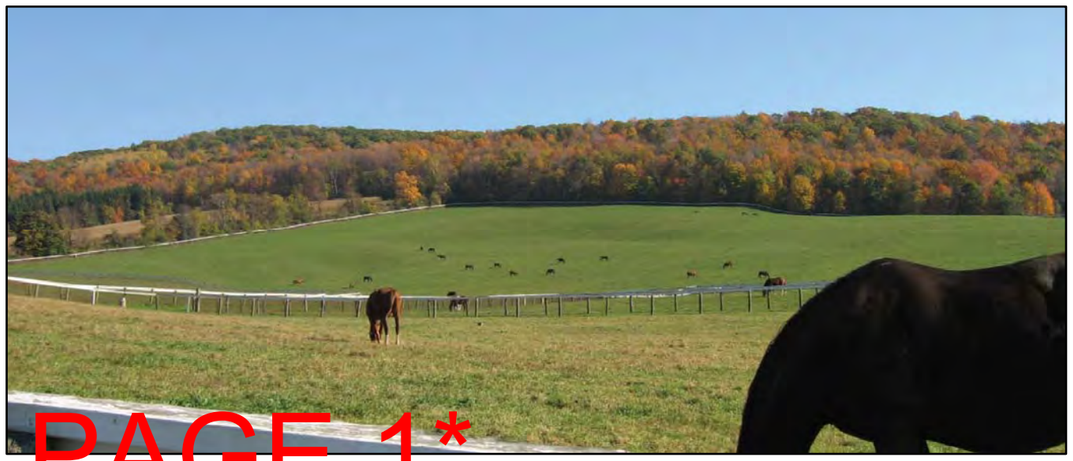


Expanded Equestrian Use

- Construction of ±11,751 linear feet of new horse trails along proposed private drives.
- Horse trails accessible to residential lots and expand equestrian capabilities of adjacent sites.
- Encourage equestrian use as a key component in the agricultural diversity present on the project site.

Future Agriculture & Equestrian Use

- Minimum 60% of lot acreage not included within the conservation areas to be preserved for agricultural purposes.
- As outlined §121-20.C, this would increase permitted residential lots, but proposed subdivision falls well below maximum number of lots.
- This agricultural preservation is an added benefit that is not required.



SEE NOTE ON PAGE 1

4.4 Hedgerows & Agricultural Roadways

Existing Hedgerows

In addition to the agricultural preservation and habitat conservation efforts outlined above, the proposed project will also actively work to preserve existing hedgerows. In the past, hedgerows were typically used to delineate property boundaries and farm fields. The proposed project has been designed in a similar manner, with proposed roadways and lots located along existing hedgerows. This will not only help preserve additional existing vegetation, but also provide visual screening for both the roadways and proposed residences.





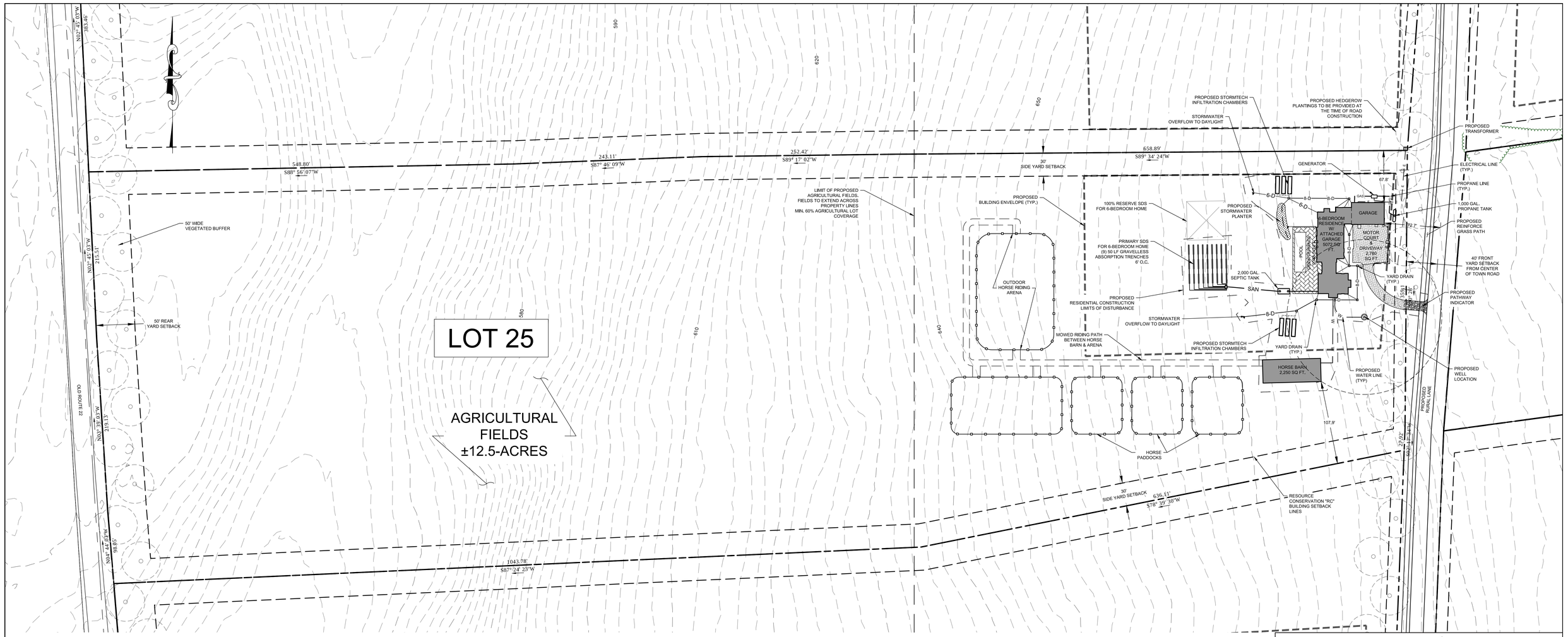
Proposed Hedgerows

In addition, to preserving existing hedgerows, the proposed project outlines plans to provide a number of new hedgerows. These hedges will be located along proposed roadways and along the property boundaries of neighboring parcels. These new hedges will not only provide additional visual screening from neighboring parcels and nearby viewpoints, but will also supplement the rural-agricultural feel of the proposed project, bringing it in even greater compliance to the intent of the Rural Agricultural and Rural Residential zoning districts. It is the intent to have the Home Owner's Association (HOA) maintain the hedgerows located along Old Route 22 and the subdivision roads.

SEE NOTE ON PAGE 1

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SEE NOTE ON PAGE 1



DESIGN STANDARDS FOR RESIDENTIAL DEVELOPMENT

PURPOSE:
THE FOLLOWING DESIGN STANDARDS ARE TO BE USED BY THE TOWN OF AMENIA CODE ENFORCEMENT OFFICER (CEO), THE TOWN ENGINEER, OR THE TOWN OF AMENIA PLANNING BOARD TO DETERMINE FUTURE COMPLIANCE FOR ANY DEVELOPMENT PROPOSED FOR A RESIDENTIAL USE THAT IS SEPARATE AND APART FROM ALL AGRICULTURAL USES, AGRICULTURAL OPERATIONS, OR FARM RESIDENTIAL BUILDINGS AS PROTECTED BY SECTION 305-A OF THE NEW YORK STATE AGRICULTURAL DISTRICTS LAW, WITH THIS PROJECT'S SUBDIVISION APPROVAL.

THE DESIGN STANDARDS WILL ENSURE COMPLIANCE WITH THE SCOPE AND PURPOSE OF THE TOWN OF AMENIA ZONING CODE, DUTCHESS COUNTY SANITARY CODE, AND NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) STORMWATER REGULATIONS.

DESIGN REQUIREMENTS:

1. ALL RESIDENTIAL HOMES, ATTACHED GARAGES, SWIMMING POOLS, OR SPORTS COURT (I.E. TENNIS, BASKETBALL, PADDLE BALL, ETC.) SHALL BE LOCATED WITHIN THE DEFINED BUILDING ENVELOPES SHOWN WITHIN THE FINAL SUBDIVISION PLAT.
2. TO THE EXTENT PRACTICAL AND SECONDARY TO THE DEFINED BUILDING ENVELOPES THE SITING OF RESIDENCES SHALL FOLLOW THE RURAL SITING PRINCIPLES OUTLINED WITHIN TOWN OF AMENIA CODE SECTION § 121-31.
3. PROVIDE AN EROSION AND SEDIMENT CONTROL PLAN FOR ALL RESIDENTIAL CONSTRUCTION ACTIVITIES THAT INVOLVE SOIL DISTURBANCES GREATER THAN FIVE THOUSAND (5,000) SQUARE FEET.
4. PROVIDE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES FOR EACH RESIDENTIAL HOME OR RESIDENTIAL ACCESSORY STRUCTURE. THE SWPPP SHALL MEET THE SPDES GENERAL PERMIT (PERMIT NO. GP- 0-20-001) REQUIREMENTS FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY AS ISSUED BY NYSDEC. EACH LOT SHALL BE TREATED AS IT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT FIVE OR MORE ACRES OF DISTURBED LAND.
5. MEET ALL APPLICABLE REQUIREMENTS OF THE TOWN, THE DUTCHESS COUNTY AND NEW YORK STATE DEPARTMENTS OF HEALTH, AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WITH REGARD TO SANITARY SEWAGE DISPOSAL SYSTEMS.
6. MEET ALL APPLICABLE REQUIREMENTS OF THE TOWN, THE DUTCHESS COUNTY AND NEW YORK STATE DEPARTMENTS OF HEALTH, AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WITH REGARD TO WATER SUPPLY SYSTEMS.
7. DRIVEWAYS MAY OCCUPY ANY PART OF THE LOT, HOWEVER DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT PRACTICAL.
8. PROVIDE A PLOT PLAN THAT INCLUDES THE FOLLOWING MINIMUM INFORMATION:
   a) SHOW CURRENT EXISTING TOPOGRAPHIC SURVEY OF THE DEVELOPMENT AREA (BUILDING ENVELOPE) WITH A CONTOUR INTERVAL OF 2 FOOT OR LESS AND INCLUDE ROCK OUTCROPPINGS.
   b) SHOW ALL EXISTING FEATURES OF THE SUBJECT LOT LYING WITHIN 200 FEET OF THE PROPOSED STRUCTURE, INCLUDING LAND AND WATER AREAS, HEDGEROWS, WATER OR SEWER SYSTEMS, WETLANDS (SMALL AGRICULTURAL STRUCTURES <500 SF AND AGRICULTURAL FENCES NOT REQUIRED).
   c) SHOW PROPOSED LOCATION AND ARRANGEMENT OF RESIDENTIAL STRUCTURES AND RESIDENTIAL USES ON THE LOT, INCLUDING MEANS OF INGRESS AND EGRESS AND PARKING.
   d) PROVIDE A PROPOSED GRADING PLAN.
   e) PROVIDE DRIVEWAY PROFILE SHOWING EXISTING AND PROPOSED GRADES.
   f) PROVIDE A PROPOSED LANDSCAPING PLAN.
   g) PROVIDE A PROPOSED EXTERIOR LIGHTING AND PHOTOMETRIC PLAN.
9. DRIVEWAY GRADE SHALL NOT EXCEED 12% GRADE AND SHALL SLOPE FROM THE ROAD AT A GRADE OF NOT GREATER THAN 2% FOR A MINIMUM DISTANCE OF 20 FEET MEASURED FROM THE EDGE OF PAVEMENT.
10. ALL EXTERIOR LIGHTING, INCLUDING SECURITY LIGHTING, IN CONNECTION WITH ALL RESIDENTIAL BUILDINGS SHALL BE SHIELDED AND DIRECTED DOWNWARD AND AWAY FROM ADJOINING STREETS AND PROPERTIES TO ELIMINATE GLARE. PERMANENT FIXTURES AFFIXED TO BUILDINGS SHALL BE FULL CUTOFF / DARK SKY COMPLIANT TYPE. UNSHIELDED LANDSCAPE LIGHTING SHALL BE MINIMIZED AND SHALL HAVE A COLOR TEMPERATURE OF NO MORE THAN 3000 KELVINS.

CONCEPTUAL SITE PLAN

SCALE: 1" = 50'

0 50' 100'
1" = 50'
GRAPHIC SCALE

LEGEND

EXISTING PROPERTY LINE
EXISTING MAJOR CONTOUR 800
EXISTING MINOR CONTOUR 802
PROPOSED ELECTRIC LINE E E E
PROPOSED 4" DRAINAGE PIPE 4.0 4.0 4.0 4.0
PROPOSED 6" DRAINAGE PIPE 6.0 6.0 6.0 6.0
PROPOSED 8" DRAINAGE PIPE 8.0 8.0 8.0 8.0
PROPOSED WATER PIPE W W W
PROPOSED SANITARY SEWER SAN SAN SAN
PROPOSED PROPANE GAS GAS GAS GAS
PROPOSED 8" INLINE DRAIN
PROPOSED ROOF LEADER

SEWAGE DISPOSAL SYSTEM - CONCEPTUAL BASIS OF DESIGN:

BUILDING TYPE:	RESIDENTIAL (MAIN HOUSE)		AGRICULTURAL (HORSE BARN)	
SYSTEM TYPE:	GRAVELLESS ABSORPTION TRENCHES		GRAVELLESS ABSORPTION TRENCHES	
DESIGN FLOW RATE:	660 GPD		220 GPD	
USE:		FLOW (GPD)	USE:	FLOW (GPD)
6 BEDROOMS @ 110 GPD EA.		660	HORSE BARN	220
TOTAL		660	TOTAL	660
STABILIZED PERC RATE:	20-30 MIN./INCH		20-30 MIN./INCH	
APPLICATION RATE	0.6 GAL/DAY/SQ.FT.		0.6 GAL/DAY/SQ.FT.	
ABSORPTION AREA	660 GPD / 0.6 GAL/DAY/SQ-FT. = 1100 SQ-FT		220 GPD / 0.6 GAL/DAY/SQ-FT. = 366.67 SQ-FT	
TRENCH WIDTH	2'		2'	
TRENCH SPACING	6' O.C.		6' O.C.	
GRAVELLESS ABSORPTION AREA	1100 SQ-FT X 0.75 = 825 SQ-FT		366.67 SQ-FT X 0.75 = 275 SQ-FT	
REQUIRED TRENCH LENGTH	825 SQ-FT / 2 FT WIDE TRENCH = 412.5 LF OF TRENCH		275 SQ-FT / 2 FT WIDE TRENCH = 137.5 LF OF TRENCH	
NO. OF LATERALS	9 (TOTAL OF 108-QUICK4 EQUALIZER 36 CHAMBERS OR TOTAL OF 90 ARC24 CHAMBERS)		3 (TOTAL OF 36-QUICK4 EQUALIZER 36 CHAMBERS OR TOTAL OF 30 ARC24 CHAMBERS)	
LENGTH OF LATERALS	48' IF USING QUICK4, 50' IF USING ARC24		48' IF USING QUICK4, 50' IF USING ARC24	

BULK REGULATIONS

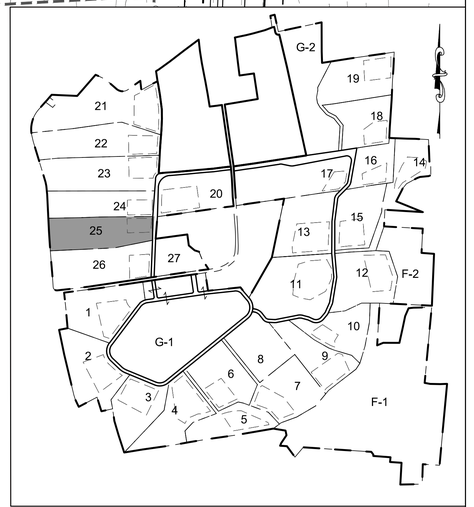
PROVISION	REQUIRED	CONCEPTUAL BUILDOUT CONDITIONS
MIN. LOT AREA (SQ-FT)	435,600	836,352
MAX. IMPERMEABLE SURFACE COVERAGE (%)	10%	1.6%
MAX. BUILDING HEIGHT (FT)	35	35
YARDS (MINIMUM)*		
MIN. FRONT YARD SETBACK (FT)	40	47.4'
MIN. REAR YARD SETBACK (FT)	50	1578.4'
MIN. SIDE YARD SETBACK (FT)	30	67.8'

*NOT APPLICABLE FOR ACTUAL BUILDOUT. BUILDING ENVELOPES IMPLEMENTED.

PROPOSED LIMIT OF DISTURBANCE SHOWN:
RESIDENTIAL CONSTRUCTION: 25,743 SQ FT. OR 0.59 ACRES
SEWAGE DISPOSAL SYSTEM INSTALLATION: 8,521 SQ FT. OR 0.195 ACRES
AGRICULTURE (BARN): 4,775 SQ FT. OR 0.11 ACRES
DRIVEWAY: 12,608 SQ FT. OR 0.29 ACRES

TOTAL: 51,647 SQ FT. OR 1.185 ACRES

PROPOSED IMPERMEABLE SURFACE SHOWN:
13,406 SQ FT OR 0.307 ACRES



LOT KEY MAP

SCALE: 1" = 1000'

SEE NOTE ON PAGE 1

DATE	REVISION

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL • ENVIRONMENTAL • STRUCTURAL

6 Dover Village Plaza, Suite 400, Dover Plains, NY 12522
Tel: (845) 877-0555 Fax: (845) 877-0556

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KEANE STUD SUBDIVISION

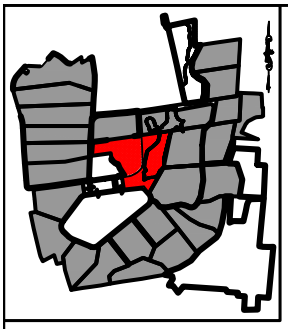
TOWN OF AMENIA — DUTCHESS COUNTY, NY

CONCEPTUAL SITE PLAN BUILD-OUT
PROPOSED LOT 25

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
6/21/2022	1"=50'	RED	KLG	RAR	21-006	1 of 1

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SEE NOTE ON PAGE 1



SCALE: 1" = 5000'

BUILDING ENVELOPE PARCELS =

KEANE STUD SUBDIVISION

CONSERVATION ANALYSIS
BUILDING ENVELOPE SITING ANALYSIS
APPENDIX D

PLANS PREPARED FOR:

KEANE STUD LLC.
217 DEPOT HILL RD
AMENIA, NY 12501

DATED:
1/25/2022

REVISED:
6/21/2022
7/25/2022
2/21/2023

PROJECT PARCELS

TAX GRID No. : 132000-7166-00-403720
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 216 DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: SL KEANE STUD LLC
PO BOX 37
AMENIA, NY 12501
LOT SIZE: 450.728-ACRES
(441.992 ACRES SOUTH OF DEPOT HILL & 9.632 ACRES ON THE NORTH)

TAX GRID NO. : 132000-7167-00-515033
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 37.072-ACRES

TAX GRID NO. : 132000-7167-00-570145
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 18 PROSPECT AVENUE
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 62.133-ACRES

TAX GRID NO. : 132000-7167-00-212034
ZONING DISTRICT: SUBURBAN RESIDENTIAL "SR"
PROPERTY ADDRESS: AMENIA-WASSAIC
AMENIA, NY 12501
PROPERTY OWNER: CLARE MICHAEL LLC
1 NORTH FRANKLIN
CHICAGO, IL 60606
LOT SIZE: 154.992-ACRES

TOTAL PROJECT ACREAGE=704.925-ACRES

DRAWING LIST

TITLE SHEET	SHEET 0 OF 28
GENERAL NOTES SHEET	SHEET 1 OF 28
OVERALL SUBDIVISION	SHEET 2 OF 28
LOT 1	SHEET 3 OF 28
LOT 2	SHEET 4 OF 28
LOT 3	SHEET 5 OF 28
LOT 4	SHEET 6 OF 28
LOT 5	SHEET 7 OF 28
LOT 6	SHEET 8 OF 28
LOT 7	SHEET 9 OF 28
LOT 8	SHEET 10 OF 28
LOT 9	SHEET 11 OF 28
LOT 10	SHEET 12 OF 28
LOT 11	SHEET 13 OF 28
LOT 12	SHEET 14 OF 28
LOT 13	SHEET 15 OF 28
LOT 14	SHEET 16 OF 28
LOT 15	SHEET 17 OF 28
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LOT 18	SHEET 20 OF 28
LOT 19	SHEET 21 OF 28
LOT 20	SHEET 22 OF 28
LOT 21	SHEET 23 OF 28
LOT 22	SHEET 24 OF 28
LOT 23	SHEET 25 OF 28
LOT 24	SHEET 26 OF 28
LOT 25	SHEET 27 OF 28
LOT 26	SHEET 28 OF 28

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SEE NOTE ON PAGE 1

KEANE STUD SUBDIVISION

TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
COVER SHEET

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	0 of 28

GENERAL BUILDING ENVELOPE STANDARDS

BUILDING ENVELOPES HAVE BEEN ESTABLISHED FOR THE PROPOSED NONREALITY SUBDIVISIONS LOTS IN ORDER TO ENSURE COMPLIANCE WITH SCENIC PROTECTIONS OVERLAY DISTRICT REQUIREMENTS, RURAL SITING PRINCIPALS RECOMMENDATIONS, AND THE GENERAL INTENT OF THE RURAL AGRICULTURAL (RA) RURAL RESIDENTIAL (RR) ZONING DISTRICTS, IN THE EVENT THAT DEVELOPMENT IS PROPOSED FOR THE LOTS. ESTABLISH BUILDING ENVELOPES SHALL COMPLY WITH THE FOLLOWING CRITERIA:

1. ESTABLISHED BUILDING ENVELOPES SHALL BE AMENDABLE WITH AMENIA PLANNING BOARD SITE PLAN APPROVAL.
2. ESTABLISHED BUILDING ENVELOPES WILL PERTAIN TO RESIDENTIAL DEVELOPMENT, ACCESSORY STRUCTURES RELATED TO THE RESIDENTIAL USE, AND ANY OTHER ADDITIONAL USES REQUIRING A SPECIAL USE PERMIT OR SITE PLAN APPROVAL AS LISTED IN THE TOWN OF AMENIA USE TABLE - ATTACHMENT 1 OF THE TOWN OF AMENIA ZONING CODE.
3. BUILDING ENVELOPES SHALL NOT APPLY TO SEPTIC SYSTEMS AND OTHER SUBSURFACE UTILITIES.
4. PROPOSED DEVELOPMENT WITHIN ESTABLISHED BUILDING ENVELOPES WILL REQUIRE SITE PLAN APPROVAL, WHICH SHALL INCLUDE THE FOLLOWING INFORMATION:

- PROVIDE EXISTING TOPOGRAPHIC SURVEY WITH CONTOUR INTERVAL OF 2 FOOT OR LESS AND INCLUDE ROCK OUTCROPPINGS AND ALL TREES GREATER THAN 8 INCHES DBH.
- PROVIDE A STEEP SLOPES MAP DELINEATING AREAS OF SLOPE 0-15%, 15-30%, AND GREATER THAN 30%.
- DRIVEWAY PROFILES SHALL BE PREPARED SHOWING EXISTING AND PROPOSED GRADES.
- AN ALLOWABLE DISTURBANCE AREA (ADA) SHALL BE ESTABLISHED IN CONFORMANCE WITH SCENIC PROTECTION OVERLAY REQUIREMENTS. ADDITIONAL ENVELOPES MAY BE ESTABLISHED BY THE PLANNING BOARD ON A LOT BY LOT BASIS.

RURAL SITING PRINCIPALS

§121-31 "RURAL SITING PRINCIPALS OF THE TOWN OF AMENIA ZONING CODE ARE RECOMMENDED PROVISIONS OUTLINED WITHIN THE ZONING CODE FOR THE SITING OF RESIDENCES IN NEW SUBDIVISIONS. PROVIDED BUILDING ENVELOPES HAVE BEEN DESIGNED TO COMPLY WITH SAID PROVISIONS:

A. WHEREVER FEASIBLE, RETAIN AND REUSE EXISTING OLD FARM ROADS AND LANES RATHER THAN CONSTRUCTING NEW ROADS OR DRIVEWAYS.
B. PRESERVE STONE WALLS AND HEDGEROWS.
C. AVOID PLACING BUILDINGS IN THE MIDDLE OF OPEN FIELDS. PLACE THEM EITHER AT THE EDGES OF FIELDS OR IN WOODED AREAS.
D. USE EXISTING VEGETATION AND TOPOGRAPHY TO BUFFER AND SCREEN NEW BUILDINGS IF POSSIBLE, UNLESS THEY ARE DESIGNED AND LOCATED CLOSE TO THE ROAD IN THE MANNER HISTORICALLY FOUND IN THE TOWN. GROUP BUILDINGS IN CLUSTERS OR TUCK THEM BEHIND TREELINES OR KNOLLS RATHER THAN SPREADING THEM OUT ACROSS THE LANDSCAPE IN A "SPRAWL" PATTERN.
E. MINIMIZE CLEARING OF VEGETATION AT THE EDGE OF THE ROAD, CLEARING ONLY AS MUCH AS IS NECESSARY TO CREATE A DRIVEWAY ENTRANCE WITH ADEQUATE SIGHT DISTANCE.
F. SITE BUILDINGS SO THAT THEY DO NOT PROTRUDE ABOVE TREETOPS AND CRESTLINES OF HILLS AS SEEN FROM PUBLIC PLACES AND ROADS. USE VEGETATION AS A BACKDROP TO REDUCE THE PROMINENCE OF THE STRUCTURE.
G. MINIMIZE CROSSING OF STEEP SLOPES WITH ROADS AND DRIVEWAYS.

VEGETATIVE BUFFER NOTES

A 50' WIDE VEGETATIVE BUFFER SHALL BE PLANTED TO ENSURE ADEQUATE SCREENING FROM EXISTING AND PROPOSED ROADS. PLANTINGS SHALL BE PLACED IN 50 INTERVALS AND HAVE A 3" CALIBER MINIMUM WITH A MATURE HEIGHT OF 40' OR MORE.

AGRICULTURAL/OPEN SPACE NOTES

AS PART OF THIS NONREALITY SUBDIVISION, BUILDING ENVELOPS HAVE BEEN ESTABLISHED AS SPECIFIED IN "GENERAL BUILDING ENVELOPE STANDARDS.

1. A MINIMUM OF 60% OPEN/AGRICULTURAL SPACE SHALL BE PROVIDED ON EACH PROPOSED LOT.
2. ALL LANDS LOCATED OUTSIDE OF ESTABLISHED BUILDING ENVELOPES SHALL BE DESIGNATED AS OPEN/AGRICULTURAL SPACE.
3. DESIGNATED OPEN SPACE/AGRICULTURAL AREAS SHALL BE PERMITTED TO CONTAIN AGRICULTURAL STRUCTURES. RESIDENTIAL AND OTHER USES NOT ASSOCIATED WITH AGRICULTURE SHALL BE PROHIBITED, UNLESS OTHERWISE AUTHORIZED BY THE PLANNING BOARD BY EITHER SPECIAL USE PERMIT OR SITE PLAN APPROVAL.
4. OPEN SPACE/AGRICULTURAL AREAS ON ADJACENT LOTS SHALL BE PERMITTED TO MAINTAIN AGRICULTURAL OPERATIONS (I.E.: ROW CROPS) ACROSS PROPERTY BOUNDARIES.

LOT EXCEPTIONS

LOT 23: CONTAINS SEVERAL EXISTING STRUCTURES AS WELL NYSDEC WETLANDS. THE LOT SHALL NOT BE SUBJECT SERVICED BY PROPOSED ROADWAYS SERVICING THE SUBDIVISION THERE FOR NO BUILDING ENVELOPE IS PROPOSED.

LOT 27: EXISTING FARM PARCEL HAS NOT BEEN PROVIDED A BUILDING ENVELOPE DUE TO THE PRESENCE OF EXISTING AGRICULTURAL STRUCTURES/USE

LOT 28: CONTAINS SEVERAL EXISTING STRUCTURES, INCLUDING RESIDENTIAL AND AGRICULTURAL STRUCTURES. NO BUILDING ENVELOPE IS PROPOSED.

FOREST PERSEVERATION NOTES

EXISTING FORESTED AREAS LOCATED ON PROPOSED LOTS ARE TO BE PRESERVED. OWNERS OF THE PROPOSED LOTS ARE PERMITTED TO MAINTAIN/MANAGE FORESTED AREAS, WHICH INCLUDES THE FOLLOWING ACTIVITIES:

1. THE REMOVAL OF DAMAGED, DYING, OR DEAD TREES.
2. THE REMOVAL AND MAINTENANCE OF UNDERBRUSH.
3. THE PLANTING AND CARE OF ADDITIONAL VEGETATION.

ANY CONSTRUCTION ACTIVITIES OR OTHER DISTURBANCE WITHIN FORESTED AREAS, EXCLUDING AGRICULTURE USES, SHALL REQUIRE SITE PLAN APPROVAL BY THE AMENIA PLANNING BOARD.

SCENIC PROTECTION OVERLAY DISTRICT (SPO)

LARGE PORTIONS OF THE PROJECT SITE ARE LOCATED WITHIN THE SCENIC PROTECTION OVERLAY (SPO) DISTRICT. THE PROVIDED BUILDING ENVELOPES HAVE BEEN DESIGNED TO COMPLY WITH THE GENERAL SITE PLAN REQUIREMENT STANDARDS PREFACED IN §121-14.1.f OF THE AMENIA ZONING CODE:

1. WILL NOT SIGNIFICANTLY IMPAIR SCENIC CHARACTER AND WILL BE AESTHETICALLY COMPATIBLE WITH ITS SURROUNDINGS.
2. WILL MINIMIZE THE REMOVAL OF NATIVE VEGETATION, EXCEPT WHERE SUCH REMOVAL MAY BE NECESSARY TO OPEN UP OR PREVENT HE BLOCKAGE OF SCENIC VIEWS AND PANORAMAS FROM PUBLICLY ACCESSIBLE PLACES.
3. WILL LOCATE AND CLUSTER BUILDINGS AND OTHER STRUCTURES IN A MANNER THAT MINIMIZES THEIR VISIBILITY FROM PUBLIC PLACES.
4. WILL BE AT LEAST 40 FEET BELOW THE CREST LINE OF ANY RIDGE AND WILL NOT DISTURB THE CONTINUITY OF THE TREELINE WHEN VIEWED FROM A PUBLICLY ACCESSIBLE PLACE.
5. WILL NOT RESULT IN CLEARING A BUILDING SITE AREA, INCLUDING ACCESSORY STRUCTURES AND PARKING AREAS (EXCLUDING THE AREA REQUIRED FOR DRIVEWAY AND UTILITY ACCESS), GREATER THAN 30,000 SQUARE FEET IN AREA FOR A SINGLE-FAMILY RESIDENCE.

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6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522

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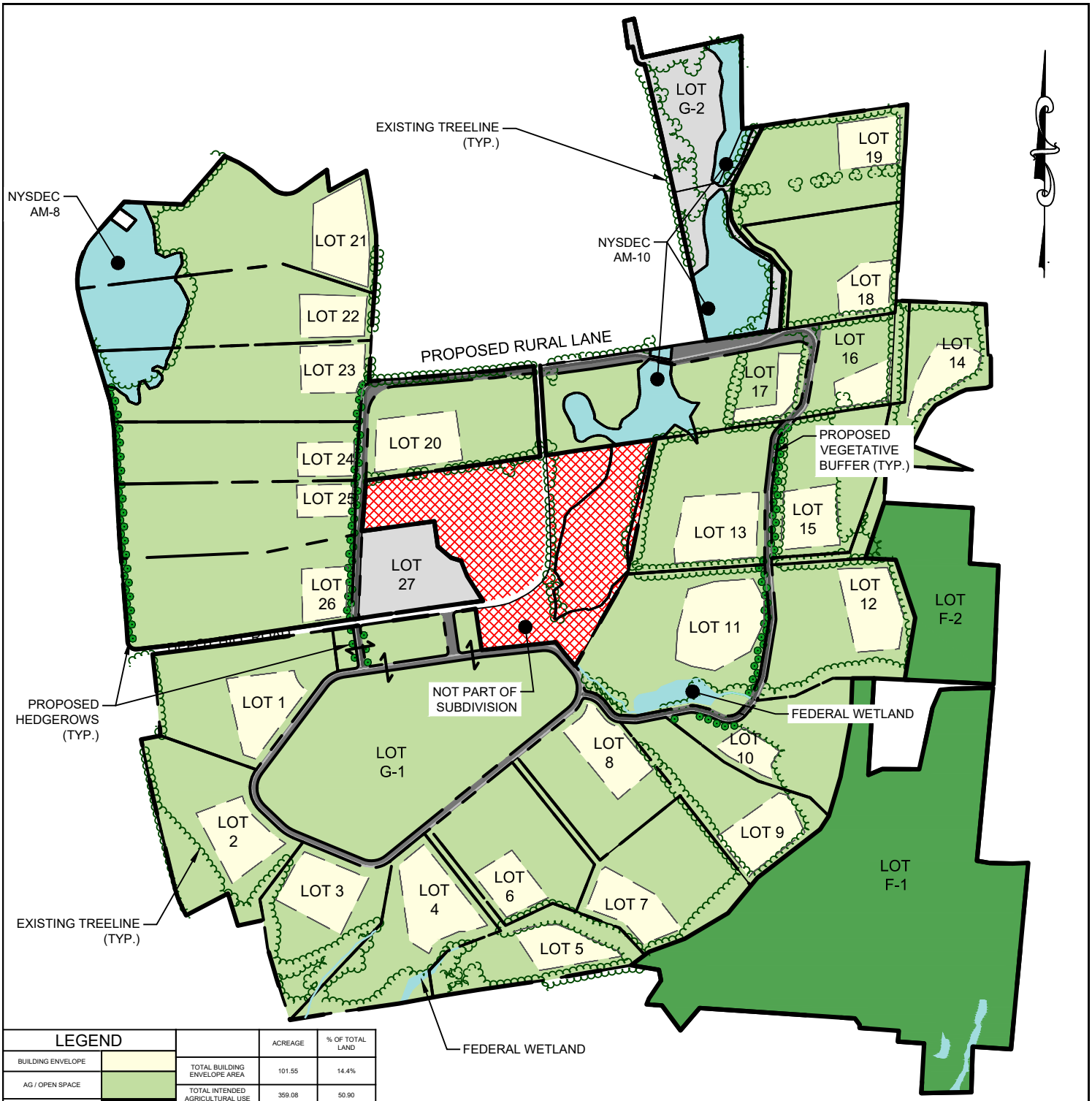
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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
GENERAL NOTES

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	1 of 28



LEGEND
BUILDING ENVELOPE
AG / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS
PROPERTY LINE
EXISTING TREE LINE
PROPOSED HEDGEROW

	ACREAGE	% OF TOTAL LAND
TOTAL BUILDING ENVELOPE AREA	101.55	14.4%
TOTAL INTENDED AGRICULTURAL USE	359.08	50.90
TOTAL WETLANDS (PRESERVED)	38.58	5.50
TOTAL FOREST (PRESERVED)	108.61	15.40
TOTAL EXISTING DEVELOPED	24.46	3.5%
TOTAL ROAD AREA	20.65	2.9%
TOTAL OVERALL	704.9	100.0%
TOTAL CONSERVATION / AGRICULTURAL	506.3	71.8%

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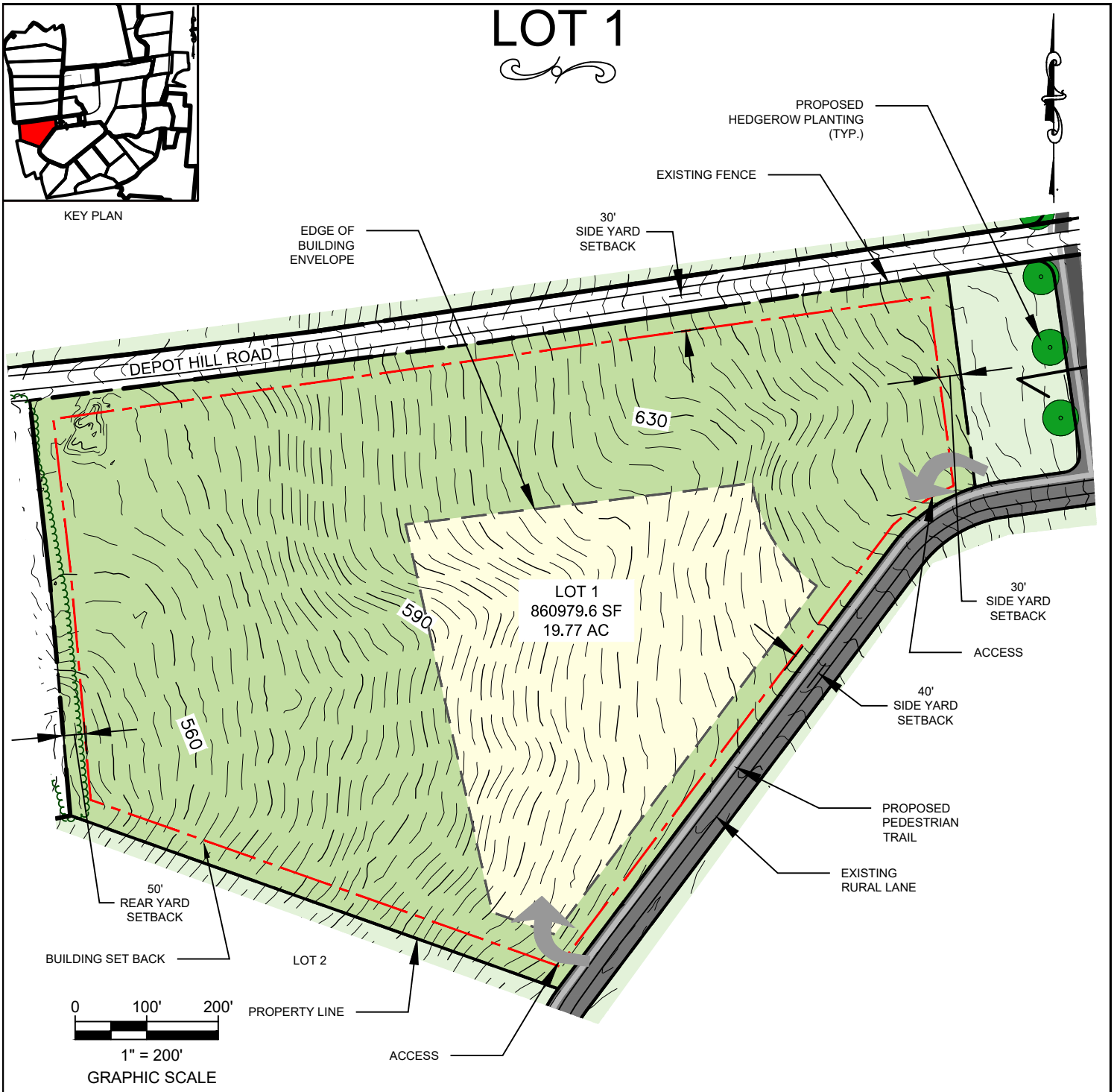
TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS OVERALL SITE

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	2 of 28

LOT 1

KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	19.77
BUILDING ENVELOPE (ACRES)	4.88
OPEN SPACE (ACRES)	14.88
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
5. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
6. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

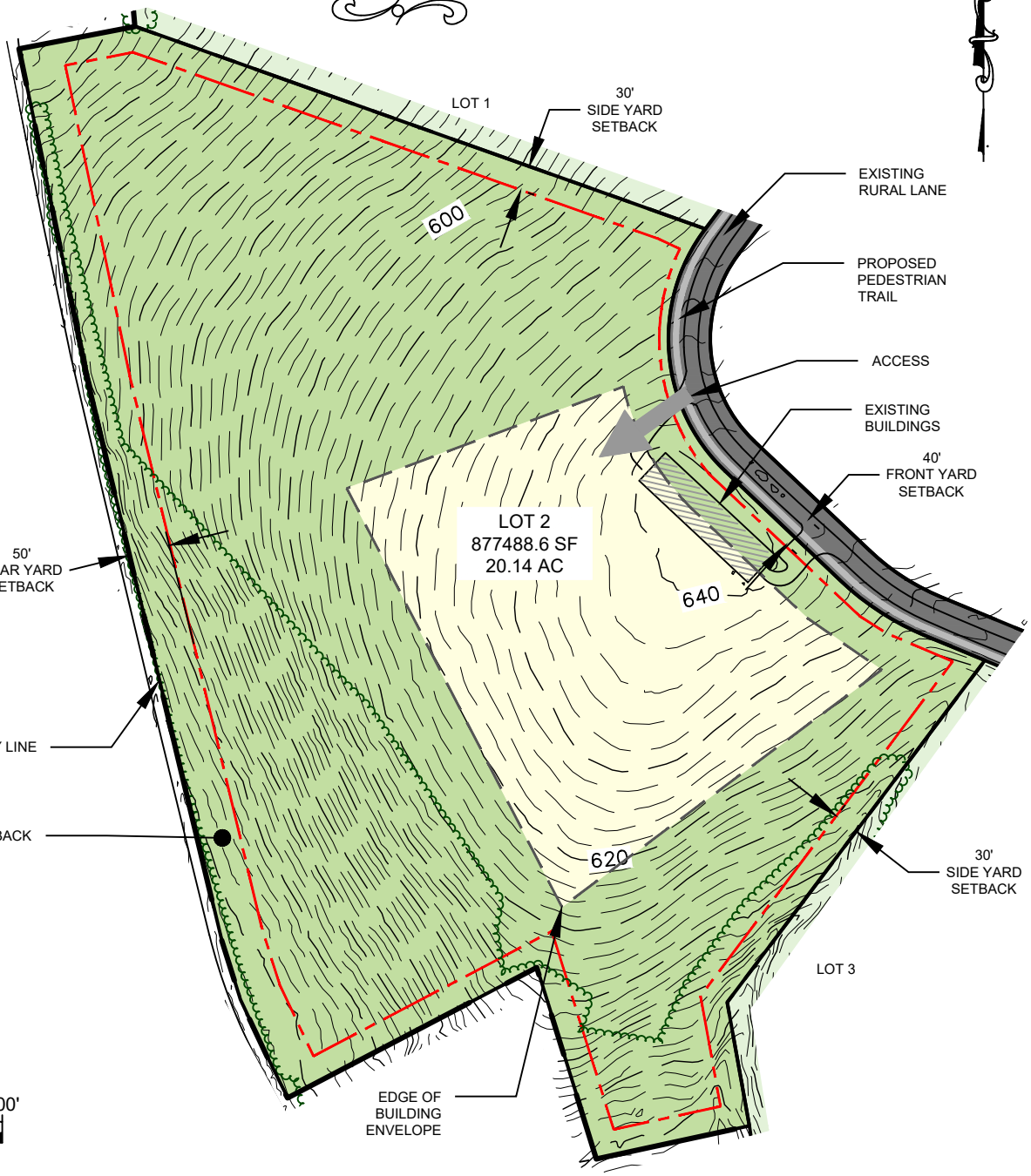
BUILDING ENVELOPE SITING ANALYSIS
LOT 1

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	3 of 28

LOT 2



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	20.14
BUILDING ENVELOPE (ACRES)	4.48
OPEN SPACE (ACRES)	15.66
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS CLUSTERED/SCREENED BY EXISTING AGRICULTURAL STRUCTURE(S).
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
9. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

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TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDING ENVELOPE ANALYSIS
LOT 2

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/15/2022	AS SHOWN	RED	RED	#21-006	4 of 28

LOT 3



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	15.79
BUILDING ENVELOPE (ACRES)	5.01
OPEN SPACE (ACRES)	10.78
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS CLUSTERED/SCREENED BY EXISTING AGRICULTURAL STRUCTURE(S).
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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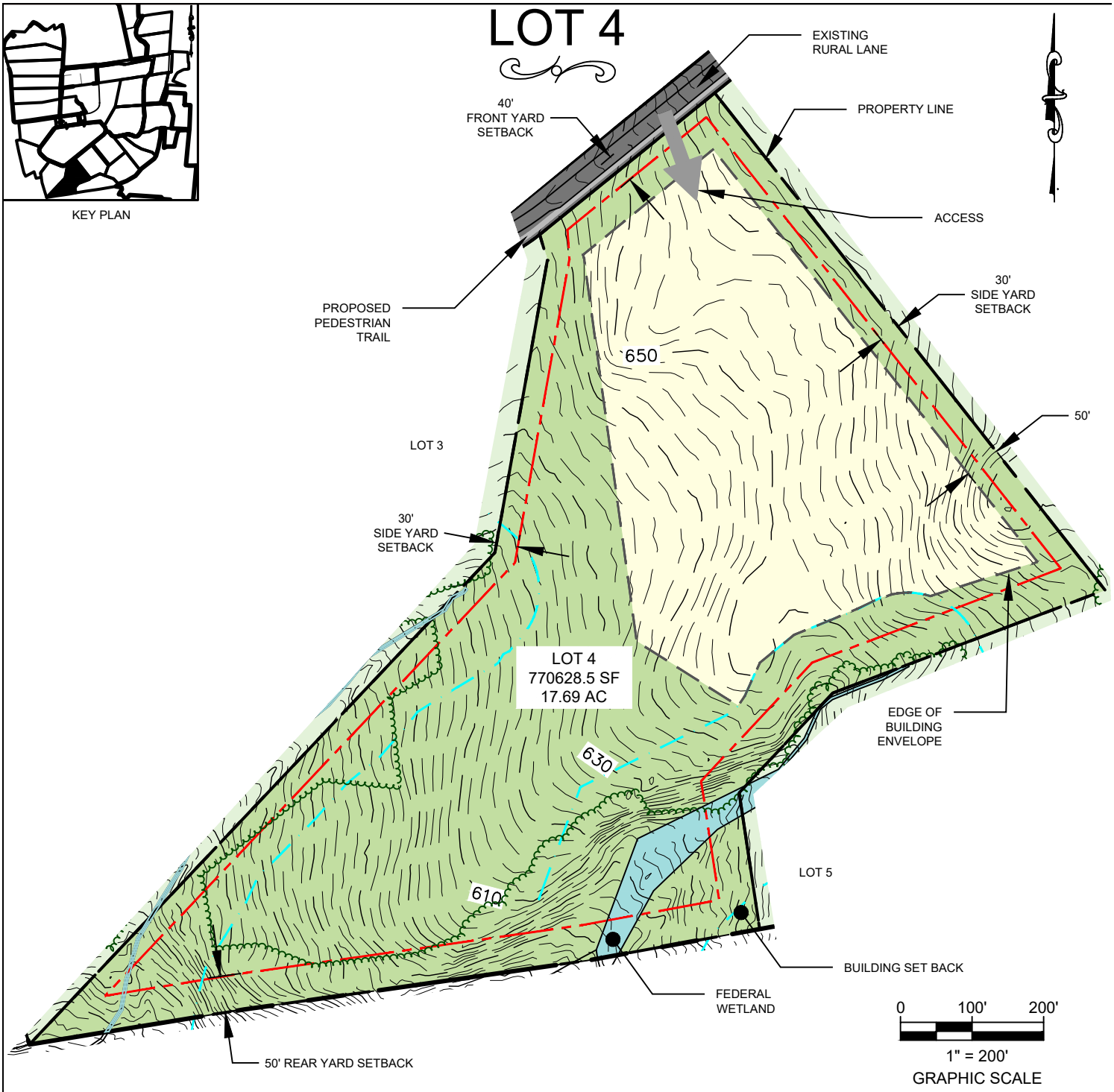
TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 3

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7/15/2022	AS SHOWN	RED	RED	#21-006	5 of 28

KEY PLAN

LOT 4



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	17.69
BUILDING ENVELOPE (ACRES)	5.95
OPEN SPACE (ACRES)	11.74
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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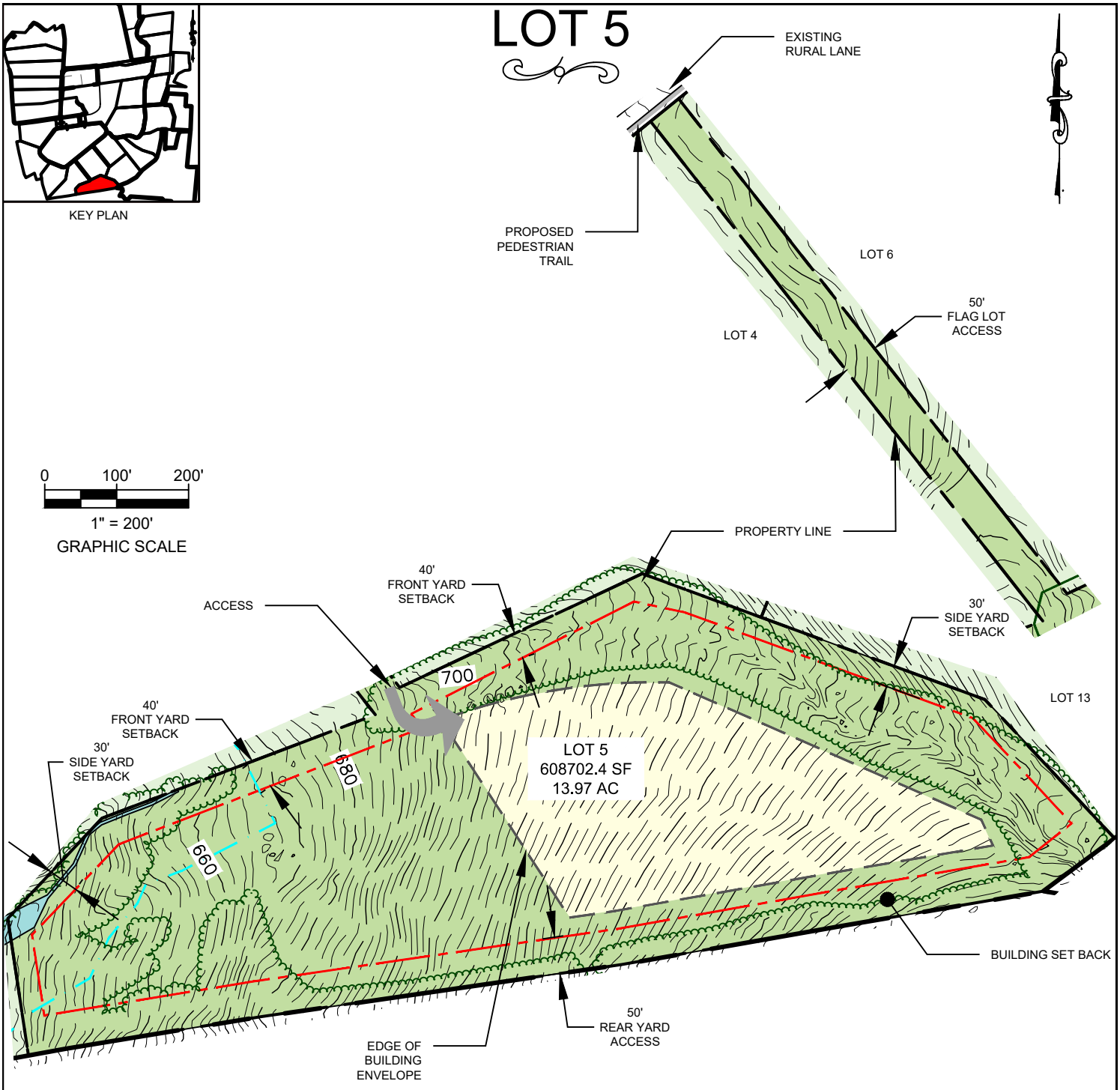
TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 4

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/15/2022	AS SHOWN	RED	RED	#21-006	6 of 28

KEY PLAN

LOT 5



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	13.97
BUILDING ENVELOPE (ACRES)	3.38
OPEN SPACE (ACRES)	10.59
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
8. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

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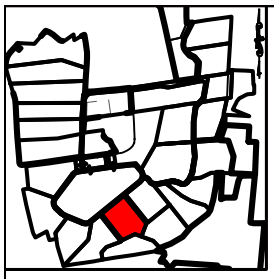
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 5

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	7 of 28

LOT 6



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	17.12
BUILDING ENVELOPE (ACRES)	3.00
OPEN SPACE (ACRES)	14.11
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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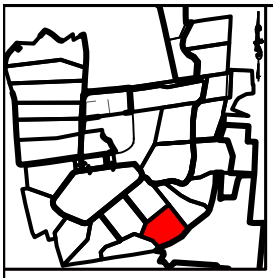
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TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 6

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/15/2022	AS SHOWN	RED	RED	#21-006	8 of 28

LOT 7



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	18.86
BUILDING ENVELOPE (ACRES)	4.16
OPEN SPACE (ACRES)	14.70
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
8. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

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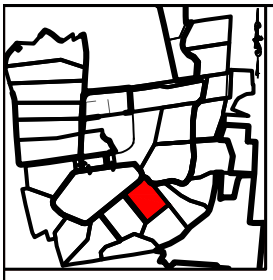
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 7

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	9 of 28

LOT 8



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND

BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	15.55
BUILDING ENVELOPE (ACRES)	4.55
OPEN SPACE (ACRES)	11.00
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS CLUSTERED/SCREENED BY EXISTING AGRICULTURAL STRUCTURE(S
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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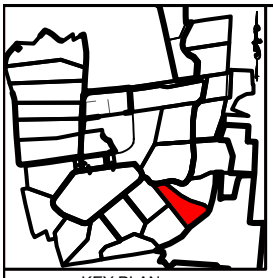
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TOWN OF AMENIA DUTCHESS COUNTY, NY

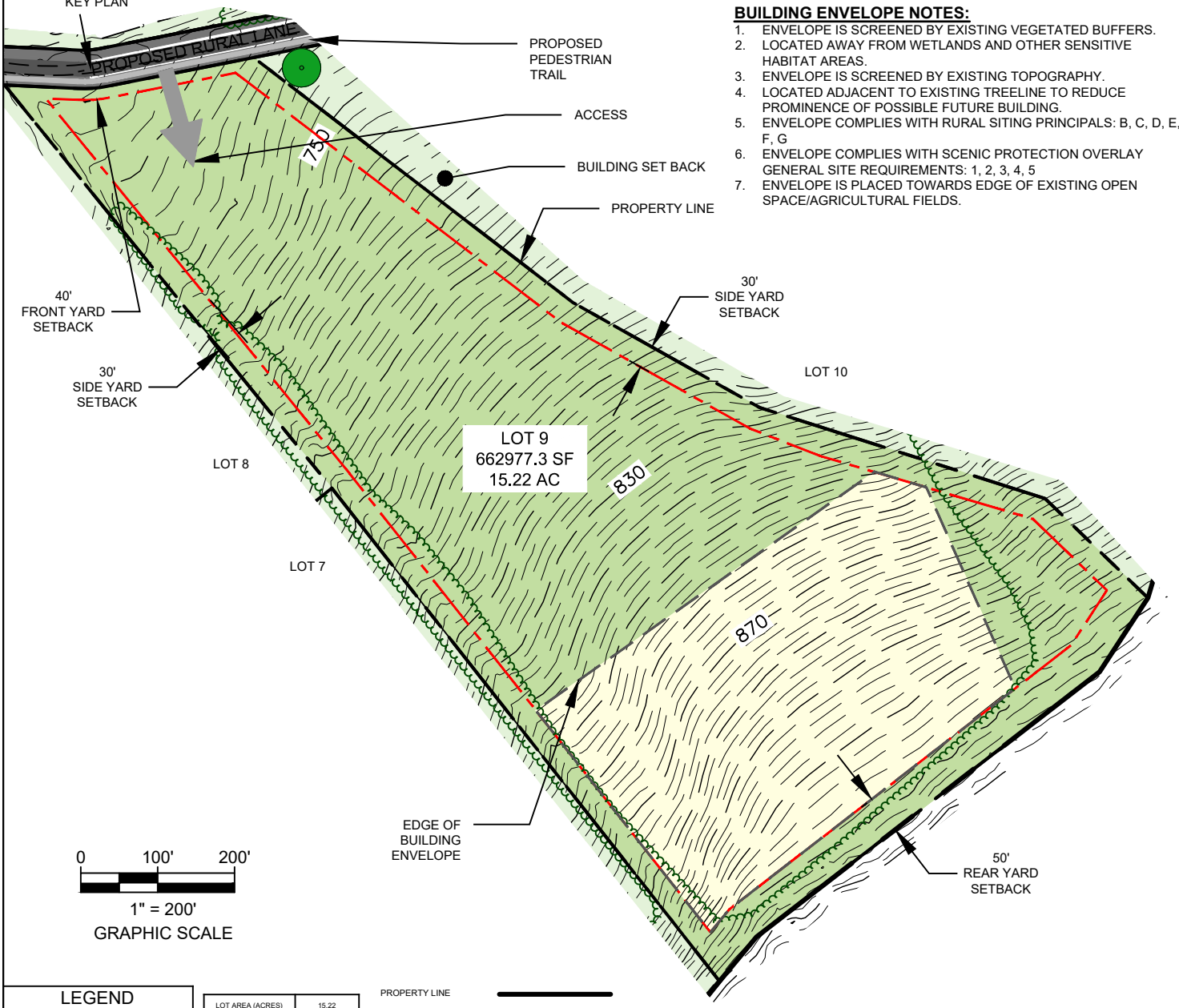
BUILDING ENVELOPE SITING ANALYSIS
LOT 8

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	10 of 28

LOT 9



KEY PLAN



BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	15.22
BUILDING ENVELOPE (ACRES)	4.35
OPEN SPACE (ACRES)	10.87
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

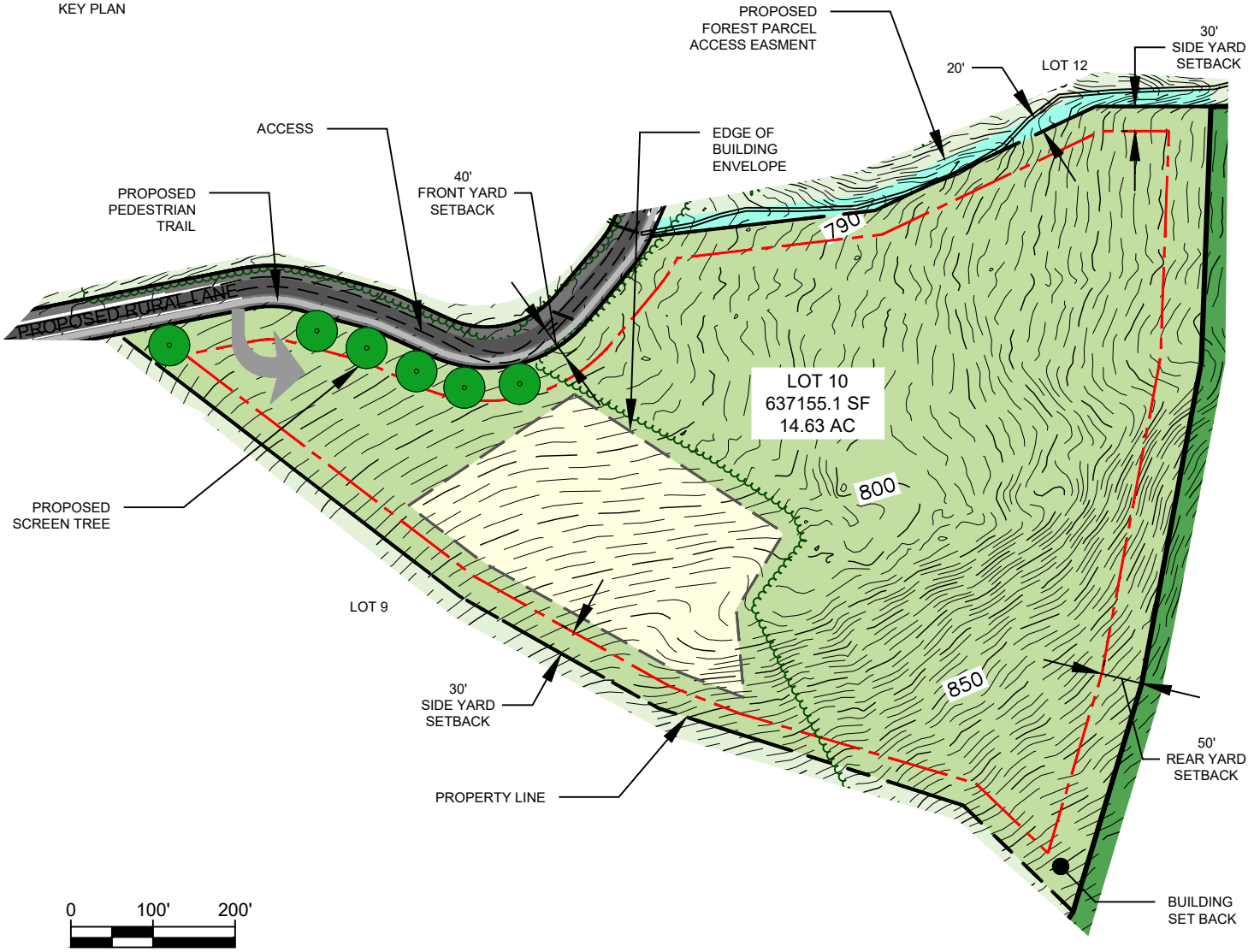
BUILDING ENVELOPE SITING ANALYSIS
LOT 9

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	11 of 28

LOT 10



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	14.63
BUILDING ENVELOPE (ACRES)	1.90
OPEN SPACE (ACRES)	12.73
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 10

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	12 of 28

LOT 11

KEY PLAN



LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	27.07
BUILDING ENVELOPE (ACRES)	7.43
OPEN SPACE (ACRES)	19.64
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 11

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	13 of 28

LOT 12



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	19.73
BUILDING ENVELOPE (ACRES)	4.98
OPEN SPACE (ACRES)	14.74
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

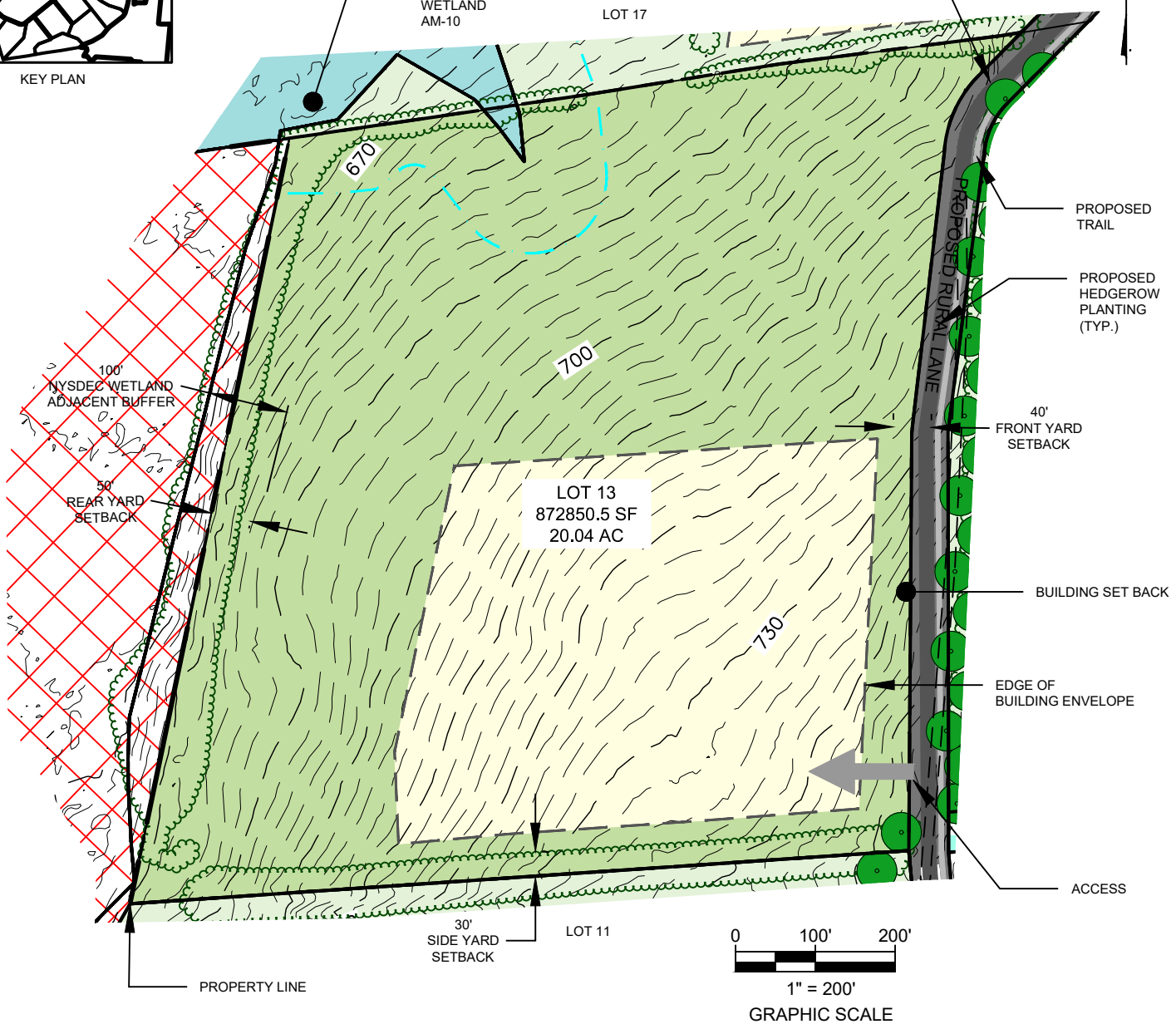
BUILDING ENVELOPE SITING ANALYSIS
LOT 12

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/5/2022	AS SHOWN	RED	RED	#21-006	14 of 28

LOT 13



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	20.04
BUILDING ENVELOPE (ACRES)	6.03
OPEN SPACE (ACRES)	14.01
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

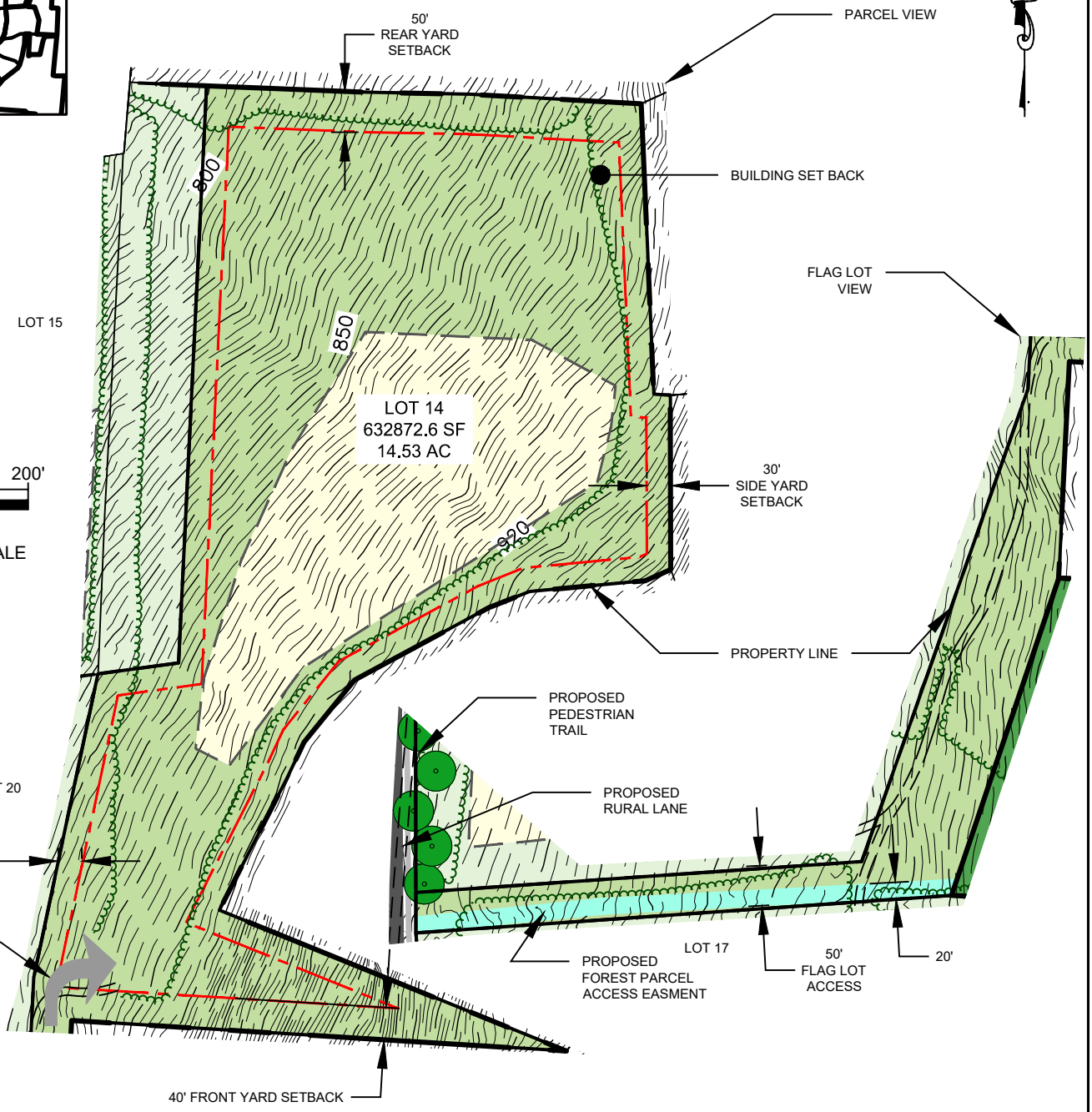
BUILDING ENVELOPE SITING ANALYSIS
LOT 13

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	15 of 28

LOT 14



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	14.53
BUILDING ENVELOPE (ACRES)	3.08
OPEN SPACE (ACRES)	11.45
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
8. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

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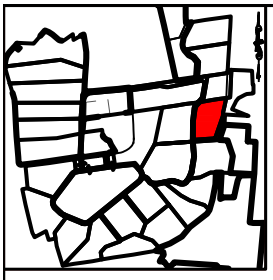
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

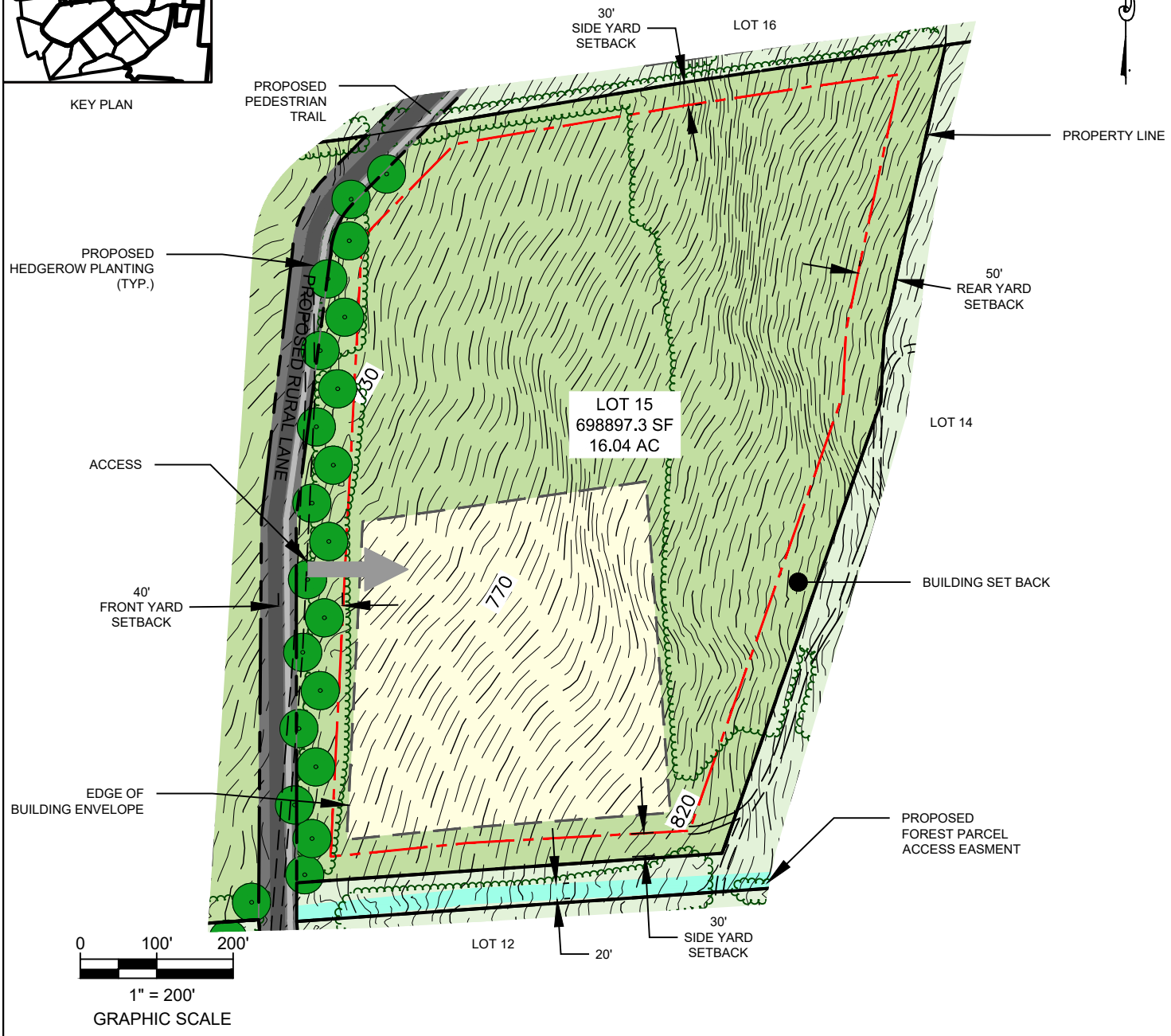
BUILDING ENVELOPE SITING ANALYSIS
LOT 14

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	16 of 28

LOT 15



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	16.04
BUILDING ENVELOPE (ACRES)	3.86
OPEN SPACE (ACRES)	12.18
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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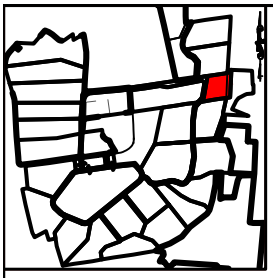
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

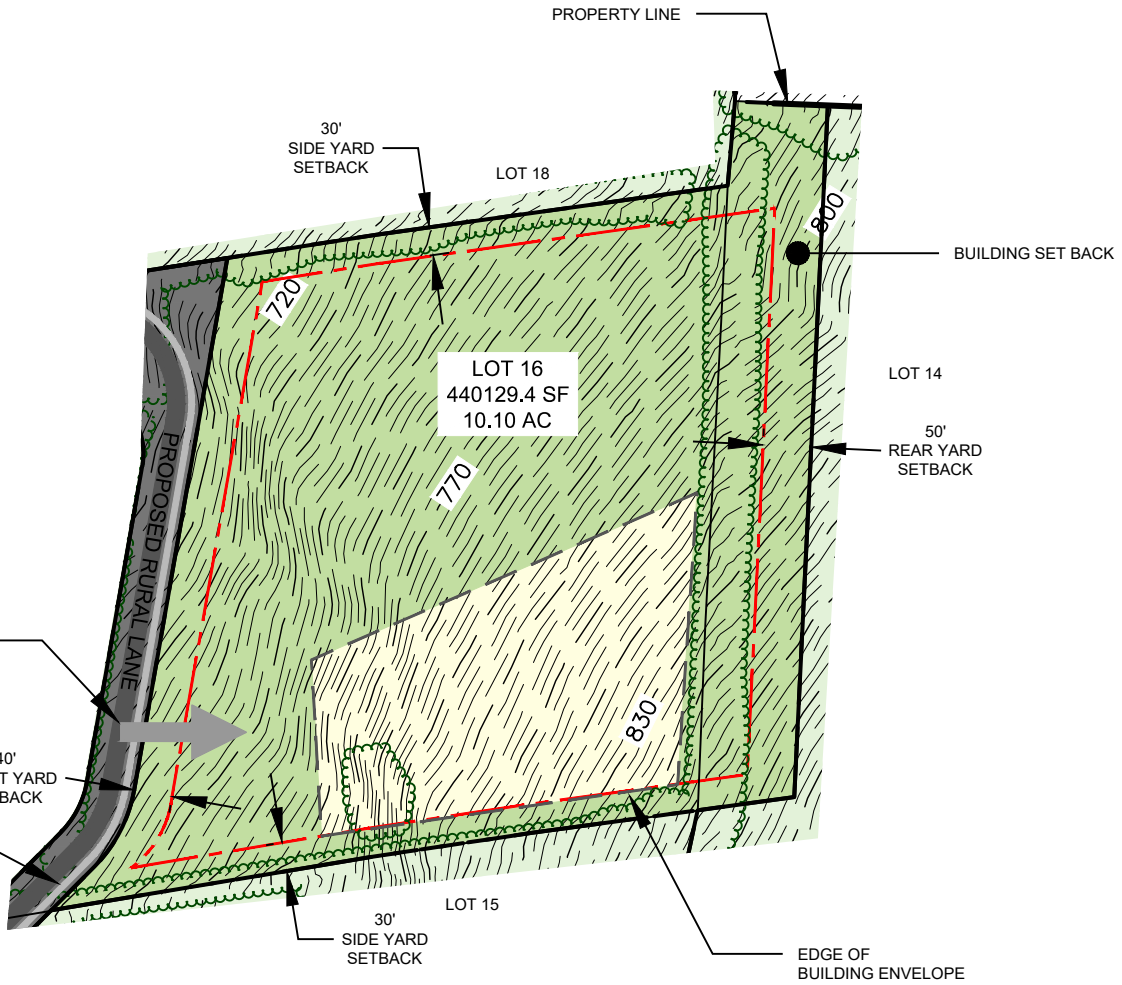
BUILDING ENVELOPE SITING ANALYSIS
LOT 15

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/15/2022	AS SHOWN	RED	RED	#21-006	17 of 28

LOT 16



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND

BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	10.10
BUILDING ENVELOPE (ACRES)	2.15
OPEN SPACE (ACRES)	7.96
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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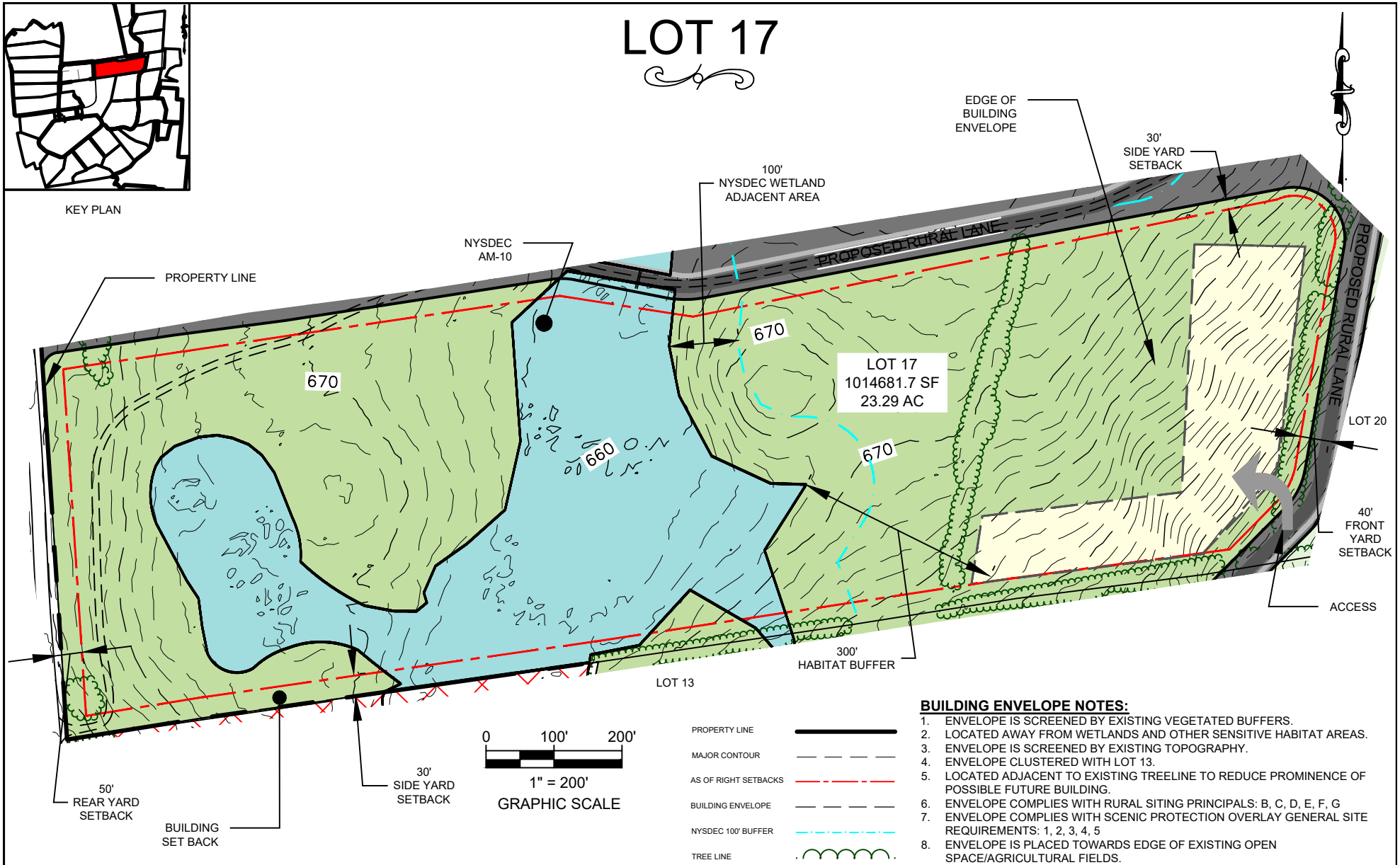
TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 16

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/5/2022	AS SHOWN	RED	RED	#21-006	18 of 28

LOT 17

KEY PLAN



BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. ENVELOPE CLUSTERED WITH LOT 13.
5. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
6. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
7. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	23.29
BUILDING ENVELOPE (ACRES)	2.05
OPEN SPACE (ACRES)	21.25
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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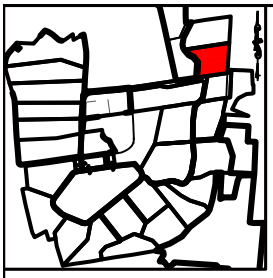
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 17

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	19 of 28

LOT 18



KEY PLAN



LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	15.35
BUILDING ENVELOPE (ACRES)	2.72
OPEN SPACE (ACRES)	12.63
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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TOWN OF AMENIA — DUTCHESS COUNTY, NY

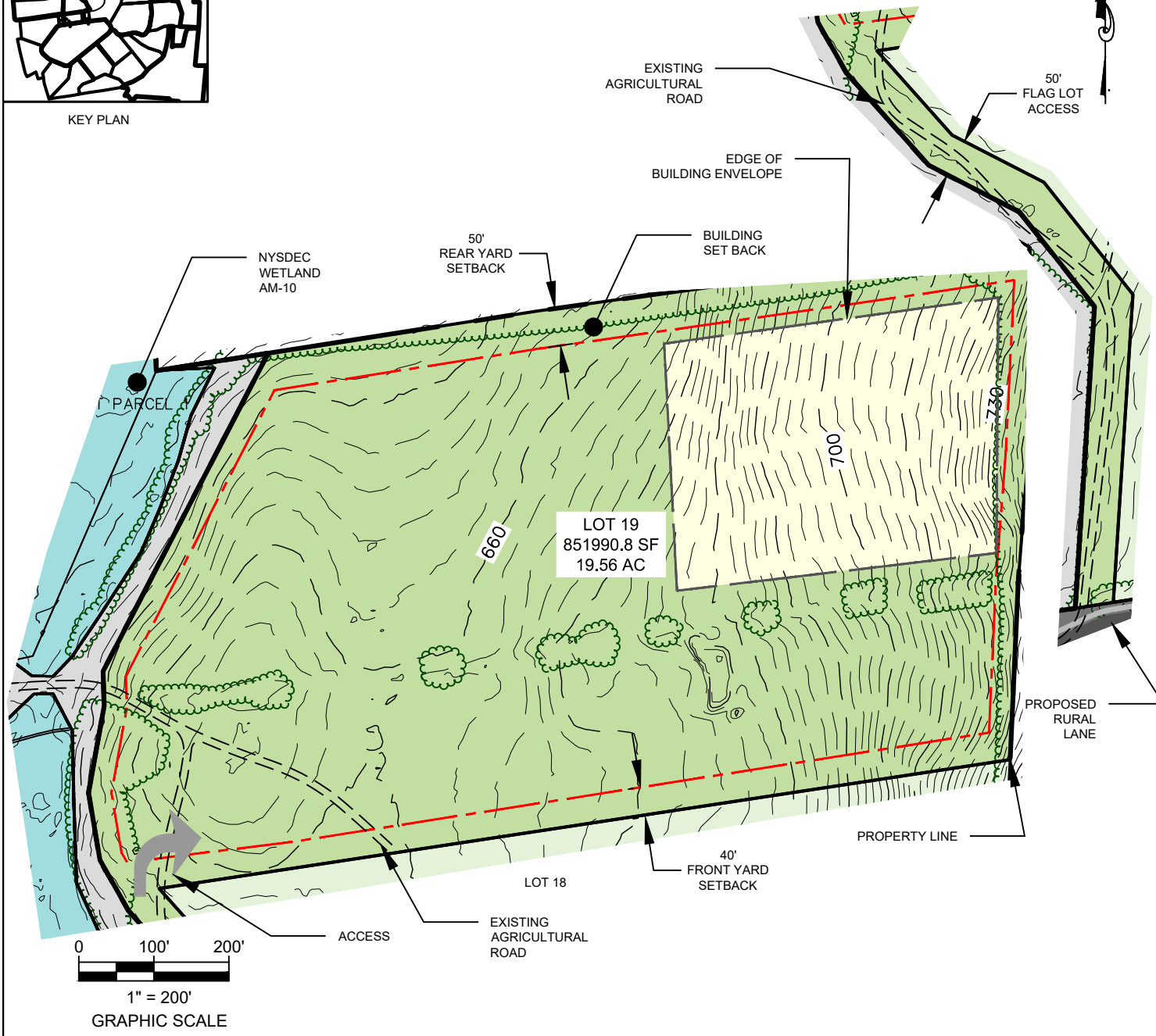
BUILDING ENVELOPE SITING ANALYSIS
LOT 18

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	20 of 28

LOT 19



KEY PLAN



LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	19.56
BUILDING ENVELOPE (ACRES)	3.36
OPEN SPACE (ACRES)	16.20
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: A, B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
8. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

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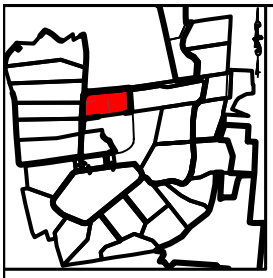
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

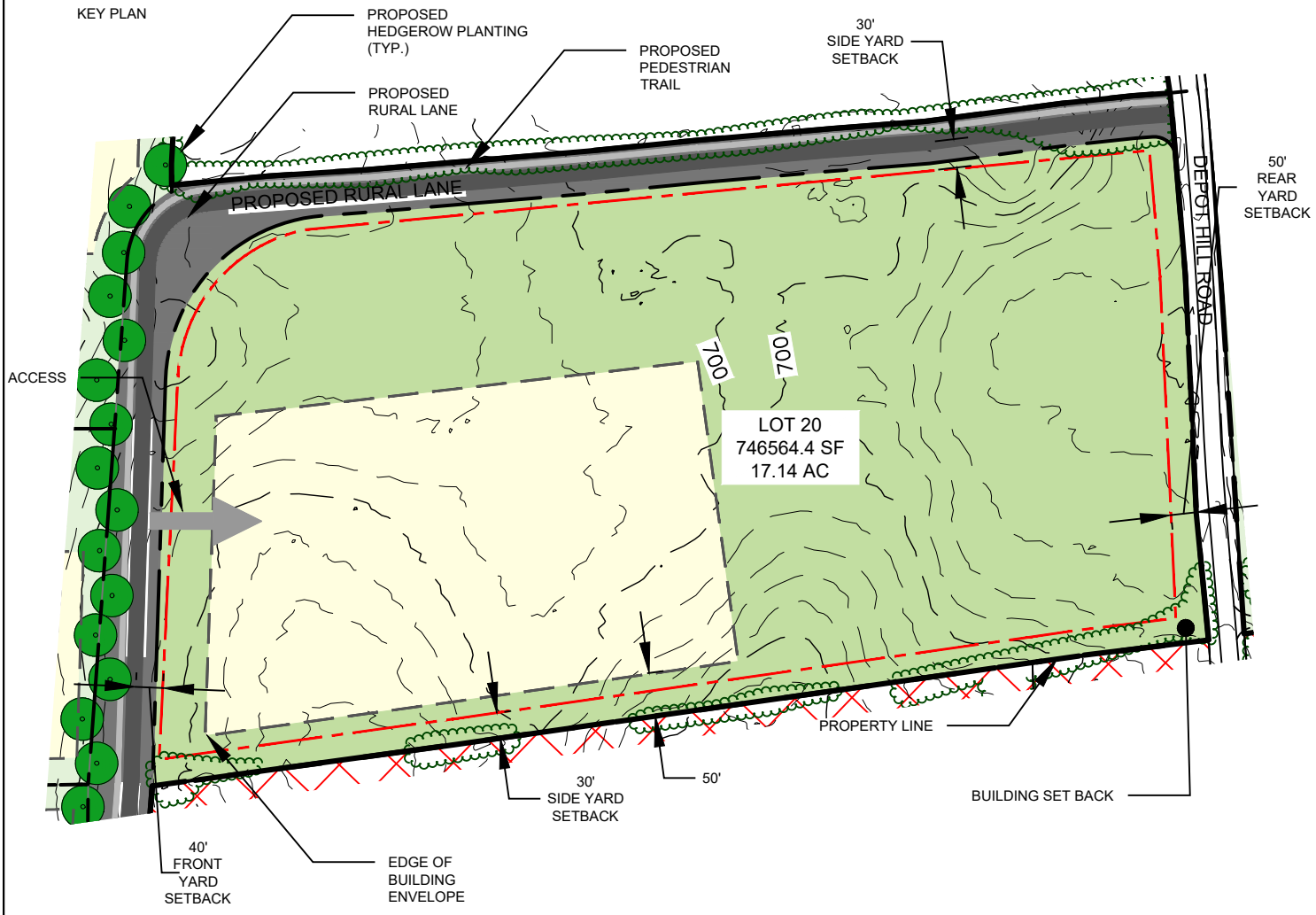
BUILDING ENVELOPE SITING ANALYSIS
LOT 19

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
11/15/2022	AS SHOWN	RED	RED	#21-006	21 of 28

LOT 20



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND	
BUILDING ENVELOPE	
AGRICULTURAL / OPEN SPACE	
FOREST AREA	
ROAD ROW	
WETLANDS	

LOT AREA (ACRES)	17.14
BUILDING ENVELOPE (ACRES)	5.03
OPEN SPACE (ACRES)	12.11
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
5. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
6. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

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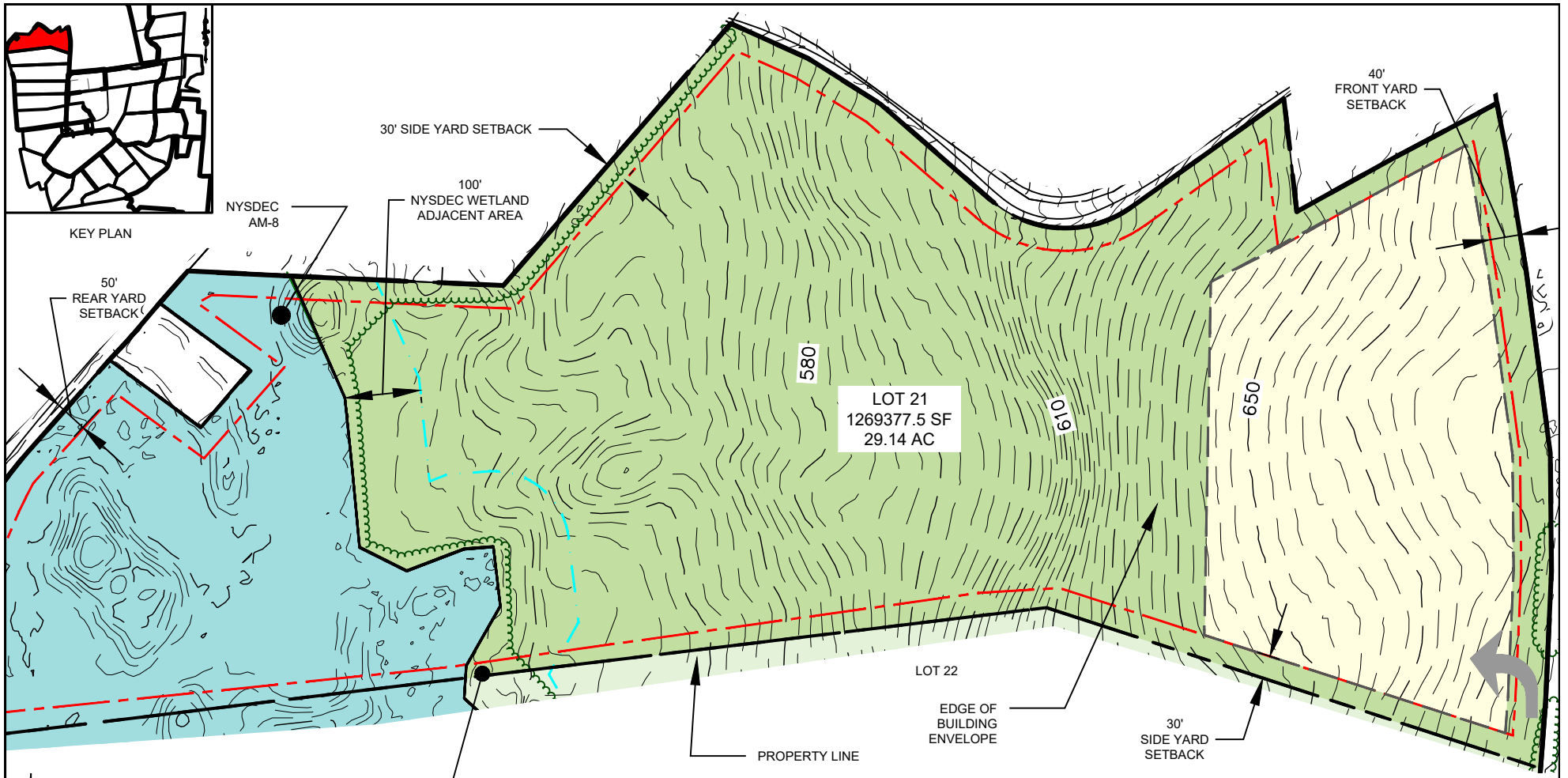
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TOWN OF AMENIA DUTCHESS COUNTY, NY

BUILDING ENVELOPE SITING ANALYSIS
LOT 20

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
7/5/2022	AS SHOWN	RED	RED	#21-006	22 of 28



LOT 21

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. ENVELOPE CLUSTERED WITH LOT 22.
5. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
6. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
7. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	29.14
BUILDING ENVELOPE (ACRES)	5.57
OPEN SPACE (ACRES)	23.57
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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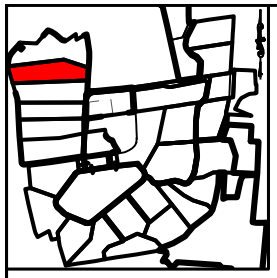
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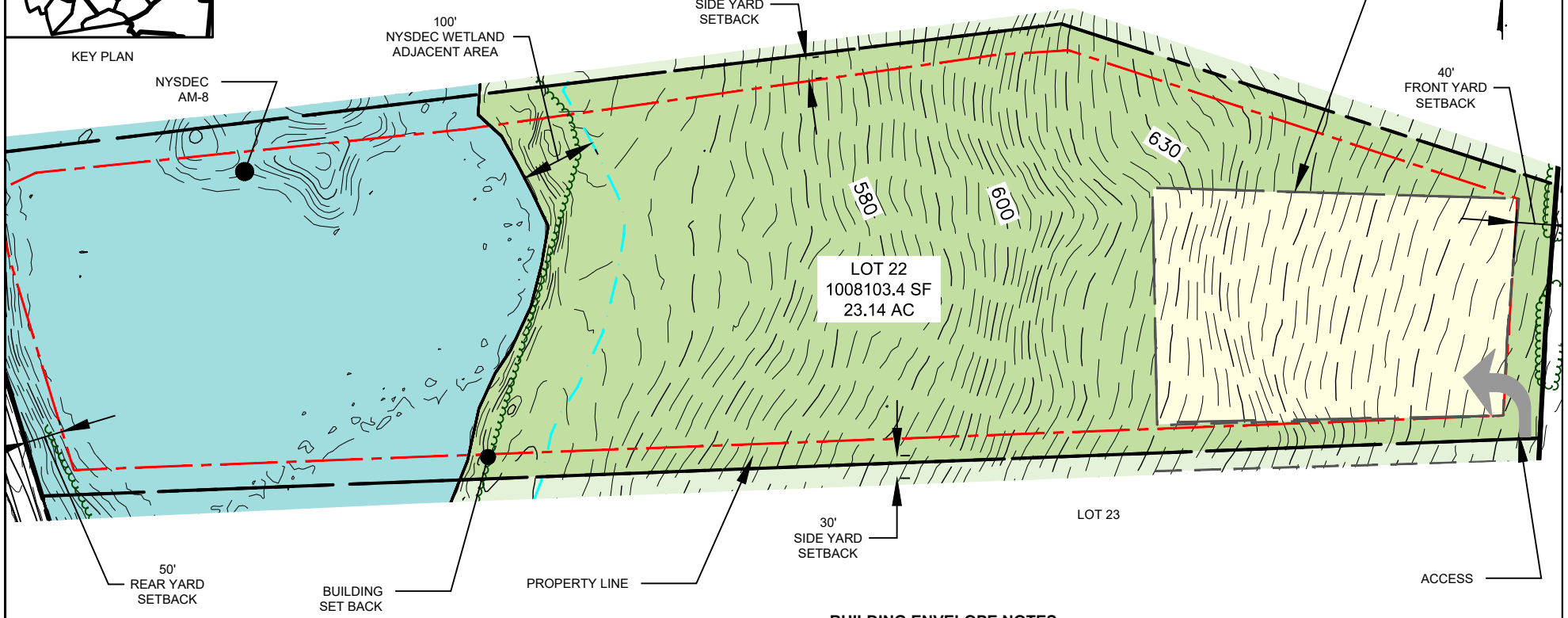
BUILDING ENVELOPE SITING ANALYSIS
LOT 21

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	23 of 28

LOT 22



KEY PLAN



PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. ENVELOPE CLUSTERED WITH LOT 21 AND 23.
5. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
6. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
7. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.

0 100' 200'

1" = 200'

GRAPHIC SCALE

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	23.14
BUILDING ENVELOPE (ACRES)	3.20
OPEN SPACE (ACRES)	19.94
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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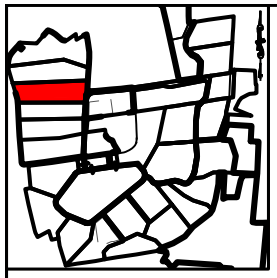
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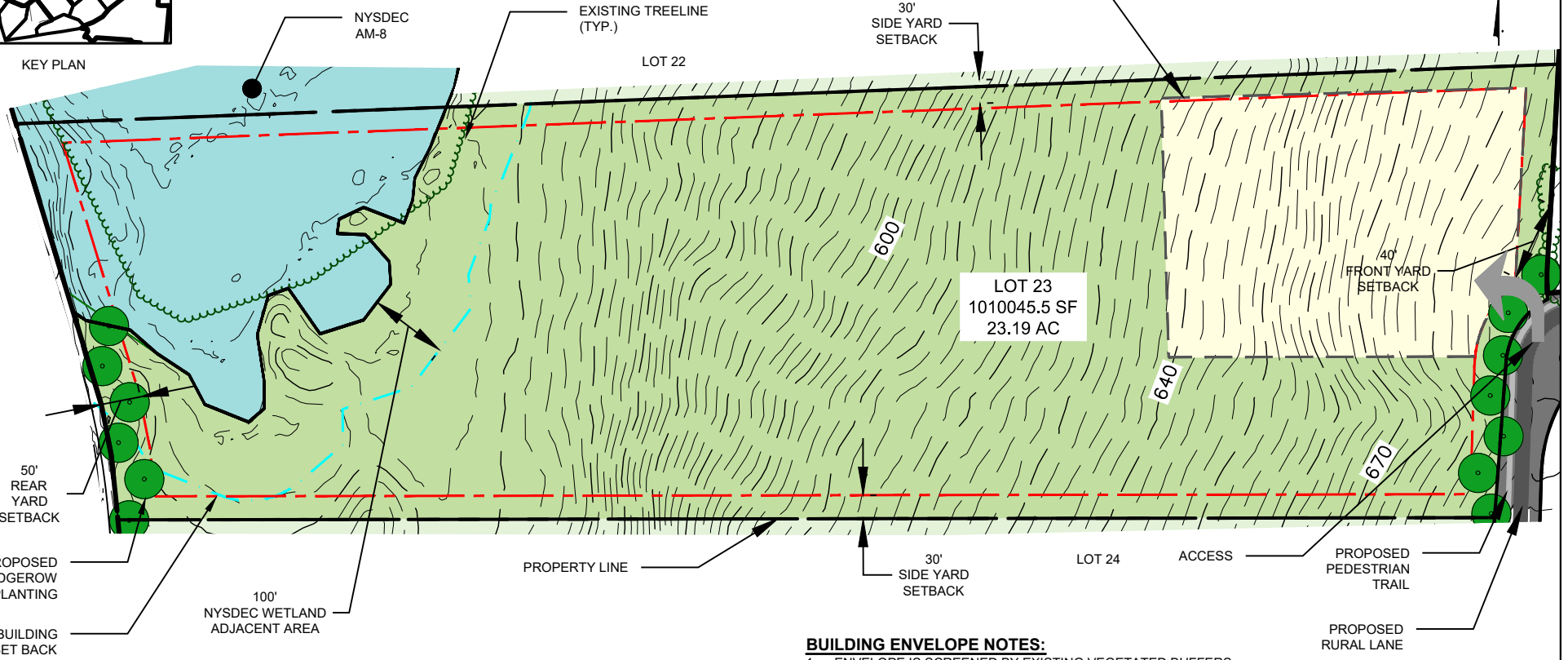
BUILDING ENVELOPE SITING ANALYSIS
LOT 22

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	24 of 28

LOT 23



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. ENVELOPE IS SCREENED BY EXISTING VEGETATED BUFFERS.
2. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
3. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
4. ENVELOPE CLUSTERED WITH LOT 22.
5. LOCATED ADJACENT TO EXISTING TREELINE TO REDUCE PROMINENCE OF POSSIBLE FUTURE BUILDING.
6. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
7. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
8. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
9. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	23.19
BUILDING ENVELOPE (ACRES)	3.43
OPEN SPACE (ACRES)	19.76
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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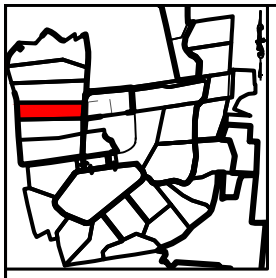
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TOWN OF AMENIA — DUTCHESS COUNTY, NY

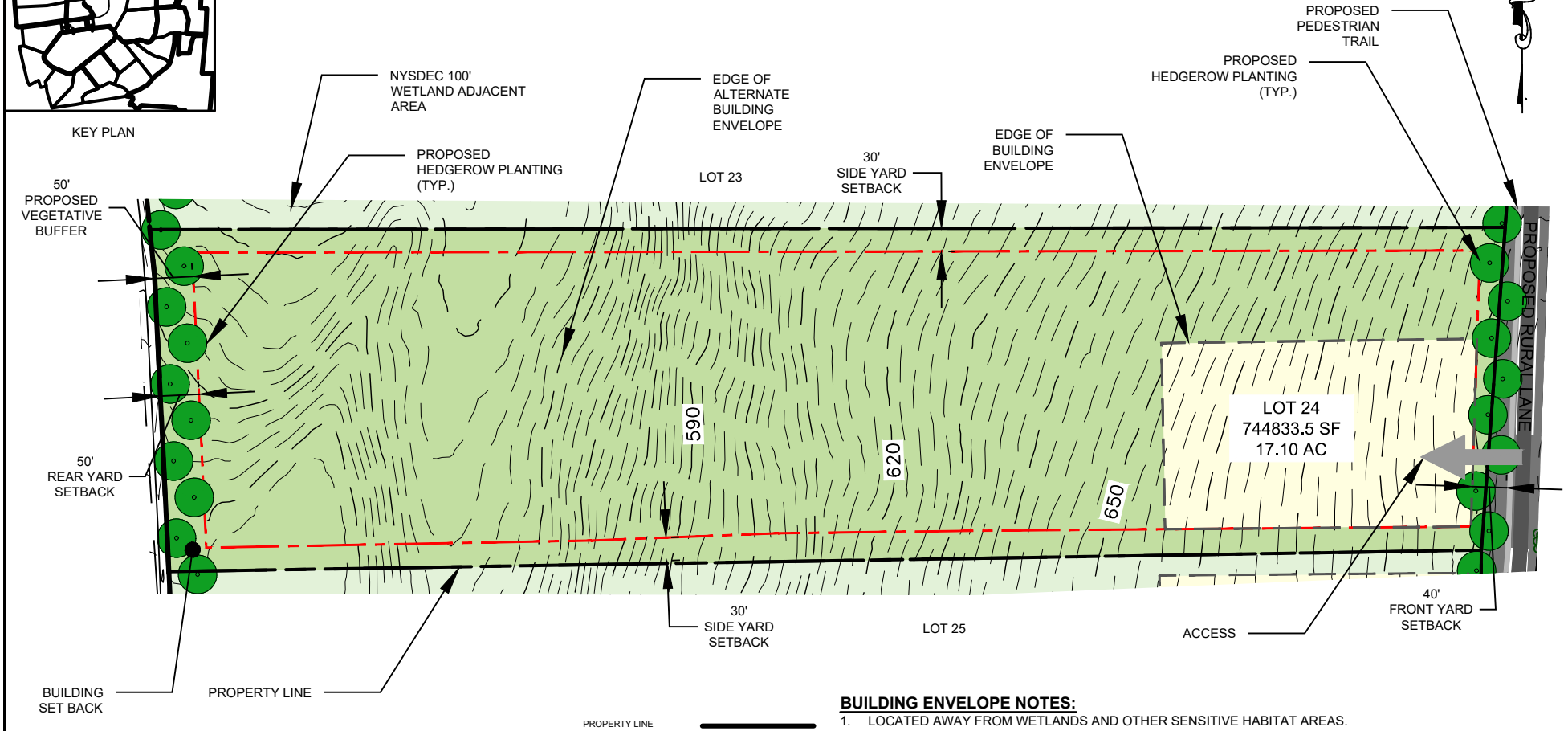
BUILDING ENVELOPE SITING ANALYSIS
LOT 23

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	25 of 28

LOT 24



KEY PLAN



PROPERTY LINE
MAJOR CONTOUR
AS OF RIGHT SETBACKS
BUILDING ENVELOPE
NYSDEC 100' BUFFER
TREE LINE

0 100' 200'

1" = 200'

GRAPHIC SCALE

BUILDING ENVELOPE NOTES:

1. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
2. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
3. ENVELOPE CLUSTERED WITH LOT 25.
4. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
5. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
6. ENVELOPE IS CLUSTERED/SCREENED BY EXISTING AGRICULTURAL STRUCTURE(S).
7. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
8. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	17.10
BUILDING ENVELOPE (ACRES)	2.24
OPEN SPACE (ACRES)	14.86
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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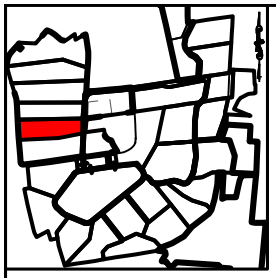
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TOWN OF AMENIA DUTCHESS COUNTY, NY

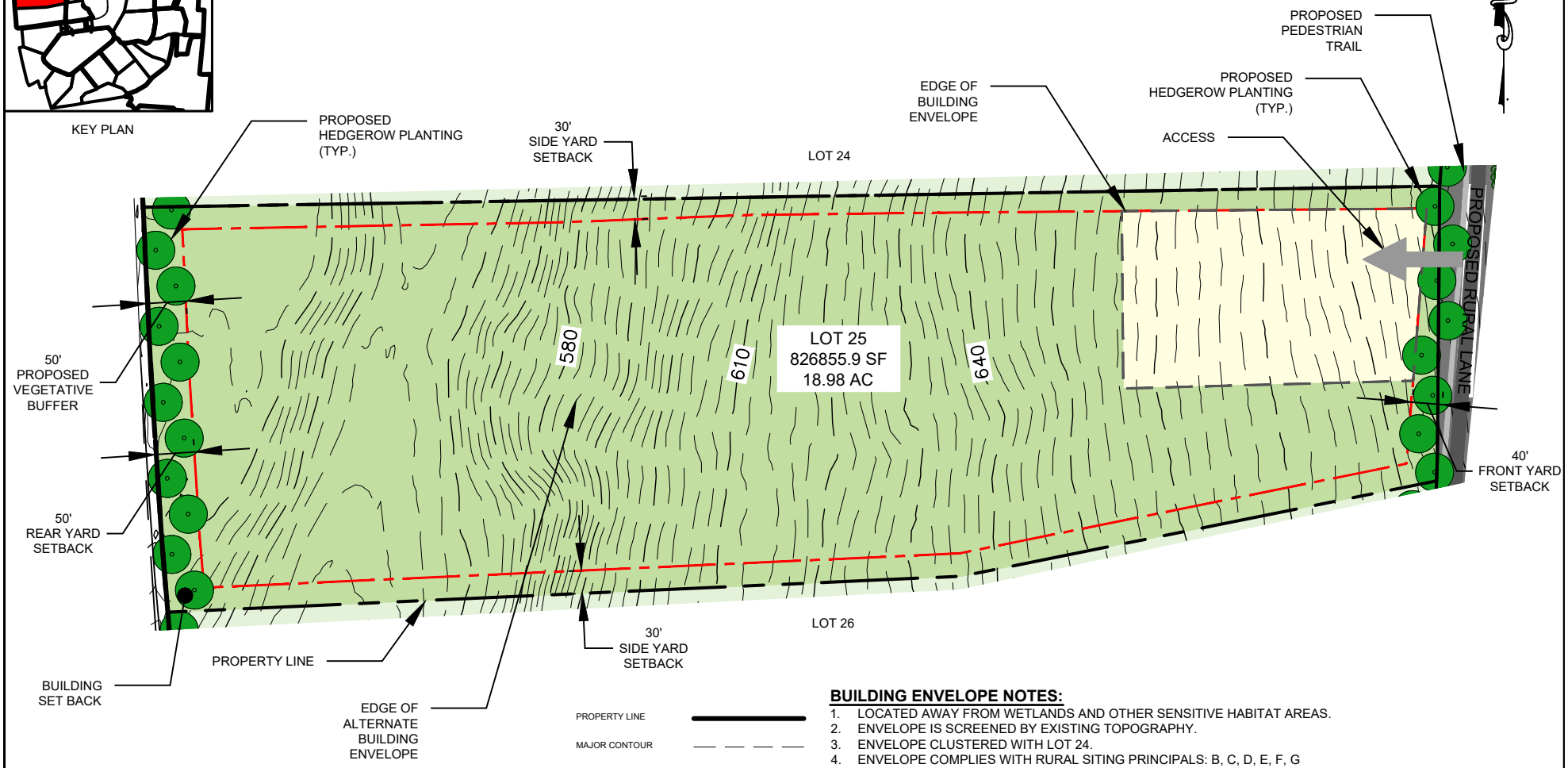
BUILDING ENVELOPE SITING ANALYSIS
LOT 24

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	26 of 28

LOT 25



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
2. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
3. ENVELOPE CLUSTERED WITH LOT 24.
4. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
5. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
6. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
7. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	18.98
BUILDING ENVELOPE (ACRES)	2.06
OPEN SPACE (ACRES)	16.93
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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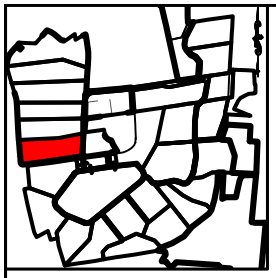
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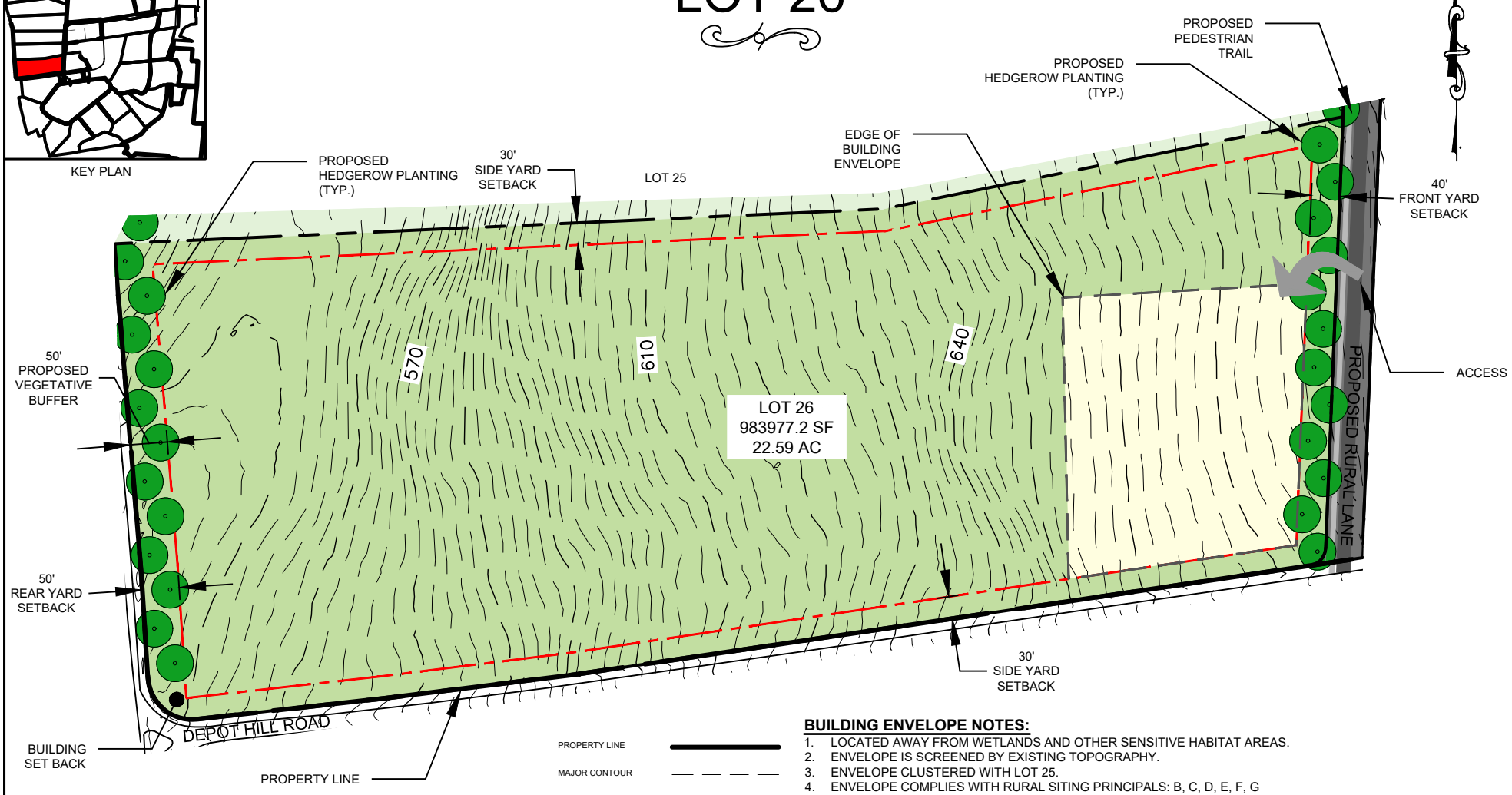
BUILDING ENVELOPE SITING ANALYSIS
LOT 25

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
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LOT 26



KEY PLAN



0 100' 200'

1" = 200'

GRAPHIC SCALE

PROPERTY LINE

MAJOR CONTOUR

AS OF RIGHT SETBACKS

BUILDING ENVELOPE

NYSDEC 100' BUFFER

TREE LINE

BUILDING ENVELOPE NOTES:

1. LOCATED AWAY FROM WETLANDS AND OTHER SENSITIVE HABITAT AREAS.
2. ENVELOPE IS SCREENED BY EXISTING TOPOGRAPHY.
3. ENVELOPE CLUSTERED WITH LOT 25.
4. ENVELOPE COMPLIES WITH RURAL SITING PRINCIPALS: B, C, D, E, F, G
5. ENVELOPE COMPLIES WITH SCENIC PROTECTION OVERLAY GENERAL SITE REQUIREMENTS: 1, 2, 3, 4, 5
6. ENVELOPE IS PLACED TOWARDS EDGE OF EXISTING OPEN SPACE/AGRICULTURAL FIELDS.
7. DEVELOPED IS SCREENED BY PROPOSED VEGETATED BUFFERS.

LEGEND
BUILDING ENVELOPE
AGRICULTURAL / OPEN SPACE
FOREST AREA
ROAD ROW
WETLANDS

LOT AREA (ACRES)	22.59
BUILDING ENVELOPE (ACRES)	2.70
OPEN SPACE (ACRES)	19.89
ROAD WIDTH	18'
TRAIL WIDTH	6'
MAXIMUM BUILDING HEIGHT	35'

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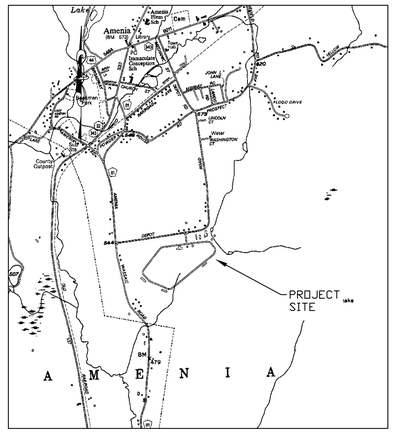
BUILDING ENVELOPE SITING ANALYSIS
LOT 26

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
1/25/2022	AS SHOWN	RED	RED	#21-006	28 of 28

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SEE NOTE ON PAGE 1

VICINITY PLAN


Lake
Amenia
Amenia Depot
Cem
Dinsmoor Golf Course
Amenia Union
Wassaic
Wiltsie
Wiltsie Cemetery
Amenia Hill
Amenia Hill Cemetery
Coopers Corners
Wilcox Cemetery
Wilcox
Wilcox Corners
Wilcox Corners Cemetery
Wilcox Lake
Wilcox Lake Dam
Wilcox Lake Outlet
Wilcox Lake Inlet
Wilcox Lake Inlet Dam
Wilcox Lake Outlet Dam

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SEE NOTE ON PAGE 1

Keane Stud Subdivision
Conservation Analysis

Visual Impact Analysis
Conceptual Viewshed Conditions Exhibit

Dated: 12/27/2022

Revised: 2/21/2023

Conservation Analysis Appendix D

SEE NOTE ON PAGE 1

ABOUT THIS DOCUMENT

This document and accompanying plans, photographic simulations, and other supporting information have been prepared at the request of the Amenia Planning Board as part of the Conservation and SEQR Analysis for the Keane Stud Subdivision.

The provided renderings have been prepared to demonstrate what a potential residential and agricultural, use and accompanying buildout of the proposed subdivision may look like following a full buildout scenario. Being a conventional, non-realty, type subdivision, no specific development is proposed for any of the lots at this time. As such, the residential and agricultural development shown within the renderings of this document are considered conceptual and subject to change depending on the selected development of any potential future owner.

The purpose of this document is to demonstrate that the potential buildout of the proposed subdivision lots is in compliance with the intent of underlying Rural Agricultural and Rural Residential zoning districts, as well as the added protections offered Scenic Protection Overlay District (SPO) and as such will not result in a negative visual effect of the site and the surrounding viewshed. Additionally, this document demonstrates that any potential buildout of the proposed subdivision will be low density, and will comply with rural character of the surrounding neighborhood.

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3.0 ALTERNATIVE BUILDOUT SCENARIO (VISUAL SIMULATIONS):

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3.2 Alternative Buildout Scenario Viewpoints
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ALT. POV Viewpoint 3: Old Route 22-Depot Hill Road Intersection
ALT. POV Viewpoint 13: NYS Route 44-DeLaVergne Hill
ALT. Aerial Viewpoint 16 – Parcel #403720

4.0 STATEMENT OF METHODOLOGY
Lunar Studios – Conventional Subdivision Renderings
Genesis Studios – Alternative Buildout Scenario Renderings

SUPPORTING DOCUMENTATION

- Keane Stud Subdivision – Preliminary Overall Subdivision Plat Set
- Keane Stud Subdivision – Conservation Analysis
- Keane Stud Subdivision – Visual Impact Analysis
- Keane Stud Subdivision – Building Envelope Siting Analysis
- Keane Stud Subdivision - Alternative Depot Hill Development/Conservation Subdivision

SOURCES

Visual Renderings:
- Conventional Subdivision: Lunar Studio: 3D Architectural Visualization and Design, Charles Leo – Owner/Artist
- Alternative Buildout Scenario: Genesis Studios: Architectural Renderings

Point-of-View Imagery:
Rennia Engineering Design, PLLC., Peter Sander, AICP – Project Planner, August 2022

Aerial Imagery:
Hudson Valley Aerial, Maurice Jackson – Owner/Operator, August 2022

SEE NOTE ON PAGE 1

1.0 ESTABLISHED VIEWPOINTS



SEE NOTE ON PAGE 1

Project Overview

The project consists of subdividing four (4) parcels of land, that when combined total ±704.925-acres. The subdivision will consist of the following:

- **Lot G-1 - Existing Equestrian Facility (to remain as agriculture)**
- **Lot G-2 - Existing Farm parcel that contains a federal wetland reserve easement.**
- **Lots F-1 & F-2 – Proposed Forest Conservation Parcels.**
- **Lots 1 - 26 – Proposed New Parcels (Agriculture & Residential).**
- **Lot 27 – Existing Developed Farm Residential Parcel.**

EXISTING CONDITIONS

The existing project parcels are located along Depot Hill Road, the bulk of which contain a mixture of rolling hills, agricultural fields, paddocks, several wetland areas, and barns. In the eastern portion of the site, rolling hills and fields give way to a steeply sloped forest, that extends to the eastern edge of the project site on top of “Rattle Snake Mountain”. Given the location of the project site and elevation above the valley bottom, it is partially visible from a number of roadways, including Powder House Road, Old Route 22 (CR9), NYS Route 22, and NYS Route 44. It is important to note that NYS Route 44 at DeLaverne Hill maintains a scenic overlook looking out over valley, a portion of which contains the project site. From these areas, travelers can catch glimpses of the expansive agricultural and forest areas.

Portions of the site is also visible from neighboring adjacent parcels, the bulk of which are located along Depot Hill and Powder House Road. While the entire site is not visible from these parcels, portions of the proposed lots may be seen from these neighboring parcels.

PROPOSED CONDITIONS

The proposed project is a conventional subdivision. Due to each new lot being greater than 5-acres in size, it is also considered a non-realty subdivision. As such the proposed lots and two rural lanes are being created as part of this project do not require a formal development plan. Pursuant to the Amenia Zoning Code, once the lots have been subdivided future lot owners are required to obtain Planning Board approval for certain uses permitted within the RR & RA Zoning and Scenic Protection Overlay Districts. Given the intent of the underlying districts, most residential uses will require future Planning Board Approval.

In order to analyze how the potential buildout of the parcel(s) may look, the following design assumptions have been followed in the generation of the provided renderings:

- A mixture of residential and agricultural structures, the intended use of the proposed parcels, have been rendered to demonstrate a potential buildout.
- Residential structures are also shown at approximate size of +3,000 SF footprint. All residential structures (i.e: houses, garages) are shown within proposed building envelopes.
- Agricultural structures, are shown at a similar size of existing barns present onsite, varying between 5,000 SF – 9,000 SF. Being permitted by right, agricultural structures are shown both within and outside of building envelopes.
- Three (3) proposed hedgerows are shown. Two along the proposed rural lanes and one along Old Route 22. A mixture of deciduous and evergreen plantings, rendered at varying levels of maturity, are shown in key areas to demonstrate the reduced visibility from neighboring viewsheds that the plantings provide and to enhance the existing agricultural aesthetic of the project site.

SEE NOTE ON PAGE 1

1.2 ESTABLISHED VIEWPOINTS — Viewpoint Descriptions

The following section indicates 16 viewpoint locations that have been selected by the Planning Board to assess the potential visual impact that a future residential and/or agricultural buildout of the proposed Keane Stud Subdivision lots may have on surrounding viewshed. There are two different types of viewpoints that have been prepared: Point-of-View (POV) Viewpoints and Aerial Viewpoints. Points-of-View viewpoints provide on the ground perspectives of how the site is seen from adjacent roadways and parcels. While Aerial Viewpoints provide a birds-eye view of the project site.

POV Viewpoint 1

Eastern side of Old Route 22 (C.R. 9), approximately ±850 south of the Amenia Lake Road-Old Route 22 junction. The view is looking southeast-east across project parcel #212034.

POV Viewpoint 2

Eastern side of Old Route 22 (C.R. 9) at the approximate midpoint between Amenia Lake Road-Old Route 22 and Depot Hill Road-Old Route 22 intersections. Two separate viewpoint were taken at this location: one northerly facing (#2a) the other southernly (#2b).

POV Viewpoint 3

Taken from the interior grass triangle of the Depot Hill Road-Old Route 22 intersection. The view looks east up Depot Hill Road, in direction of one of two new town-private road intersections proposed for the subdivision.

POV Viewpoint 4

Taken toward the center of Depot Hill Road, approx. 50' west from the southeastern corner of project parcel #212034. The view looks north up along the proposed north-south bound Rural Lane A, which will meet Depot Hill Road to form a four-way intersection with the portion of Rural Lane A that is proposed to continue south into project parcel #403720.

POV Viewpoint 5

Taken towards the center of an existing agricultural roadway running through parcels # 403720, 515033 and 570145. The view is looking north, along the north-south bound portion of proposed Rural Lane B.

POV Viewpoint 6

This image was taken from the eastern side of an existing agricultural loop road, running through parcel #403720. The view looks east towards the subdivision lots that are adjacent to the proposed forest conservation parcels that comprise the eastern border of the subdivision parcels.

POV Viewpoint 7

Imagery for this viewpoint was taken at the base of an existing residential driveway serving adjacent parcel #365912. The view looks south past another adjacent parcel not associated with this project, parcel #515886, towards the southern most portion of project parcel #403720.

POV Viewpoint 8

Taken along the western side of Depot Hill Road right-of-way, in front of the residence located on parcel #379932. The view looks east across the lands located on parcel #515886 towards the proposed parcels located in parcels # 515886 and towards the lots to be created on parcels #403720 and #515033.

POV Viewpoint 9

Taken from the eastern side of Depot Hill Road facing east-southeast. The viewpoint is located approximately +/-100' north of the driveway entrance for parcel #375968.

POV Viewpoint 10

Taken from the eastern side of Depot Hill Road. The viewpoint is +/-150' from the proposed Rural Lane A&B-Depot Hill Road intersection. Two separate viewpoint angels were taken from this location: one southernly (#10a), looking towards where the new roads ways will meet, the other east (#10b), looking out over the adjacent parcel (#430145) towards the northerly bound Rural Lane B.

POV Viewpoint 11

Taken from the southern side of Powder House Road approximately 430' southeast of the Ohandley Drive intersection, where the road makes a 90° bend. The viewpoint is looking south across project parcel #212034.

POV Viewpoint 12

Taken from the eastern shoulder of NYS Route 22, at the base of the existing driveway accessing parcels #885633 and #882575, the former Town of Amenia landfill. The view looks east towards parcel #051601, Old Route 22, and project parcel #403720.

POV Viewpoint 13

Taken from the western shoulder of NYS Route 44, directly east and at a higher elevation than the Scenic Overlook. The viewpoint looks at east of toward the project site and contains view of all the project parcels.

Aerial Viewpoint 14

Drone imagery of the project site was taken from adjacent parcels just west of NYS Route 22 at an elevation of 400' looking east. The viewpoint shows an adjacent parcel between NYS Route 22 and Old Route 22 as well as Depot Hill Road and the entire project site.

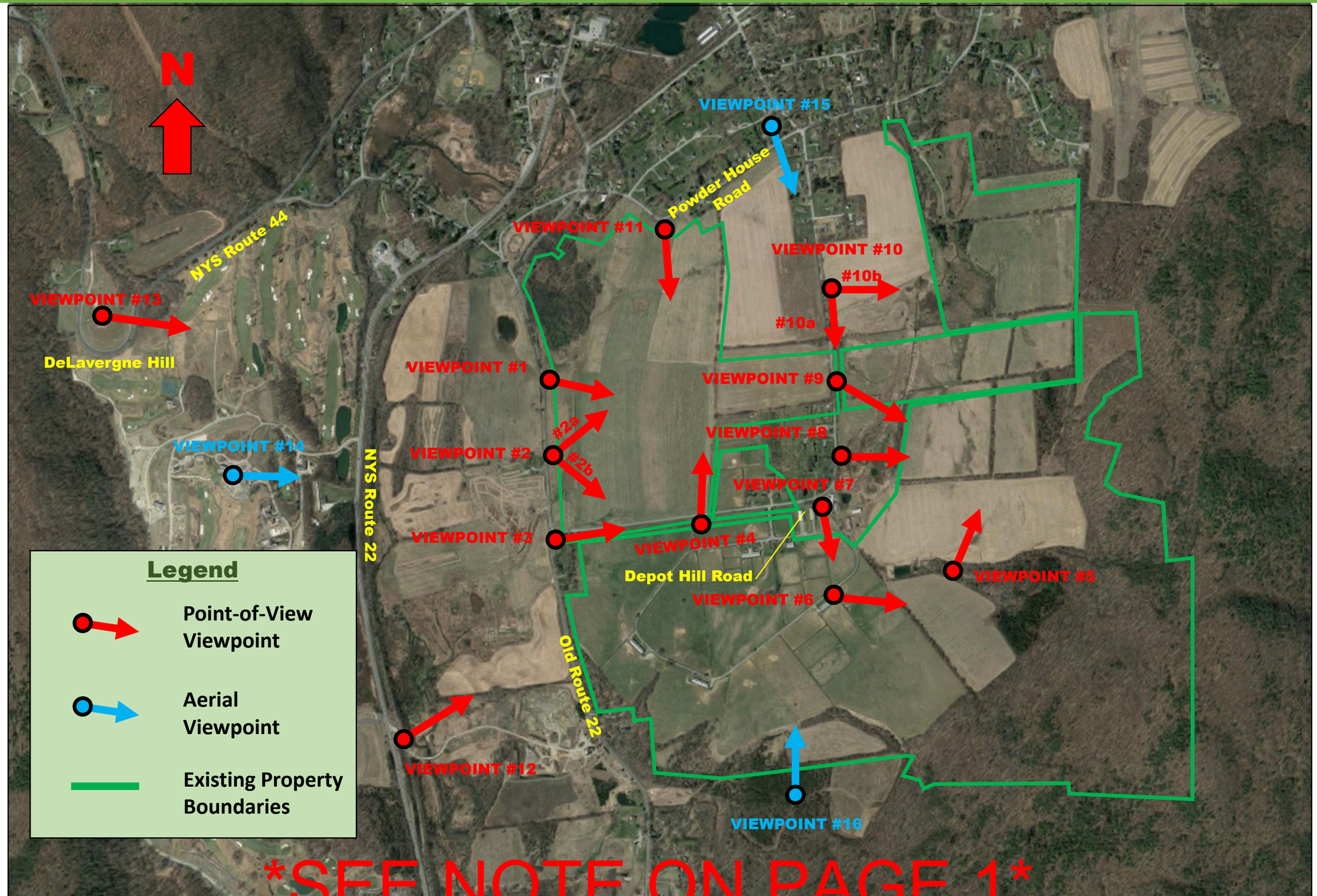
Aerial Viewpoint 15

Drone imagery of the project site was taken from the Powder House Road-Prospective Ave-Depot Hill Road intersection at an elevation of 400' looking south. The viewpoint shows neighboring 1-2-acres residential parcels, several adjacent agricultural parcels, as well as all of the project parcels, excluding the northern most portion of lot #570145, which is proposed to remain under its current ownership.

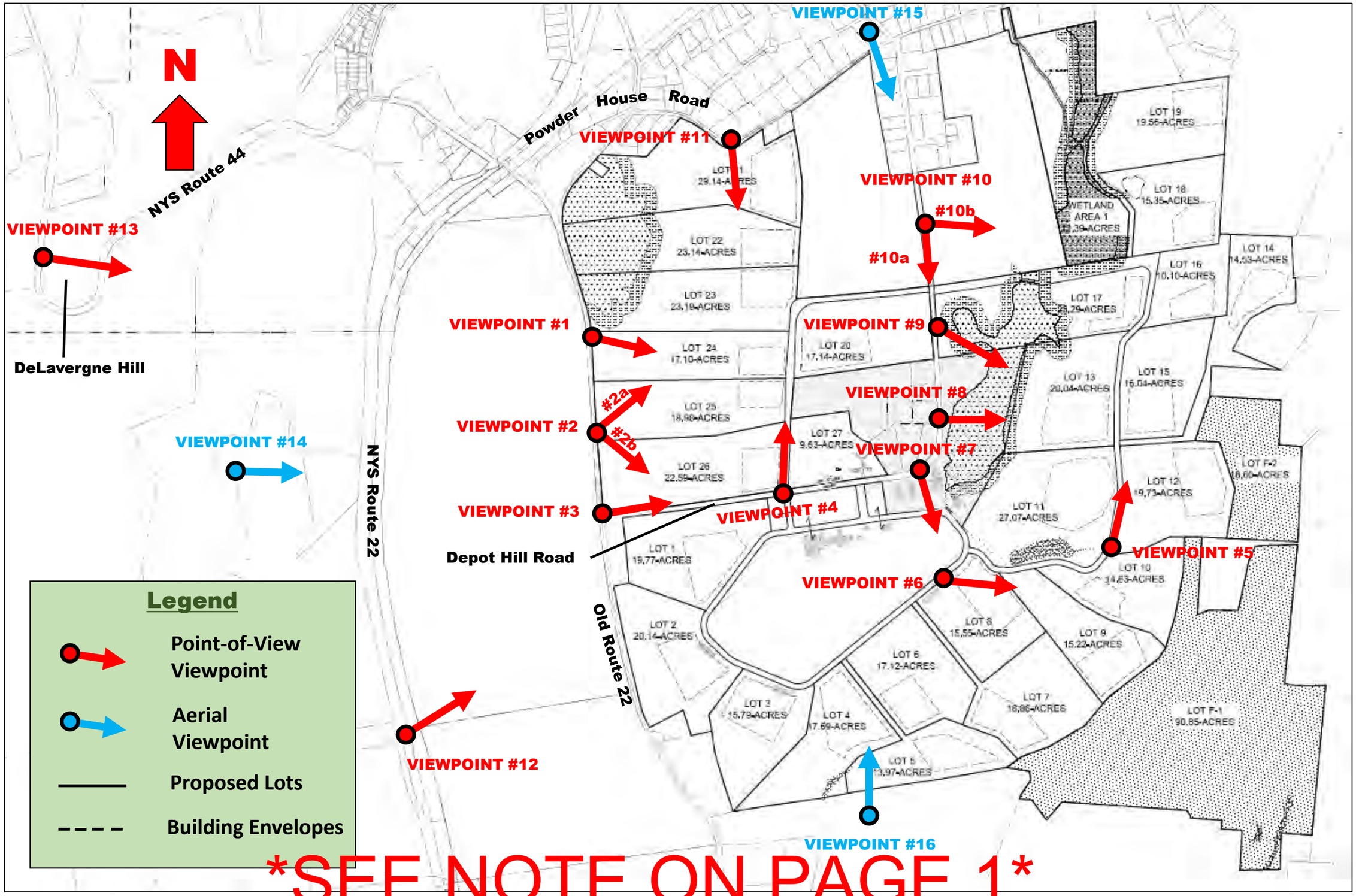
Aerial Viewpoint 16

Drone imagery of the project site was taken from the adjacent parcels to the south of the project site at an elevation of 400' looking north. The viewpoint shows the existing equestrian facility and existing agricultural roadways.

SEE NOTE ON PAGE 1



SEE NOTE ON PAGE 1

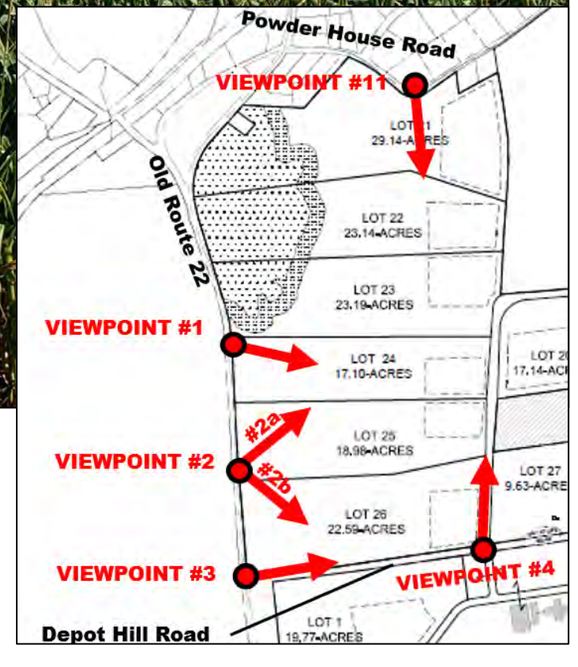


SEE NOTE ON PAGE 1



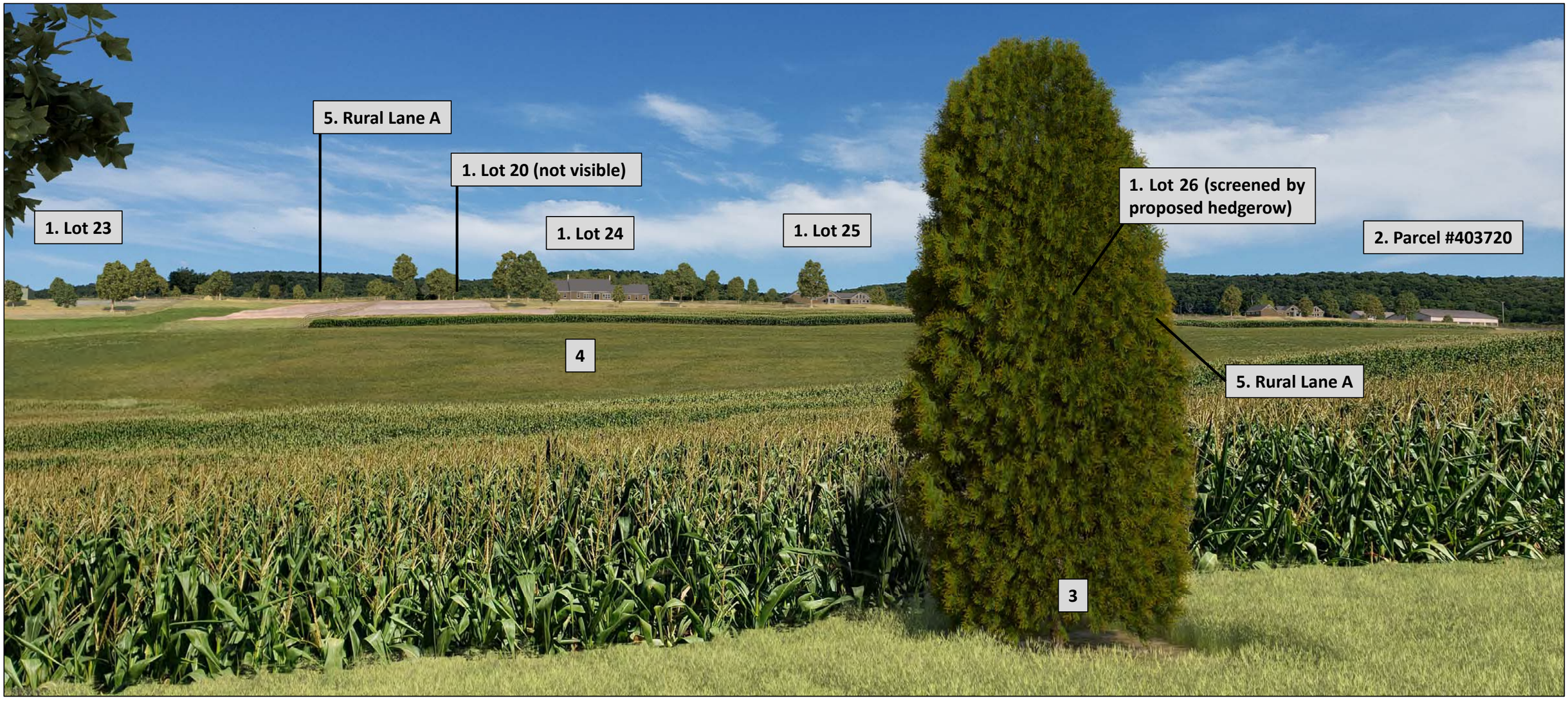
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:12 PM
Location: Old Route 22 – just south of Dunn Road Intersection, Facing East-Southeast
Coordinates: 41°50'10.9"N 73°33'33.7"W

SEE NOTE ON PAGE 1

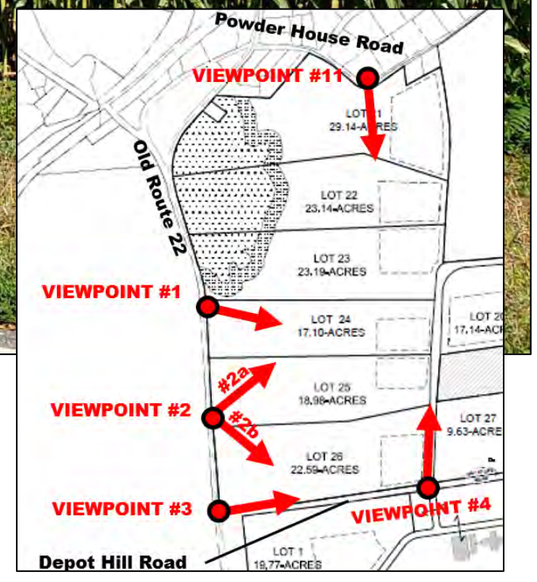


Rendering Notes:

1. Six (6) residential-agricultural lots, Lots 20, 23-27, are shown, with potential residences located within building envelopes that have been clustered with envelopes on adjacent parcels to reduce sprawl.
2. Existing equestrian facilities on parcel #403720 to remain.
3. View of the proposed lots are screened with a mixture of deciduous and evergreen plantings along Old Route 22 and along Rural Lane A.
4. Existing agricultural fields will continue to exist and may span multiple lots depending on property owner preference.
5. Proposed Lots constructed Rural Lane A, which is proposed to connect to Depot Hill Road in two locations.

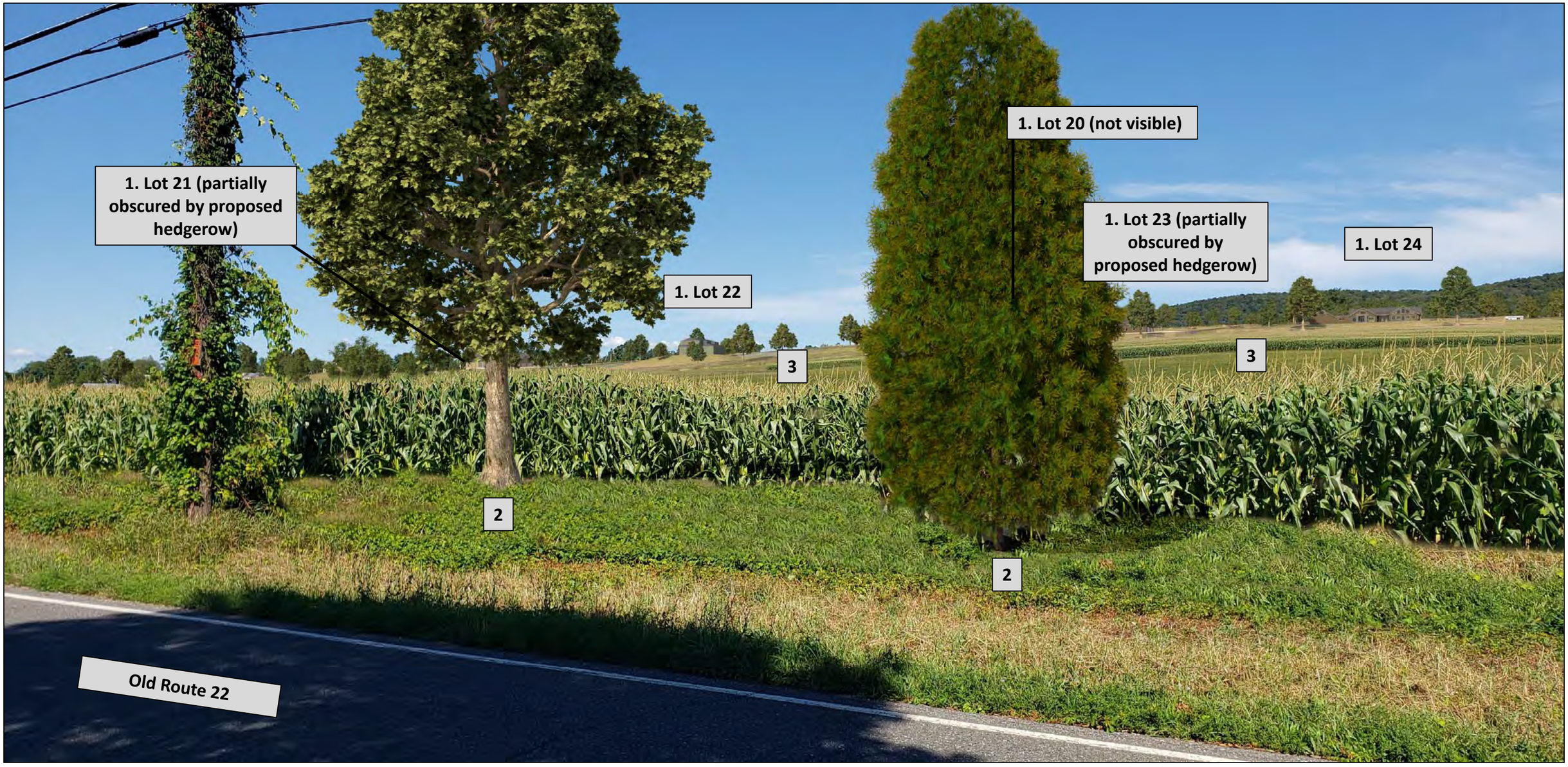
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:20 PM
Location: Old Route 22 – Between Depot Hill and Dunn Rd. – Facing East Northeast
Coordinates: 41°50'04.5"N 73°33'33.6"W

SEE NOTE ON PAGE 1

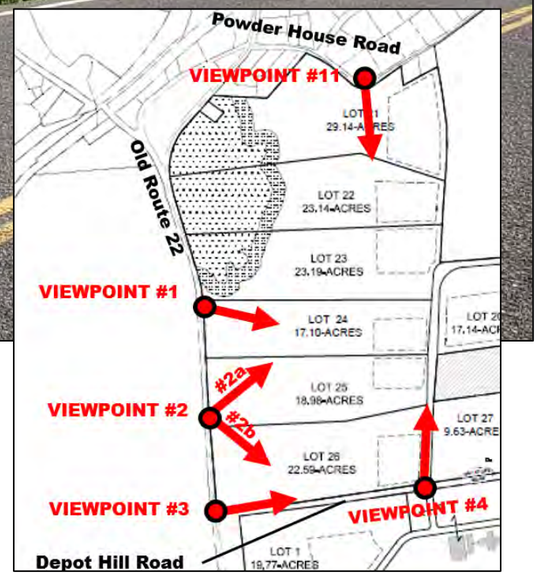


Rendering Notes:

1. Constructed along proposed Rural Lane A, five (5) residential-agricultural, lots 20-24, with potential residences located within building envelopes that have been clustered towards envelopes on adjacent parcels to reduce sprawl and cluster residences within the agricultural parcels.
2. View of the proposed lots are screened with a mixture of deciduous and evergreen plantings along Old Route 22 and along Rural Lane A.
3. Existing agricultural fields will continue to existing and may span multiple lots.

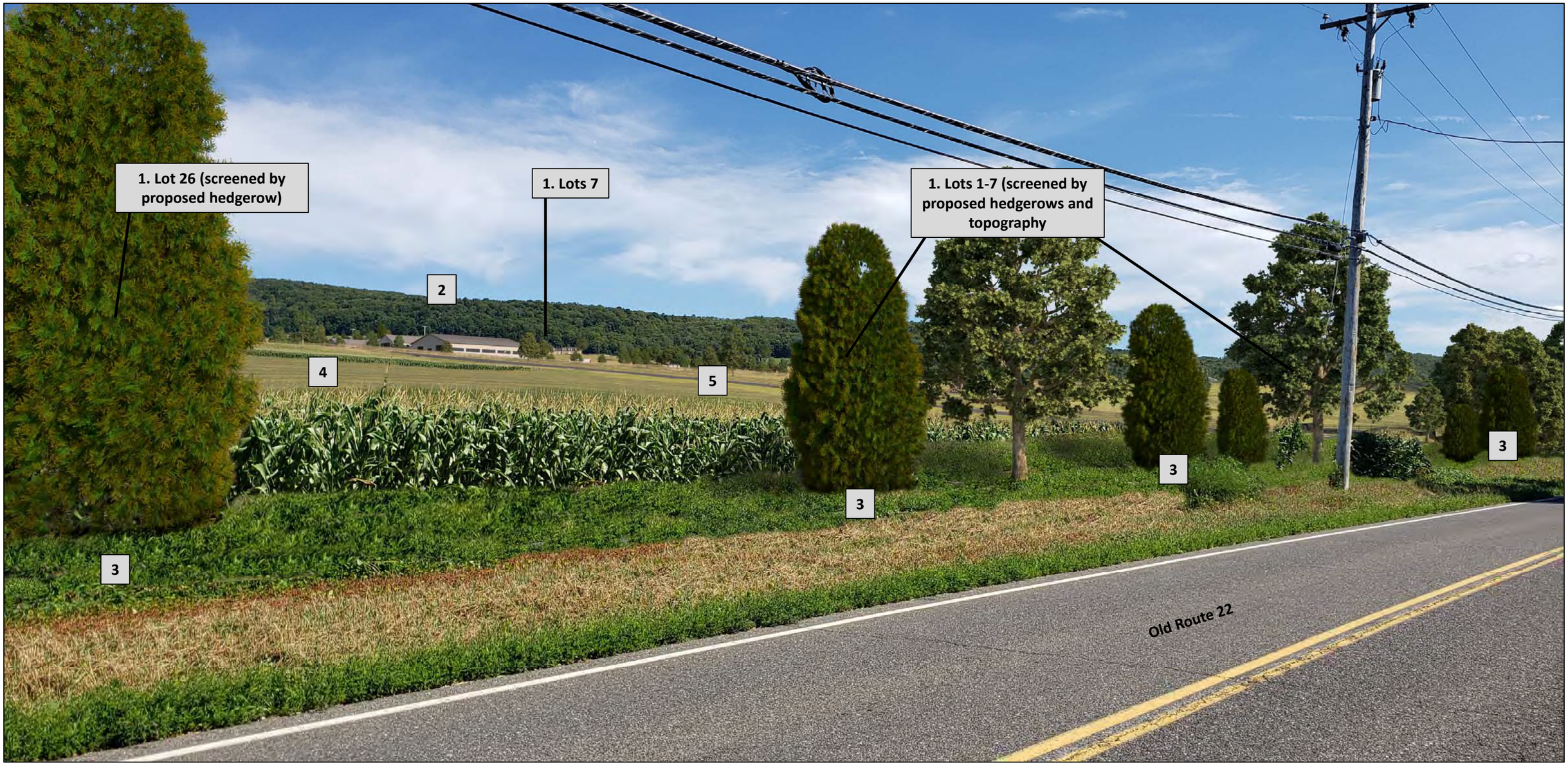
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:20 PM
Location: Old Route 22 – Between Depot Hill and Dunn Rd. – Facing East Southeast
Coordinates: 41°50'04.5"N 73°33'33.6"W

SEE NOTE ON PAGE 1

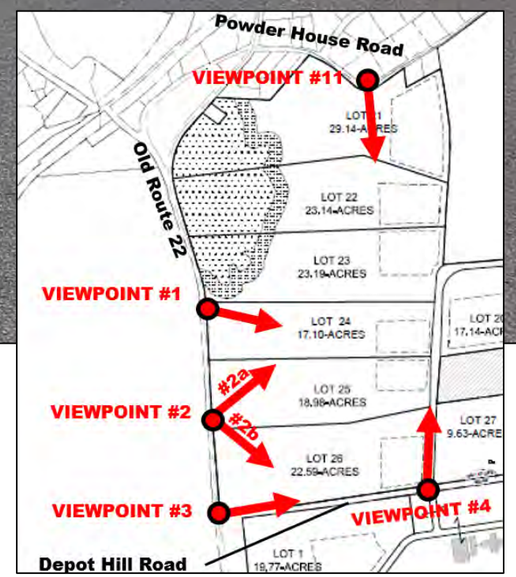


Rendering Notes:

1. Multiple residential-agricultural lots, 1-7, are shown constructed along existing Rural Lane C, with potential residences located within building envelopes that have been clustered with envelopes on adjacent parcels to reduce sprawl.
2. Existing equestrian facilities on parcel #403720 to remain.
3. View of the proposed lots are screened with a mixture of deciduous and evergreen plantings along Old Route 22.
4. Existing agricultural fields will remain and may span multiple lots.
5. Depot Hill Road.

SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:23 PM
Location: Old Route 22 – Depot Hill Road Intersection – Facing East
Coordinates: 41°49'55.3"N 73°33'32.1"W

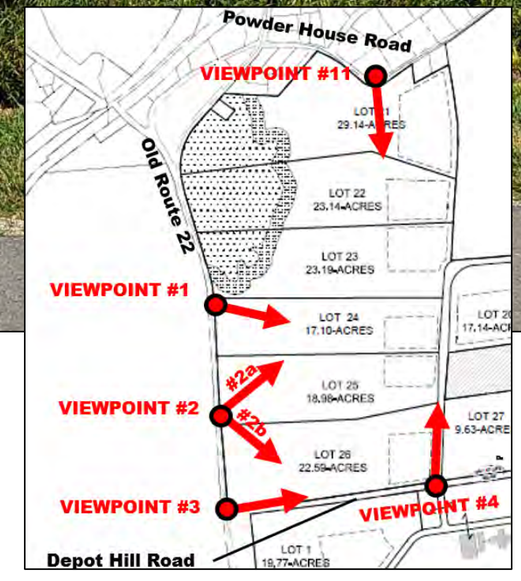
SEE NOTE ON PAGE 1



Rendering Notes:

1. Taken from the intersection of Old Route 22 and Depot Hill Road, the rendering shows the proposed four way intersection created by the construction of Rural Lane A on parcels #403720 and #212034.
2. The renderings also provides views of proposed Lots 1, 20, 23-27, and the existing equestrian facility, views of which are obstructed by natural changes in topography, existing vegetation , and proposed hedgerow planting associated with Rural Lane A. The rendering highlights how building envelopes have been located away from existing roadway which reduces the overall visibility of potential development.
3. Existing agricultural fields will remain and may span multiple lots.

SEE NOTE ON PAGE 1



Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:27 PM
Location: Depot Hill Road Intersection – Facing North
Coordinates: 41°49'57.9"N 73°33'11.2"W

SEE NOTE ON PAGE 1

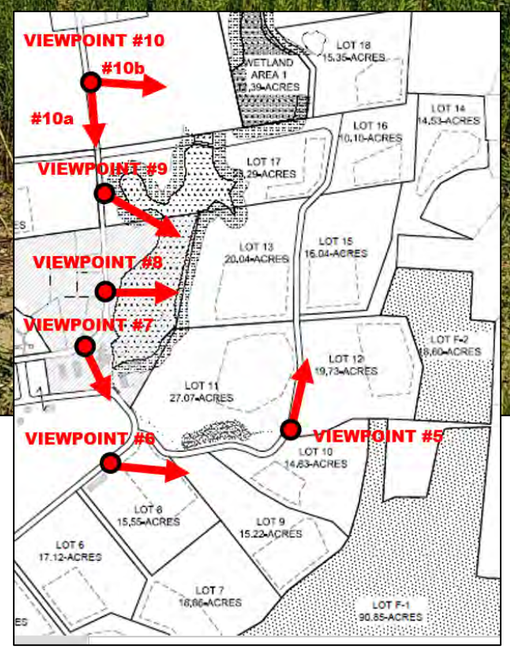


Rendering Notes:

1) Proposed Rural Lane A connection/intersection with Depot Hill Road. The rendering highlights the intent to follow existing agricultural trails/roadways as the base for the new private roadways.
2) Looking north towards Lots 20-27, the proposed rural lanes will preserve the country aesthetic of the site, adhering to the less intensive rural lane standards described in §105.22H of the Town of Amenia Subdivision Code.
3) Rural lanes will be provided with enlarged grass shoulders/trails and planted with a mixture of evergreen and deciduous trees, which will breakup view lines of potential development from adjacent parcels and enhance wildlife habitat.

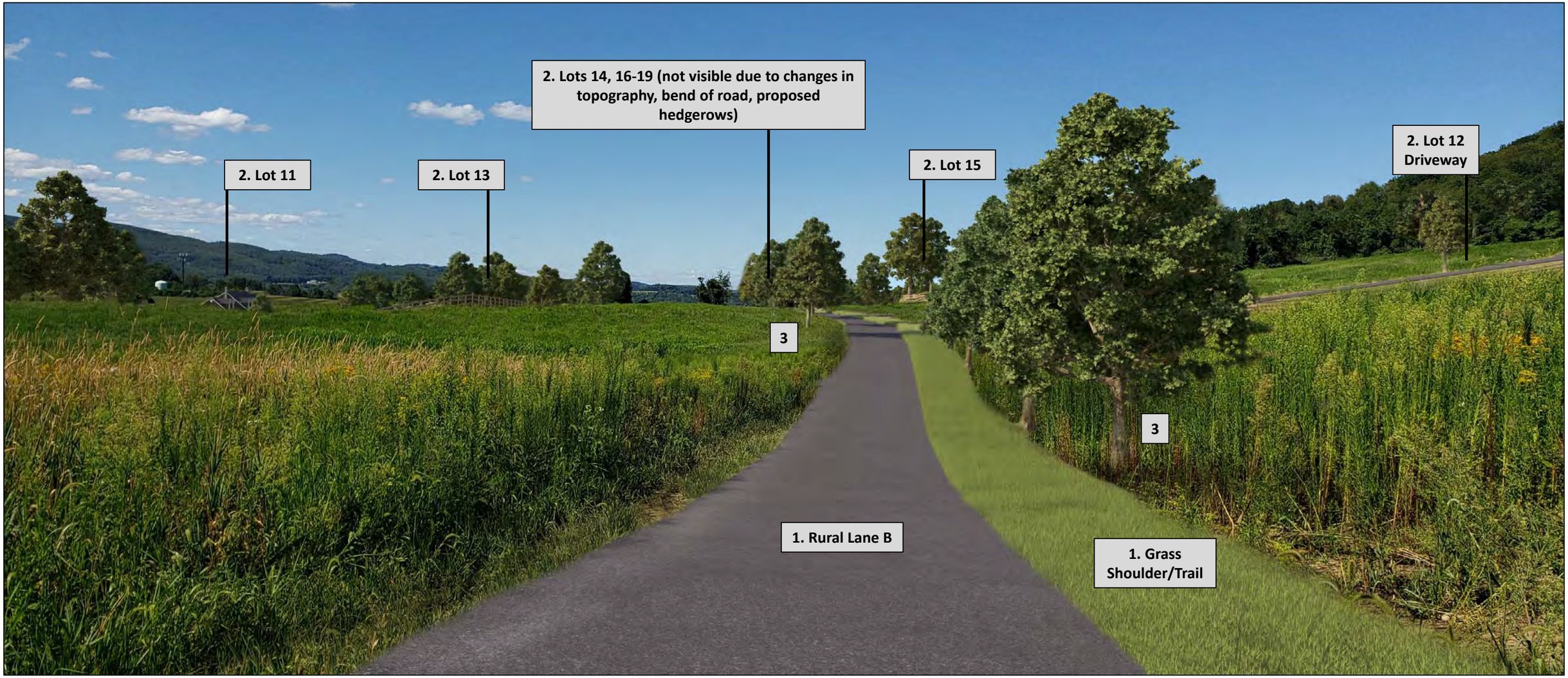
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:40 PM
Location: Parcel #403720, Just north of Existing Stream Crossing, Facing North
Coordinates: 41°49'52.4"N 73°32'32.9"W

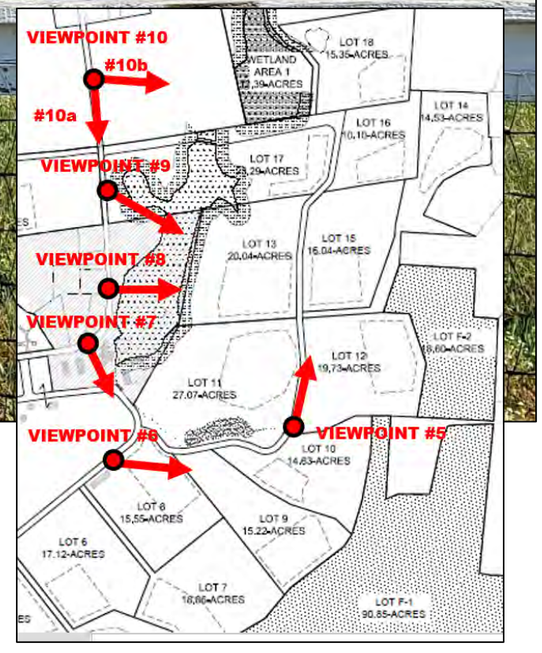
SEE NOTE ON PAGE 1



Rendering Description:

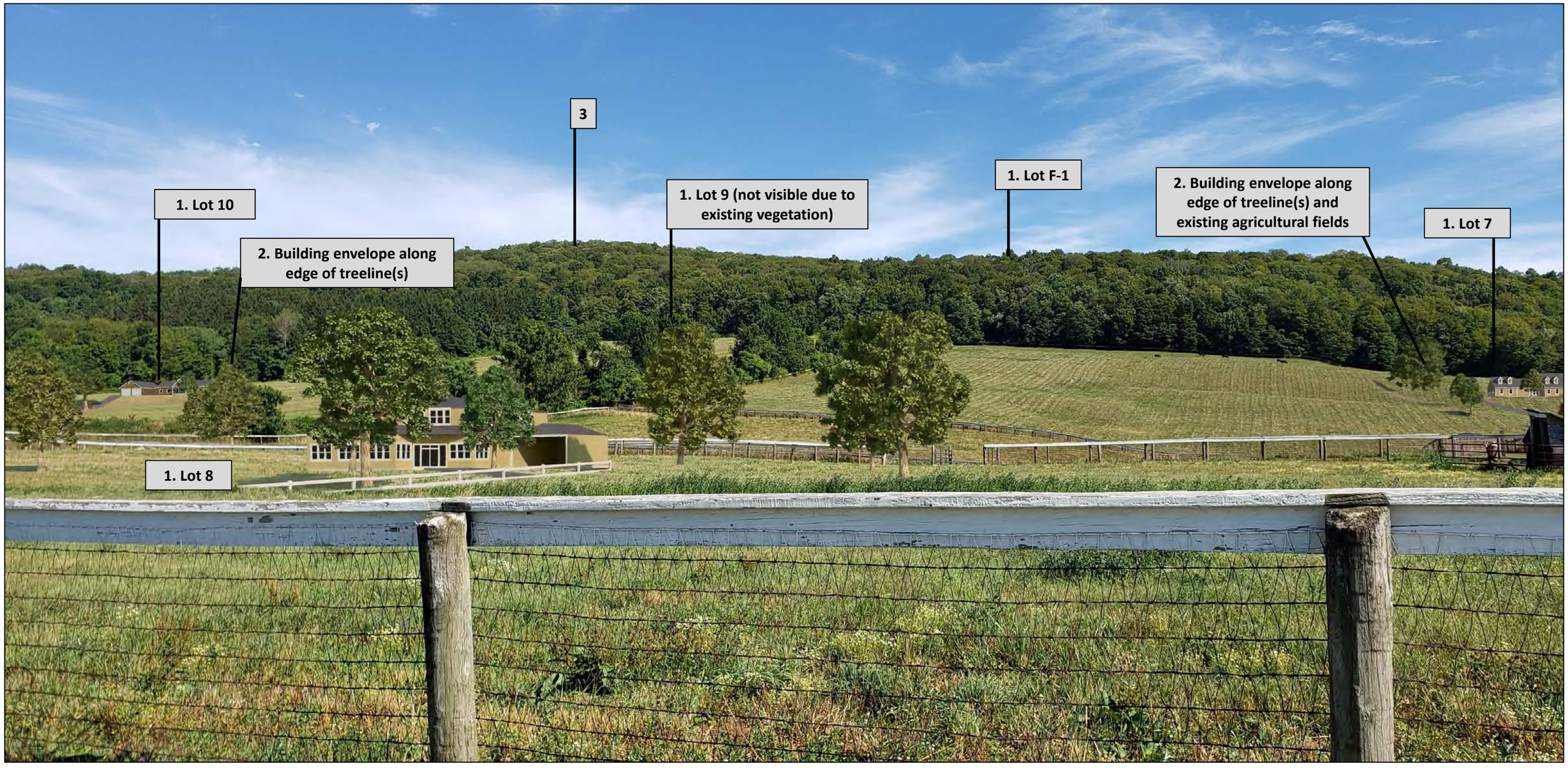
1. Proposed Rural Lane B, which will connect to an existing agricultural road (Rural Lane C) and continue North through existing parcels #403720 and #515033. As with Rural Lane A, Rural Lane B has also been designed to follow existing agricultural trails/roadways and hedgerows present throughout the site and will also be provided with an enlarged grass shoulder/trail.
2. Rural Lane B will provide access to Lots 9-19 (Lots 9 & 10 located south of viewpoint). The rendering highlights how the proposed project utilizes existing agricultural roadways to lessen the impact of road construction and emphasize the low-density and rural/agricultural nature of the proposed subdivision.
3. Proposed Road B hedgerows will provide enhanced wildlife habitat and breaks up viewlines of the interior portion of the project site.

SEE NOTE ON PAGE 1



Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 3:49 PM
Location: Parcel #403720, Proposed Rural Lane C, Facing East
Coordinates: 41°49'49.5"N 73°32'52.8"W

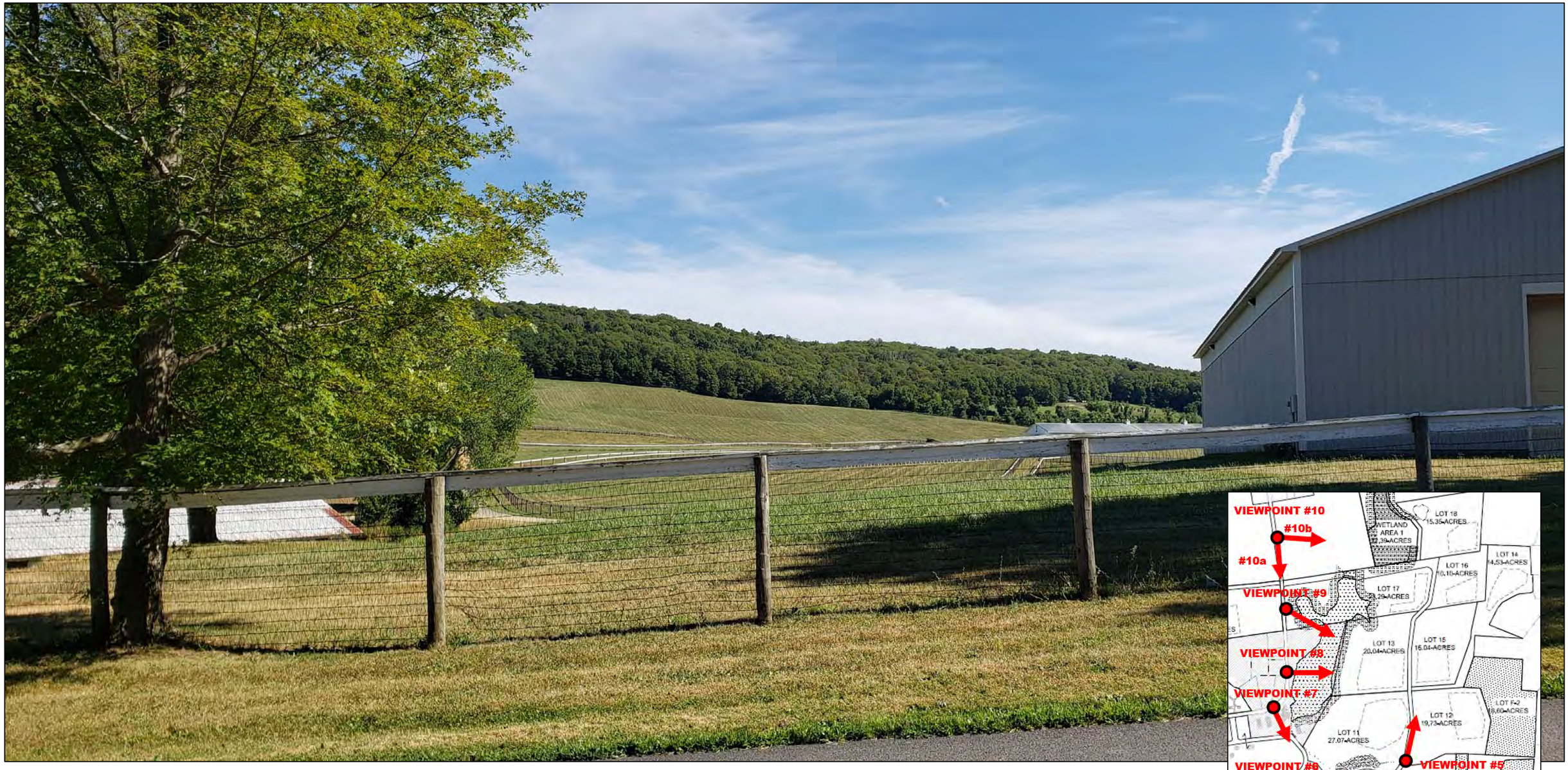
SEE NOTE ON PAGE 1

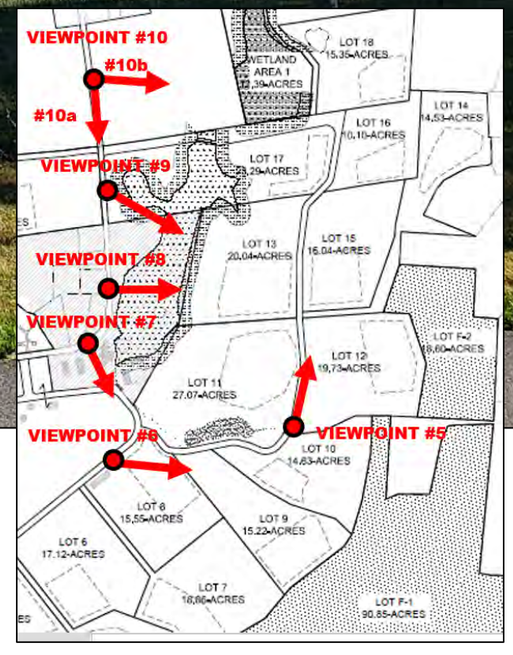


Rendering Description:

1. From an existing agricultural roadway (Rural Lane C), the rendering provides views of proposed lots 7-10, as well as Forest Conservation parcel F1.
2. Envelopes have been developed for areas that either contain existing agricultural development or in areas of the site that are adjacent to, but not within, existing treelines. In utilizing existing site features, the established building envelopes help screen the visual impacts of potential development by reducing its prominence and blending it into existing background features.
3. The rendering also shows some of the highest portions of the site, which demonstrates how a potential buildout will continue to maintain the thickly forested land along the prominent crestline of the project site.

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Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:06 PM
Location: Depot Hill Road, base of Parcel #365912 driveway, Facing South Southeast
Coordinates: 41°49'59.9"N 73°32'55.8"W

SEE NOTE ON PAGE 1



Rendering Notes:

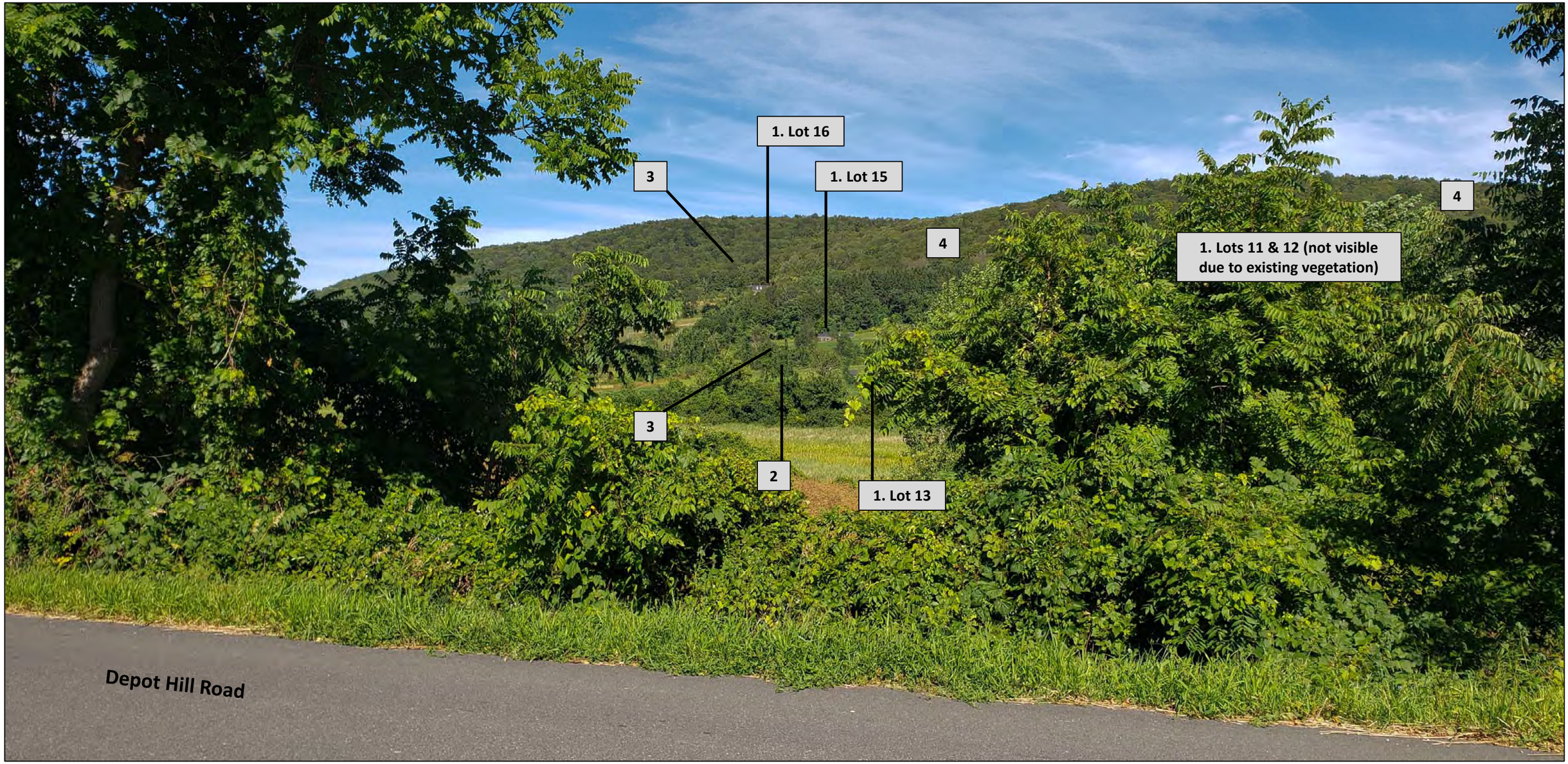
1. Taken from the base of an existing driveway located on residential parcel #365912 and looking out over equestrian parcel G-1 and Lots 5-8, the rendering highlights the low visibility of potential development from the perspective of neighboring parcels closest to the project site.
2. Numerous existing agricultural/equestrian facilities and site features, existing/proposed vegetative screening, and natural changes in topography present on both project and adjacent parcels will screen significant portions of development from the majority of neighbors along Depot Hill Road.
3. Buildings envelopes focused around existing agricultural fields and treelines reduce the prominence and visibility of potential development.

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Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:09 PM
Location: Depot Hill Road, base of Parcel #379932 driveway, Facing South Southeast
Coordinates: 41°50'04.9"N 73°32'53.0"W

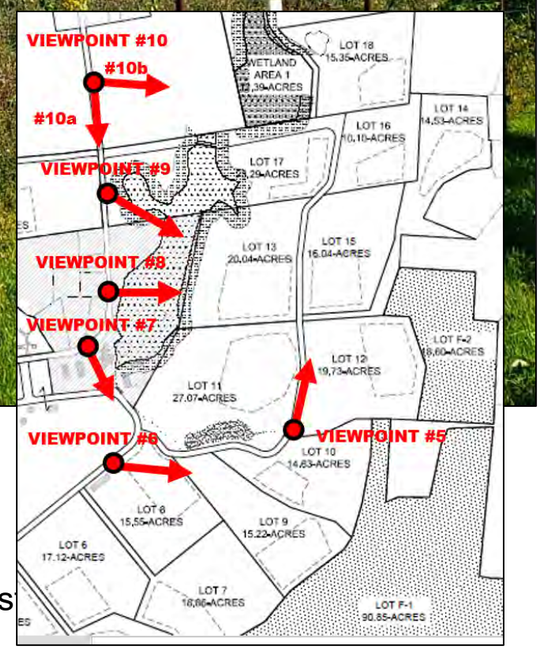
SEE NOTE ON PAGE 1



Rendering Notes: Taken from the base of an existing driveway located on residential parcel #379932 looking east through the most exposed portion of the existing vegetative screening along Depot Hill Road, this rendering highlights how the placement of proposed building envelopes reduce visibility of the site from neighboring parcels.

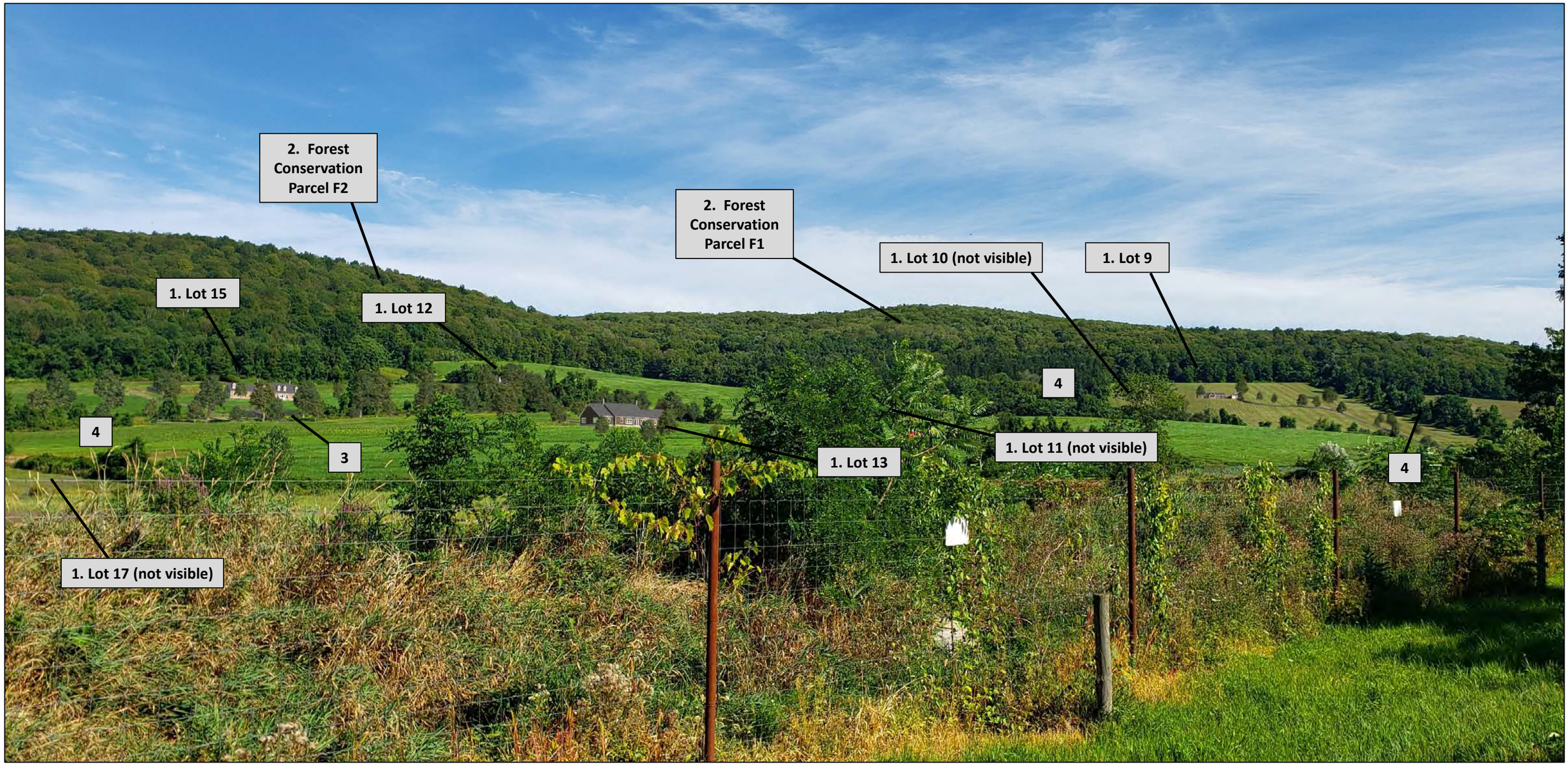
1. The rendering provides views of Lots 11-16, but demonstrate very little visibility due to existing vegetative screening along Depot Hill Road.
2. Proposed Rural Lane B, to utilize existing and proposed hedgerows to screen potential development and enhance wildlife corridor,
3. Placement of building envelopes in less prominent areas of the proposed parcels, and the low density nature of the proposed subdivision.
4. Forest Conservation Parcel (Lot F-2).

SEE NOTE ON PAGE 1



Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:17 PM
Location: Depot Hill Road, Just north of Wetland Easement entrance, Facing East Southeast
Coordinates: 41°50'12.7"N 73°32'59.3"W

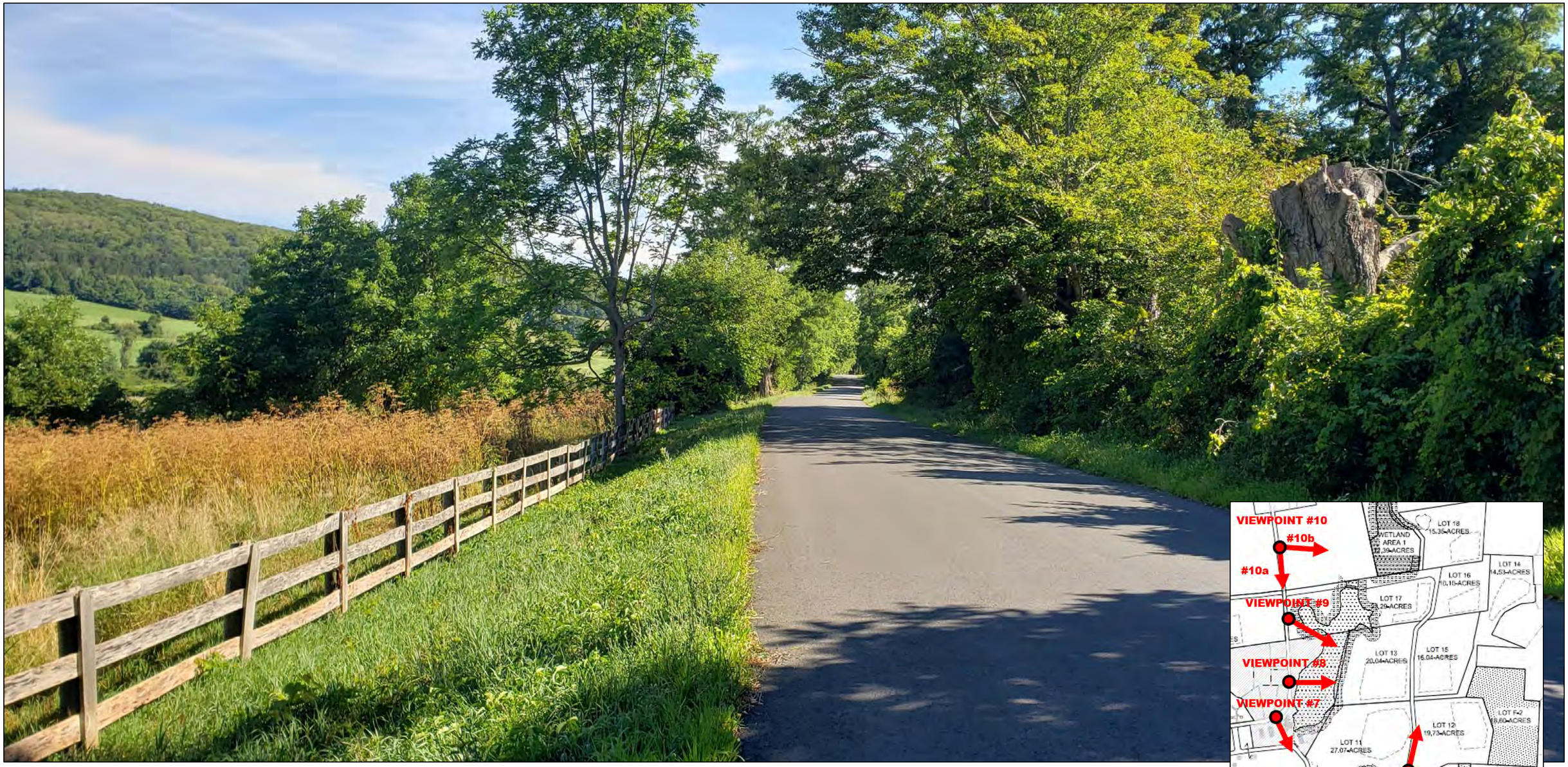
SEE NOTE ON PAGE 1

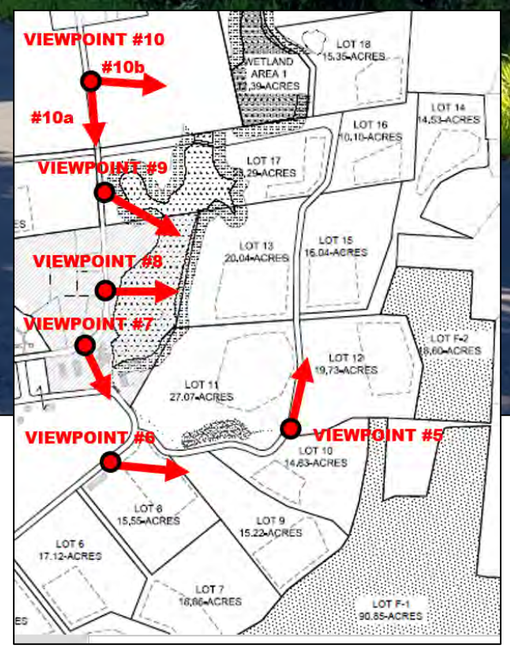


Rendering Notes:

1. The rendering provides an east-southeast view of the Lots 9-15, and Lot 17.
2. Forest Conservation Parcels F1 & F2,
3. Rural Lane B runs along existing hedgerows present throughout the site, which will be enhanced by additional plantings further reducing its visibility from Depot Hill Road.
4. The renderings also highlight the careful placement of building envelopes in discrete locations, utilizing existing treelines, site features, and natural changes of topography to reduce prominence and visibility of a potential buildout.

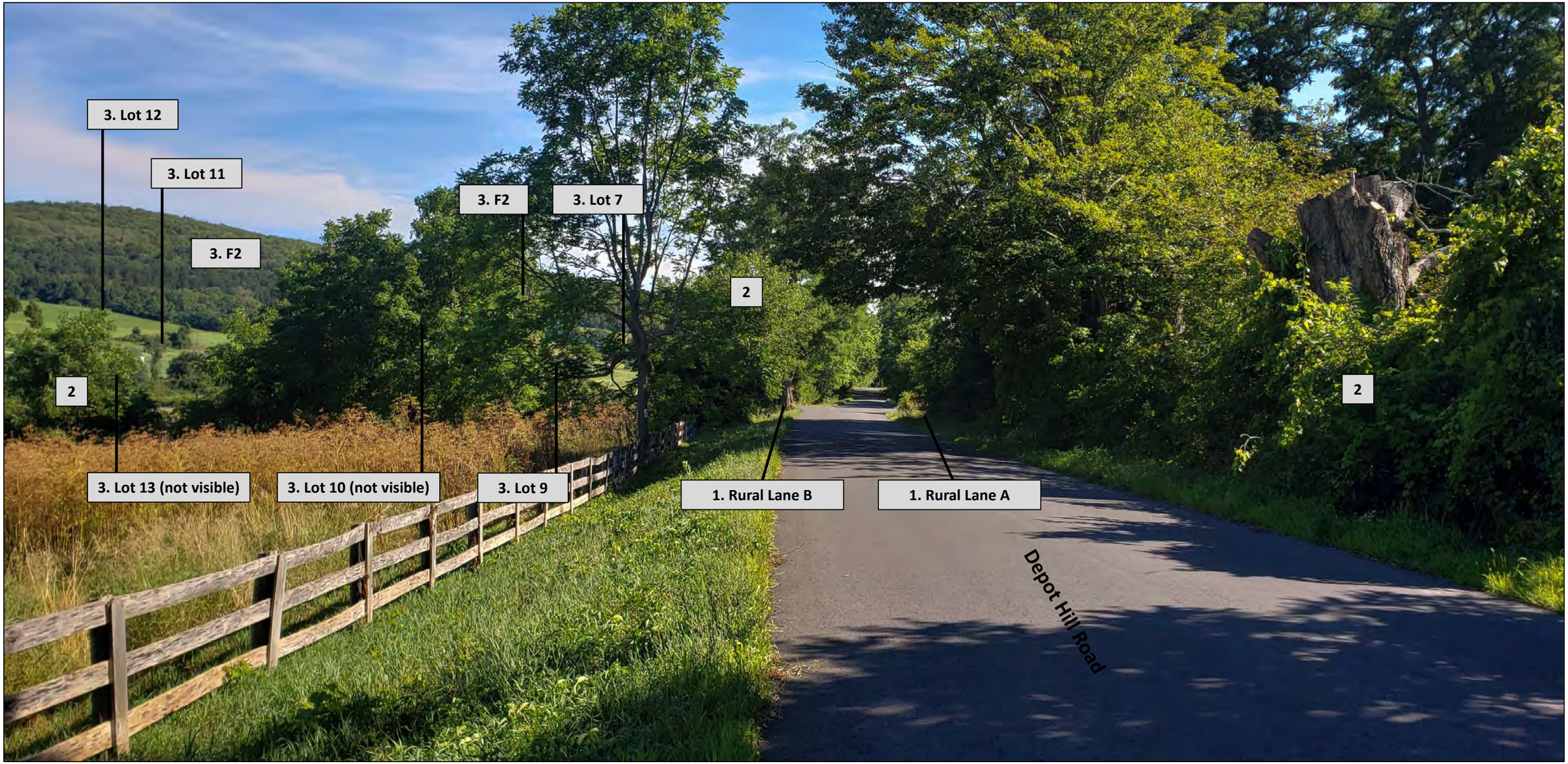
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:21 PM
Locations: Depot Hill Road – Just north of Project Parcel #515033 – Facing South
Coordinates: 41°50'17.2"N 73°32'53.7"W

SEE NOTE ON PAGE 1

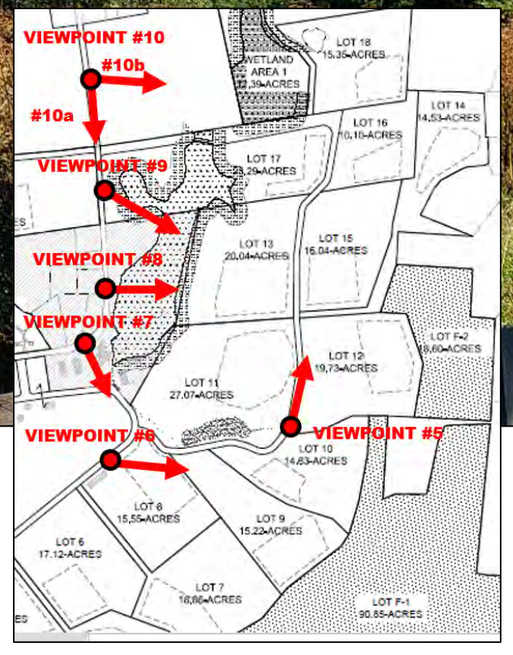


Rendering Notes:

1. The rendering provides a southward facing view down Depot Hill Road towards the proposed Rural Lane A – B intersection. The proposed rendering shows that the proposed subdivision and new intersection shall have minimal effect on the views of people traveling along Depot Hill road. The proposed intersection for Rural Lanes A & B, will be largely obscured by existing hedgerows ring the perimeter of the project site, with minimal clearing to be provided to ensure adequate sight lines.
2. The rendering also highlights the substantial vegetative buffer that borders both the western and eastern side of Depot Hill Road.
3. The rendering also shows Forest Conservation Parcels F1 & F2, and proposed subdivision Lots 9-13.

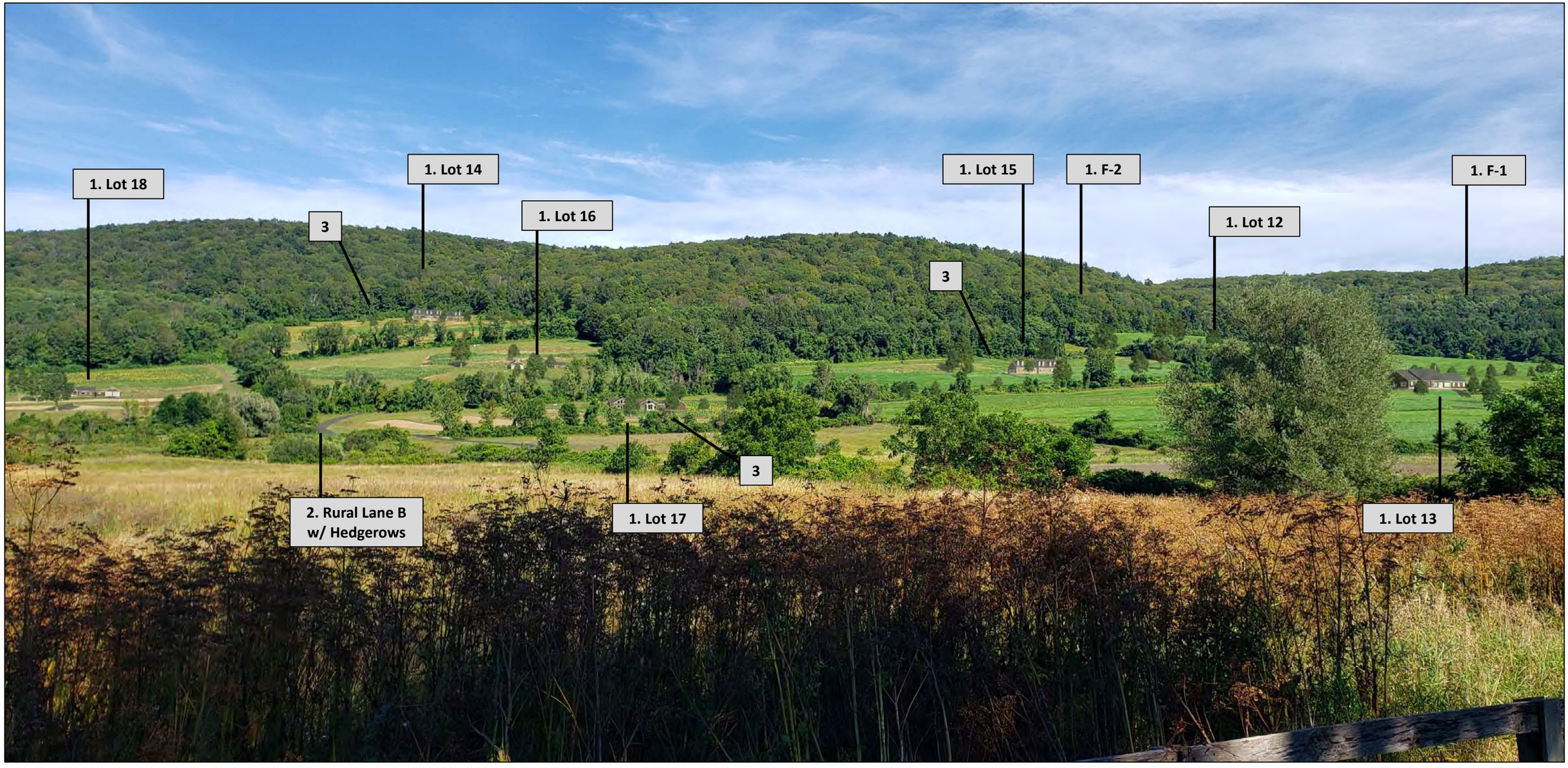
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:20 PM
Locations: Depot Hill Road – Just north of Project Parcel #515033 – Facing East
Coordinates: 41°50'17.2"N 73°32'53.7"W

SEE NOTE ON PAGE 1

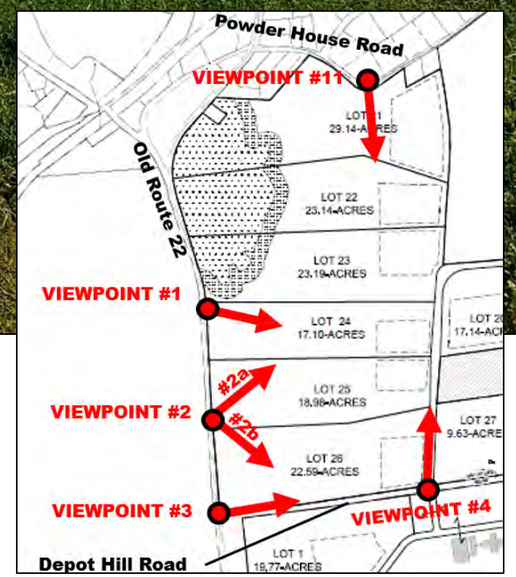


Rendering Notes: Taken along Depot Hill Road facing east over adjacent parcel #430145, towards project parcels #570145, 515033, and 403720.

1. The rendering provides views of potential development for Lots 12-18 and Forest Conservation Parcels F-1 & F-2.
2. Rural Lane B and its associated hedgerows. Rural Lane B will also lower levels of visibility, having been designed to follow existing agricultural roadways and hedgerows present throughout the site.
3. Building envelopes have been established along existing treelines and hedgerows, reducing prominence of potential development. While proposed vegetative screening will help obscure view of the proposed lots, the utilization of existing site features and screening provides significant benefits in obscuring views of potential development.

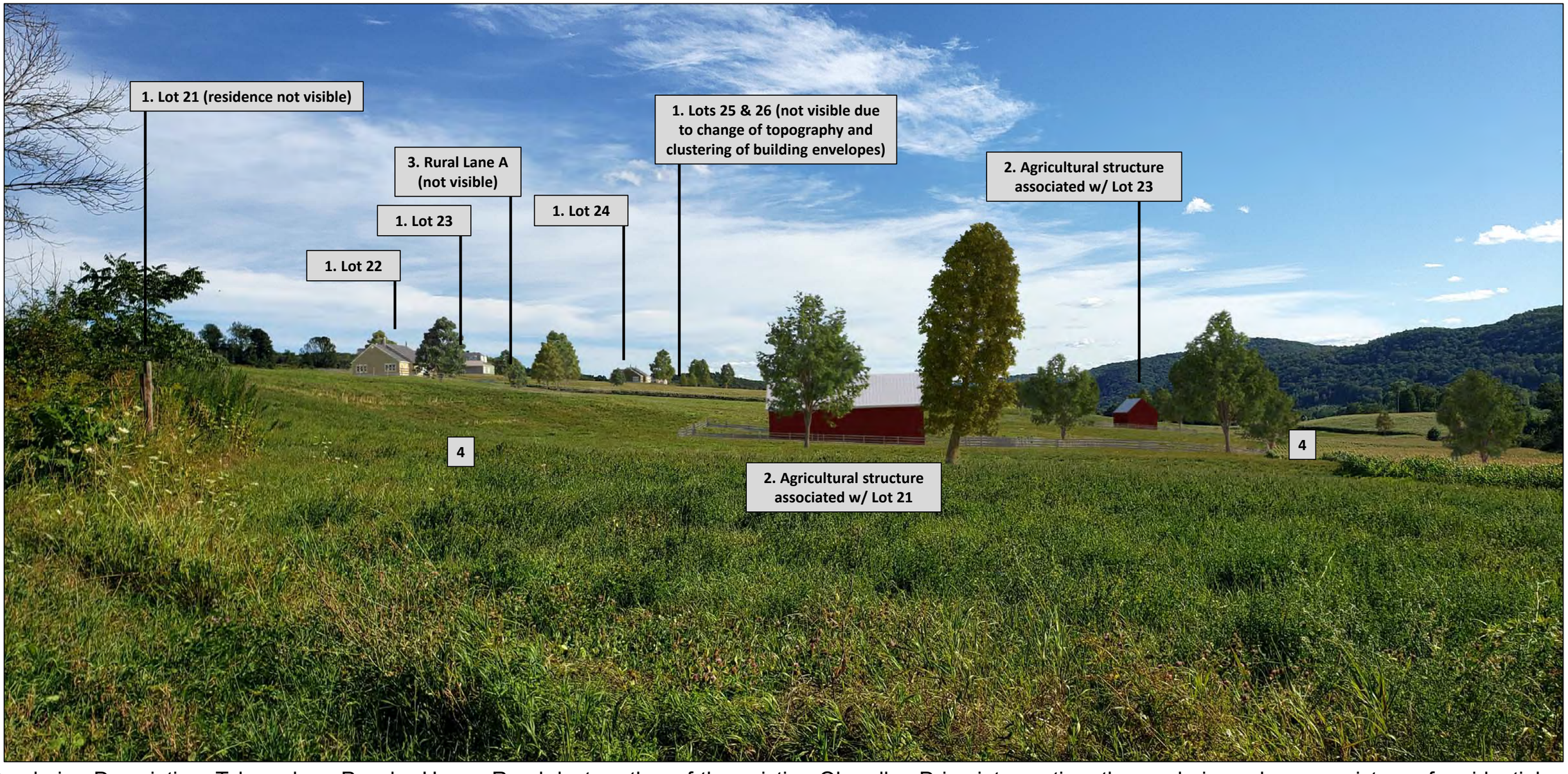
SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:30 PM
Location: Powder House Road, East of Ohandley Dr. Intersection – Facing South
Coordinates: 41°50'28.6"N 73°33'19.2"W

SEE NOTE ON PAGE 1

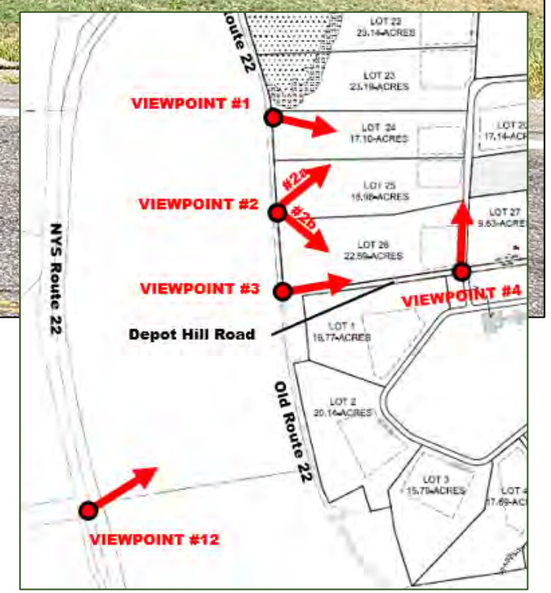


Rendering Description: Taken along Powder House Road, just norther of the existing Ohandley Drive intersection, the renderings shows a mixture of residential and agricultural structures that could potentially be constructed on the proposed lots.

1. Facing south towards proposed Lots 21-26, proposed residential structures are clustered towards one another within the proposed building envelopes.
2. Agricultural structures, which are permitted by right, may be constructed outside of the building envelopes, further enhancing the agricultural/rural intent of the site.
3. Proposed Rural Lane A, which would provide access to the proposed Lots would not be visible due to it being designed to follow an existing hedgerow, visibly extending south towards Depot Hill Road, and natural changes in topography.
4. Existing agricultural fields/open space will be maintained and extend across multiple proposed lots depending on the lot owners preference.

SEE NOTE ON PAGE 1





Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm Focal Length
Date: 8/12/2022
Time: 4:37 PM
Location: NYS Route 22, base of Parcel #885633 – Facing East Northeast
Coordinates: 41°49'35.1"N 73°33'59.0"W

SEE NOTE ON PAGE 1



Rendering Notes:

1. Taken along NYS Route 22 at the base of parcel #885633 facing east towards the project site, the rendering provide a view of the proposed subdivision Lots 1-5.
2. Due to significant vegetative screening and an earthen/rock embankment running along the eastern edge of NYS Route 22, this viewpoint is one of the few areas where the project site may be visible from the roadway. Due to distance from Route 22, the aforementioned vegetative screening, and changes of topography, views of the project site are extremely limited with only fleeting glimpses of the existing agricultural structures and potential residences visible.

SEE NOTE ON PAGE 1



Camera: Samsung Galaxy Note 9 SM-N960U1 w/ 4.3mm focal length
Date: 9/16/2022
Time: 1:56 PM
Location: NYS Route 44, just west of DeLavergne Hill Scenic Overlook – Facing East
Coordinates: 41°50'17.3"N 73°34'37.2"W

SEE NOTE ON PAGE 1



Rendering Description: Taken along NYS Route 44, adjacent to the DeLavergne Hill – Scenic Overlook, the renderings provides an eastern facing panoramic view of the project site and potential development. The rendering provides a view of the majority of proposed parcels, with the exception of Lots 11, 13, and 17, for which visibility of which is obstructed by changes natural changes of topography between Depot Hill Road and the Forest Conservation parcels in the easternmost portion of the site. Due to low density nature of the proposed conventional subdivision, potential development will have minimal effect on the viewshed, with the vast majority of existing agricultural facilities, forested areas, and other scenic features to be preserved with the implementation of building envelopes, which focus potential development within areas of the site that reduces its prominence and screens it from view.

SEE NOTE ON PAGE 1





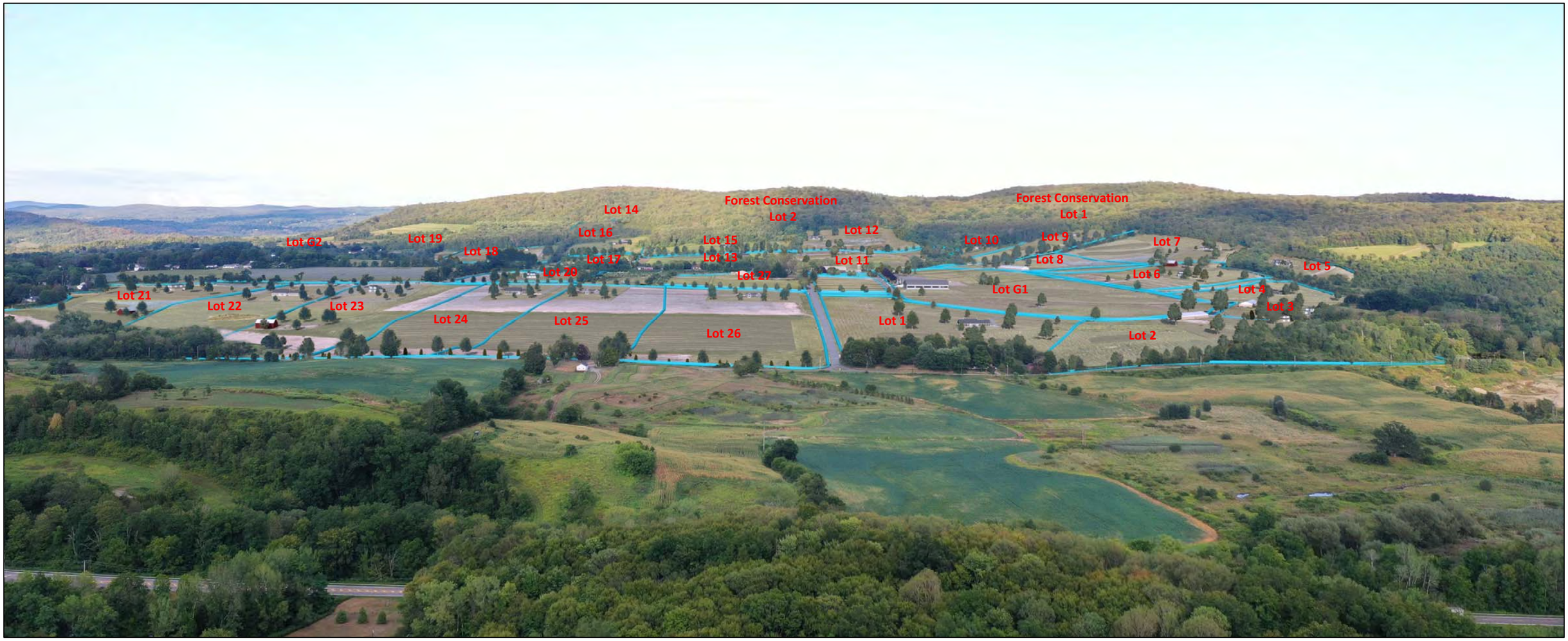
Camera: DJI Mavic 2 Pro – Hasselblad L1D-20cSM-N960U1
w/ 10.3mm focal length
Date: 8/24/2022
Time: 6:21PM
Location: 400’ above northern portion of Parcel #727708, Facing East
Coordinates: 41°49’52.7"N 73°34’19.5"W

SEE NOTE ON PAGE 1



Rendering Description: Taken 400’ above Parcel #727708 (Silo Ridge Field Club) facing east towards the project parcels. The renderings provide an aerial view of the project site, displaying portions of all proposed parcels with potential residential and agricultural development. While aerial views of the project site would only be accessible to those with aviation equipment, the aerials perspectives highlights the low density nature of the subdivision. Implementation of building envelopes allows for the preservation of significant amount of open space and agricultural land, ensuring that residential structures are located in areas that would allow them to blend in with existing conditions. This aerial perspective also demonstrate the significant amount of existing forest and vegetative buffers to be preserved by the proposed layout, while also demonstrating that additional landscaping, which will be reviewed and approved by the Planning Board prior to construction, will enhance species and habitat diversity throughout the project parcels.

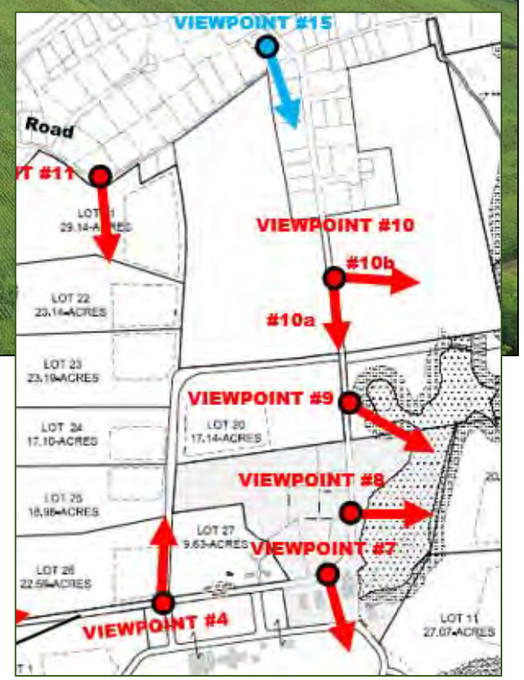
SEE NOTE ON PAGE 1



Rendering Description: Displaying the same perspective as the previous Viewpoint #14 slide, this second rendering for the viewpoint shows the property lines associated with each of the proposed lots. As displayed by the image and supporting documentation, the proposed parcels have been designed to meet or exceed the dimensional criteria outlined for the Rural Agricultural and Rural Residential Zoning Districts, which require 10 and 5-acre parcels. The rendering demonstrate that the majority of the proposed parcels will be left undeveloped, preserved as either open space or agricultural lands.

SEE NOTE ON PAGE 1





Camera: DJI Mavic 2 Pro – Hasselblad I1D-20cSM-N960U1
w/ 10.3mm focal length
Date: 8/24/2022
Time: 6:45PM
Location: 400’ above northern portion of Parcel #343318, Facing South
Coordinates: 41°50’42.7"N 73°32’57.6"W

SEE NOTE ON PAGE 1



Rendering Description: Taken 400’ above northern portion of Parcel #343318 looking south towards the project site. The rendering highlights the proposed subdivision relationship with both adjacent parcels and the relatively dense Amenia Heights subdivision. The proposed subdivision will create lots that resemble the size and aesthetic feel of the agricultural parcels directly adjacent (north) to the project site. The image also demonstrates that the proposed subdivision is significantly less dense than adjacent subdivisions (Amenia Heights) which contains comparable number of lots (19) on less acreage, with each lot maintaining between 0.5 to 2-acres of land. With this in mind development on the adjacent development is fairly well screened by existing vegetation, a feature that will be replicated on the proposed subdivision lots.

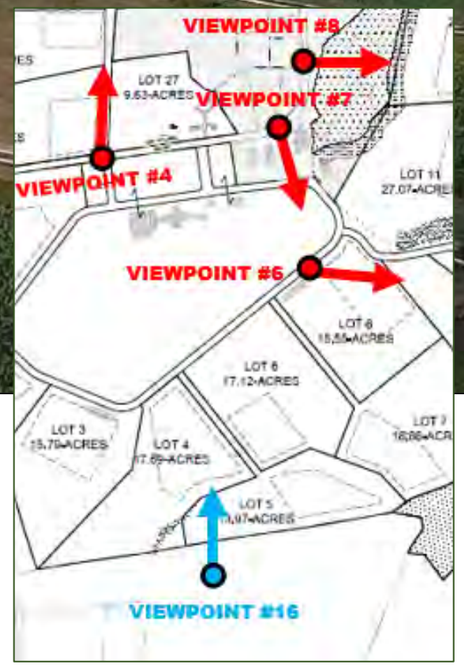
SEE NOTE ON PAGE 1



Rendering Description: Displaying the same perspective as the previous Viewpoint #15 slide, this second rendering for the viewpoint shows the property lines associated with each of the proposed lots. The rendering demonstrate that the proposed subdivision lots are far larger than the vast majority of adjacent parcels. The image also highlights how the subdivision has been designed to follow rural siting principals, with proposed property lines to designed to follow existing hedgerows, stonewalls, and agricultural fields and that any potential development has been located away from adjacent parcels and in areas that are appropriate for its low density design.

SEE NOTE ON PAGE 1





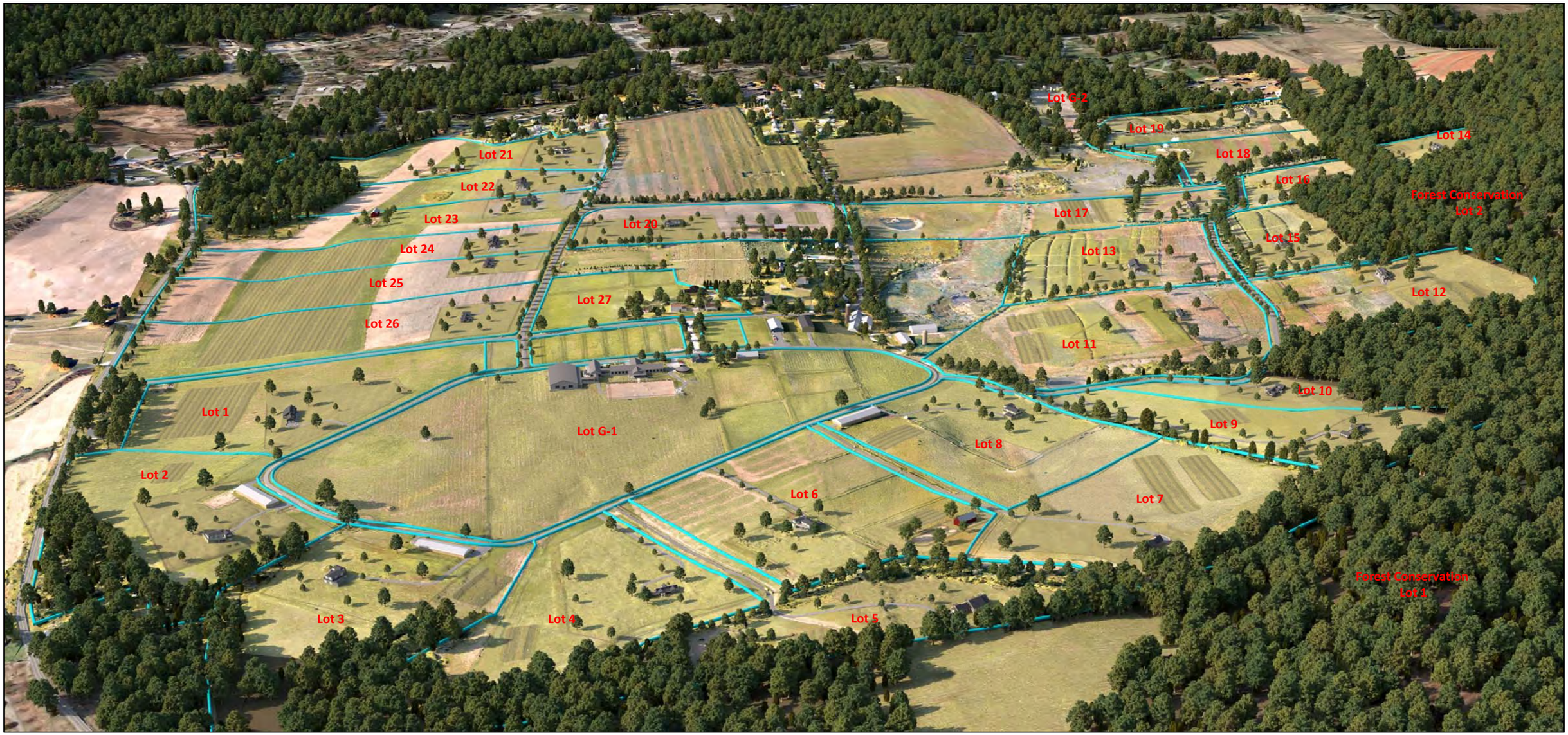
Camera: DJI Mavic 2 Pro – Hasselblad I1D-20cSM-N960U1
w/ 10.3mm focal length
Date: 8/18/2022
Time: 10:09 AM
Location: 400’ above northern portion of Parcel #307562, Facing North
Coordinates: 41°49'31.1"N 73°32'58.2"W

SEE NOTE ON PAGE 1



Rendering Description: Taken 400’ above northern portion of Parcel # 307562 looking north towards the project site. The rendering highlights how proposed building envelopes have been focused in areas that preserve existing vegetation, open space, and agricultural fields. The image demonstrate that the proposed subdivision will have little impact on the existing conditions of the project site, with building envelopes and potential construction being relatively small compared to the size of each proposed parcel. As such, much of the existing agricultural and open space aesthetic of the project parcels will remain following the buildout of proposed lots.

SEE NOTE ON PAGE 1



Rendering Description: Displaying the same perspective as the previous Viewpoint #16 slide, this second rendering for the viewpoint shows the property lines associated with each of the proposed lots. The rendering highlights how proposed building envelopes and the potential development they represent have been carefully sited to maximize open space and preserve existing agriculture. As demonstrated by the additional property lines, developable areas have been located away from the center of each proposed parcel and are focused more towards the edges of proposed property lines, along existing treelines and forested areas, and in areas where they can blended with existing agricultural features (i.e.: paddocks, barns, etc.). As with the previous viewpoint, this image also demonstrates how the subdivision property lines have been design to follow existing property lines and agricultural features.

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3.1 ALTERNATIVE BUILDOUT SCENARIO VISUAL SIMULATIONS

In order to analyze the true buildout potential of the four (4) project parcels and to highlight the conservation benefits provided by the currently proposed conventional subdivision, am alternative buildout scenario has been prepared combining the previously proposed Depot Hill Development for parcel #403720 with separate conservation subdivision layouts prepared for the three (3) parcels not included within the Resort Development Overlay (RDO).

The combined RDO and Conservation Subdivision development will allow for the creation of **171 residential lots/units**, which could be developed as a viable alternative to the 26 residential lot Keane Stud Conventional Subdivision currently proposed and depicted in previous sections of this analysis.

To assess the potential visual impact of this alternative buildout scenario, four addition perspectives have been rendered, depicting the alternative buildout scenario discussed above, using the same viewpoints chosen by the Planning Board (1/11/2023 Planning Board Meeting) and assessed in previous sections of this document.

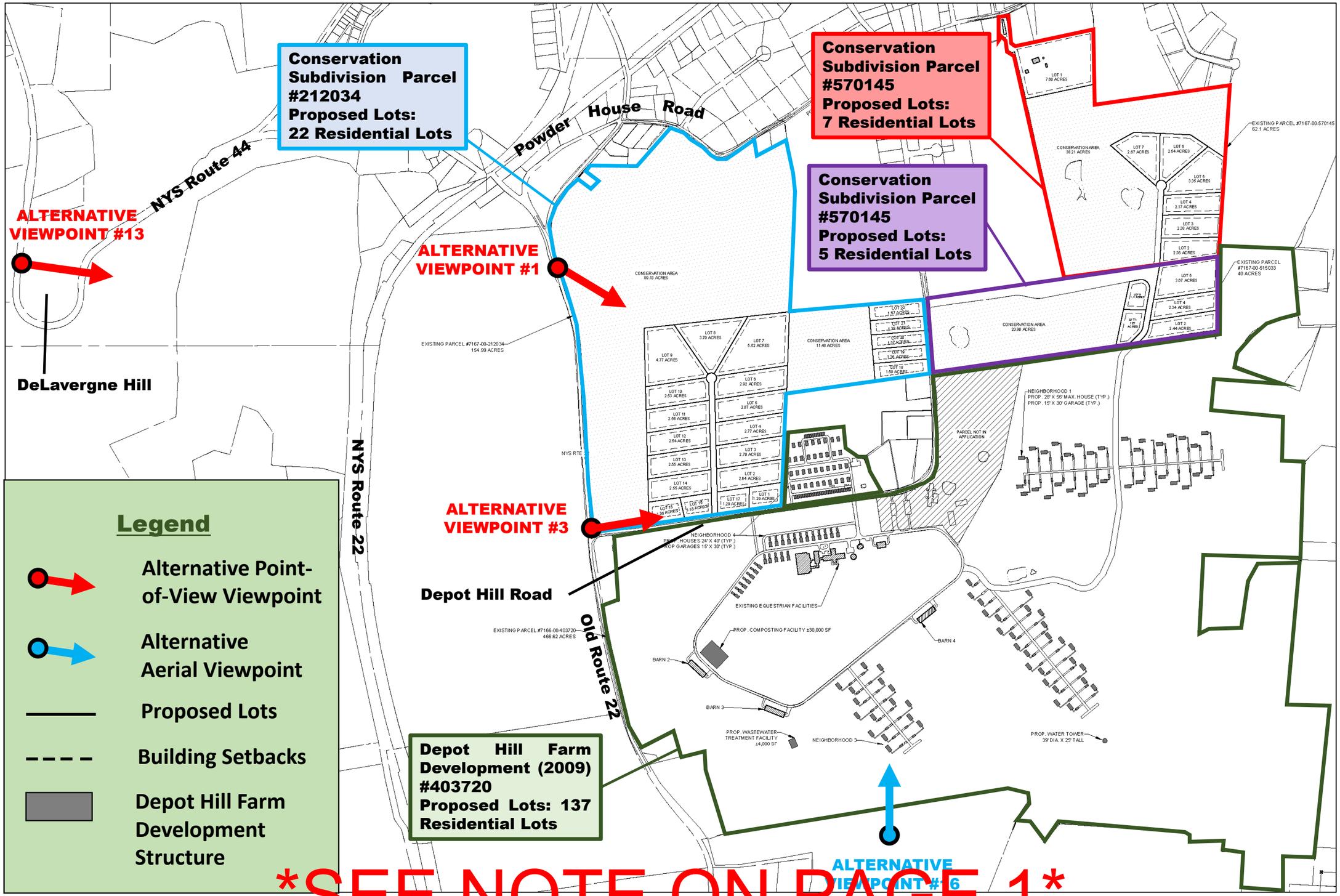
PROPOSED CONDITIONS

In order to analyze how the potential buildout of the parcel(s) may look, the following design assumptions have been followed in the generation of the provided renderings:

- Residential/accessory structures rendered for the Depot Hill Farm portion of this alternative buildout scenario use the same ±2,600 SF residential building elevations prepared for the previously proposed development.
- For the conservation subdivision layout portion of this project, residential structures are also shown at an approximate size of +3,000 SF. All residential structures (i.e: houses, garages) are shown within proposed building setbacks.
- Conservation subdivision parcels vary from ±1-5 acres. Parcels sizes are similar to adjacent subdivided parcels (i.e: Amenia Heights). There is no maximum lots size for a conservation subdivision parcels.
- The alternative Depot/Conservation lot layouts have been designed to comply with rural siting principles and open space design guidelines.
- A minimum of 50% of each conservation subdivision parcel is shown within a designated conservation area. 80% of parcel #403720 (Depot Hill Development) shall be placed under conservation easement.
- Proposed development has been sited away from existing wetlands, waterways, forested, and steeply sloped areas.

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Viewpoint Location Map w/ Alternative Buildout Subdivision



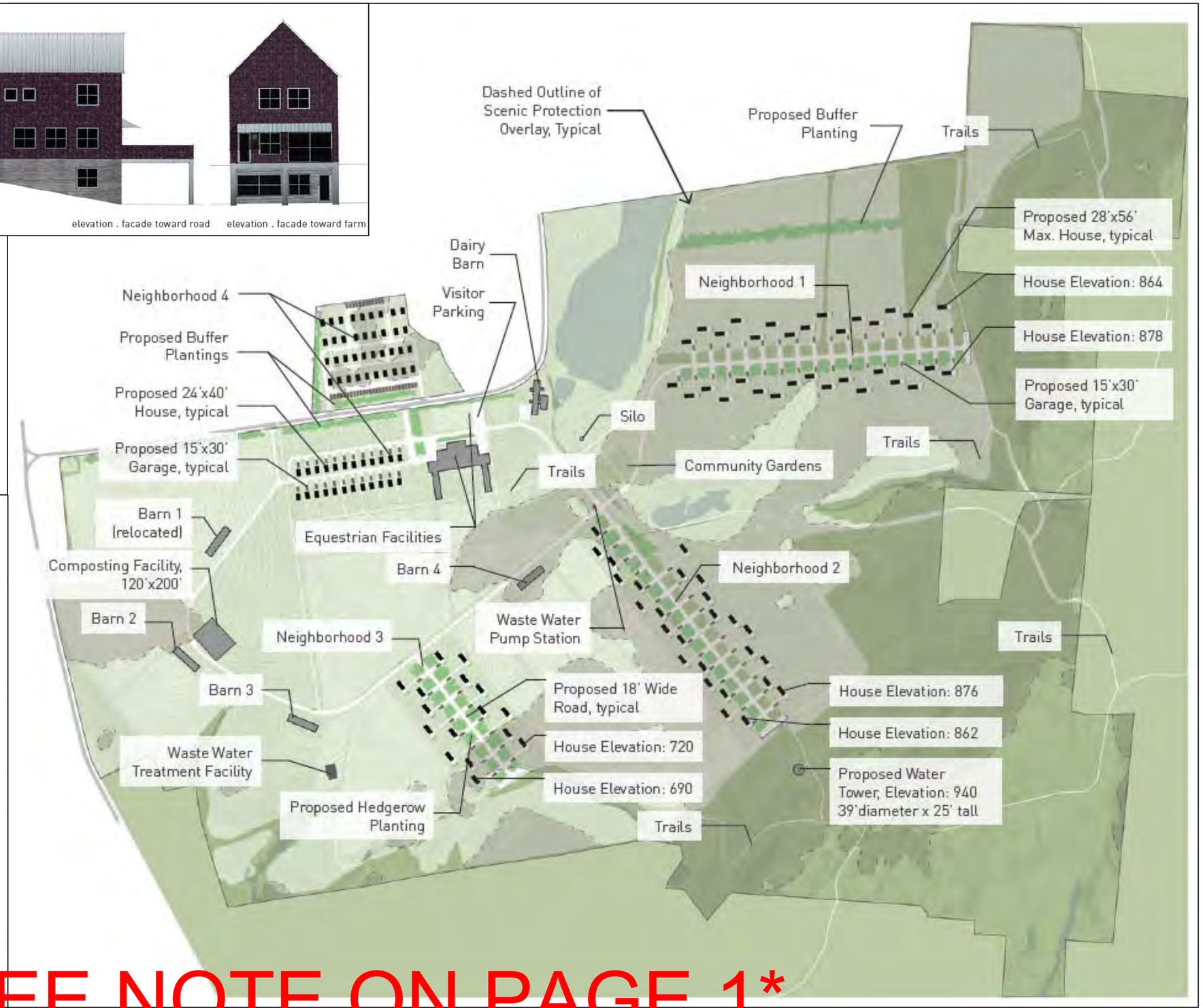
SEE NOTE ON PAGE 1



Top & Bottom: Typical garage and 2,600 SF residence building elevations prepared for Depot Hill Farm Development, designed by David Salmela. **Right:** 2009 Depot Hill Farm Master Development Plan outlining construction of 137 and accessory structures within 4 separate neighborhoods.







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Alternative Buildout Conditions
Old Route 22 – Facing Southeast

Parcel #212034
Lots 18-22 to gain access off of Depot Hill Road not visible due to changes of topography and existing/

Parcel #403720
38 of 137 residences and 45 garage units (Neighborhood 4) of Depot Farm Development to be placed north of Depot Hill Road

Parcel #403720
Existing Keane Stud Equestrian Facility

Parcel #212034
Lots 1-17. Lots 2-14, 16, 17 to be accessed via new Rural Lane w/ cul-du-sec turnaround.

Parcel #212034
89.13-acres out 154.99-acres to be designated as Conservation Area.

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Existing Conditions
Old Route 22 – Facing Southeast



SEE NOTE ON PAGE 1

Alternative Buildout Conditions
Old Route 22-Depot Hill Road Intersection – Facing East

Parcel #403720
38 of 137 residences and 45 garage units of Depot Farm Development to be placed north of Depot Hill Road

Parcel #403720
24 of 137 residences and garage units (Neighborhood 4) of Depot Farm Development to be placed around existing Keane Stud Equestrian Facility

Depot Hill Road

Parcel #212034
Lots 1-17. Lots 2-14, 16, 17 to be accessed via new Rural Lane w/ cul-du-sec turnaround.

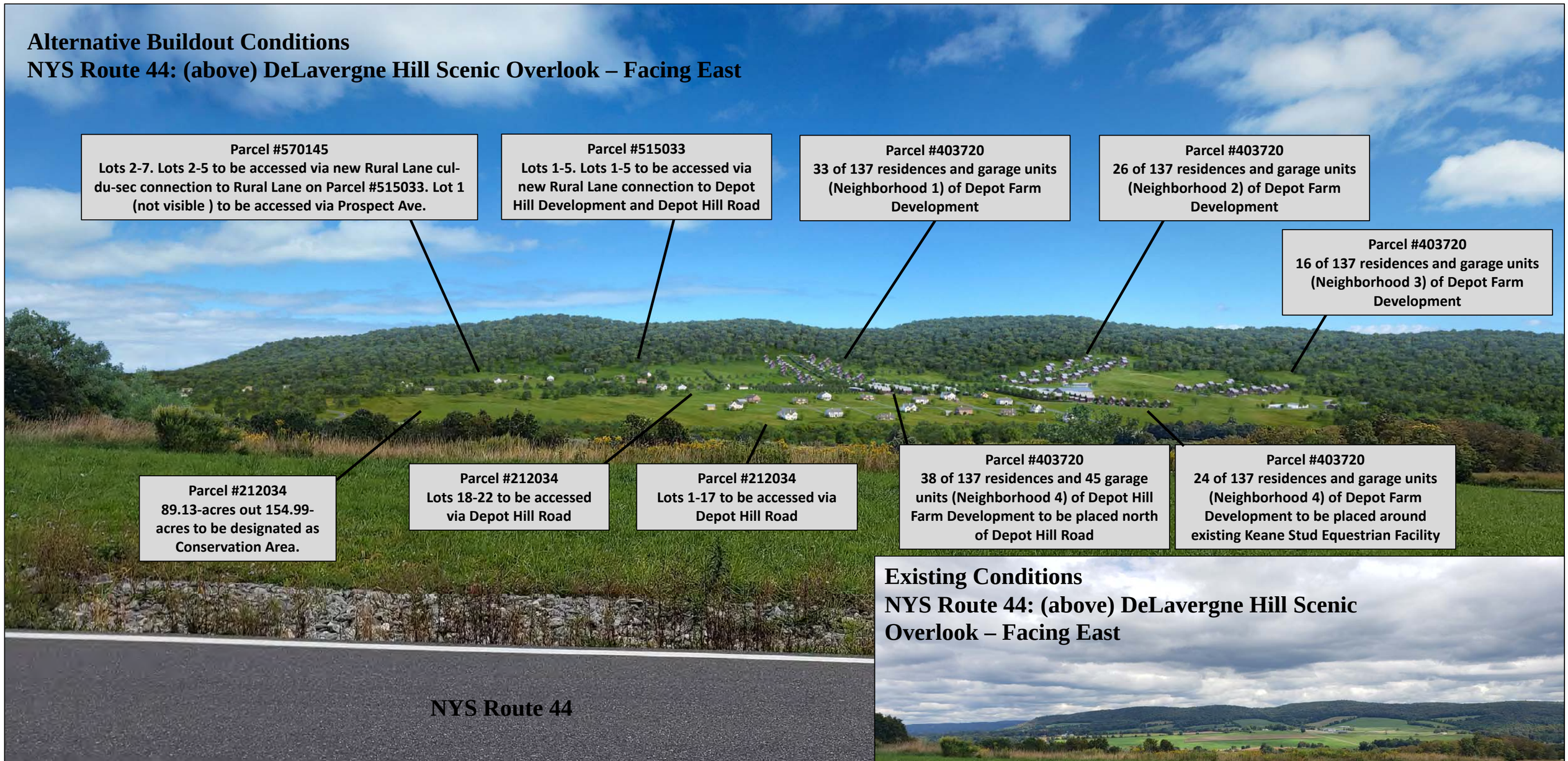
Parcel #212034
Lots 1 & 15. Lots 1-15 to be accessed via new driveways onto Depot Hill Road

Parcel #212034
89.13-acres out 154.99-acres to be designated as Conservation Area.

Existing Conditions
Old Route 22-Depot Hill Road Intersection – Facing East

SEE NOTE ON PAGE 1

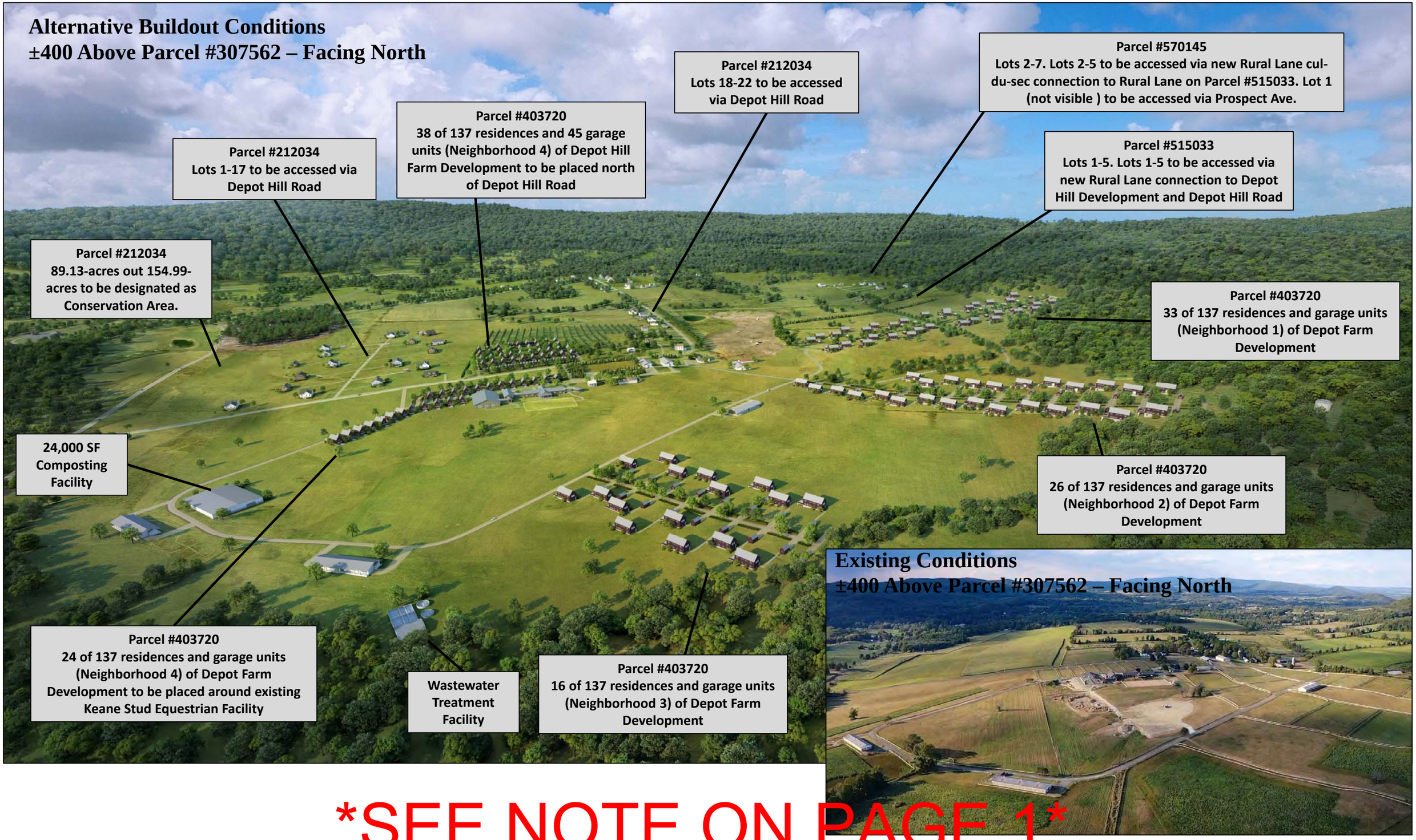
Alternative Buildout Conditions
NYS Route 44: (above) DeLavergne Hill Scenic Overlook – Facing East



Existing Conditions
NYS Route 44: (above) DeLavergne Hill Scenic Overlook – Facing East



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SEE NOTE ON PAGE 1



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LunarStudio Overview:

LunarStudio has been in operation for close to 20 years specializing in 3D architectural renderings, architectural visualization, and animations. LunarStudio also focuses on graphic design, 3D modeling, 3D illustrations, industrial design, and product images. Much of their underlying research work is featured in most special effects coming out of Hollywood today. LunarStudio has been hired by Fortune 500 companies and various government entities for its remarkable rendering work and accuracy, including but not limited to Blue Cross Blue Shield, CVS, The Federal Reserve, The State of New Jersey, The State of Massachusetts, The DC Mall, Au Bon Pain, Bain Capital, Halliburton, National Geographic, Wired, and hundreds of other major companies and agencies around the world. People and companies hire LunarStudio because of our record of accuracy and presentation skills.

Project Methodology:

1) Previous 3D model from May of 2022 was partially used (built upon) as a reference and template for these latest renderings.
2) It was brought to LunarStudio's attention that more recent site information was requested and the attached images are the results of the latest data.
3) An independent drone operator (Hudson Valley Drones) was hired in late summer of 2022 to produce aerial drone mapping. This involves taking photographs in multiple strips South to North and East to West over the course of a few weeks. This involves a multi-day process where the drone catalogs and compiles this information and eventually was sent to LunarStudio. Drone mapping is in some ways similar to aerial photography when it comes to quality. In fact, it's more accurate than most commercial satellite imagery (Bing, OpenMaps, Google Maps, Apple Maps, and Digital Globe) as well as other GIS sources.
4) The drone operator provided LunarStudio access to a private website called DroneDeploy that allowed for the download of multiple forms of data taken by the drone.
5) Due to the extreme complexity of the data over the course of an extremely large series of properties, the drone data had to be downloaded in strips separately, then the point data painstakingly reduced in order for a high-end series of computers on LunarStudio's end to be able to even process this data. Numerous methods were tried and employed. Some had even failed. Point (vertices) decimation involved using Blender (a 3d program) to select vertices on the strips then calculate and determine an acceptable visual reduction in points. Then this was saved to an optimized Wavefront OBJ format where it was imported and further reduced within 3D Studio Max utilizing \Convert Poly\Vertex Mode\Select All\Weld Vertices at varying thresholds.
6) This process was repeated numerous times for all of the separate strips in order to be merged back together and be able to work with a reduced polygon count.
7) This information was then superimposed onto the previous 3D model made back in the spring.
8) Since the drone did not capture everything in the surrounding areas due to FAA height limitations, the surrounding areas not critical to the locus are based on satellite data from various satellite sources mentioned in step 3 above.
9) Everything is carefully lined up across numerous axes (Z, X, and Y) to the best of LunarStudio's capabilities based on visual cues. Just for a simple example, if half of a building is on a satellite photo and another half on a drone map, the photo and map must be painstakingly aligned so that both match. But when it's such a tremendous and detailed property, there is a tremendous amount of time involved in getting everything to the proper scale and aligned.
10) The strips and tiles from numerous sources are then aligned, sometimes recut, readjusted, and filled in.
11) Errors from the drone having taken multiple passes at different heights on different days are then fixed/realigned to the best of my ability. It's a very tedious process, and one which is not a simple push of a button as many might incorrectly thing is automated. The more data points (which the drone provided), the more time-consuming and difficult this becomes.
12) Some of the areas such as roads, paths, fencing, drives, and where the proposed example homes sit were flattened a little to accommodate their foundations and provide smooth access to properties just as if they were to occur in the real world. This process had to be repeated this round but in greater detail because there was simply more data points to sort through.
13) Because the drone data provided more detailed information, additional adjustments to the scene were made in accordance to newer plans (as well as cross-referencing satellite, drone, and parcel data) provided by Rennia Engineering.
14) Parcels were then slightly readjusted, recut, new building envelopes were addressed, homes and driveways were resituated, Barns added, paddocks added, farm plots, and new fencing added to these lots.
15) Once the 3D model is near complete, it is then taken into another 3rd party rendering software called Vantage where it is then 3D rendered/processed.
16) That image output is then taken into another program such as Photoshop, in which minor visual artifacts (i.e. Differing colors from the different drone strips) are then matched more closely.

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Genesis Studios Overview:

Genesis Studios is an award-winning architectural rendering, digital photorealistic rendering, 360 virtual reality rendering and architectural scale model service based in Central Florida. For more than 35 years, we have created visual expressions of designs for public and private spaces, both locally and abroad. Our portfolio ranges from small intimate rooms and gardens to major cities and corporations.

Genesis Studios was founded in 1985 by Frank Bartus, a talented and determined illustrator, who combined his artistic abilities with a commitment to professional service. The result has been a dynamic partnership with designers from around the world. Since our founding, Genesis Studios has grown, along with our expertise and reputation. We stand by a belief in our creative passion, commitment to service and in finding new ways to bring the latest generation of architectural design to life through art.

Project Methodology:

The 3D model of the full conceptual buildout Keane Stud Subdivision Development was built using Autodesk 3ds Max, a 3D modeling/drafting software. The model has been prepared to demonstrate what a residential/agricultural buildout of the proposed parcels may look like from identified viewpoint(s). Provided below is an outline of the procedure used to generate the images:

1. The 3D building and the surrounding land/roads, etc. are developed in the 3D software, using files provided by the client and their professionals. Provided below is the procedure used to generate the model that the provided images are generated from:
   - Next, existing features (i.e: roadways, structures) are drawn into the rendering based on existing conditions survey CAD files provided by the project engineer. (July 2021 Survey)
   - Site topography is then generated using georeferenced 2' Dutchess County LiDAR contours provided by Rennia Engineering Design, giving the rendering model volume and depth.
   - Structures currently under construction (i.e: barns) were modeled using approved building permit plans for the structure and inserted into the rendering.
   - Existing conditions are verified using recent aerial imagery/ of the site from identified view angles.
   - Proposed conditions (i.e: proposed property lines, building envelopes, roadways), based on CAD files provided by Rennia Engineering, are then overlaid onto the model and drawn.
   - Overlapping existing and proposed features are removed in favor of proposed conditions.

2. The location of the viewpoint established for the rendering were derived from actual site photos and areas map prepared by the client's professionals.
   - NYS Route 44 Overlook rendering was based on point-of-view photographs taken by the client's professionals at an average standing height (5'8").
   - An aerial imagery view point was identified on area maps prepared by the client's professional, with a view point then being established at ±250 feet above grade.

3. Proposed residential and agricultural structures within conservation subdivision areas are then obtain from stock models of ±3,000 SF residential structures and miscellaneously sized agricultural structures are inserted into the rendering within building setbacks. Structures rendered for the Depot Hill Development portion of the renderings are created using building elevations provided by the applicant and then place in locations identified in CAD. Driveways are then drawn connecting the structures to proposed roadways.

4. Stock models of mature deciduous (30'-50') trees are inserted into the drawing along proposed hedgerow areas at 50' intervals.

5. Once viewpoints were established, and existing and proposed conditions modeled, they were rendered and enhanced using Chaos Corona Render Engine. Corona builds out the lighting and materials to make the images more realistic.

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APPENDIX E

ENVIRONMENTAL REPORTS

Phase IA/IB Cultural Resources Survey, Depot Hill Farm Equestrian Community Project, dated August 2007

Phase II Site Examination, Depot Hill Farm Equestrian Community Project, dated May 2008

Phase IB Cultural Resources Survey, Keane Stud Farm Residential Development Project, dated July 2022

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Phase IA/IB Cultural Resources Survey
Depot Hill Farm Equestrian Community Project
Town of Amenia, Dutchess County New York

prepared for

Crawford & Associates Engineering, PC

prepared by

David Moyer and Rebecca Moyer

Birchwood Archaeological Services
2948 County Highway 35
Sidney Center, NY 13839
Phone: 607-265-3444
Fax: 607-265-3459
email: birchwoodarch@yahoo.com

August 2007

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Executive Summary

A Phase IA/IB Cultural Resources Survey has been completed for the Depot Hill Farm Equestrian Community Project, located in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 80.0 acres for residential and recreational use. Residences will consist of house with basements built as condominiums with necessary utilities installed as part of the construction process. Each residence will be built under strict exterior design guidelines, and no homeowner will be building additions or sheds at any later date. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

Artifacts from all prehistoric cultural time periods are known to exist in Dutchess County, while two prehistoric archaeological sites are known to lie within one mile of the project area. The presence of these sites confirms that prehistoric peoples visited and/or occupied the local area, usually with camps and villages being placed relative to natural resource availability. As a result, the project area is considered highly sensitive for prehistoric remains. The project involves the improvement of approximately 80.0 acres for residential and recreational purposes. Historically, the lands in and around Amenia afforded natural resources for the carriage industry and, along with fertile crops, fueled the early rise of the local economy, while the town itself rose to importance as a resort destination. As a result, the project area is considered highly sensitive for historic remains.

A Phase IB field examination was conducted to test for cultural deposits that may be impacted by the proposed project. The entire APE, encompassing all areas of proposed ground disturbance, was surveyed utilizing a careful surface visual inspection, with a systematic surface inspection of all plowed areas, followed by thorough subsurface testing within both plowed and unplowed portions of the proposed project. A total of 1,349 STPs were laid out in 15 m (49.2 ft) intervals to create a grid over the area of proposed construction. STPs were labeled according to transect, with numerical labels used to further designate individual holes. Out of the 1,349 STPs laid out, a total of 22 (1.6 %) could not be excavated due to buildings, roads, creeks and other obstructions. Of the 1,327 STPs excavated as part of the project, 37 (27.9 %) recovered cultural material. In addition to the artifacts recovered from the excavation of STPs, five prehistoric artifacts were located during the visual inspection of area plowed prior to the initiation of subsurface testing. Three prehistoric sites were identified as part of the survey. Locus 1 is comprised of a core fragment and a chert flake fragment, Locus 2 identified two flakes and a projectile point tip, and excavations in the Locus 3 area located a chert flake and a fragment of FCR in adjacent STPs.. In addition to the loci mentioned, two isolated finds comprised of projectile point fragments were identified in STP C-23 and Z-4. The proximity of these last points to the loci determined as sites is not such as to include them within the site boundaries given for the individual loci, and no other artifacts were located in any of the eight radial STPs excavated adjacent to either point. None of the flakes, flake fragments, or other debitage recovered from the Phase IB study showed clear evidence of utilization under light (20-30x) magnification.

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These sites appear to be able to address a host of research questions about prehistoric lifeways in the southern Taconic range and may be considered eligible for inclusion in the National Register of Historic Places under Criterion D for their ability to address important information about the past. Therefore, it is our recommendation that these three prehistoric loci identified be avoided by all construction activities and that a formal avoidance plan be drawn and submitted to the NYSOPRHP for concurrence and approval prior to the initiation of construction. If avoidance is not possible, we recommend that Phase II Site Examinations take place prior to any construction.

These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Introduction

Birchwood Archaeological Services was contracted to conduct a Phase IA/IB cultural resources survey for the areas of potential effect (APE) for the Depot Hill Farm Equestrian Community Project, located in the Town of Amenia, Dutchess County, New York. The overview had been requested to assess the potential that significant cultural resources may be located within the project area. The investigation was performed as part of a request by the OPRHP in accordance with Section 106, Section 36 CFR 800 and Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law.

The project is located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County NY, and involves the development of approximately 80.0 acres for residential and recreational use. Residences will consist of house with basements built as condominiums with necessary utilities installed as part of the construction process. Each residence will be built under strict exterior design guidelines, and no homeowner will be building additions or sheds at any later date. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

Background research was conducted to assess the potential for prehistoric and historic resources in the vicinity and provide contexts with which to interpret any findings (see Part I: Documentary Research). Field investigations were conducted to identify any cultural deposits in the area of proposed construction (see Part II: Field Reconnaissance).

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Part I: Documentary Research

Documentary sources and collections were consulted to gain an overview of the prehistory, history, and environmental setting of the project area and surrounding region. A search was also conducted to locate known archaeological sites, historic structures, and National Register properties within two miles of the project area. Sources of information that were consulted included:

- Office of Parks, Recreation and Historic Preservation (OPRHP) site files and survey reports
- New York State Museum site files (copies at OPRHP)
- National Register of Historic Places
- New York State Library, Albany
- Milne Library, SUNY Oneonta
- Glen Bartle Library, Binghamton University

Specific documentary references that were consulted are listed in the bibliography.

Environmental Setting

Dutchess County is situated in southeastern New York State. Two physiographic units occur within the county: Valley and Ridge Province and the New England Province. The project area lies in the Valley and Ridge Province, which includes the Hudson Lowlands and the Low Taconics. The Hudson Lowlands extend eastward from the Hudson River three to six miles, and the Low Taconics extend eight to ten miles east of the Hudson Lowlands (Faber 2002).

The Hudson Lowland, the subsection within the Valley and Ridge Province, is described as containing bedrock comprised of easily eroded sedimentary rock such as shale, greywacke, and siltstone. The bedrock was deposited during the Cambrian and Ordovician time periods Lowlands (Faber 2002).

The project area is located approximately 2.2 miles west of the New York and Connecticut State border on an upland plateau nearly 32.5 km (20.2 miles) east of the Hudson River. Elevation ranges from 633 feet above sea level in the western portion of the project area, to 745 feet above sea level at the eastern end of the APE. A series of unnamed creeks and streams lie within and adjacent to the current proposed project, with Webatuck Creek being the closest named creek in the vicinity at 1.2 miles (2.0 km) to the east. Other creeks nearby include Millbrook Creek 1.8 miles (2.9 km) southeast of the project area, and the Wassaic Creek which lies 11,222 feet to the west. All of these water sources eventually drain into the Hudson.

Soils

The USDA Web Soil Survey (WSS) maps three soil types as occurring within the project area (Figure 2). The Georgia silt loam series (map unit GsB) is mapped throughout the

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project area sporadically interspersed with the Masssena and Stockbridge Silt loams (map units MnB and SkB, SkC, and SkD).

The Georgia silt loam series soils consist of very deep, moderately well drained soils on glaciated uplands. They formed in loamy till (Faber 2002). Permeability is moderate in the solum and slow in the substratum. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. A typical soil profile of Georgia silt loam is provided below in Table 1:

Table 1. Typical soil profile of Georgia silt loam.

Horizon	Depth	Description
Ap	0-8 in. (0-20 cm)	very dark grayish brown (10YR 3/2) loam; moderate fine and medium granular structure; friable; many roots; 5 percent rock fragments; neutral; abrupt smooth boundary
Bw1	8-14 in. (20-36 cm)	brown (10YR 4/3) ped interiors and dark brown (10YR 3/3) exteriors, loam; moderate medium granular structure; friable; many roots; 5 percent rock fragments
Bw2	14-21 in. (36-53 cm)	brown (10YR 4/3) loam; moderate very fine and fine subangular blocky structure; friable; common roots; 5 percent rock fragments; few fine distinct yellowish brown (10YR 5/6) soft masses of iron accumulation; neutral; clear smooth boundary
Bw3	21-26 in. (53-66 cm)	olive brown (2.5Y 4/4) loam; moderate fine and medium subangular blocky structure; friable; common roots; 5 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral; clear smooth boundary
C1	26-36 in. (66-91 cm)	gray (N 5/0), olive brown (2.5Y 4/4), dark grayish brown (2.5Y 4/2), and light olive brown (2.5Y 5/6) loam; moderate medium subangular and angular blocky structure; friable to firm; slightly sticky, slightly plastic; few roots; 10 percent rock fragments; neutral; clear smooth boundary
C2	36-65 in. (91-165 cm)	olive (5Y 4/3) loam; weak fine and medium angular blocky structure; firm to friable, slightly sticky, slightly plastic; few roots; 10 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral

Massena silt loam (map unit MnB) is also mapped as occurring interspersed throughout each portion of the project area. The Massena series soils consist of very deep, somewhat poorly drained or poorly drained soils on uplands (Faber 2002). They are nearly level to strongly sloping soils that formed in till dominated by siliceous rock with some limestone. A typical profile of Massena silt loam is provided in Table 2.

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Table 2. Typical soil profile of Massena silt loam.

Horizon	Depth	Description
Ap	0-7 in. (0-18)	very dark grayish brown (10YR 3/2) silt loam; light brownish gray (10YR 6/2) dry; weak fine granular structure; friable; nonsticky, nonplastic; many fine and medium roots; 5 percent rock fragments; neutral; clear smooth boundary
Bw	7-13 in. (18-33 cm)	olive brown (2.5Y 4/3) loam; weak fine subangular blocky structure; friable; nonsticky, nonplastic; many fine roots; 5 percent rock fragments; neutral; abrupt smooth boundary
Bg	13-23 in. (33-58 cm)	dark grayish brown (2.5Y 4/2) loam; weak medium subangular blocky structure; friable; 10 percent rock fragments; neutral; gradual wavy boundary
Cg1	23-46 in. (58-117 cm)	dark grayish brown (2.5Y 4/2) loam; massive; friable; 10 percent rock fragments; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; neutral; gradual smooth boundary
Cg2	46-80 in. (117-203 cm)	dark grayish brown (2.5Y 4/2) loam; massive; friable; 10 percent rock fragments; common prominent yellowish brown (10YR 5/6) masses of iron accumulation; slightly alkaline; slightly effervescent

The Stockbridge silt loam series (map units SkB, SkC, and SkD) is the remaining soil unit mapped as within various portions of the project area. Stockbridge series soils are very deep, well drained soils formed in loamy calcareous till. They are nearly level to very steep soils on till plains, smooth hills, low ridges and drumloidal landforms (Faber 2002). Slope ranges from 0 to 60 percent. Permeability is moderate in the surface layer and subsoil and moderately slow or slow in the substratum. A typical profile of Massena silt loam is provided below in Table 3.

Table 3. Typical soil profile of Stockbridge silt loam.

Horizon	Depth	Description
Ap	0-10 in. (0-25cm)	dark brown (10YR 3/3) loam, light brownish gray (2.5Y 6/2) dry; weak coarse granular structure; friable; many fine and very fine roots; 10 percent gravel; moderately acid; clear smooth boundary
Bw1	10-20 in. (25-51 cm)	olive brown (2.5Y 4/4) loam; weak coarse subangular blocky structure; friable; common fine roots; 10 percent gravel; neutral; clear wavy boundary.
Bw2	20-28 in. (51-71 cm)	light olive brown (2.5Y 5/4) loam; weak coarse subangular blocky structure; firm; few fine roots; few weathered limestone fragments in lower part; 10 percent gravel; neutral; gradual wavy boundary
C1	28-42 in. (71-107 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few fine roots; many brown (10YR 4/3) weathered limestone fragments and few grayish brown (2.5Y 5/2) streaks; 15 percent gravel and 2 percent cobbles; neutral; gradual wavy boundary
C2	42-48 in. (107-122 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles; slight effervescence; slightly alkaline; gradual wavy boundary
C3	48-65. (122-165 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles

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The above soil profiles suggest that both historic and prehistoric resources may be found in the A and Bg/Bw horizons overlaying parent material, which typically extends to between 74 and 81 cm (29-32 in) below the ground surface. Subsurface testing was conducted to a minimum depth of 20 cm (8 in.) into the B/C or C horizon whenever possible and unless otherwise noted.

This soil information is based upon documentary sources examined prior to the initiation of fieldwork. As a result, it may be necessary to modify the subsurface testing strategy to meet unexpected soils, disturbances and other obstructions. The results of the subsurface testing and how they compare with the above soils information is discussed in the *Results* section of this report.

Current/Past Land Use

The project has likely seen a number of past uses prior to the initiation of the proposed project. During much of the 19th century, the property appears to have been used for agricultural purposes, as evidenced today by the historic dairy farm complex located in the central part of the APE boundaries (Photos 2-4, 18 and 20-21). The active horse farm can be seen as a continuation of this agricultural land use, with rows of white fencing and buildings of uniform scale and color reflecting continuity across the landscape. The proposed equestrian community will retain some of the open space of the current horse farm while still following the active trends in land use and development in rural Dutchess County.

Disturbance

While some areas of ground disturbance were evident within the APE boundaries, the majority of the project area appears relatively undisturbed. Some disturbance associated with the construction and operation of the historic dairy farm complex may have occurred in the immediate vicinity of the buildings (Photos 2-4, 18 and 20-21). Similar ground disturbance may also occur in proximity to the other buildings within the APE boundaries, including the modern stables and farm buildings (Photos 27, 69-71 and 73-74) as well as the three residences on the north side of Depot Hill Road (Photos 31, 33 and 34). In addition, a storm drain runs parallel to Depot Hill Road in front of the office and two stables (Photo 72).

Despite these minor disturbances, almost all of the area of potential effects (APE) appears to be undisturbed on the surface, most notably in the plowed fields and larger pastures. Therefore, the Phase IB subsurface testing strategy should remain consistent throughout the entire area of proposed construction, with shovel testing to be conducted at a minimum interval of 15 m (49.2 ft) intervals over all areas of proposed ground disturbance.

Previous Surveys

Three cultural resources surveys have been conducted within one mile of the project area (Table 4). The first survey listed is a Phase IA/IB cultural resources survey completed by Gregory and Dorothy Walwer in 2000 as part of the River Course at Troutbeck in the Town of Amenia. This survey identified two prehistoric sites, A02701.000072 and A0271.000073, as well as two historic sites, A0271.000074 and A0271.000075. Historical Perspectives

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completed the next listed survey, a Phase IA/IB conducted in 2002 for a Nextel Communications Antenna Site. This survey identified no archaeological sites. The final survey listed was a Phase IA/IB survey completed by Louis Berger & associates, Inc., in 2006 as part of the Silo Ridge Resort Community Project. This survey identified two historic sites, A02701.000081, and A02701.000082.

Table 4. Previous cultural resource surveys within one mile of the project area.

Project Name	Reference	No. of Sites Identified
River Course at Troutbeck	(Gregory Walwer/Dorothy Walwer 2000)	4
Nextel Communications Amenia Antenna Site	(Historical Perspectives 2001)	0
Silo Ridge Resort Community	(Louis Berger & Associates, Inc., 2006)	2

Prehistoric Overview

Glaciers covered the eastern ridges of the Hudson Valley during the Wisconsin glaciation, which ended about 12,000 years ago. People may have begun occupying the area soon after the glaciers retreated. These Paleoindians were organized in highly mobile bands adapted to the tundra and boreal forest environments present at the end of the Pleistocene. While archaeologists have traditionally emphasized the hunting of large megafauna such as mammoth and bison, there is increasing evidence that Paleoindians exploited a diverse array of small game and wild plants. While Ritchie (1994: 4-5) fails to note any fluted points in Dutchess County, several fluted points indicative of Paleoindian occupation occur nearby on the western banks of the Hudson River in Ulster County. In addition to large fluted points commonly thought to be used in hunting large game, unfluted lanceolate points became more common in the latter part of the Paleoindian Period.

Around 7000 B.C., stands of Spruce and Fir rapidly gave way to a denser forest of Pine and deciduous trees, with Oak becoming a dominant species (Salwen 1975). This drier climate supported less game and provided fewer plant resources for human populations. As a result, few sites dating from this Early and Middle Archaic period have been discovered in the region (Funk 1991). Those few sites that have been found dating to this period are often found near water sources and suggest that people lived in small mobile bands and subsisted on gathered and hunted wild resources.

Beginning around 6500 B.C., the climate became increasingly wetter, resulting in an environment similar to ours today (Salwen 1975). The large number of sites from this period suggests that Late Archaic populations increased significantly at this time. While people continued to live in small, mobile bands, there was an increasing trend toward sedentism. Subsistence practices were highly diverse and included a wide variety of aquatic and terrestrial resources. Late Archaic sites range from small upland camps to large villages near the confluences of major streams.

The Transitional Period (ca. 1300-1000 B.C.) is characterized by the use of steatite vessels and smoking pipes, which gradually give way to large, thick pottery vessels. This period is very much a continuation of Late Archaic life ways, with increasing sedentism and reliance on plant resources. The Woodland Period begins about 1000 B.C. and is marked by the

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introduction of pottery and the development of an elaborate trade and ceremonial complex. It is during this time that people gradually began to cultivate plants.

The Late Woodland Period began around A.D. 1000 and is differentiated from its predecessor primarily on the basis of projectile point types, pottery styles and diet (Funk 1976). Hoe cultivation also appears during Late Woodland times. Diet was largely made up of cultigens (corn, beans and squash) and game supplemented by fishing and the gathering of aquatic and terrestrial resources. Large, permanent village sites occur along major rivers as well as defensive locations (Ritchie 1994). Small, ephemeral sites also occur, probably used as camps for resource extraction. These smaller sites are located in a wide variety of geographic contexts, ranging from wetlands and backwater drainages to forested uplands. After about A.D. 1400, two distinct cultures emerge in this stretch of the Hudson River Valley: Proto-Esopus people along the western banks of the river and ancestral Wappinger populations located east of the Hudson in Dutchess and Westchester counties (Ritchie and Funk 1973).

Known Prehistoric Sites

A check of site files of the Office of Parks, Recreation, and Historic Preservation and the New York State Museum indicated that two prehistoric sites are known within one mile of the project area (Table 5). Both of these sites, NYSM 3135 and NYSM 8206, were listed by Arthur Parker in the 1920s. Each site remains unnamed with no cultural affiliation listed, although each refers to the presence of burials.

Table 5. Previously identified prehistoric sites within one mile of project area.

Site Number	Cultural Affiliation	Status	Site Name	Distance	Reference
NYSM 3135	No info	I	No info	4,425 feet north	(NYSM files)
NYSM 8206	No info	I	No info	3,425 feet north	(NYSM files)

*Status: I=inventoried, E=eligible, L=listed

Historic Overview

In 1682, Colonel Thomas Dongan, who had been appointed Governor of the Province of New York, took to task the creation of twelve counties within the state of New York. Dutchess County was formed in 1683 as one of these original counties, being named for the Dutchess of York. The newly formed county encompassed a very desirable location between Albany and New York City, with no physical barriers to the major source of transportation, the Hudson River. Any Indian titles on the land throughout the vicinity had been eradicated before the creation of the county with no fur trading posts established here, and relations between early settlers of the county and local native inhabitants as amicable as could have been expected. Indian populations in the area were largely Mohican, with the Wappingers prevalent. Originally, Dutchess County included what is now known as Putnam County, as well as a small portion of Columbia County. The county lies on the eastern side of the Hudson River, boarded to the east by the Fishkill and Taghkanic Mountains, and the State of Connecticut. The Beacon Peaks of the Fishkill Range provided ideal placement of signal flares during the Revolutionary War. In the southern portion of Dutchess County lie some of

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the highest peaks of the Highlands, with Grand Sachem standing at 1, 685 above sea level. The large number of streams crisscrossing the county led to the early use of waterpower in its development, as did the highly fertile soils, producing a large amount of wheat, rye, corn, and oats for export. The Hudson River historically provided the main mode of transportation of both settlers and goods. Dairy production, iron and steel production, brick production from local clays, and agriculture were all very strong driving forces of the early economy of the area. Dutchess County was also home to an early rail station adding tourism and varietal trade goods to the local economy.

Although Nicholas Emigh had settled here in 1685, and in June of 1687, Colonial Governor Robert Sanders (an interpreter) purchased land in the present day Poughkeepsie area which he further leased to Dutch settlers, Dutchess County remained largely uninhabited until 1701. As the settling of the county was slow to start and population remained low, the county was attached to Ulster County for representation in the General Assembly until 1713. Larger scale development of the county did not truly begin until the 1720s. Early settlers were largely of Dutch descent, with New Englanders prominent in the east, Irish homesteaders along the Hudson, and a distinct Quaker population in the south. By the end of the 18th century, the county had become the second largest in the province, largely due to the natural resources readily exploitable in the area. In 1740, a Wappingers tribal sachem, or counselor, by the name of Daniel Nimham attempted to regain a portion of native lands drawn as part of the Philipse Patent, to no avail, despite his claims of fraudulent negotiations. In the summer of 1742, as a result of the Moravian Society in the Western World mission efforts, the first Christian congregation of Indians in the country was formed at Pine Plains, and by 1743, the number of converted and baptized Indians reached sixty four (Frisbie 1996). At this point, mission activities became a source of confusion and concern for the other white settlers. Relations between Moravians and other settlers became further strained by the presumption of alignment of the Moravians to the French cause in the French and Indian War. In 1744, General Clinton gave orders that Moravian missionaries must cease their teaching and converting of local Indians, made it necessary for any settler choosing to live with the Indian community to apply for and receive a license from the Governor to do so.

Amenia town lands are comprised of a portion of the 1697 Great Partners Land Patent, lying on the eastern boundary of Dutchess County. The Town of Amenia was established in 1788, and was named from the Latin “amoena”, meaning pleasing to the eye, by Dr. Thomas Young. Dr. Young was an early settler who was a committee man for the Sons of Liberty, and who also took part in the Boston tea Party, an early demonstration of the radical minded populations drawn to this town. Following the revolutionary war, the town was home to an active abolitionist component, led by Ezra Reed who freed his own slaves in 1788 (Grogan 1989). The prominent estate, Troutbeck, owned and named by its original settlers, the Benton Family from England provided a meeting place for the early prominent thinkers such as Thoreau and Emerson. The Benton family was a family of farmers, with a strong interest in the literary arts and history, starting local societies dedicated to the study of each. Later, in the early 1920s, Troutbeck was purchased by Joel and Amy Springarn, also great fans of the literary arts, and locally renowned for their liberal political influences. Springarn Estates became the favorite haunt of Sinclair Lewis, Hemingway, WEB DuBois, and Theodore Roosevelt. Joel Springarn, himself, had the distinct honor of being recognized as one the great thinkers of his time, and was the first Jewish professor at Columbia University. Springarn aided in the resolution of dispute between DuBois and Booker Washington, paving the way for the formation of the NAACP, and later, Springarn would serve as the second

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President of this group, following a tour of duty during WWI in which Springarn served as Colonel.

The early economy of Amenia was largely reliant on carriage and wagon makers, a marble works, wood finishing mill, brickyard, and manufacture of tin ware and household utensils, sheep and grain farming and the growing iron mining industry, with steel production to follow. Helped along by the ease of transport afforded the town by the Hudson, Amenia bore witness to steady growth throughout the 19th Century. Local industry included the establishing by Gail Borden of his first condensed milk factory in 1850, using the railroad to deliver this revolutionary new product worldwide. The production of condensed milk directly led to the dairy industries growth in the area, largely overshadowing the sheep farming of earlier times. During the Civil War, production of condensed milk, patented in 1856, could barely keep up with demand. In addition to the growth of industry, visitors from the city flocked to the area as a result of the natural beauty it possessed, taking advantage of the railroad system providing a new means of direct access to the area. At this time, the Army Corps constructed a dam in order to provide power to a local sawmill, leading in turn to the formation of Lake Amenia. This new lake quickly developed into a cottage resort community, adding to the area's draw to those looking to get away from it all. Unfortunately, in 1955, Hurricane Diane wrecked the dam, causing the lake to overspill and drain, leaving behind a wetland now designated as NYS wetlands.

After World War II, the increased reliance on automobile travel led to the demise of rail travel to Amenia. Fewer visitors arrived, and the local economy suffered, as the Catskills became the vacation spot of choice. The demise of Lake Amenia also added to the decrease in tourism to the area and local industry has fallen. There are a number of local parks, and a variety of trails and historic markers attesting to the active participation of the town in the volatile growth of a nation. However, the population stands at about 4,100, and the heydays of yesteryear cannot compare to the slower lifeways experienced by modern residents.

Known Historic Archaeological Sites and Structures

A check of site files of the Office of Parks, Recreation, and Historic Preservation and the New York State Museum indicated that one historic archaeological site is known within one mile of the project area (Table 6). This site, the West Lake Amenia Road Site (A02701.000082), was reported by the Louis Berger Group as a result of a Phase I survey conducted for the Silo Ridge County Club in 2006.

A survey of the National Register database (SPHINX) revealed that there are no listed National Register properties within one mile of the project area, and there are no map-documented structures within the project area.

Table 6. Previously identified historic sites within one mile of project area.

Site Number	Cultural Affiliation	Status	Site Name	Distance	Reference
A02701.000082	No info	I	West Lake Amenia Road	5,263 feet northwest	(Berger 2006)

*Status: I=inventoried, E=eligible, L=listed

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Assessment of Sensitivity for Cultural Resources

An assessment of whether significant cultural resources are likely to be present within a project area must consider what is known of the prehistory of the area, including likely locations of archaeological sites and proximity to known sites; and the history of the immediate area, including whether any historic structures or features are known to exist within the project boundaries. An assessment must also consider that if cultural resources *are* located on a parcel, will they likely retain *integrity* (without which they would not be considered significant). Modifications to the land may serve to destroy all or portions of any cultural deposits that may exist.

Prehistoric Sensitivity

Two prehistoric archaeological sites with reference made to the presence of burials are known to lie within one mile of the project area. Both of these sites were listed by Arthur C. Parker in the 1920s, with no other information recorded. The presence of these sites confirms that prehistoric peoples visited and/or occupied the local area, usually with camps and villages being placed relative to natural resource availability.

The broadly sloping terrain of the project area would have encompassed a variety of smaller wetlands and other upland environments that would have been attractive to prehistoric people for their rich resources potential. As a result, the project area is considered highly sensitive for prehistoric remains. Areas of the project that have been substantially disturbed are considered poorly sensitive.

Historic Sensitivity

One historic archaeological site lies within one mile of the project area: The West Lake Amenia Road Site, A02701.000082, (see *Known Historic Archaeological Sites and Structures*). There are no National Register listed properties in the vicinity and a review of relevant historic maps shows that there are no map-documented structures (MDS) in the vicinity of the proposed development.

The project involves the improvement of approximately 80.0 acres for residential and recreational purposes. Historically, the lands in and around Amenia afforded natural resources for the carriage industry and, along with fertile crops, fueled the early rise of the local economy, while the town itself rose to importance as a resort destination fulfilling the vacation needs of a growing state while taking advantage of the newly laid rail system with the natural beauty of the area providing the inspiration for the likes of Thoreau and Emerson. As such, the project area is considered highly sensitive for historic remains. Areas of the project that have been substantially disturbed are considered poorly sensitive.

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Part II: Field Research

Field investigations were conducted to identify any historic or prehistoric cultural resources that may be impacted by the proposed project. The fieldwork was conducted between May 14th and July 20th of 2007, and was supervised by David Moyer, Principal Archaeologist. Royce Duda, Paula Perrault, David Crawford, Bennett Brumson, and Skip Paulson assisted in the subsurface investigations. The weather ranged from warm and muggy to sunny, hot and dry with temperatures ranging between 70 and 90 degrees. Photographs were taken of the project area, adjacent visible structures, and areas of disturbance (Appendix B). None of the staff of the active horse farm were aware of any prehistoric or historic archaeological sites within the APE boundaries.

Methodology

Field Walkover and Surface Collection

The entire project area was initially examined through a walkover designed to identify visible features and artifact scatters, areas of disturbance, and the general terrain and ground cover. The project area was partially plowed and disked prior to the initiation of field investigations. Areas of the APE that had been plowed were subjected to a thorough pedestrian inspection, in addition to the general surface assessment conducted throughout the APE in its entirety. Linear transects laid out in 3 meter intervals were thoroughly examined in order to identify any surface artifact scatters or cultural features. Five prehistoric artifacts were located during the surface examination, including two projectile point fragments- one of chert and one of quartz, two flake fragments- again one each of chert and quartz, and one chert core. As a result of these surface finds, STPs were placed both above and along radials extending from each artifact location in each cardinal direction to further investigate the possible presence of additional cultural material adjacent to the artifacts discovered on the surface. All subsurface testing results are discussed in the results section of this report. Following the completion of the visual inspection of all plowed areas, these plowed areas were also subjected to subsurface testing in order to identify any cultural deposits not previously identified. Only the areas within the proposed APE were tested; areas outside of this will not be disturbed by the project.

Subsurface Testing

Standard shovel test pits (STPs) were used to test for buried cultural deposits. STPs are small (about 40 cm or 16 inch diameter) holes excavated with a shovel; sediments are screened through 1/4 inch hardware mesh to look for artifacts. STPs are excavated in natural soil layers, as much as possible, and are dug through the topsoil to at least 20 cm (~ 8 inches) into culturally sterile subsoil unless noted in he STP records (Appendix C).

STPs were placed using a compass and tape at 15 m (49.2 foot) intervals within the project area, with the exception of STPs placed in plowed areas which were laid out in transects spaced at 30 meter intervals with STPs 15 m apart, creating a grid over all areas of proposed ground disturbance (See Subsurface Examinations). If an STP was placed in an area that was obviously disturbed (e.g., in a ditch along side the road), an attempt was made to move the

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shovel test beyond the area of disturbance, to a maximum distance of 3 meters from its original location. A list of the STPs and their soil profiles is provided in Appendix C. A complete listing of the artifacts recovered can be found in Appendix D.

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Results

Surface Inspection

The entire area of potential effects (APE) was first subjected to a pedestrian walkover of all of all proposed areas of ground disturbance. The project is located along a north facing slope along both side off Depot Hill Road south of the village of Amenia in Dutchess County, New York (Figure 1, Appendix F., Photos 1-107). The area of potential effects (APE) includes the development of approximately 80.0 acres for residential and recreational use. Residences will consist of house with basements built as condominiums with necessary utilities installed as part of the construction process. Each residence will be built under strict exterior design guidelines, and no homeowner will be building additions or sheds at any later date. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

The property is accessed from an asphalt drive on the south side of Depot Hill Road (Photo 1). The project property is actively used as a horse farm, with the APE consisting of pastures and smaller paddocks connected to stables and storage barns through a series of white fences. Two pastures occur on either side of the entrance road (Photos 57-68). The central part of the project area consisted of tall grasses and the stubble of previously harvested corn, while provided almost no surface visibility (Photos 2-7). A farm complex appearing to date to the early 20th century occurs to the north and west, including a dairy barn, a hay or equipment shed and three silos (Photos 2-4, 18 and 20-21). A small stream flows north to fan into the grassy meadow (Photo 8). These farm buildings will be removed as part of the proposed project.

In addition to the older farm complex, several tan painted buildings from the modern horse farm occur to the west. These buildings include an office (Photo 73), two storage sheds (Photos 27, 69 and 70), as well as two stables on either side of the office (Photos 71 and 74). These structures will be removed as part of the proposed subdivision. Other stable buildings in the same color scheme are also visible to the south on adjacent pastures and will not be directly impacted (Photos 77, 79, 81 and 84). All of these buildings appear less than 50 years old and would not be considered eligible for inclusion in the National Register of Historic Places. Vegetation adjacent to the buildings consisted of pasture grasses providing no surface visibility.

In addition to the meadows and pasture, three long strips were plowed and disked prior to the Phase IB field investigations. One of these plowed strips extends south from the center of the project (Photos 100-107), while the other two run parallel to one another along the eastern end of the project (Photos 88-99). The northernmost of these two plowed strips was notably shorter, and shovel testing was required at the eastern of the field (Photo 95). The two northern plowed strips each measured approximately 100 ft (30 m) wide while the southern strip measured approximately 80 ft (24.3 m) wide (Appendix F). These plowed areas were subjected to a systematic surface walkover designed to identify artifacts and cultural features as described in the *Field Methods* section of this report. As part of the close interval surface inspection two prehistoric archaeological sites were identified, one in the northern end of the southern plowed field (Photos 89-94) and the other located near the center of the southernmost of the two parallel fields (Photos 9-14; Appendix F). No evidence of charcoal

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or buried cultural features was noted during the surface walkover. More information regarding these prehistoric archaeological sites is provided in additional detail in the following section.

Several structures occur on the north side of Depot Hill Road, some of which occur within the APE boundaries. Four residential structures occur to the east of the APE on the north side of Depot Hill Road (Photos 25-28). These structures will not be directly impacted by the proposed construction. Three structures occur within the project boundaries on the north side of Depot Hill Road (Photos 29, 33 and 34). One of the structures has shingle siding and appears to date to around the middle of the 20th century (Photos 29 and 31). The two other structures located directly west appear more recent (Photos 33 and 34). These structures will be removed and part of the proposed development. Most of the APE on the north side of Depot Hill Road consists of four large paddocks separated by orderly rows of white wooden and wire fencing (Photos 35-40; 42-46; 54-56). Another concrete block stable building occurs to the east of the paddocks (Photos 53 and 56). This building, as well as the paddocks, will be removed as part of the proposed development.

A large rectangular pasture located south of the farm buildings will also be developed as part of the project (Photos 75-80). The tall grasses provided no surface visibility. A small circular area located to the west of this pasture will also be developed (Photos 81-86). This area encompasses both side of the roadway. A long ditch containing wetland plants occurs in the southern part of this area (Photo 87).

Structures

Several structures occur both on the property as well as on adjacent parcels. A number of structures will be removed as part of the project including a historic dairy barn with associated sheds and silos all dating from around the early to mid 20th century (Photos 2-4, 18 and 20-21). All of these buildings will be removed as part of the proposed project. In addition to the historic farm buildings, a number of more recent buildings associated with the operation of the current horse farm occur along the south side of Depot Hill Road. These structures include an office (Photo 73), two storage sheds (Photos 27, 69 and 70), as well as two stables on either side of the office (Photos 71 and 74). These structures will be removed as part of the proposed subdivision. Other stable buildings in the same color scheme are also visible to the south on adjacent pastures and will not be directly impacted (Photos 77, 79, 81 and 84). All of these buildings appear less than 50 years old and would not be considered eligible for inclusion in the National Register of Historic Places.

Three residences occur within the APE on the north side of Depot Hill Road. One of the structures has shingle siding and appears to date to around the middle of the 20th century (Photos 29 and 31). The two other structures located directly west appear more recent (Photos 33 and 34). All three of these structures will be removed and part of the proposed development. In addition, a concrete block stable building behind the houses will also be removed (Photos 53 and 56). In addition, four residences are located on adjacent lots on the north side of Depot Hill Road to the east of the APE (Photos 25-28). These structures will not be directly impacted by the proposed construction.

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Visual Impacts

The proposed residential subdivision is located along a north facing slope along both sides of Depot Hill Road south of the Village of Amenia in Dutchess County, New York (Figure 1, Appendix F., Photos 1-107). It is situated on an open valley with little tree cover. As a result, views from the upper elevations of the project along the plowed fields provide a wide panorama of the valley below (Photos 15-17, 88, 96 and 101). Four structures are visible on adjacent lots on the north side of Depot Hill Road (Photos 25-28). Two cellular transmission towers and a water tank are visible just north of the project boundaries (Photos 101 and 104-105). The proposed residential development of this formerly agricultural property reflects land use trends found throughout the region, with crops and farmland slowly giving way to residential and recreational land use.

Subsurface Examinations

Subsurface testing was conducted in all areas of proposed ground disturbance. A total of 1,342 STPs were laid out in 15 m (49.2 ft) intervals to create a grid over the area of proposed construction. STPs were labeled according to transect, with numerical labels used to further designate individual holes. Out of the 1,349 STPs laid out, a total of 22 (1.6 %) could not be excavated due to buildings, roads, creeks and other obstructions. Of the 1,349 STPs excavated as part of the project, 37 (27.9 %) recovered cultural material including prehistoric artifacts (a flake fragment, a chert core, a quartzite projectile point, and a chert projectile point), as well as historic refuse (gun shells, metal bolt and nail fragments, bottle and window glass). In addition to the artifacts recovered from the excavation of STPs, five prehistoric artifacts were located during the visual inspection of area plowed prior to the initiation of fieldwork (as discussed in the Surface Collection section of this report).

As a result of the recovery of the prehistoric artifacts discussed, three distinct loci were declared prehistoric sites, with boundaries drawn encompassing the surface find itself and as well as adjacent positive STPs within a 50 ft buffer. NYS Prehistoric Archaeological Site Forms for each of these three loci are included in Appendix E.

Locus 1- This site was identified during the surface inspection of a plowed field in the eastern part of the project area (Figure 9). A nearly complete Brewerton side notched projectile point was recovered near the central part of the project area (Photo 108). A closer inspection of the area identified a chert core fragment approximately 23.0 m to the southeast. (Figure 9). A total of 19 STPs were excavated directly over the two surface finds, as well as in 1 and 3 m intervals and in 5 m intervals connecting the two finds. No other prehistoric material was recovered from any of these STPs.

Some days later during the subsequent subsurface testing of the unplowed areas, a single contracting stemmed projectile point was recovered from the upper level of STP C-23 (Photo 108). Eight additional STPs were excavated in 1 and 3 m intervals in the four cardinal directions, but no additional prehistoric artifacts were recovered. Because of the proximity of STP C-23 to SF-1 and SF-2, the find was included as part of Locus 1 and the boundary was redrawn accordingly.

The slate projectile point recovered from STP C-23 appears to be a Lamoka Point, which dates to around 5,500 B.C. to 4,500 years ago. Brewerton Side notched points are somewhat

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more recent and are a chief characteristic of the Laurentian associated Brewerton Phase. Brewerton points are thought to date to sometime in the Late Archaic Period between 5,000 and 3,750 years ago (Ritchie 1969: 91-92).

Locus 2- Locus 2 was initially identified from a single quartzite flake fragment located near the northern end of the southern plowed field (SF-3; Figure 10). An intensive survey of the area also identified the tip of a quartzite projectile point 13.2 m to the west (SF-4) and a chert flake fragment approximately 54.0 m to the south (SF-5; Photo 108). A total of 27 STPs were excavated directly over each of these 3 surface finds as well as at 1 and 3 m intervals in the four cardinal directions. In addition, 12 STPs were excavated in 5 m intervals between SF-3 and SF-4 and SF-5 as shown in Figure 10. Of these 39 STPs, two recovered prehistoric cultural material within the plowed field: a fragment of a chert core recovered from STP SF-4/3mS and a quartzite flake fragment recovered from STP SF-4/ 5mS.

Locus 3- Locus 3 was initially identified in STP O-2, where a single chert flake was recovered from the upper level (Figure 11; Photo 108). Eight additional STPs were excavated in the four cardinal directions at one and three meter intervals. A single fragment of fire cracked rock (FCR) was recovered from STP O-2/3mS. No other prehistoric artifacts were recovered from the other STPs. Two additional STPs were excavated to the south of STP O-2/3mS, but no additional artifacts were recovered. Because of the presence of two prehistoric artifacts within three meters, the area was designated an archaeological site. A NYS Prehistoric Archaeological Site Form for Locus 3 included in Appendix E.

The function of Locus 3 remains unknown, although the presence of FCR suggests that undiscovered prehistoric fire-related features such as hearths and roasting pits might occur nearby. The site may be eligible for inclusion in the National Register of Historic Places for its ability to provide important information about prehistoric life in Dutchess County.

In addition to the loci mentioned, an isolated prehistoric find was also identified. A chert projectile point fragment was recovered from the upper level of STP Z-4 (Photo 108). The artifact appears to be a fragment of a Levanna point, a projectile point indicative of early Iroquoian related Owasco culture, which superseded the previous Jack's Reef (late Point Peninsula) occupation in central New York State. Levanna points are thought to date to between ca. 700-300 years B.P. Eight additional STPs were excavated in 1 and 3 m intervals in the cardinal directions around STP Z-4, but no additional prehistoric artifacts were recovered. Because of the relative isolation of this find with respect to the identified prehistoric loci, the area was not designated an archaeological site. None of the flakes, flake fragments, or other debitage recovered from the Phase IB study showed clear evidence of utilization under light (20-30x) magnification (Photo 108).

STPs ranged in depth between 41 and 90 cm (12.2 and 35.4 in) below the ground surface, with the average STP depth equaling 71.2 cm (28.0 in). Excavation of 189 STPs (14.0%) was hindered due to the presence of impassable rock, six STPs (0.4%) were stopped by large root networks, and two ((0.1%) were stopped by the presence of increasing water levels.

Some disturbance was noted in isolated STPs, with nine STPs (0.7%) noting the presence of fill, primarily in the vicinity of the stables and smaller paddocks. These small paddocks might have been filled and leveled to help drain the runoff, since dry pastures are a necessary component of overall hoof health. In some of these cases the fill consisted of black or dark

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gray sandy soil, such as in STPs KK-18, OO-16, RR-20 and HHH-1. In other examples the transported fill consisted of reddish yellow coarse and silty sand with rocks. This was especially common along both sides of Depot Hill Road along the FF and KK transects (See Appendix C; STPs FF-8. FF-13 and KK-18). STP WW-13 had been stripped of topsoil some time in the past. No buried A horizons and no other soil anomalies were noted.

While some minor ground disturbances were noted in isolated STPs, the majority of the area of proposed construction appeared relatively undisturbed. Soils encountered as part of the Phase IB study appeared to follow natural stratigraphic soil progression with little evidence of turbation or other disturbances. Soils largely conformed with the typical soil profiles examined prior to the fieldwork from the Web Soil Survey, with mainly dark gray and brown silty loams occurring (Tables 1, 2, and 3; Appendix C), although weak red and yellow soils not shown in soil descriptions were encountered in some of the southeasterly portions of the APE. It would appear that soils in the APE were formed in loamy till, as mapped within the immediate area (Figure 2).

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Part III: Summary and Recommendations

A Phase IA/IB cultural resources survey has been completed for the proposed Davis Residential Subdivision Project in the City of Saratoga Springs, Saratoga County, NY. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines, equaling approximately 80.0 acres. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

Artifacts from all prehistoric cultural time periods are known to exist in Dutchess County, while two prehistoric archaeological sites are known to lie within one mile of the project area. The presence of these sites confirms that prehistoric peoples visited and/or occupied the local area, usually with camps and villages being placed relative to natural resource availability. As a result, the project area is considered highly sensitive for prehistoric remains. The project involves the improvement of approximately 80.0 acres for residential and recreational purposes. Historically, the lands in and around Amenia afforded natural resources for the carriage industry and, along with fertile crops, fueled the early rise of the local economy, while the town itself rose to importance as a resort destination. As a result, the project area is considered highly sensitive for historic remains.

A Phase IB field examination was conducted to test for cultural deposits that may be impacted by the proposed project. The entire APE, encompassing all areas of proposed ground disturbance, was surveyed utilizing a careful surface visual inspection, with a systematic surface inspection of all plowed areas, followed by thorough subsurface testing within both plowed and unplowed portions of the proposed project. A total of 1,349 STPs were laid out in 15 m (49.2 ft) intervals to create a grid over the area of proposed construction. STPs were labeled according to transect, with numerical labels used to further designate individual holes. Out of the 1,349 STPs laid out, a total of 22 (1.6 %) could not be excavated due to buildings, roads, creeks and other obstructions. Of the 1,327 STPs excavated as part of the project, 37 (27.9 %) recovered cultural material. In addition to the artifacts recovered from the excavation of STPs, five prehistoric artifacts were located during the visual inspection of area plowed prior to the initiation of subsurface testing. Three prehistoric sites were identified as part of the survey. Locus 1 is comprised of a core fragment and a chert flake fragment, Locus 2 identified two flakes and a projectile point tip, and excavations in the Locus 3 area located a chert flake and a fragment of FCR in adjacent STPs.. In addition to the loci mentioned, two isolated finds comprised of projectile point fragments were identified in STP C-23 and Z-4. The proximity of these last points to the loci determined as sites is not such as to include them within the site boundaries given for the individual loci, and no other artifacts were located in any of the eight radial STPs excavated adjacent to either point. None of the flakes, flake fragments, or other debitage recovered from the Phase IB study showed clear evidence of utilization under light (20-30x) magnification.

These sites appear to be able to address a host of research questions about prehistoric lifeways in the southern Taconic range and may be considered eligible for inclusion in the National Register of Historic Places under Criterion D for their ability to address important information about the past. Therefore, it is our recommendation that these three prehistoric loci identified be avoided by all construction activities and that a formal avoidance plan be drawn and submitted to the NYSOPRHP for concurrence and approval prior to the initiation

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of construction. If avoidance is not possible, we recommend that Phase II Site Examinations take place prior to any construction.

These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Appendix A.

Figures

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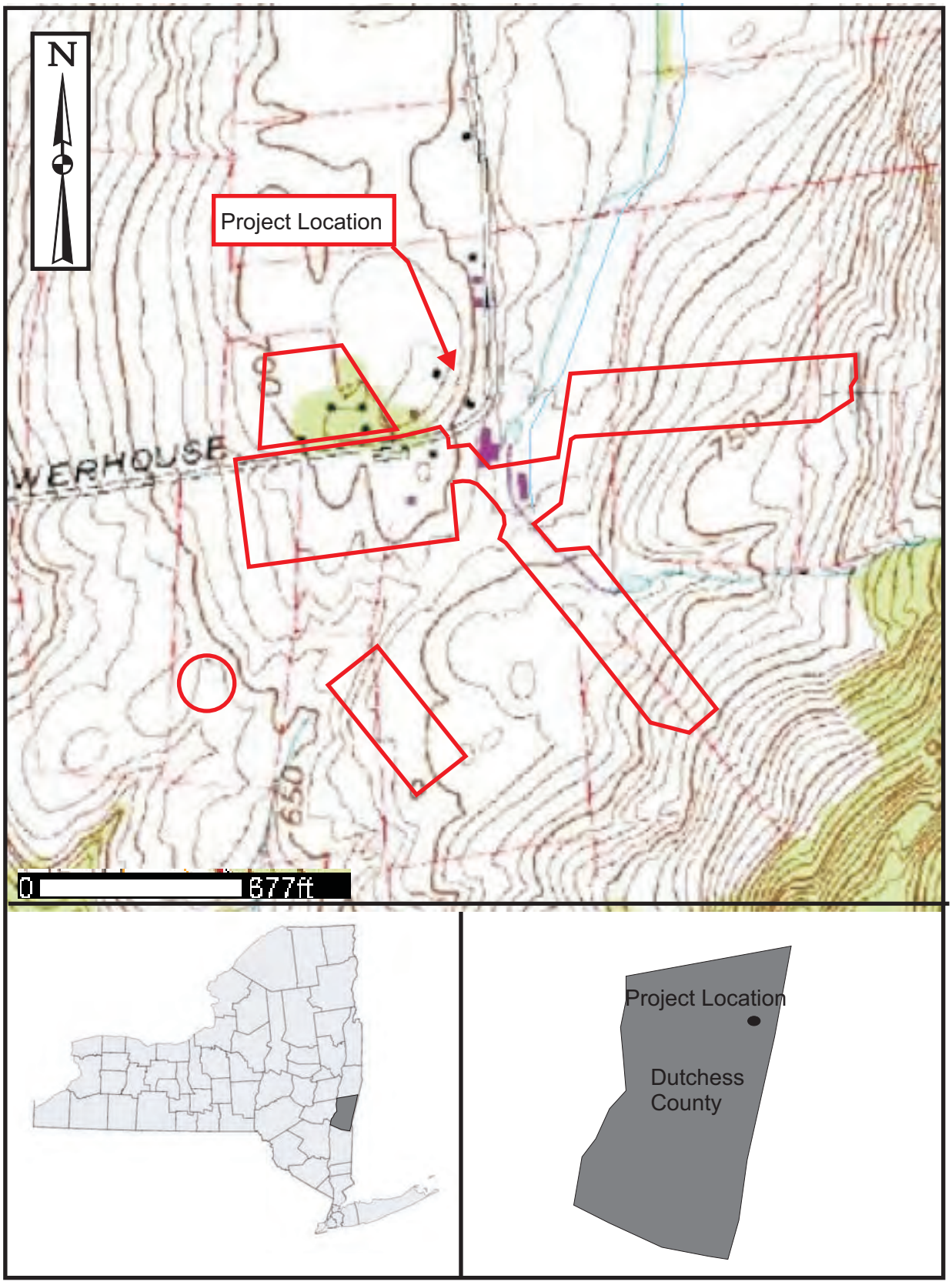


Figure 1. Map showing the location of the project area on Amenia USGS 7.5 minute topographic map.

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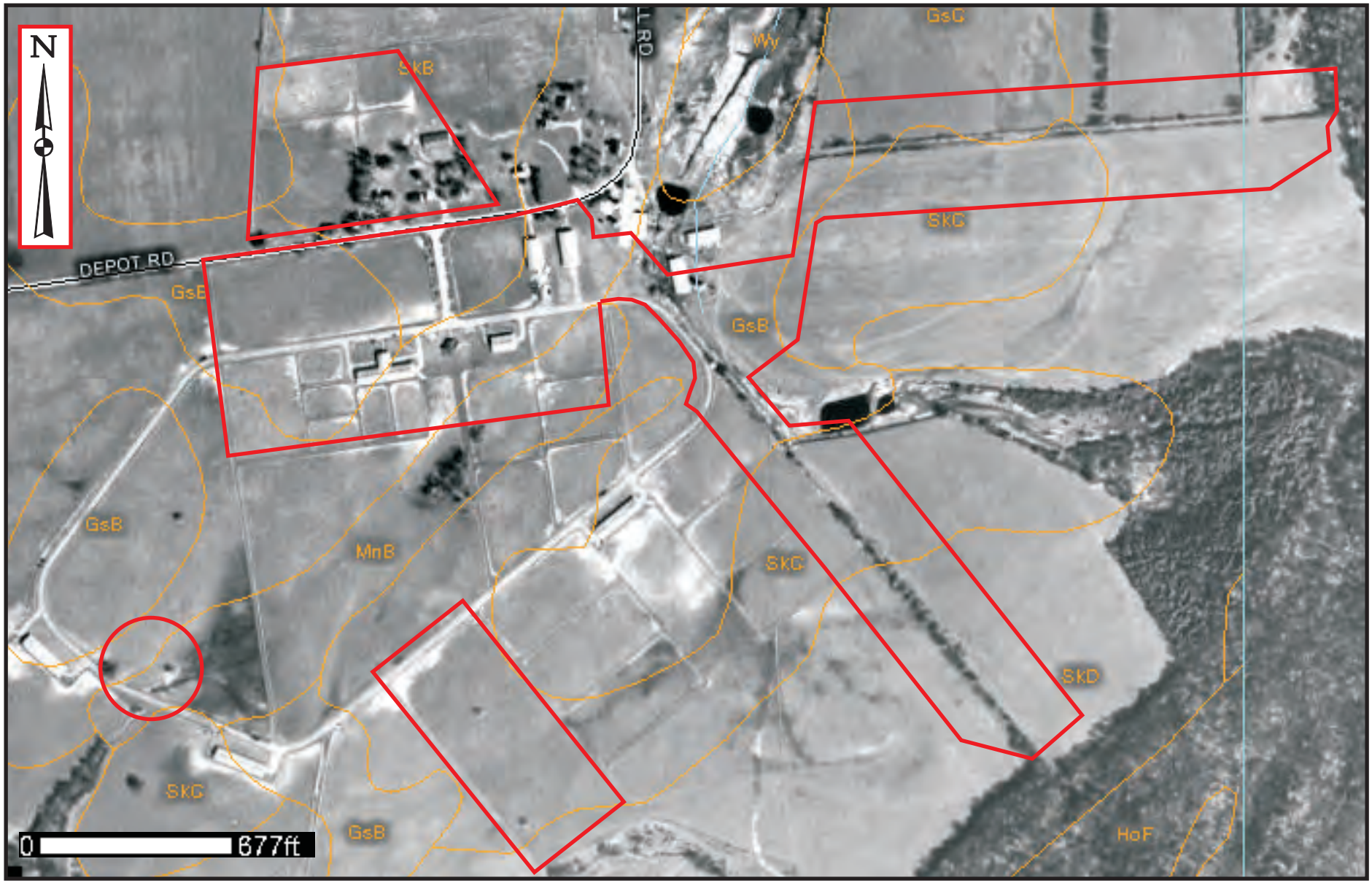


Figure 2. NRCS soils map with the proposed construction indicated.

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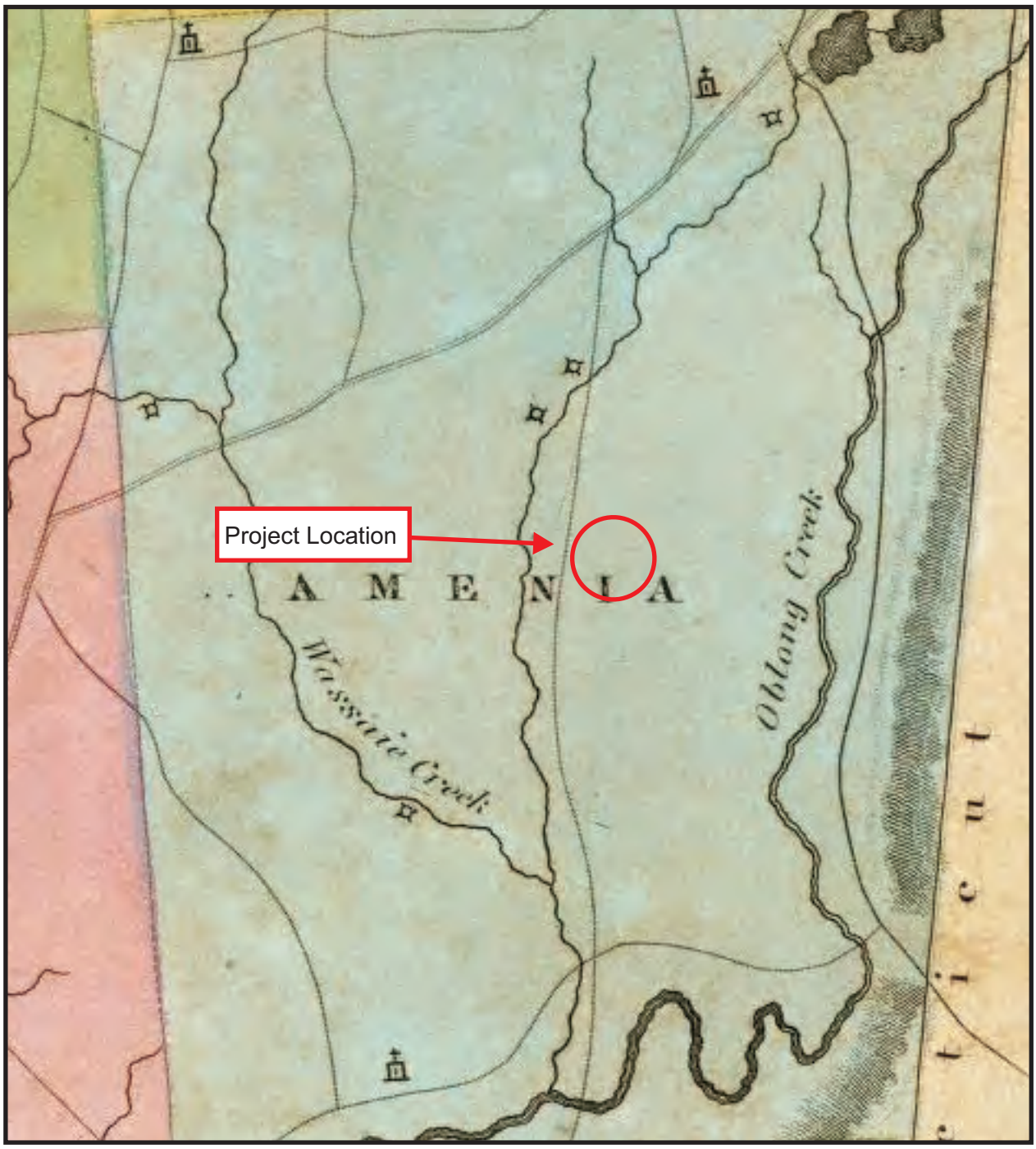


Figure 3. Portion of 1829 Burr Map with the approximate location of the project area indicated.

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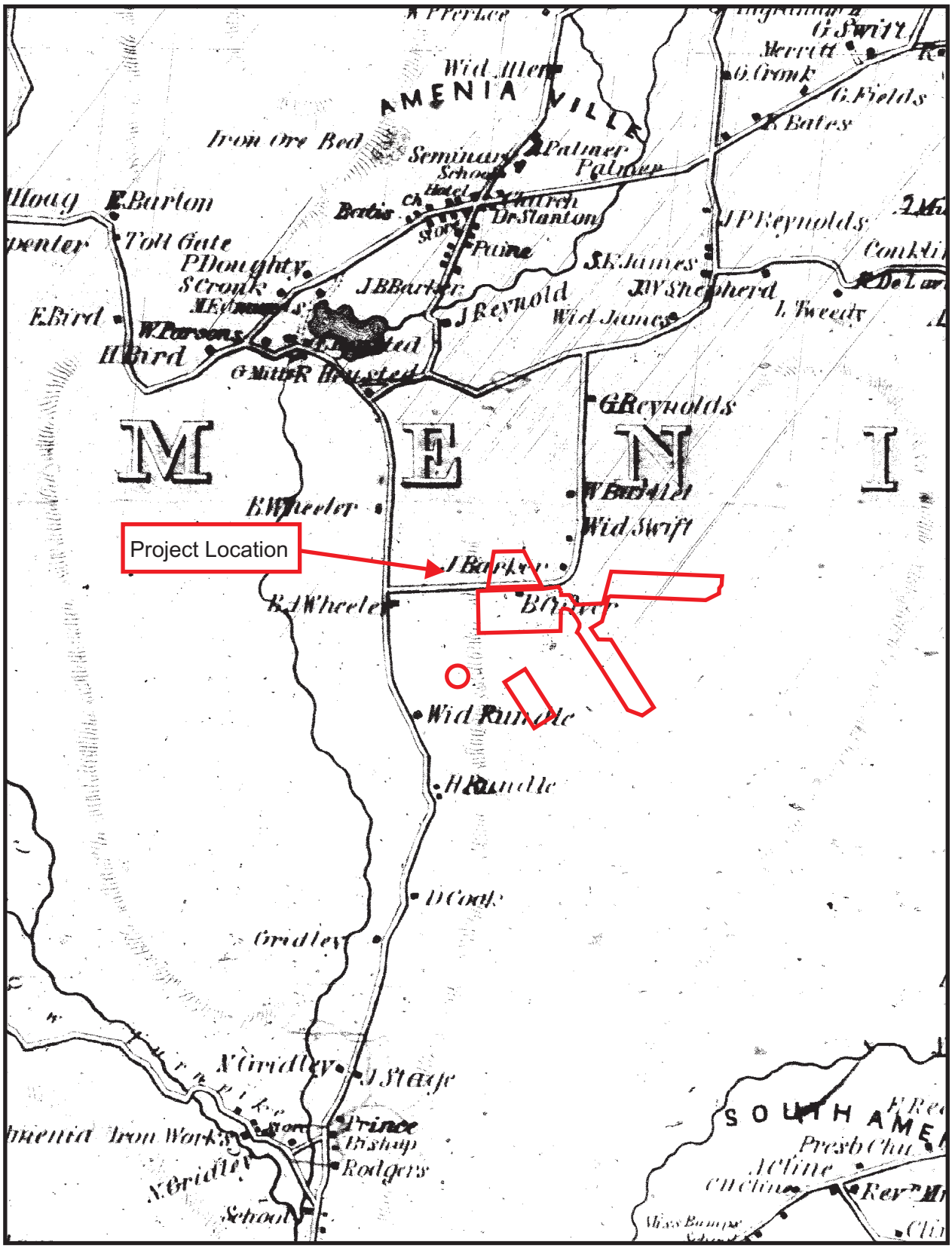


Figure 4. Portion of 1850 Sidney map with the project area indicated.

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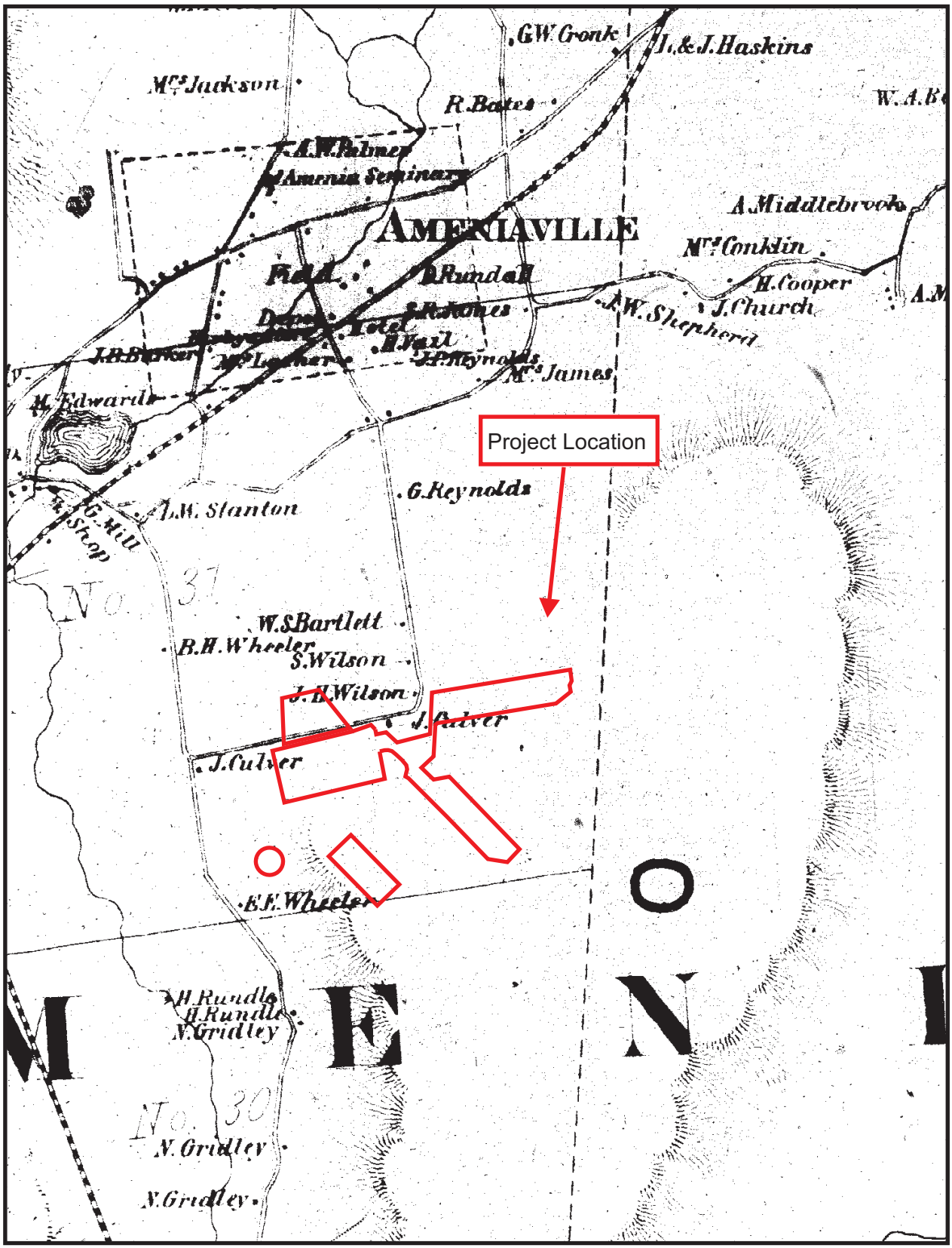


Figure 5. Portion of 1858 Gillette map with the project area indicated.

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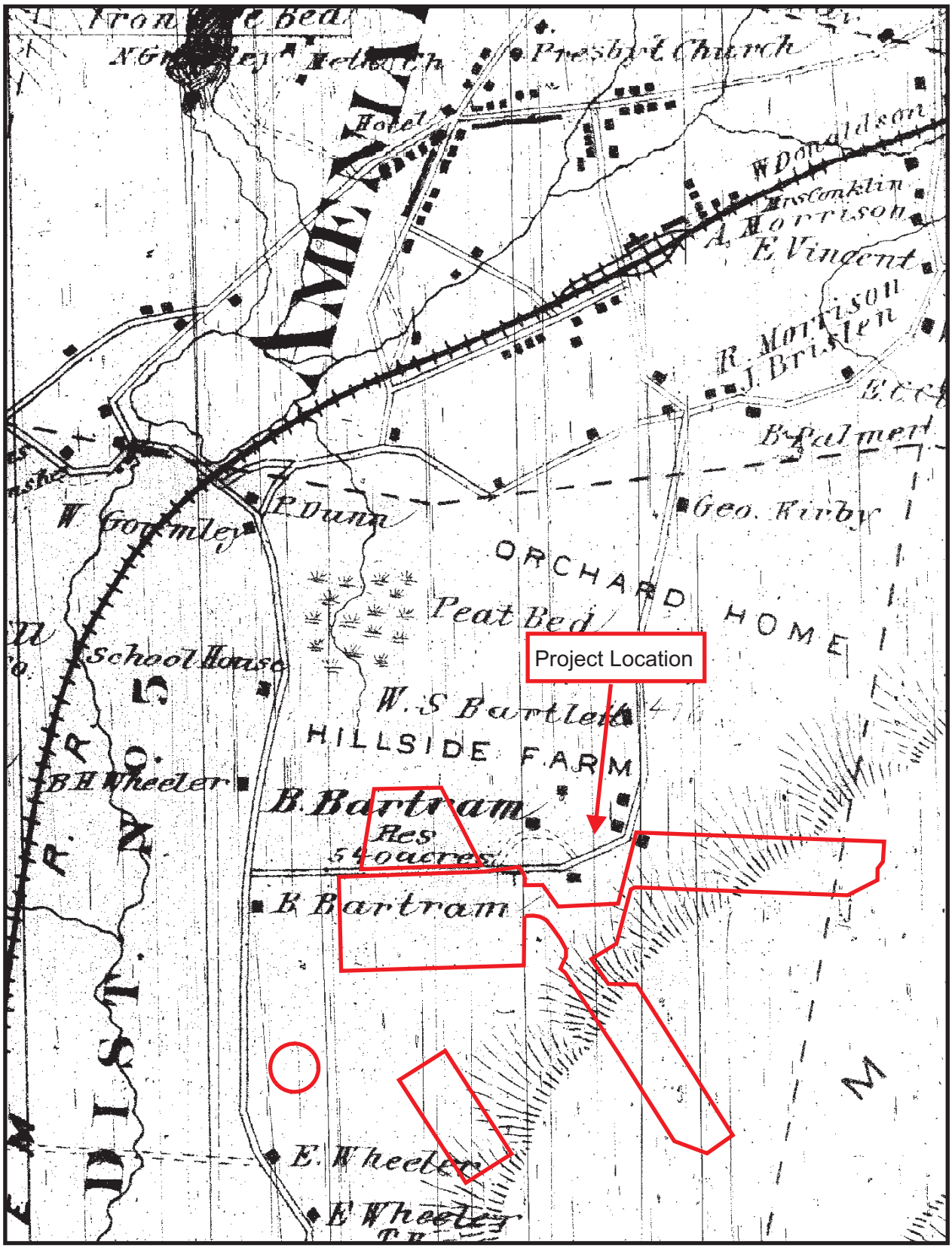


Figure 6. Portion of 1876 Gray and Son map with the project area indicated.

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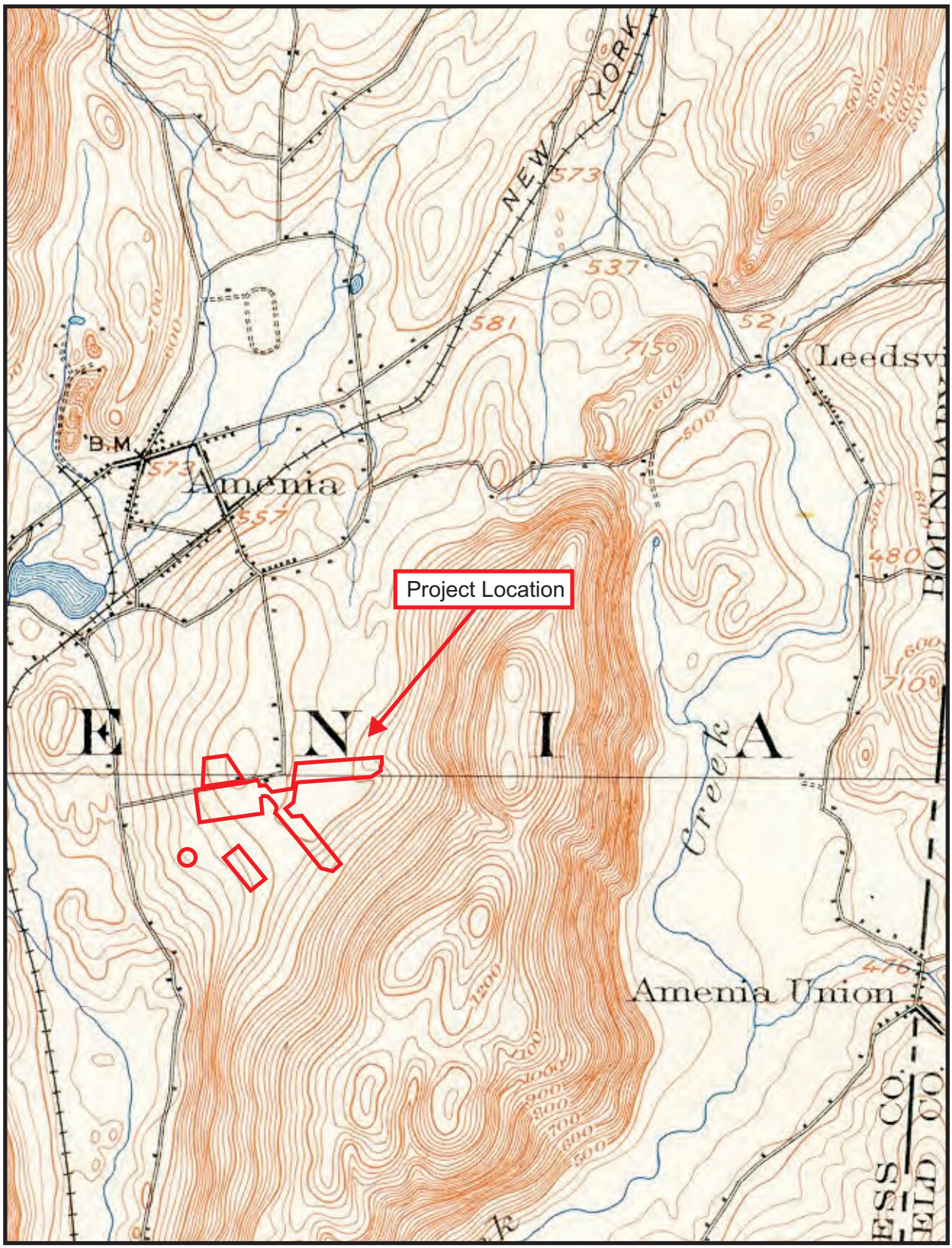


Figure 7. Portion of 1899 Millbrook 15 minute USGS topographic map with project area indicated

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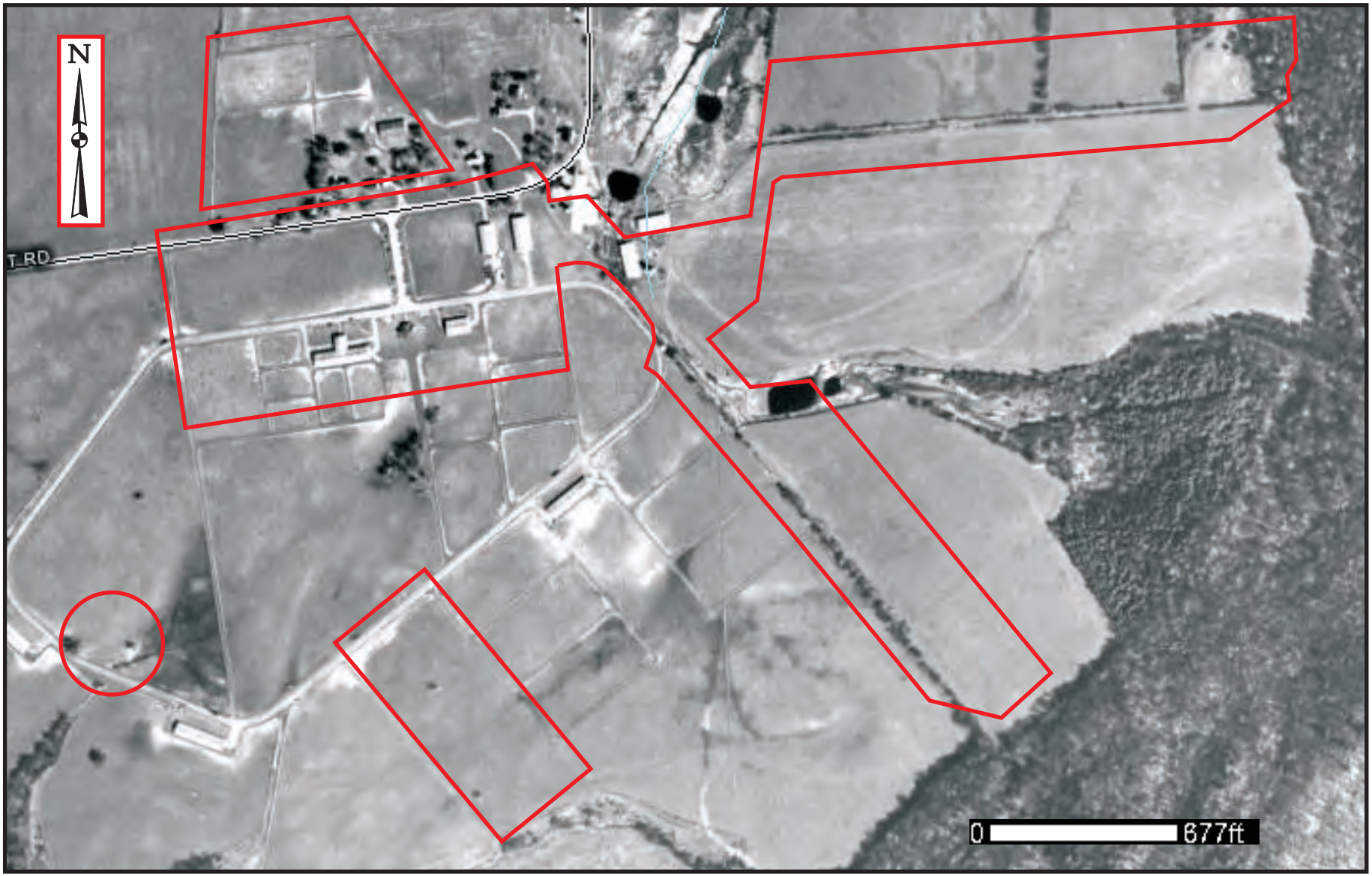


Figure 8. Digital aerial photograph with the project area indicated.

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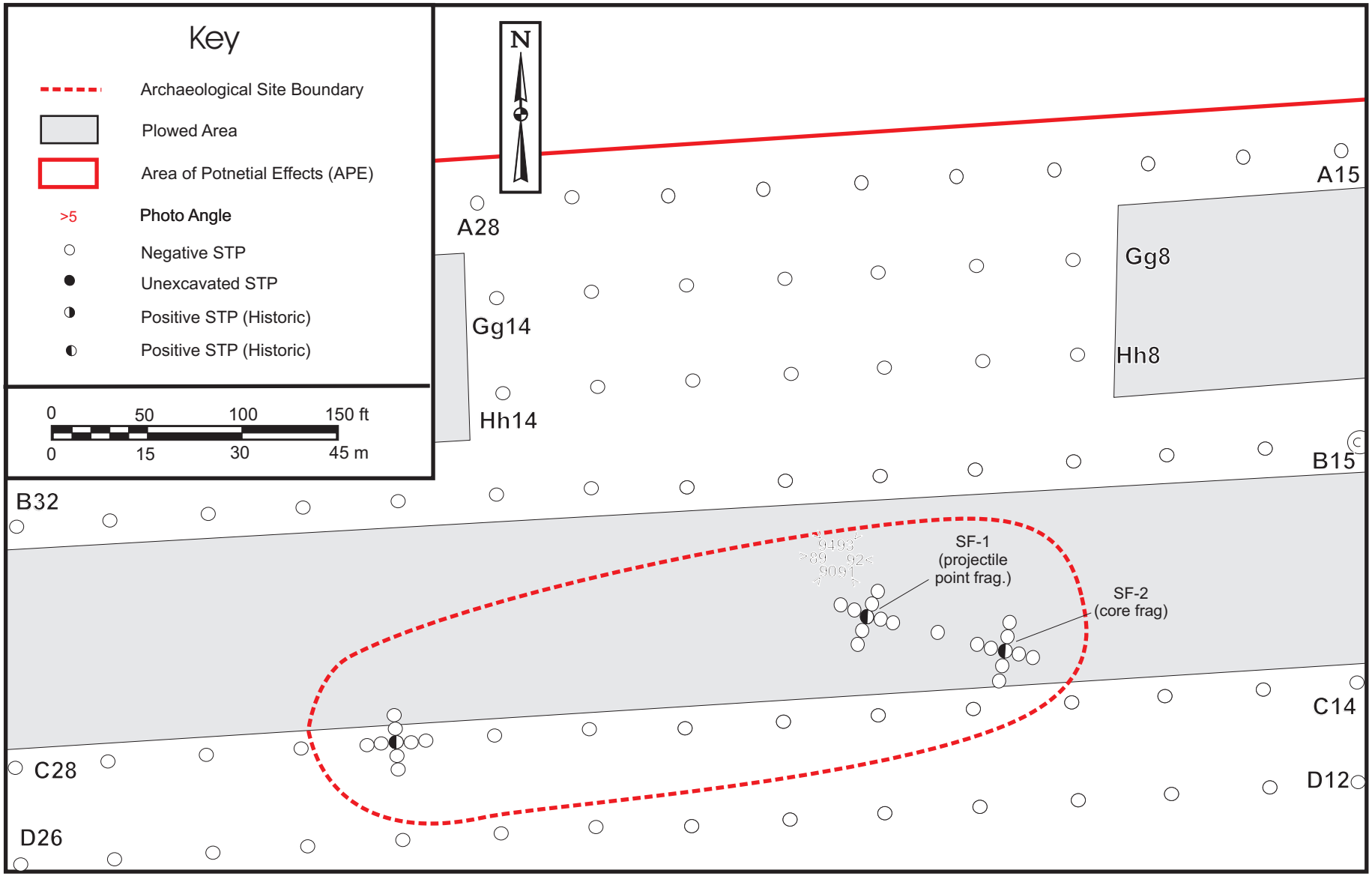


Figure 9. Map showing the location of Locus 1.

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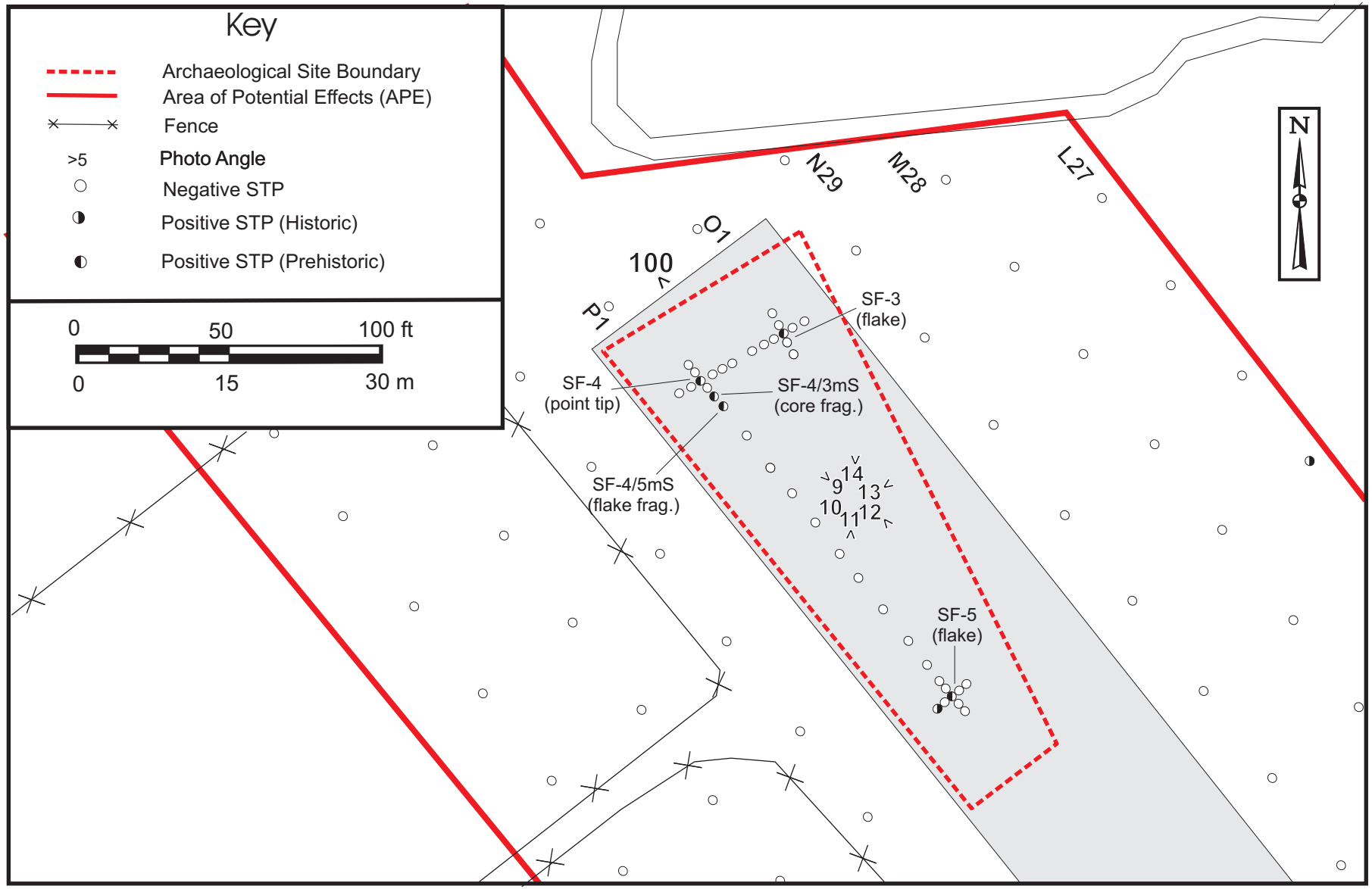


Figure 10. Map showing the location of Locus 2.

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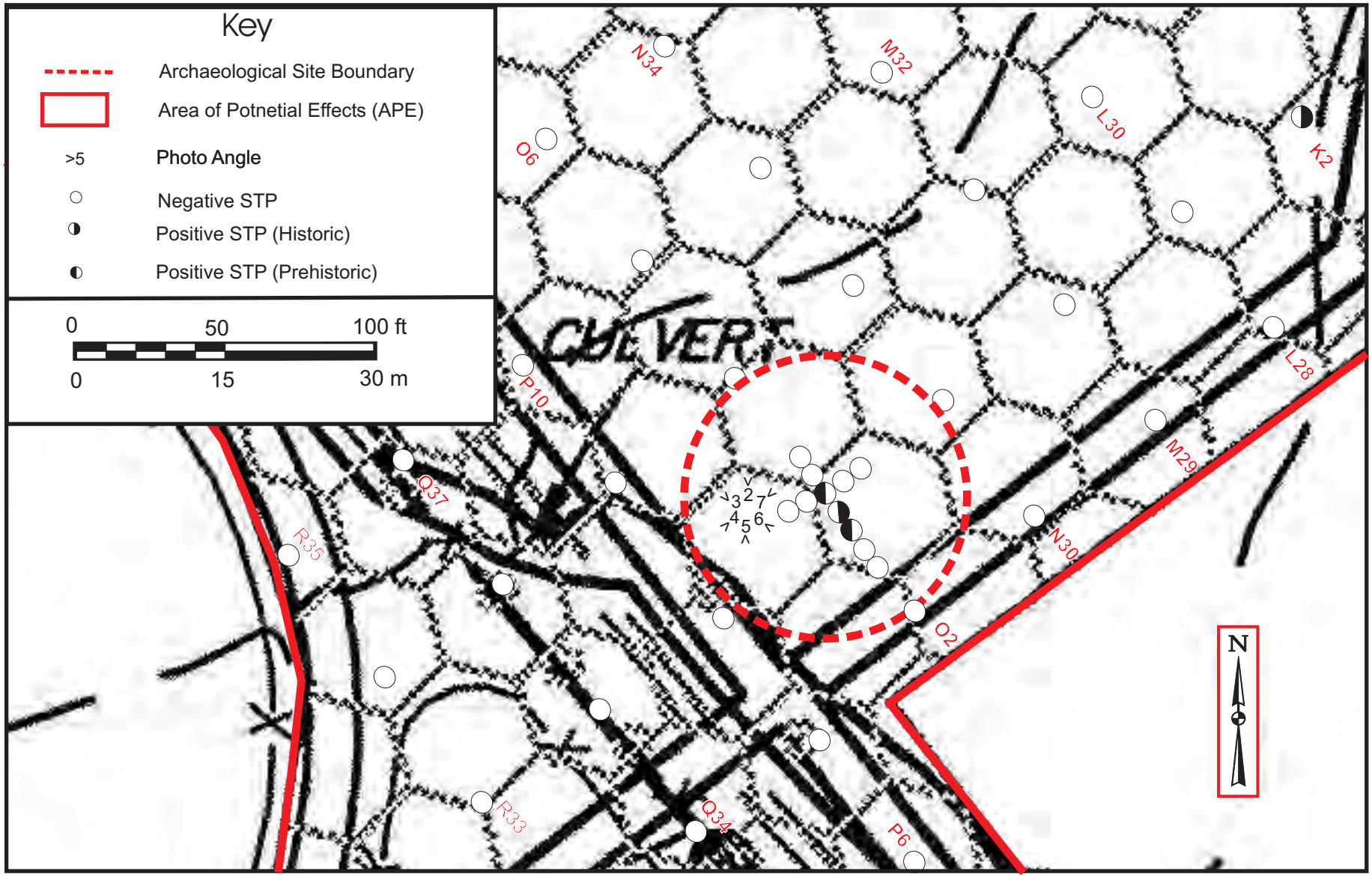


Figure 11. Map showing the location of Locus 3.

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Photo 3. Portion of panoramic view of Locus 3, facing northwest.



Photo 4. Portion of panoramic view of Locus 3, facing southwest.

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Photo 6. Portion of panoramic view of Locus 3, facing southeast.

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Photo 7. Portion of panoramic view of Locus 3, facing northeast.



Photo 8. View of drainage in the central part of the APE, facing southeast.

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Photo 15. View from the southern end of the proposed project area, facing northwest.



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Photo 17. View from the southern end of the proposed project area, facing southwest



Photo 18. View of historic barns along the south side of Depot Hill Road, facing north.

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Photo 20. Portion of panoramic view adjacent to historic barn complex, facing southeast.

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Photo 22. Portion of panoramic view adjacent to historic barn complex, facing north.

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Photo 23. Portion of panoramic view adjacent to historic barn complex, facing northwest.



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Photo 26. View of structure on the north side of Depot Hill Road outside of the APE, facing northwest.

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Photo 27. View of structure on the north side of Depot Hill Road outside of the APE, facing north.



Photo 28. View of structure on the north side of Depot Hill Road outside of the APE, facing north.

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Photo 33. View of structure located within the APE on the north side of Depot Hill Road, facing north.



Photo 34. View of structure located within the APE on the north side of Depot Hill Road, facing north.

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Photo 37. Portion of panoramic view from paddocks on the north side of Depot Hill Road, facing northwest.



Photo 38. Portion of panoramic view from paddocks on the north side of Depot Hill Road, facing north.

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Photo 39. Portion of panoramic view from paddocks on the north side of Depot Hill Road, facing northeast.



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Photo 51. Portion of panoramic view from isolated point find on the north side of the APE, facing south.



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Photo 54. View from the northeast corner of the APE on the north side of Depot Hill Road, facing west.

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Photo 55. View from the northeast corner of the APE on the north side of Depot Hill Road, facing southwest.



Photo 56. View from the northeast corner of the APE on the north side of Depot Hill Road, facing southeast.

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Photo 57. Portion of panoramic view from pasture west of the entrance to the property, facing northeast.



Photo 58. Portion of panoramic view from pasture west of the entrance to the property, facing southeast.

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Photo 59. Portion of panoramic view from pasture west of the entrance to the property, facing south.



Photo 60. Portion of panoramic view from pasture west of the entrance to the property, facing southwest.

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Photo 61. Portion of panoramic view from pasture west of the entrance to the property, facing northwest.



Photo 62. Portion of panoramic view from pasture west of the entrance to the property, facing north.

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Photo 63. Portion of panoramic view from pasture east of the entrance to the property, facing north.



Photo 64. Portion of panoramic view from pasture east of the entrance to the property, facing northeast.

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Photo 65. Portion of panoramic view from pasture east of the entrance to the property, facing southeast.



Photo 66. Portion of panoramic view from pasture east of the entrance to the property, facing south**.**

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Photo 67. Portion of panoramic view from pasture east of the entrance to the property, facing southwest.



Photo 68. Portion of panoramic view from pasture east of the entrance to the property, facing northwest.

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Photo 69. View of stable building and wide paved driveway, facing north.



Photo 70. View of maintenance building on the south side of Depot Hill Road, facing north.

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Photo 71. View of stable building east of the office, facing west.



Photo 72. View of storm drain along a fence boundary, facing northwest.

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Photo 73. View of farm office on the south side of Depot Hill Road, facing south.



Photo 74. View of large stable building west of the office, facing southwest.

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Photo 75. Portion of panoramic view from pasture south of the farm office, facing southeast.



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Photo 77. Portion of panoramic view from pasture south of the farm office, facing southwest.



Photo 78. Portion of panoramic view from pasture south of the farm office, facing northwest.

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Photo 79. Portion of panoramic view from pasture south of the farm office, facing north.



Photo 80. Portion of panoramic view from pasture south of the farm office, facing northeast.

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Photo 81. Portion of panoramic view from circular area of proposed construction, facing southeast.



Photo 82. Portion of panoramic view from circular area of proposed construction, facing northeast.

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Photo 83. Portion of panoramic view from circular area of proposed construction, facing north.



Photo 84. Portion of panoramic view from circular area of proposed construction, facing northwest.

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Photo 85. Portion of panoramic view from circular area of proposed construction, facing southwest.



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Photo 87. View of wetland plants in the southern part of the circular construction area, facing south.



Photo 88. View from the eastern end of a plowed field overlooking the project area, facing west.

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Photo 89. Portion of panoramic view from Locus 1 in plowed field, facing west.



Photo 90. Portion of panoramic view from Locus 1 in plowed field, facing southwest.

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Photo 91. Portion of panoramic view from Locus 1 in plowed field, facing southeast.



Photo 92. Portion of panoramic view from Locus 1 in plowed field, facing east.

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Photo 93. Portion of panoramic view from Locus 1 in plowed field, facing northeast.



Photo 94. Portion of panoramic view from Locus 1 in plowed field, facing northwest.

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Photo 95. View along plowed section in the eastern part of the project area, facing east.



Photo 96. View from the eastern end of the plowed field, facing west.

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Photo 97. View along plowed section in the eastern part of the project area, facing west.



Photo 98. View along plowed section in the eastern part of the project area, facing

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Photo 99. View from the western end of plowed field, facing east.



Photo 100. View from the western end of plowed field, facing east.

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Photo 101. View from the northern end of the southern plowed field, facing southeast.



Photo 102. Portion of panoramic view from the center of the southern plowed field, facing southeast.

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Photo 103. Portion of panoramic view from the center of the southern plowed field, facing east.



Photo 104. Portion of panoramic view from the center of the southern plowed field, facing northeast.

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Photo 105. Portion of panoramic view from the center of the southern plowed field, facing northwest.



Photo 106. Portion of panoramic view from the center of the southern plowed field, facing west.

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Photo 107. Portion of panoramic view from the center of the southern plowed field, facing southwest.

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Birchwood
Archaeological Services

2948 County Highway 35, Sidney Center, NY 13839
Phone: 607-265-3444 email: birchwoodarch@yahoo.com fax: 607-265-3459

26 July 2007

Christine Piwonka- Bernstein
Crawford & Associates Engineering, PC
551 Warren Street
Hudson NY 12534

RE: Phase IA/IB Cultural Resources Survey, Depot Hill Equestrian Community Project, Town of Amenia, Dutchess County, NY.

A Phase IA/IB Cultural Resources Survey has been completed for the Depot Hill Equestrian Community Project, located in the Town of Amenia, Dutchess County, NY. This investigation was performed in compliance with Section 106 of the National Historic Preservation Act and Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law.

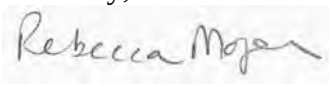
The project lies south of the intersection of NYS Route 44 and Route 343, approximately twenty miles east of the Hudson River and ten miles south of the convergence of the states of New York, Massachusetts, and Connecticut. Approximately 64 acres will be directly impacted by the current proposed project. The final report for this project is currently in progress and is expected to be submitted by August 31st, 2007.

The excavation of Shovel Test Pits (STPs) performed as part of the current project identified three prehistoric archaeological sites as shown on the attached map (a copy of which will be included in the final report). Each site produced one projectile point, one of which is made of quartzite. Other cultural material recovered includes fire cracked rock, chert flakes, a core fragment, chert shatter, and a piece of decorative pewter, possibly a comb of sorts. Complete results of the artifact analysis will be included as Appendix D of the final report for this project. No cultural features were encountered during these excavations.

Based on these findings, we recommend avoidance of the archaeologically sensitive sites, including the creation of a formal avoidance plan to be submitted to NYSOPRHP for formal concurrence. If avoidance is not possible, additional archaeological studies in the form of Phase II Reconnaissance should be completed prior to any construction activities in the vicinity of these sites.

If you have any questions, please call our office at (607)-265-3444.

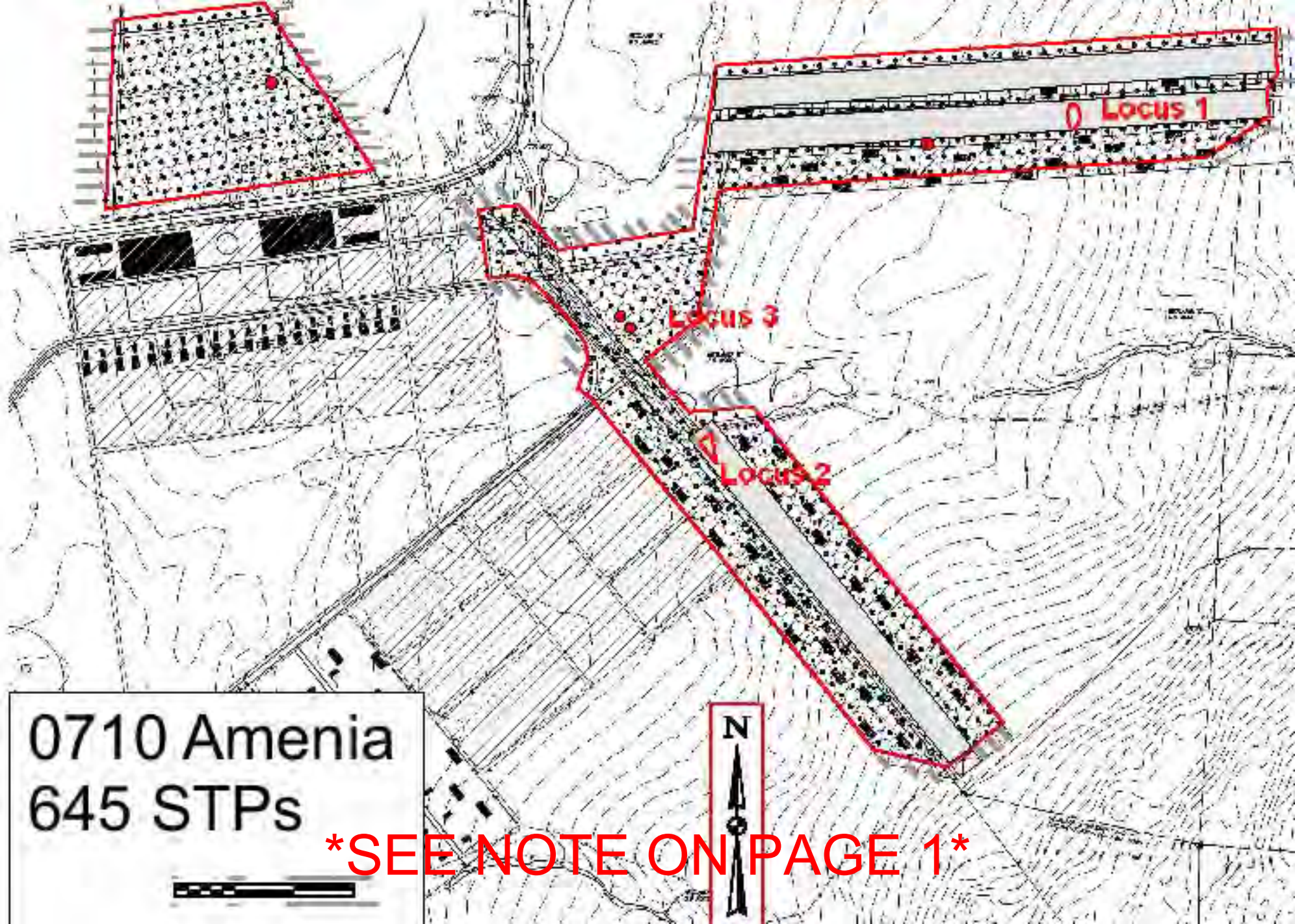
Sincerely,



Rebecca Moyer

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0710 Amenia
645 STPs

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Phase II Site Examination
Depot Hill Farm Equestrian Community Project
Town of Amenia, Dutchess County New York

prepared for

Crawford & Associates Engineering, PC

prepared by

David Moyer and Rebecca Moyer

Birchwood Archaeological Services
2948 County Highway 35
Sidney Center, NY 13839
Phone: 607-265-3444
Fax: 607-265-3459
email: birchwoodarch@yahoo.com

May 2008

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Management Summary

Depot Hill Farm Equestrian Community Project

SHPO Project Review Number:

Involved State and Federal Agencies: DEC

Phase of Survey: II

Location Information
Location: east of Old Route 22/County Route 81, along both sides of Depot Hill Road
Minor Civil Division: Town of Amenia
County: Dutchess

Survey Area (Metric & English)
Length:
Width:
Depth: 8 ft (2.4 m)
Number of Acres Surveyed: 60.7
Number of Square Meters & Feet Excavated:
Percentage of the Site Excavated:

USGS 7.5 Minute Quadrangle Map: Amenia

Archaeological Survey Overview
Number & Interval of Shovel Tests: 229 STPs STPs laid out at 5m (16.4 ft) intervals
Number & Size of Units: 12 1x1 m units
Width of Plowed Strips:
Surface Survey Transect Interval: 5 ft (1.5 m)

Results of Archaeological Survey
Number & name of prehistoric sites identified: 0
Number & name of historic sites identified: 0
Number & name of sites recommended for Phase II/Avoidance: 0

Results of Architectural Survey
Number of buildings/structures/cemeteries within project area: 0
Number of buildings/structures/cemeteries adjacent to project area: 0
Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: 0
Number of identified eligible buildings/structures/cemeteries/districts: 0

Report Author(s): David Moyer and Rebecca Moyer
Date of Report: May 2008

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Executive Summary

Phase II archaeological site examinations have been conducted for three prehistoric loci associated with the proposed Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums including necessary utilities, which will be installed as part of the construction process.

These three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were initially identified as part of a Phase IA/IB cultural resources survey conducted for the above-mentioned project (Moyer and Moyer 2007). As each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that these sites may be able to yield additional artifacts or features which could be used to address important questions about prehistoric life in Dutchess County. For these reasons, Phase II archaeological site examinations were conducted at each of these three sites. Field methods employed at each of the sites consisted of a series of increasingly intensive techniques involving surface walkovers, shovel testing, and the excavation of 1 x 1 m square excavation units.

Locus 1 is situated along a plowed field that has regrown with dense hay grasses. No prehistoric artifacts were recovered as part of the surface inspection. The next phase of the field investigations involved the placement of a total of eighty-one (81) 40 cm diameter shovel test pits (STPs) at 5 m intervals over the entire site boundary as shown in Figure 3. One STP (N15 E90) was not excavated because a previous Phase I STP fell at that location. Of these 80 STPs excavated as part of the close interval testing, only one (0.12 percent) recovered prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. After the shovel testing, a total of four 1 x 1 m excavation units were placed in two areas with high artifact concentrations. A total of 10 prehistoric artifacts were recovered as part of the unit excavations including 5 fragments of quartz shatter, a complete flake, two flake fragments and two biface fragments. No evidence of charcoal or cultural features was noted during the Phase II study.

The recovery of only 10 prehistoric artifacts after such intensive investigations with units placed near separate concentrations suggests that this site is of a relatively low artifact density, while the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered in continued excavation of the site. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2 is situated in a plowed field at the base of a steep slope. One prehistoric artifact was recovered during the surface inspection: a quartz scraper found 271 cm east of STP S5/E55. No evidence of charcoal or features was identified during the walkover. The next phase of investigation at Locus 2 involved the excavation of one-hundred one (101) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site boundary. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake

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was recovered from STP N30E20, while a fragment of quartz shatter was recovered from STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted, and no soil anomalies were encountered in any of the STPs. The final phase of the investigations at the site involved the excavation of six 1 x 1 m square excavation units in a tight cluster near an artifact concentration at the eastern end of the site. In total, 34 prehistoric artifacts were recovered during the Phase II investigations, including 12 fragments of quartz shatter, 9 flake fragments, 5 complete flakes, an expended scraper, and 5 non-temporally diagnostic biface fragments.

Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study, which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered, including a projectile point tip, none of the artifacts appears temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) suggests that the site would be unlikely to encounter prehistoric fire related features yielding macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it may be plausible that fire related features might once have occurred in the vicinity, with little to no evidence at present. Due to the light density of artifacts at the site as well as the lack of temporally diagnostic artifacts or prehistoric cultural features, it does not appear that Locus 2 can substantively address questions about seasonality and temporal sequencing, and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3 is located in a field of harvested corn to the west of Loci 1 and 2. No prehistoric artifacts or cultural features were identified from either the surface inspection or the excavation of 48 STPs in 5 m intervals forming a grid over the initial find location. Because no artifacts were recovered during the walkover or shovel testing, two 1 x 1 m square excavation units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. A total of 9 prehistoric artifacts were recovered from the excavation of the two units, including six fragments of quartz shatter, two flake fragments, and a single fragment of fire cracked rock (FCR).

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort conducted as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers or in the tight interval STP grid suggests that the find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I find spot. The lack of charcoal or staining in any of the excavations at Locus 3 suggests that it is not likely that intact hearths or fire related features would be encountered through further site examination. The lack of diagnostic material from these Units suggests that additional excavation in the immediate vicinity would produce similar results. For these reasons, the site does not appear able to address questions necessary for its inclusion in the National Register of Historic Places.

Based upon the above information, it does not appear that any of the three sites contained sufficient artifact diversity or density to address important research questions about prehistoric lifeways in the lower Taconic region. Consequently, we suggest that the

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performance of an archaeological data recovery is not warranted at any of these three prehistoric sites. These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Introduction

Birchwood Archaeological Services has conducted Phase II archaeological site examinations on three prehistoric lithic scatters initially identified as part of the Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums with the necessary utilities installed as part of the construction process. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

Three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were identified as part of the initial Phase IA/IB cultural resources survey conducted for the above referenced project (Moyer and Moyer 2007). As each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that additional artifacts or features which could be used to address important questions about prehistoric life in Dutchess County may be identified through further investigations. For these reasons, Phase II archaeological site examinations were conducted at each of the three sites. This report provides the results of these Phase II archaeological investigations. Fieldwork was conducted between the period of March 10th and March 26th of 2008 and was supervised by David Moyer, RPA. Royce Duda, Nick Ulfik, Doug Idleman and David Crawford assisted in the subsurface investigations.

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Environmental Setting

Dutchess County is situated in southeastern New York State. Two physiographic units occur within the county: Valley and Ridge Province and the New England Province. The project area lies in the Valley and Ridge Province, which includes the Hudson Lowlands and the Low Taconics. The Hudson Lowlands extend eastward from the Hudson River three to six miles, and the Low Taconics extend eight to ten miles east of the Hudson Lowlands (Faber 2002).

The Hudson Lowland, the subsection within the Valley and Ridge Province, is described as containing bedrock comprised of easily eroded sedimentary rock such as shale, greywacke, and siltstone. The bedrock was deposited during the Cambrian and Ordovician time periods Lowlands (Faber 2002).

The project area is located approximately 2.2 miles west of the New York and Connecticut State border on an upland plateau nearly 32.5 km (20.2 miles) east of the Hudson River. Elevation ranges from 633 feet above sea level in the western portion of the project area, to 745 feet above sea level at the eastern end of the APE. A series of unnamed creeks and streams lie within and adjacent to the current proposed project, with Webatuck Creek being the closest named creek in the vicinity at 1.2 miles (2.0 km) to the east. Other creeks nearby include Millbrook Creek 1.8 miles (2.9 km) southeast of the project area, and the Wassaic Creek, which lies 11,222 feet to the west. All of these water sources eventually drain into the Housatonic.

Soils

According to the USDA Web Soil Survey (WSS), two soil series occur in the vicinity of the three prehistoric sites (Figure 2). The relatively level plain at the base of the hill slope where Locus 3 is located is mapped as Georgia silt loam (map unit GsB). Georgia series soils consist of very deep, moderately well drained soils on glaciated uplands. They formed in loamy till (Faber 2002). Permeability is moderate in the solum and slow in the substratum. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. A typical soil profile of Georgia silt loam is provided below in Table 1:

Table 1. Typical soil profile of Georgia silt loam.

Horizon	Depth	Description
Ap	0-8 in. (0-20 cm)	very dark grayish brown (10YR 3/2) loam; moderate fine and medium granular structure; friable; many roots; 5 percent rock fragments; neutral; abrupt smooth boundary
Bw1	8-14 in. (20-36 cm)	brown (10YR 4/3) ped interiors and dark brown (10YR 3/3) exteriors, loam; moderate medium granular structure; friable; many roots; 5 percent rock fragments
Bw2	14-21 in. (36-53 cm)	brown (10YR 4/3) loam; moderate very fine and fine subangular blocky structure; friable; common roots; 5 percent rock fragments; few fine distinct yellowish brown (10YR 5/6) soft masses of iron accumulation; neutral; clear smooth boundary

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Table 1. Typical soil profile of Georgia silt loam (continued)

Horizon	Depth	Description
Bw3	21-26 in. (53-66 cm)	olive brown (2.5Y 4/4) loam; moderate fine and medium subangular blocky structure; friable; common roots; 5 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral; clear smooth boundary
C1	26-36 in. (66-91 cm)	gray (N 5/0), olive brown (2.5Y 4/4), dark grayish brown (2.5Y 4/2), and light olive brown (2.5Y 5/6) loam; moderate medium subangular and angular blocky structure; friable to firm; slightly sticky, slightly plastic; few roots; 10 percent rock fragments; neutral; clear smooth boundary
C2	36-65 in. (91-165 cm)	olive (5Y 4/3) loam; weak fine and medium angular blocky structure; firm to friable, slightly sticky, slightly plastic; few roots; 10 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral

Locus 1 and 2 are positioned along gradual slopes to the east of Locus 3, and occur in areas mapped as Stockbridge silt loam (map units SkC, and SkD). Stockbridge series soils are very deep, well drained soils formed in loamy calcareous till. They are nearly level to very steep soils on till plains, smooth hills, low ridges and drumloidal landforms (Faber 2002). Slope ranges from 0 to 60 percent. Permeability is moderate in the surface layer and subsoil and moderately slow or slow in the substratum. A typical profile of Stockbridge silt loam is provided below in Table 2.

Table 2. Typical soil profile of Stockbridge silt loam.

Horizon	Depth	Description
Ap	0-10 in. (0-25cm)	dark brown (10YR 3/3) loam, light brownish gray (2.5Y 6/2) dry; weak coarse granular structure; friable; many fine and very fine roots; 10 percent gravel; moderately acid; clear smooth boundary
Bw1	10-20 in. (25-51 cm)	olive brown (2.5Y 4/4) loam; weak coarse subangular blocky structure; friable; common fine roots; 10 percent gravel; neutral; clear wavy boundary.
Bw2	20-28 in. (51-71 cm)	light olive brown (2.5Y 5/4) loam; weak coarse subangular blocky structure; firm; few fine roots; few weathered limestone fragments in lower part; 10 percent gravel; neutral; gradual wavy boundary
C1	28-42 in. (71-107 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few fine roots; many brown (10YR 4/3) weathered limestone fragments and few grayish brown (2.5Y 5/2) streaks; 15 percent gravel and 2 percent cobbles; neutral; gradual wavy boundary
C2	42-48 in. (107-122 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles; slight effervescence; slightly alkaline; gradual wavy boundary
C3	48-65. (122-165 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles

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Based upon the above information, all three of the sites occur on till derived uplands and share other similarities with regard to soil texture and horizon sequencing. Given the upland contexts of these three sites, it would appear that the greatest probability for finding prehistoric remains would be in the uppermost soil, with the probability of encountering artifacts falling of in the weakly developed B horizons. Excavation should proceed a minimum of 20 cm or in the case of the excavation units at least two 10 cm levels into culturally sterile subsoil unless otherwise noted.

Prehistoric Context

While much has been discovered and postulated about the western half of Dutchess County along the bluffs of the Hudson River, relatively little is known about the prehistory of the eastern part of the county. A check of site files of the Office of Parks, Recreation, and Historic Preservation and the New York State Museum indicated that two prehistoric sites are known within one mile of the project area. Both of these sites, NYSM 3135 and NYSM 8206, were listed by Arthur Parker in the 1920s. Each site remains unnamed with no cultural affiliation listed, although each refers to the presence of burials. Of the three listed previous surveys in the area, only one identified any prehistoric sites: two small lithic scatters identified as part of the Rivercourse at Troutbeck located over a mile to the south (Walwer and Walwer 2000). Many of the towns and creeks in the vicinity have Algonquin names such as Webutuck, which is defined by Ruttenber as meaning *place of the narrow pass* or *strait* (Ruttenber 1906:42). Beauchamp suggests that this definition is erroneous and gives the name as a form of Wampatuck, meaning *a goose* (Beauchamp 1907:58-59). Other common Algonquian names in the Amenia vicinity include Wassaic, meaning *a rocky place* (Beauchamp 1907:58), and Taconic, meaning *big mountains* (Ruttenber 1906:47).

Glaciers covered the eastern ridges of the Hudson Valley during the Wisconsin glaciation, which ended about 12,000 years ago. People may have begun occupying the area soon after the glaciers retreated. These Paleoindians were organized in highly mobile bands adapted to the tundra and boreal forest environments present at the end of the Pleistocene. While archaeologists have traditionally emphasized the hunting of large megafauna such as mammoth and bison, there is increasing evidence that Paleoindians exploited a diverse array of small game and wild plants. While Ritchie (1994: 4-5) fails to note any fluted points in Dutchess County, several fluted points indicative of Paleoindian occupation occur nearby on the western banks of the Hudson River in Ulster County. In addition to large fluted points commonly thought to be used in hunting large game, unfluted lanceolate points became more common in the latter part of the Paleoindian Period.

Around 7000 B.C., stands of Spruce and Fir rapidly gave way to a denser forest of Pine and deciduous trees, with Oak becoming a dominant species (Salwen 1975). This drier climate supported less game and provided fewer plant resources for human populations. As a result, few sites dating from this Early and Middle Archaic period have been discovered in the region (Funk 1991). Those few sites that have been found dating to this period are often found near water sources and suggest that people lived in small mobile bands and subsisted on gathered and hunted wild resources.

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Beginning around 6500 B.C., the climate became increasingly wetter, resulting in an environment similar to ours today (Salwen 1975). The large number of sites from this period suggests that Late Archaic populations increased significantly at this time. While people continued to live in small, mobile bands, there was an increasing trend toward sedentism. Subsistence practices were highly diverse and included a wide variety of aquatic and terrestrial resources. Late Archaic sites range from small upland camps to large villages near the confluences of major streams.

The Transitional Period (ca. 1300-1000 B.C.) is characterized by the use of steatite vessels and smoking pipes, which gradually give way to large, thick pottery vessels. This period is very much a continuation of Late Archaic life ways, with increasing sedentism and reliance on plant resources. The Woodland Period begins about 1000 B.C. and is marked by the introduction of pottery and the development of an elaborate trade and ceremonial complex. It is during this time that people gradually began to cultivate plants.

The Late Woodland Period began around A.D. 1000 and is differentiated from its predecessor primarily on the basis of projectile point types, pottery styles and diet (Funk 1976). Hoe cultivation also appears during Late Woodland times. Diet was largely made up of cultigens (corn, beans and squash) and game supplemented by fishing and the gathering of aquatic and terrestrial resources. Large, permanent village sites occur along major rivers as well as defensive locations (Ritchie 1994). Small, ephemeral sites also occur, probably used as camps for resource extraction. These smaller sites are located in a wide variety of geographic contexts, ranging from wetlands and backwater drainages to forested uplands. The Late Woodland period in the lower reaches of the Hudson River and coastal New York includes the Windsor and East River Traditions. These cultures are defined on the basis of ceramic typologies (Smith 1950). The Windsor Tradition is restricted to areas around coastal New York. East River culture is divided into an earlier Bowman's Brook Phase and a later Clason's Point Phase (Funk 1976:173183; Ritchie 1994:270). After about A.D. 1400, two distinct cultures emerge in this stretch of the Hudson River Valley: Proto-Esopus people along the western banks of the river and ancestral Wappinger populations located east of the Hudson in Dutchess and Westchester counties (Ritchie and Funk 1973).

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Field Methodology

The first step in the Phase II study was to revisit each of the sites in order to examine any changes that may have taken place following the Phase I survey. In some cases, stakes and rebar representing site datums had been plowed over, requiring that they be relocated and reset. After resetting, datums were recorded using a hand held GPS unit and a 5 m grid was established over the entire site area. This site grid was used in the placement of STPs and excavation units, and tied all measurements to a central point. Once the grid was established, a number of field excavation techniques were employed, each of which are discussed below.

Surface Walkover and Landscape Inventory

After the datum and grid were established, each site was then subjected to a detailed surface inspection. All three of the sites had been plowed the previous season, which provided varying amounts of surface visibility. Locus 1 had regrown a thick cover of dry hay grasses, which provided little surface visibility (Photos 1-6). Locus 2 had grown over with tall weeds in the east, which still provided a fair amount of surface visibility (Photos 7-12). Locus 3 had been planted in corn the previous year, with relatively good ground visibility occurring between the corn stubble (Photos 13-18). With regard to the surface inspection, the walkover consisted of a tight interval, 5 ft (1.5 m), inspection to look for artifacts and evidence of charcoal or cultural features. If artifacts or features were identified, they were flagged and a 5 m diameter area was visually scoured to look for additional artifacts. After the surface walkover was completed, the location of each of the artifacts was mapped in relation to the archaeological site datum.

Shovel Testing

Shovel test pits (STPs) were used to test for buried cultural deposits over a wide area. STPs are small (about 40 cm or 16 inch diameter) holes excavated with a shovel; sediments are screened through 1/4 inch mesh to look for artifacts. STPs are excavated in natural soil layers, as much as possible, and are dug through the topsoil to at least 20 cm (~ 8 inches) into culturally sterile subsoil. STPs were tied into the archaeological site grid using a compass and tape measure. When an STP was placed in an area that was obviously disturbed, an attempt was made to move the shovel test beyond the area of disturbance, to a maximum distance of 3 meters from its original location.

A list of the STPs and their soil profiles is provided in Appendix C. Excavation of STPs was halted 20 cm (8 in.) into culturally sterile subsoil unless noted in the STP records (Appendix C). Appendix E contains the artifact catalog. All prehistoric artifacts were retained for analysis and curation at an appropriate curation facility.

Unit Excavations

One meter square (1 x 1 m) excavation units were placed in areas of high artifact concentrations or where the potential for buried cultural features was inferred. In some areas, these units were excavated beside one another, although each was still excavated and

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screened separately allowing for tighter data control. Units were excavated by hand using trowels and shovels as appropriate. A line level was used to measure elevational depths within the units. Units were excavated in 10 cm levels within natural soil layers to allow for tight vertical control in stratigraphic contexts. All soil was screened through ¼ inch hardware cloth to look for artifacts. All artifacts collected from the screens were bagged according to provenience and sent to our laboratory for further study. Upon completion of a unit, a wall profile was drawn showing soil stratigraphy and cultural features. Walls were chosen by the excavators on the basis of clarity and ability to show complexities within the soil profile. Unit wall profiles were also cleaned and photographed prior to backfilling. Plan views of the unit floors were undertaken whenever a point of interest was noted. Summaries of the unit excavations are provided in Appendix D, and artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

The following sections provide the results of the Phase II investigations for each of these prehistoric archaeological sites.

Locus 1

This site was identified during the surface inspection of a plowed field in the eastern part of the project area (Figure 3). A nearly complete Brewerton side notched projectile point was recovered near the central part of the project area (Photo 31). A closer inspection of the area identified a chert core fragment approximately 23.0 m to the southeast (Photo 31). A total of 19 STPs were excavated directly over the two surface finds, as well as in 1 and 3 m intervals and in 5 m intervals connecting the two finds. No other prehistoric material was recovered from any of these STPs.

Some days later during the subsequent subsurface testing of the unplowed areas, a single contracting stemmed projectile point was recovered from the upper level of STP C-23 (Photo 108). Eight additional STPs were excavated in 1 and 3 m intervals in the four cardinal directions, but no additional prehistoric artifacts were recovered. Because of the proximity of STP C-23 to SF-1 and SF-2, the find was included as part of Locus 1 and the boundary was redrawn accordingly.

Phase II Results

Field Walkover-The first part of the Phase II study involved walking the site in tight 5 ft (1.5 m) intervals to look for additional artifacts and evidence of charcoal or cultural features. While the area had been plowed the previous year, Locus 3 had revegetated with a dense cover of dry grasses, providing little surface visibility (Photos 1-6). Despite our best efforts, no prehistoric artifacts were recovered during the surface inspection. Additionally, no charcoal was noted on the surface during this second field walkover and no prehistoric features were identified.

Shovel Testing-The next phase of the field investigations involved the placement of a total of eighty-one (81) 40 cm diameter shovel test pits (STPs) in 5 m intervals over the entire site as shown in Figure 3. One STP (N15E90) was not excavated as a previous Phase I STP fell at

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that location. STPs ranged in depth between 43 and 70 cm (16.9 and 27.5 in) below the ground surface, and averaged 59.2 cm (23.3 in). The contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 80 STPs excavated as part of the close interval testing, only one (0.12 percent), recovered any prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. A copy of the shovel test pit (STP) record is included in Appendix C, while the artifact catalog for Locus 1 is included in Appendix E.

Unit Excavations-The final phase of the Phase II field methodology involved the excavation of four 1 x 1 m excavation units (Figure 3). Because of the relative lack of additional artifact recovery from the field walkover and shovel testing, units were placed on the basis of the findings of the in initial Phase IA/IB study, with two units (Units 9 and 10) placed adjacent to STP C-23, where the Lamoka Point was recovered. The two other units (Units 11 and 12) were placed in the eastern end of the site where a fragment of a Brewerton side notched projectile point and a chert core fragment were recovered during the Phase I surface inspection. Findings from each of these units are described individually below. Summaries of unit excavations are provided in Appendix D, and artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 9 and 10

The southwest corner of Unit 9 was placed in the western end of the site, exactly one meter north of where a Lamoka projectile point was recovered from STP C-23 during the initial Phase IA/IB survey (Figure 3). Unit 10 was placed directly north of Unit 9 in order to expose a broader area and look for additional artifacts and evidence of cultural features. First, both of the units were leveled at 18 cm below the ground surface. The upper soul consisted of 10YR 3/3 dark brown silty loam. This same soil continued through Levels 2 and 3, with a transition to subsoil noted at approximately 38 cm below the datum, which was located midway along the east wall between the two units. No prehistoric artifacts were recovered from Level 1, although a fragment of quartz shatter was recovered from Level 2 of Unit 9. Level of 3 of Unit 10 was more productive, recovering a complete quartzite flake as well as a quartz flake fragment and a fragment of quartz shatter. Level 4 of Units 9 and 10 consisted of a transition layer, with varying amounts of l0YR 5/2 grayish brown loamy clay that ultimately covered the entire floor of the units at the base of the level, 47 cm below datum. This same grayish brown clay loam continued through Levels 5 and 6 to a depth of 68 cm below datum in Unit 9 and 74 cm below datum in Unit 10. No prehistoric artifacts or evidence of any cultural features were noted in this soil layer. Because of the lack of prehistoric artifacts in the previous three levels, excavation in Units 9 and 10 was halted at 68 cm below datum. An STP was excavated in the center of the excavated area halfway between Units 9 and 10. This STP was excavated to a depth of 139 cm below datum. No artifacts or evidence of features was encountered in the STP. After the STP was excavated, the east wall of Units 9 and 10 were profiled and photographed prior to backfilling (Figure 10, Photo 29).

Units 11 and 12

These two units were placed on the eastern side of the site near where a Brewerton side notch point and a chert core fragment were recovered during the initial Phase IB survey (Figure 3). The southeast corner of Unit 11 was located exactly one meter north of STP N10/E100. Unit 12 was placed directly north of Unit 11 to expose a broader area in which to look for cultural features and artifacts. Because this area contained dense sod while sloped sharply to the east,

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our first step was to remove the sod and level off the Unit at a depth of 28 cm below the datum, which was located in the east wall midway between the two units. The upper soil layer was similar to that found in Units 9 and 10, consisting of 10YR 3/3 dark brown silty loam. Excavations in this area were more promising, with the tip of a quartzite point recovered from Level 1 of Unit 12. This same dark brown soil continued through Levels 2 and 3, with a flake fragment recovered from Level 2 of Unit 11 and two fragments of quartz shatter, a small medial section of a biface fragment, and a modern brass key all recovered from Level 3 of that same unit. No additional artifacts were noted. At a depth of 58 cm below the ground surface, the soil gradually became lighter, and then abruptly changed to a 10YR 4/4 dark yellowish brown silty loam at a depth of 63 cm in Unit 11 and 61 cm Unit 12. During the small 3 cm transition into the subsoil in Level 5 of Unit 12, a possible quartzite point tip was recovered. While this tip was somewhat questionable, it was decided to treat the find as cultural until the find could be washed and better examined under magnification in the lab. Consequently, we extended these two units to a deeper depth to examine the potential for more deeply buried cultural deposits. This same yellowish brown soil continued to a depth of 80 cm below datum. No additional artifacts were recovered from any of these deeper levels, while, following analysis in the laboratory; the possible point tip recovered from Level 5 of Unit 12 was determined to be non-cultural. After completing these units, an STP was excavated in the bottom of Level 8 midway between the units to a depth of 155 cm. The STP proved useful, as the soil changed from the dark yellowish brown subsoil encountered in the upper levels to a 10YR 4/3 clay silt that was encountered at a depth of 106 cm. At 128 cm, the soil changed again to a 10YR 3/3 gravelly loam, after which excavation of the STP was stopped due to the presence of massive gravels. No artifacts were recovered from any of these subsequent soil layers. After completing the STP, the east wall of Units 11 and 12 were drawn and photographed (Figure 11; Photo 30).

Discussion- Overall, the excavation of both the shovel test pits and the excavation units largely failed to identify substantial quantities of artifacts or any evidence of cultural features. Out of the excavation of four 1 x 1 m square units and 80 STPs, only 11 prehistoric artifacts were recovered, consisting primarily of quartz shatter (n=6; 54.5%). The presence of two flake fragments and a complete flake along with the shatter all suggest lithic reduction activities taking place, although no temporally diagnostic material was recovered as part of the Phase II. The presence of two biface tips recovered from the site would suggest that either final stage lithic reduction was taking place or that these bifaces represent tools that were utilized at the site. The presence of utilization (feathering) on one of the bifaces (CAT#16) suggests the latter hypothesis.

Because of the lack of temporally diagnostic artifacts encountered during the Phase II site examinations, artifacts recovered from the Phase I study were used to help determine when the site was occupied. The shale projectile point recovered from STP C-23 appears to be a Lamoka Point, which dates to around 5,500 B.C. to 4,500 years ago. Brewerton Side notched points are somewhat more recent and are a chief characteristic of the Laurentian associated Brewerton Phase. Brewerton points are thought to date to sometime in the Late Archaic Period between 5,000 and 3,750 years ago (Ritchie 1969: 91-92). While information is sparse, it appears that the site might have been occupied sometime during Middle and Late Archaic times.

While much can be speculated about past activities at the site, it is unclear whether additional excavations could provide additional information not already known about the site and it's

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occupants. The recovery of only 11 prehistoric artifacts after intensive investigations with units placed near two separate concentrations suggests that site is of a relatively low artifact density, while the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered through further examination of this site. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2

Locus 2 was initially identified as a single quartzite flake fragment located near the northern end of the southern plowed field during the initial Phase IA/B survey. An intensive survey of the area also identified the tip of a quartzite projectile point 13.2 m to the west (SF-4) and a chert flake fragment approximately 45.0 m to the south (SF-5; Photo 32). A total of 27 STPs were excavated directly over each of these 3 surface finds as well as at 1 and 3 m intervals in each of the four cardinal directions. In addition, 12 STPs were excavated in 5 m intervals between SF-3 and SF-4 and SF-5 as shown in Figure 4. Of these 39 STPs, two recovered prehistoric cultural material within the plowed field: a fragment of a chert core recovered from STP SF-4/3mS and a quartzite flake fragment recovered from STP SF-4/ 5mS. No additional prehistoric artifacts were recovered during the Phase I study and no evidence of hearths or other features was noted. Because of spring flooding, we chose to begin our Phase II investigations of the Depot Hill project at Locus 2 since it appeared to be the driest.

Phase II Results

Field Walkover- Our first step involved re-walking the site in tight 5 ft (1.5 m) intervals to look for charcoal or prehistoric artifacts. This area had been plowed the previous spring during the Phase IA/IB survey (Moyer and Moyer 2007). Locus 2 had grown over with tall weeds in the east, which still provided a fair amount of surface visibility (Photos 7-12). One prehistoric artifact was recovered during the surface inspection: a quartz scraper found 271 cm east of STP S5E55 (Photo 32). No evidence of charcoal or features was identified during this walkover, although an iron horseshoe was located 201 m west of STP S5/E10.

Shovel Testing- The next component of the field investigations involved excavating a total of one-hundred one (101) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site as shown in Figure 4. STPs ranged in depth between 30-73 cm (11.8-28.7 in) below the ground surface, and averaged 56.3 cm (22.1 in). In accordance with the methods outlined in the methodology section, the contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake was recovered from STP N30E20, while a fragment of quartz shatter was recovered from STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. Copies of the shovel test pit (STP) records are included in Appendix C. The artifact catalog for Locus 2 is provided in Appendix D.

Unit Excavations- After the shovel testing was complete, a total of six 1 x 1 m square excavation units were excavated within the site boundary. Because of the cluster of

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prehistoric artifacts noted in the eastern end of the site during the Phase I survey and Phase II walkover, it was decided to excavate Units 1-6 as a 2 x 3 m cluster as shown in the detail of Figure 4. While each of these units was excavated adjacent to one another, they retained their identity allowing for good horizontal control. It was thought that opening up a wide area might allow for the identification of features, which could then be followed in adjacent areas. In order to examine the stratigraphic profile of the center of the cluster, the outside units (Units 1-2 and 5-6) were excavated first and then the central units (3 and 4) were excavated. The southwest corner of Unit 1 was located at grid point N1.0/E2.0. Summaries of unit excavations are provided in Appendix D, while a description of all of the artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 1-6

As stated above, these units were placed in an area of high artifact density in the eastern part of the site, with the southwest corner of Unit 1 being located at grid point N1.0/E2.0 (Figure 4). The area was relatively level, with the site positioned at the base of a moderate slope directly to the east (Photos 7-12). Excavation first progressed with Units 1 and 2, which encountered plowed topsoil consisting of 10YR 3/3 dark brown silty loam. No artifacts were recovered from Level 1 although a quartz flake fragment was recovered from Level 2 of Unit 1. Two fragments of quartz shatter were recovered from Level 2 of Unit 2. While no further artifacts were recovered from Unit 1, Unit 2 continued to recover a small density of primarily quartz material, including a flake fragment from Level 3 and a flake and three fragments of shatter recovered from Levels 5 and 6. This upper topsoil was not notably thick, with a transition to subsoil occurring at a depth of 43 cm below the ground surface. Subsoil consisted of the same 10YR 4/4 dark yellowish brown silty loam encountered in Locus 1. The soil continued to remain mottled to a depth of 47 cm, with a small pocket of 7.5 YR 4/3 silty loam occurring in Unit 1. Iron oxide staining was also faintly apparent in Unit 2. At a depth of approximately 47 cm, the soil changed to encompass solely the yellowish gravelly subsoil. A quartz flake fragment and three fragments of quartz shatter were recovered from Levels 5 and 6 of Unit 2 in the beginning of this subsoil. No prehistoric artifacts were recovered below Level 6. Excavation progressed to a depth of 62 cm in Unit 1 and 72 cm in Unit 2. After completion of the units, the north and south wall were drawn and profiled (Figure 6, Photos 19 and 20).

Units 5 and 6 were excavated concurrently with Units 1 and 2, although the soil stratigraphy appeared less intact. Unit 5 encountered a mottled soil consisting of mixed 10YR 3/3 dark brown silty loam with the 10YR 4/4 gravelly loam subsoil, while the upper 20 cm of topsoil covered the beginning of the soil transition in Unit 6. The transition continued to a depth of between 40 and 42 cm before changing to a yellowish gravel. This heavily mottled soil may reflect an isolated area of deeper plowing. A complete quartz flake was recovered from level 1 of Unit 5, with a quartz projectile point tip recovered from Level 2 and two flake fragments and four fragments of quartz shatter were recovered from Level 3. The only artifact recovered from the upper soil layer in Unit 6 was a series of fused brass gears from a clock or other mechanical device that was located in Level 3 (20-30 cmbd). Quartz artifacts continued to be recovered from the upper part of the subsoil, including a biface fragment recovered from Level 4 of Unit 5 and a core fragment recovered from Level 5. A complete quartz flake was recovered from Level 5 of Unit 6 at a depth of approximately 40-50 cm. Because of the relatively deep cultural material, excavation in these units extended to a depth of 82 cm in Unit 5 and 72 cm in Unit 6 to ensure that no more deeply buried deposits might exist. After

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completing these two units, the north and south walls were photographed and drawn (Figure 8, Photos 21 and 22).

After the other four units were excavated, we turned our attention to Units 3 and 4. Soils tended to follow the same soil progression as in the adjacent units. Unit 3 encountered the beginning of the transition to subsoil at a depth of 37 cm, while Unit 4 contained more mottled topsoil, with subsoil occurring from the surface to a depth of 42 cm. Artifacts were most common in level 1, with a flake fragment and a fragment of quartz shatter recovered from Unit 3 and a biface fragment and a complete flake recovered from Unit 4. A second biface fragment was recovered from Level 3 of Unit 3 near the bottom of the transition. No artifacts were recovered from the subsoil, and the excavation stopped at depths of 65 cm in Unit 3 and 62 cm in Unit 4. After completion of the entire block, an STP was excavated in the center of the block of units, straddling Units 3 and 4. This STP was excavated to a depth of 107 cm below the ground surface before encountering a lens of clay silt of similar color, which extended to a depth of 119 cm. A layer of 10YR 3/4 dark yellowish brown clay sand was found underlying this clay silt, with the STP stopped by water at a depth of 143 cm. After completing the STP, the east and west walls of the block were profiled and photographed (Figure 7; Photos 23-25).

Discussion- Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered including a projectile point tip, none of the artifacts appear temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) all suggests that the site would be unlikely to encounter prehistoric fire related features which might yield macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it does seem plausible that fire related features might have once occurred in the vicinity, with little evidence remaining at present. Due to the light density of artifacts at the site and the lack of temporally diagnostic artifacts or prehistoric cultural features, Locus 2 does not appear likely to address important questions about seasonality and temporal sequencing, and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3

Locus 3 was initially identified in STP O-2, where a single chert flake was recovered from the upper level (Figure 5). Eight additional STPs were excavated in each of the four cardinal directions at one and three meter intervals. A single fragment of fire-cracked rock (FCR) was recovered from STP O-2/3mS. No other prehistoric artifacts were recovered from the other STPs. Two additional STPs were excavated to the south of STP O-2/3mS, but no additional artifacts were recovered. No evidence of charcoal or cultural features was noted during the Phase IA/IB investigations (Moyer and Moyer 2007).

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Field Walkover- We began our investigations by walking a 100 ft (15 m) area around the find in tight 5 ft (1.5 m) intervals to look for additional artifacts and evidence of charcoal or cultural features. This area had been tall grass at the time of the Phase I study but was subsequently plowed and planted in corn, with corn stubble and fallen stalks providing relatively good surface visibility. No prehistoric artifacts were recovered during this surface inspection and no cultural features were identified.

Shovel Testing- After the walkover, the next component of the field investigations involved excavating a total of forty-eight (48) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a 100 x 100 ft (15 x 15 m) grid over the center of the site as shown in Figure 5. The center of the grid (STP N15/E15) was not excavated as it was previously excavated as part of the Phase I survey. STPs ranged in depth between 41-72 cm (16.1-28.3 in) below the ground surface, and averaged 56.1 cm (22.0 in). As outlined in the methodology section, the contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 48 STPs excavated, none recovered any prehistoric cultural material. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. Copies of the shovel test pit (STP) records are included in Appendix C. The artifact catalog for Locus 3 is included in Appendix D.

Unit Excavations- The final phase of the Phase II field methodology at Locus 3 involved the excavation of two 1 x 1 m excavation units. Because no artifacts were recovered during the walkover or shovel testing, units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. The presence of fire-cracked rock in the immediate vicinity suggested that prehistoric hearths or fire pits might occur nearby. The southwest corner of Unit 7 was placed at grid point N13/W13, southwest of the initial prehistoric find. Unit 8 was placed directly east of Unit 7 as shown in Figure 5. Summaries of unit excavations are provided in Appendix D, while a description of all of the artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 7 and 8

Units 7 and 8 were excavated concurrently, although each unit retained its individuality in terms of screening and data recordation. The upper soil encountered in these units consisted of the same 10YR 3/3 dark brown silty loam encountered at the other loci. The transition to subsoil was relatively deep, occurring at a depth of 36 cm in both units. All artifacts were recovered from this upper topsoil, and include a flake fragment and two fragments of quartz shatter from Unit 7, and a flake fragment, four fragments of quartz shatter and a fragment of fire-cracked rock recovered from Unit 8. Subsoil consisted of the same gravelly 10YR 4/4 dark yellowish brown silty loam encountered in the other units. Excavation stopped at a depth of 67 cm in Unit 7 and 66 cm in Unit 8. An STP was then excavated in center of the 1 x 2 m block. This STP was excavated to a depth of 84 cm below the ground surface before encountering a second subsoil consisting of 10YR 4/4 dark yellowish brown silty loam mottled with 10YR 5/4 yellowish brown silty sand with large rocks and cobbles. This rocky soil prevented deeper testing at a depth of 136 cm below the ground surface. After completion of the STP, the north and south walls of Units 7 and 8 were photographed and drawn in profile (Figure 5; Photos 27 and 28).

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Discussion- The function of Locus 3 remains unknown, although the presence of FCR during both the Phase I and Phase II surveys does suggest that prehistoric fire-related features such as hearths and roasting pits may have once occurred nearby. However, the lack of charcoal or dark staining suggests that any features that may have occurred in the vicinity have been destroyed by plowing activities and runoff from the adjacent hillside. A total of 9 prehistoric artifacts were recovered during the Phase II study of Locus 3: all from the Unit excavations. The assemblage consists of six fragments of quartz shatter, two quartzite flake fragments, and a fragment of quartzite fire cracked rock.

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort conducted as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers and in the STP grid suggests that this find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I artifact location. The lack of charcoal or staining in any of the excavations suggests that intact hearths or fire related features are not likely to be encountered, and the lack of diagnostic material from the Units suggests that additional excavation in the immediate vicinity would likely produce similar results to these Phase II investigations. For these reasons, the site does not appear able to address the kinds of important questions necessary for inclusion in the National Register of Historic Places. No further archaeological work is recommended.

Interpretations and Discussion

While none of the sites appear to have sufficient cultural features or artifact density to adequately address many of the questions that archaeologists have about the prehistory of the southern Taconics, there are several interesting things that may be inferred from the data recovered as part of the Phase II study.

A total of 54 prehistoric artifacts were recovered from the three sites. This assemblage is relatively small considering the fact that 12 units and 229 STPs were excavated as part of this study. Frequency and percentage of artifact types from each of these sites is provided below in Table 3.

Table 3.
Frequency and percentage of prehistoric artifacts by locus

Site	Shatter	Flake Frags.	Whole Flakes	Scraper	Biface Frags.	Cores	FCR	Total
Locus 1	6 (11.1%)	2 (3.70%)	1 (1.85%)	0 (0.00%)	2 (3.70%)	0 (0.00%)	0 (0.00%)	**11 (20.3%)**
Locus 2	12 (22.2%)	9 (16.6%)	5 (9.25%)	1 (1.85%)	5 (9.25%)	2 (3.70%)	0 (0.00%)	**34 (62.9%)**
Locus 3	6 (11.1%)	2 (3.70%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (1.85%)	**9 (16.7%)**
Total	**24 (44.4%)**	**13 (24.0%)**	**6 (11.1%)**	**1 (1.85%)**	**7 (12.9%)**	**2 (3.70%)**	**1 (1.85%)**	**54 (100.0%)**

As shown in the above table, quartz and quartzite shatter made up the most common artifact type encountered at each of the three sites. Flake fragments make up the second most common artifact type, followed by biface fragments and complete flakes. The fact that biface

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fragments were more common than complete flakes may represent breakage or plow damage, or the high number of biface tips and medial sections may represent breakage as the result of latter stage lithic reduction or retouching. Only two cores were recovered from the site, with both of these finds being from Locus 2. Each of these cores appears fragmentary and may have been expended and discarded rather than lost or cached for later reuse.

With regard to the whole flakes recovered, dimensions ranged from 6.1 to 14.4 mm in length and 10.5 to 16.8 mm in width (See Table 4). Flake thickness ranged between 2.2 and 4.5 mm. Mean flake size was 11.14 x 12.18 x 3.26 mm, which suggests that middle and latter stage lithic reduction was taking place at the sites. Two of the five flakes showed evidence of cortex over more than 50% of the dorsal surface, suggesting that primary lithic reduction may also have taken place in the vicinity.

Table 4.
Complete flakes recovered as part of the Phase II investigations

Cat. #	Provenience	Material	Wt. (g)	Dimensions (mm)
6	Locus 2 N30 E20 LVL 1	Quartz	0.3	10.7x10.3x3.2
10	Locus 1 Unit 10 L3	Quartzite	1.3	15.4x16.8x4.0
29	Locus 2 Unit 4 L1 0-15	Quartz	0.2	9.1x8.7x2.2
30	Locus 2 Unit 5 L1	Quartz	1.2	14.4x14.6x4.5
37	Locus 2Unit 6 L5 40-52	Quartz	<0.1	6.1x10.5x2.4

Temporality

With regard to temporality, two diagnostic projectile points were recovered during our investigations, both of which were recovered from Locus 1 during the initial Phase I survey. A Lamoka point, which dates to around 7,500 to 4,500 years ago, was recovered from the eastern end of the site, and a fragment of a Brewerton side notched pint was recovered from the western side. Brewerton Side notched points are somewhat more recent and are a chief characteristic of the Laurentian associated Brewerton Phase. Brewerton points are thought to date to sometime in the Late Archaic Period between 5,000 and 3,750 years ago (Ritchie 1969: 91-92).

While information is sparse, it appears that the site might have been occupied sometime during Middle and Late Archaic times. However, an isolated Levanna projectile point was recovered on the opposite (north) side of Depot Hill Road in STP Z-4 during the initial Phase IA/IB survey (Moyer and Moyer 2007). Levanna points are relatively recent, dating to latter part of the Late Woodland Period (between 1,500-350 years ago). While the find occurred some distance to the south of the three loci, it may be that these sites were utilized for far longer than suggested by the limited evidence recovered from these three sites.

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Site Function

Site function can be one of the most difficult things to determine about a prehistoric site, especially when presented with such a limited amount of evidence as was recovered as part of the Phase II investigations. Clearly, lithic reduction was a common activity at all of these sites, with quartz shatter, flakes, flake fragments, and cores making up between 81.8 and 88.8 percent of the total assemblages from each of these sites. The presence of a scraper and seven biface fragments all suggest other activities taking place at the sites, likely encompassing an array of hunting and other resource procurement activities. The scraper appeared heavily worn, and may have been discarded after its utility was gone.

While no hearths or fire-related prehistoric features were encountered, a single fragment of fire-cracked rock (FCR) recovered from Locus 3 may represent cooking activities or possibly drying or roasting activities. Roasting was likely not a major activity at the site, since large roasting features usually produce high densities of FCR and are often located in greater proximity to rivers and other water sources.

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Part III: Summary and Recommendations

Phase II archaeological site examinations have been conducted for three prehistoric sites associated with the proposed Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums with necessary utilities installed as part of the construction process.

These three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were initially identified as part of a Phase IA/IB cultural resources survey conducted for the above project (Moyer and Moyer 2007). Because each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that these sites might be able to yield additional artifacts or features that could be used to address important questions about prehistoric life in Dutchess County. For these reasons, Phase II archaeological site examinations were conducted at each of these three sites. The field methods employed at each of the sites consisted of a series of increasingly intensive techniques involving surface walkovers, shovel testing, and the excavation of 1 x 1 m square excavation units.

Locus 1 is situated along a plowed field that had re-grown with dense hay grasses. No prehistoric artifacts were recovered as part of the surface inspection. The next phase of the field investigations involved the placement of a total of 81 40 cm diameter shovel test pits (STPs) in 5 m intervals over the entire site boundary as shown in Figure 3. One STP (N15E90) was not excavated because a previous Phase I STP fell at that location. Of these 80 STPs excavated as part of the close interval testing, only one (0.12 percent) recovered any prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. After the shovel testing a total of four 1 x 1 m excavation units were placed in two areas with high artifact concentrations. A total of 10 prehistoric artifacts were recovered as part of the unit excavations including 5 fragments of quartz shatter, a complete flake, two flake fragments and two biface fragments. No evidence of charcoal or cultural features was noted during the Phase II study.

The recovery of only 11 prehistoric artifacts after such intensive investigations with units placed near two separate concentrations suggests that site is of a relatively low artifact density, and the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2 was situated in a plowed field at the base of a steep slope. One prehistoric artifact was recovered during the surface inspection: a quartz scraper found on the surface 271 cm east of STP S5E55. No evidence of charcoal or features was identified during the walkover. The next phase of investigation at Locus 2 involved the excavation of 101 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site boundary. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake was recovered from STP N30E20, while a fragment of quartz shatter was recovered from

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STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. The final phase of the investigations at the site involved the excavation of six 1 x 1 m square excavation units in a tight cluster near an artifact concentration at the eastern end of the site. In total, 34 prehistoric artifacts were recovered during the Phase II investigations, including 12 fragments of quartz shatter, 9 flake fragments, 5 complete flakes, an expended scraper, and 5 non-temporally diagnostic biface fragments.

Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered including a projectile point tip, none of the artifacts appears temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) all suggest that further investigations at the site would be unlikely to encounter prehistoric fire related features that might yield macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it does seem plausible that fire related features might once have occurred in the vicinity, with little evidence remaining. Because of the light density of artifacts at the site and the lack of temporally diagnostic artifacts and prehistoric cultural features, Locus 2 does not appear likely to address important questions about seasonality and temporal sequencing and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3 is located in a field of harvested corn to the west of Loci 1 and 2. No prehistoric artifacts or cultural features were identified from either the surface inspection or the excavation of 48 STPs in 5 m intervals to form a grid over the initial find spot. Because no artifacts were recovered during the walkover and shovel testing, two 1 x 1 m square excavation units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. A total of 9 prehistoric artifacts were recovered from the excavation of the two units, including six fragments of quartz shatter, two flake fragments, and a single fragment of fire cracked rock (FCR).

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort expended as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers or in the STP grid suggests that this find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I find spot. The lack of charcoal or staining in any of these excavations suggests that intact hearths or fire related features would likely not be encountered, and the lack of diagnostic material from the Units suggests that additional excavation in the immediate vicinity would likely produce similar results. For these reasons, the site does not appear able to address the kinds of important questions necessary for inclusion in the National Register of Historic Places.

Based upon the above information, it would appear that none of the three sites contained sufficient artifact diversity of density to address important questions about prehistoric lifeways in the lower Taconic region. Consequently we suggest that no archaeological data recovery is warranted at any of these three prehistoric sites. These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Appendix A.

Figures

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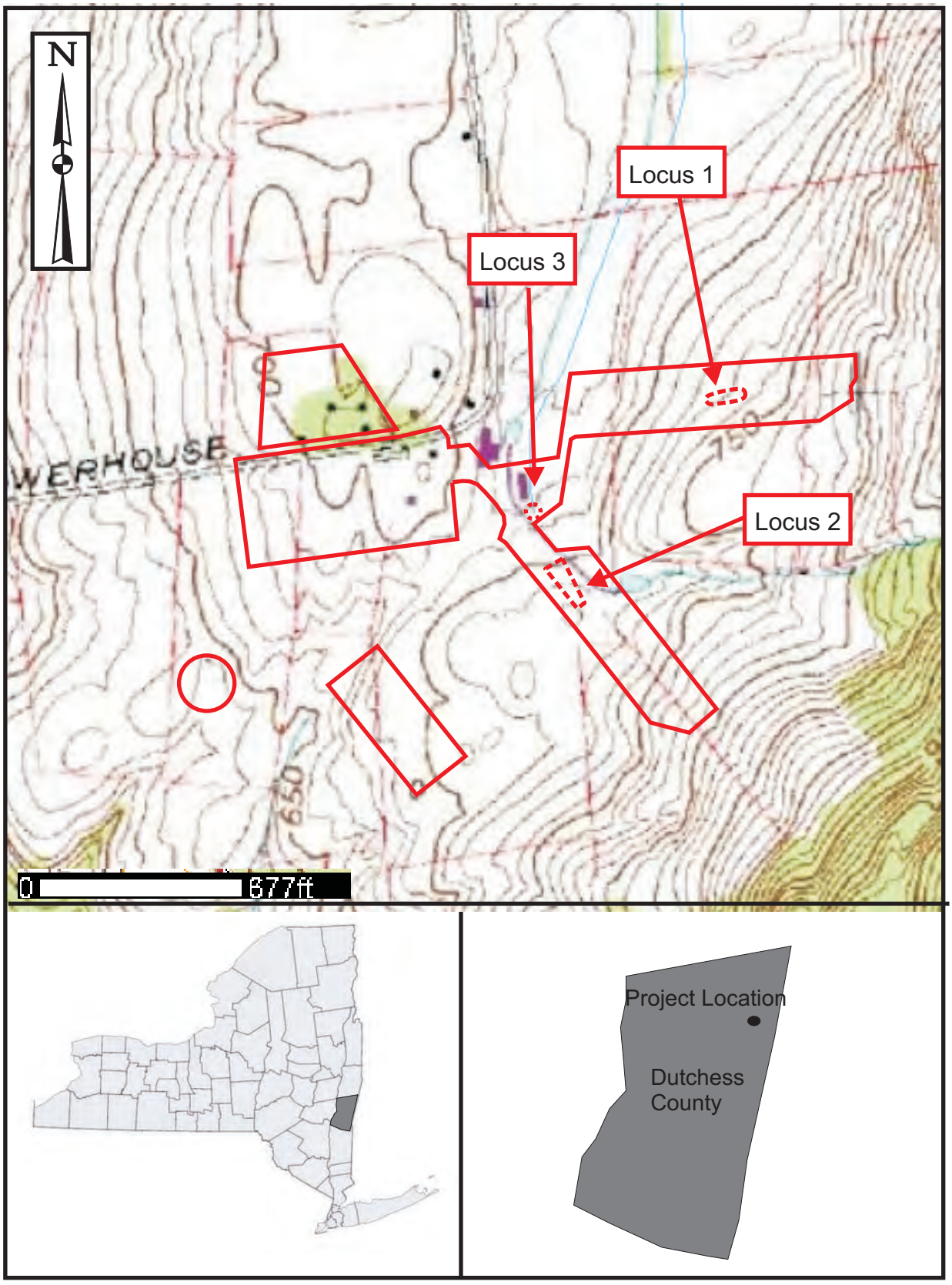


Figure 1. Map showing the location of the project area on Amenia USGS 7.5 minute topographic map.

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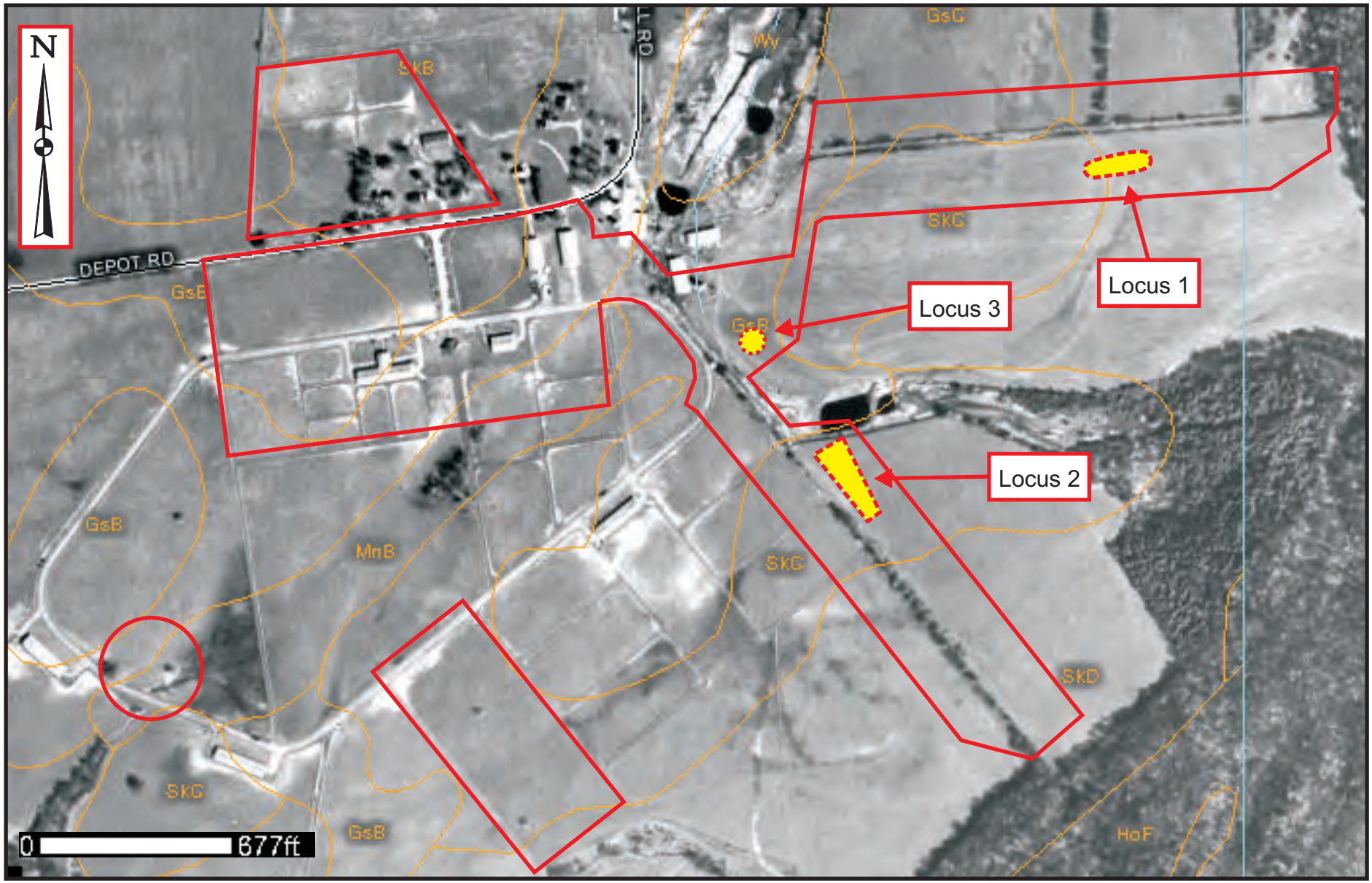


Figure 2. NRCS soils map with the proposed construction indicated.

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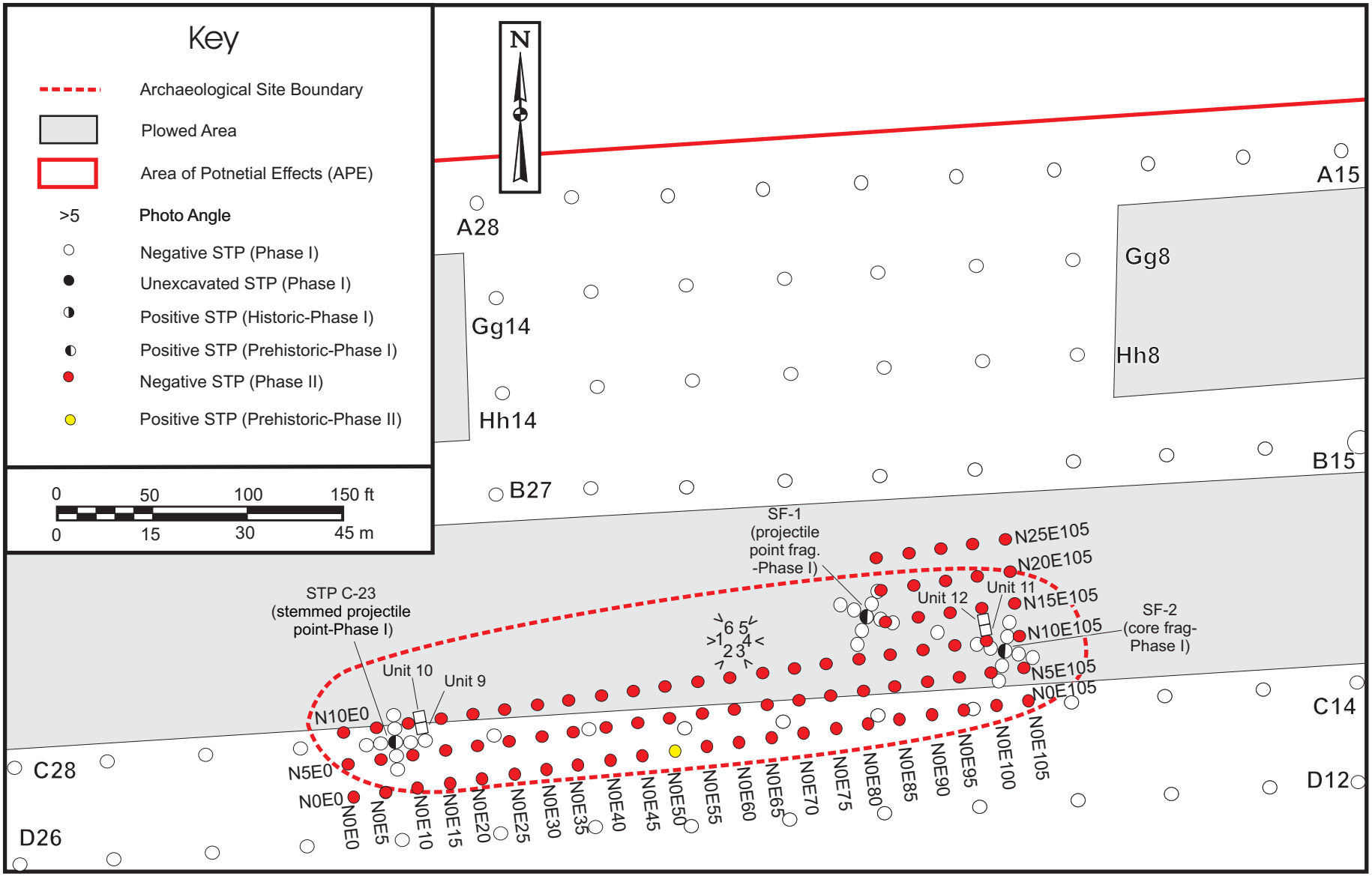


Figure 3. Map showing the location of subsurface testing at Locus 1.

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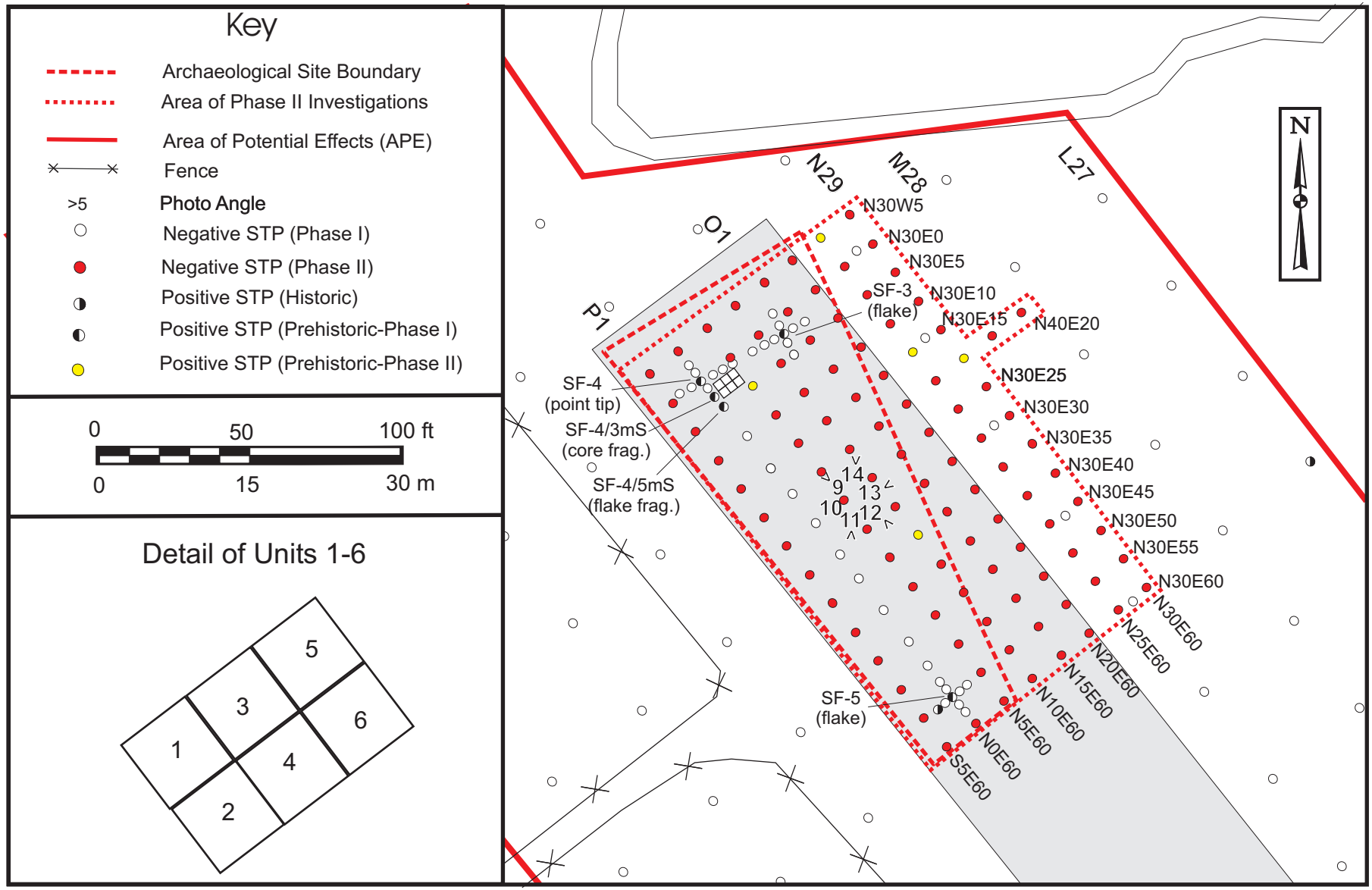


Figure 4. Map showing the location of subsurface testing at Locus 2.

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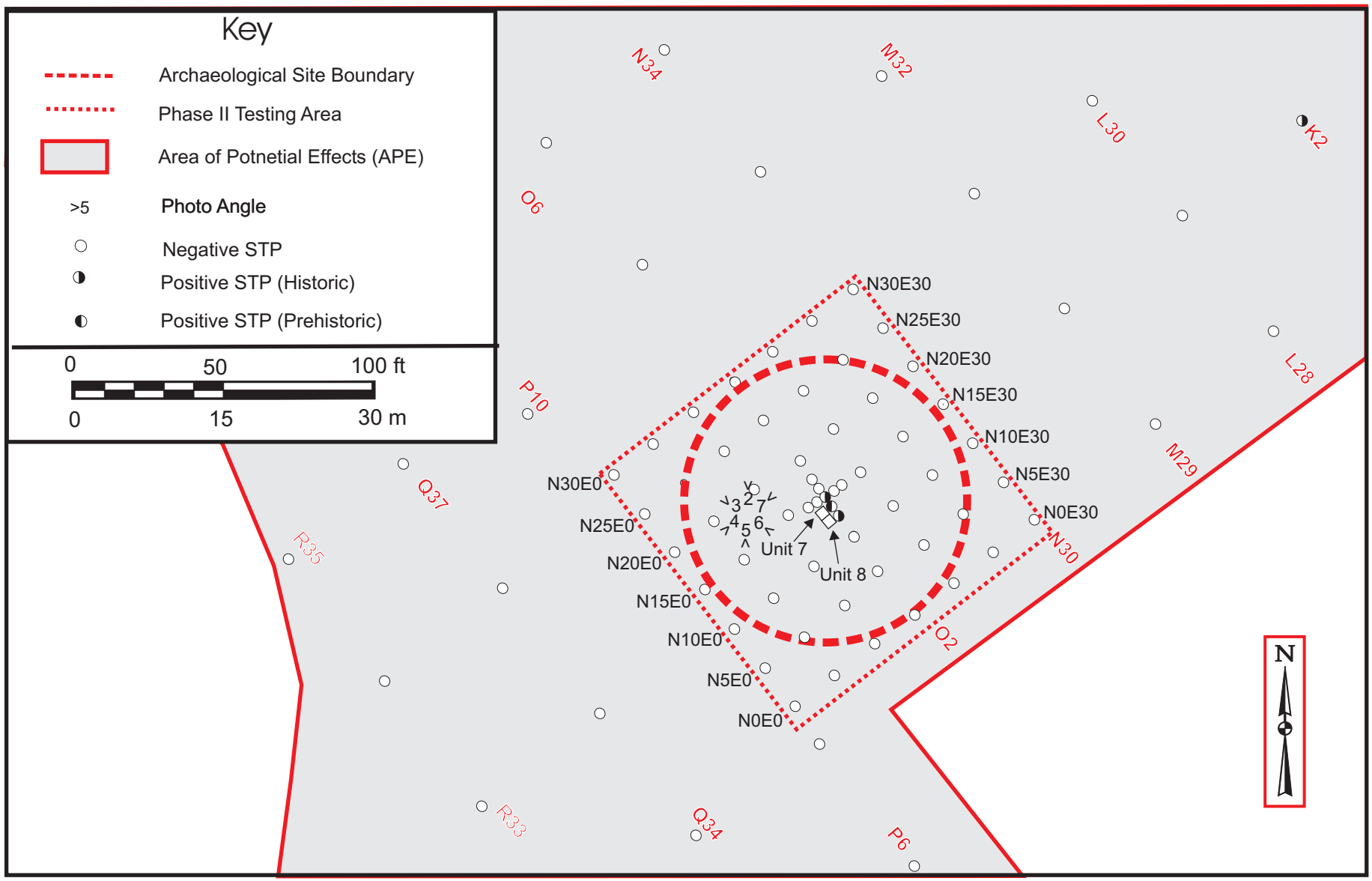


Figure 5. Map showing the location of subsurface testing at Locus 3.

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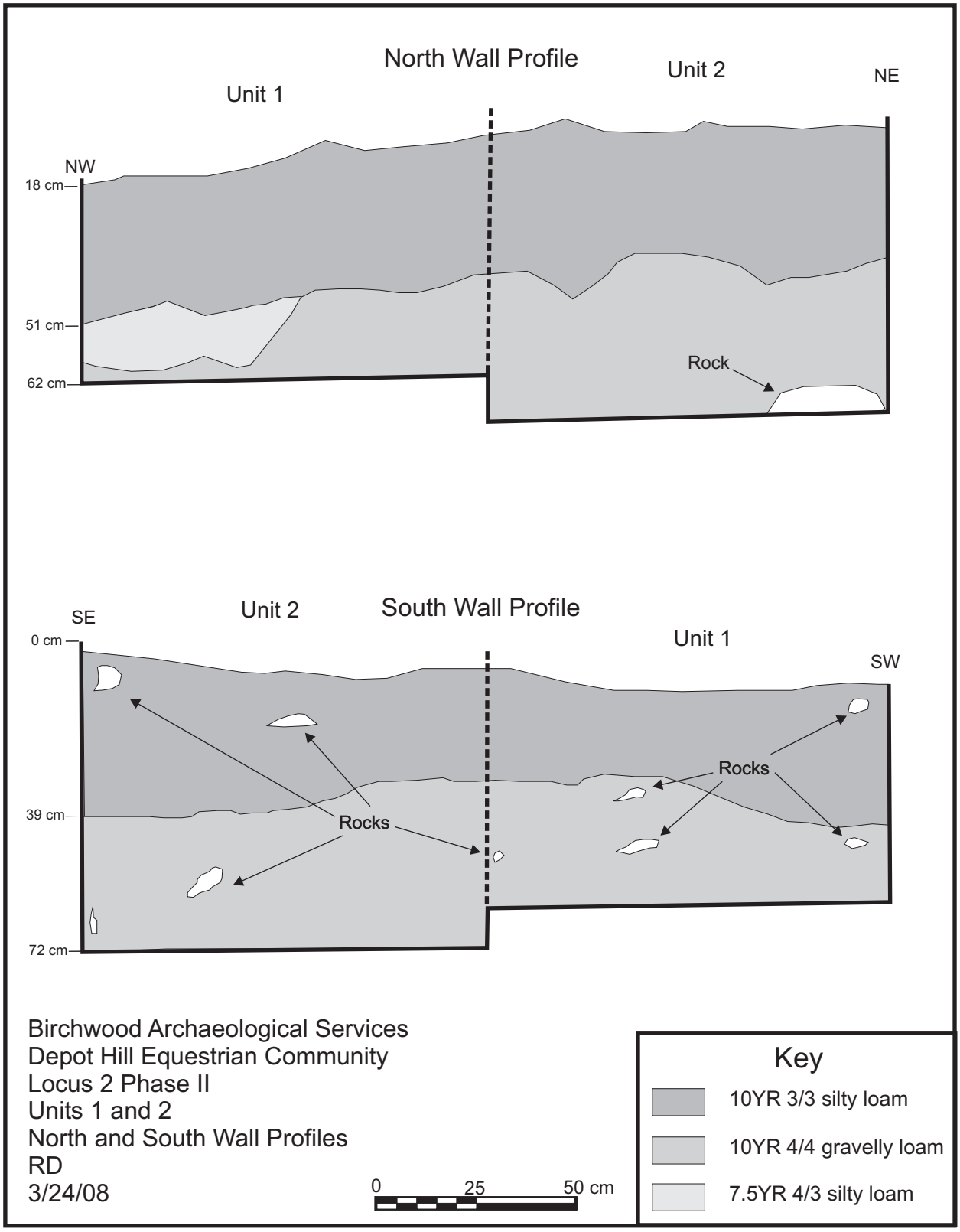


Figure 6. North and south wall profiles of Units 1 and 2 at Locus 2.

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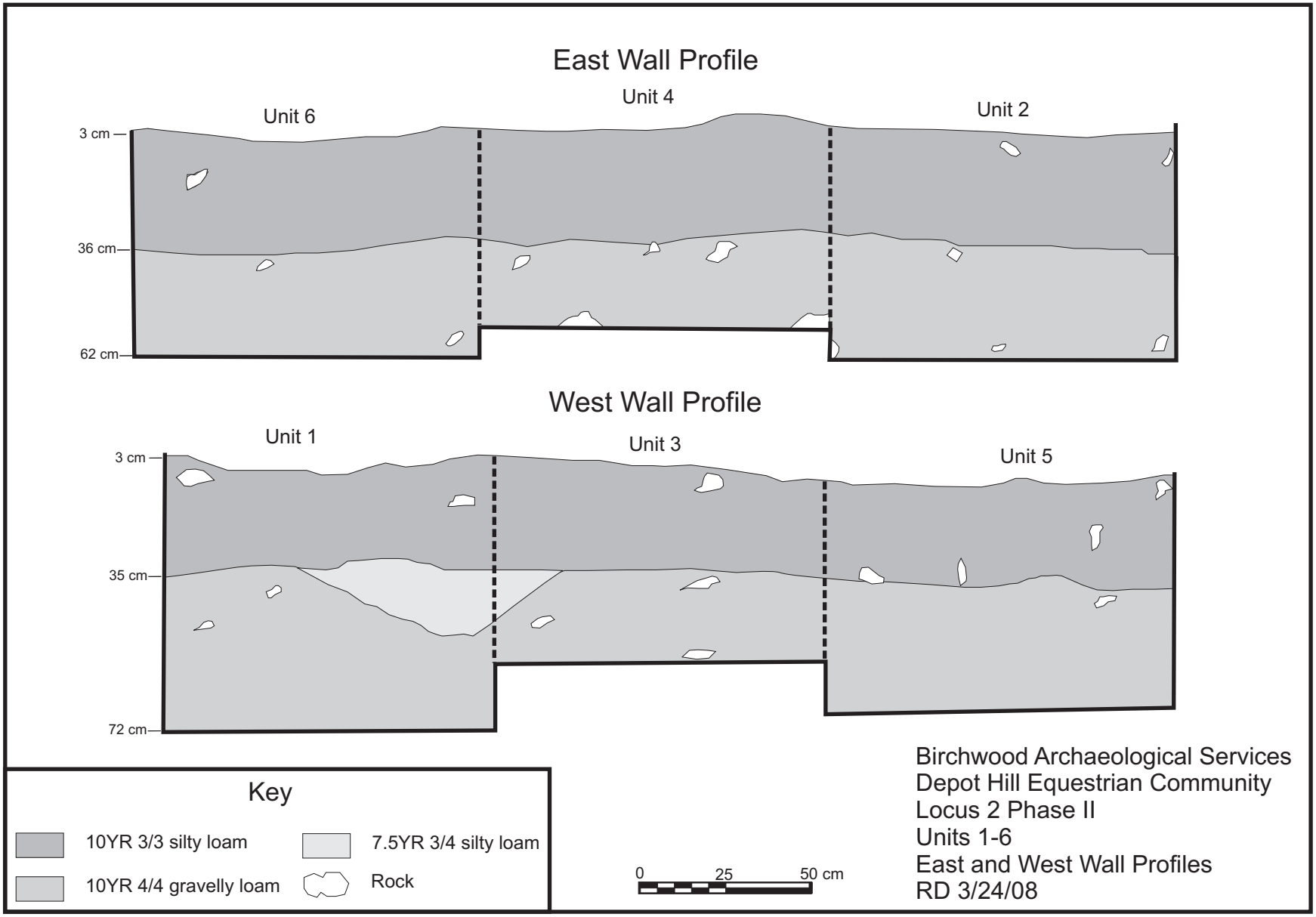


Figure 7. East and west wall profiles of Units 1 through 6 at Locus 2.

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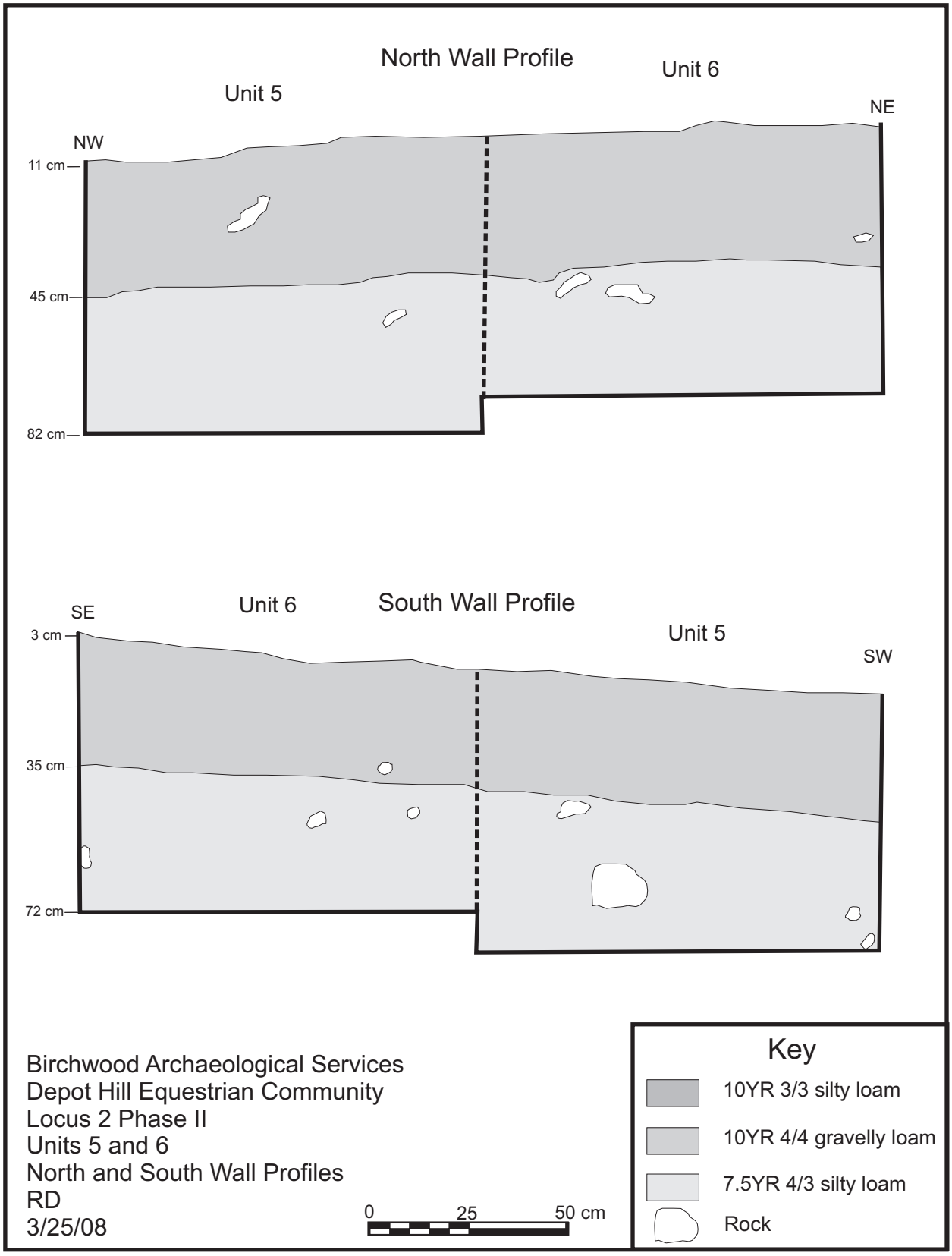


Figure 8. North and south wall profiles of Units 5 and 6 at Locus 2.

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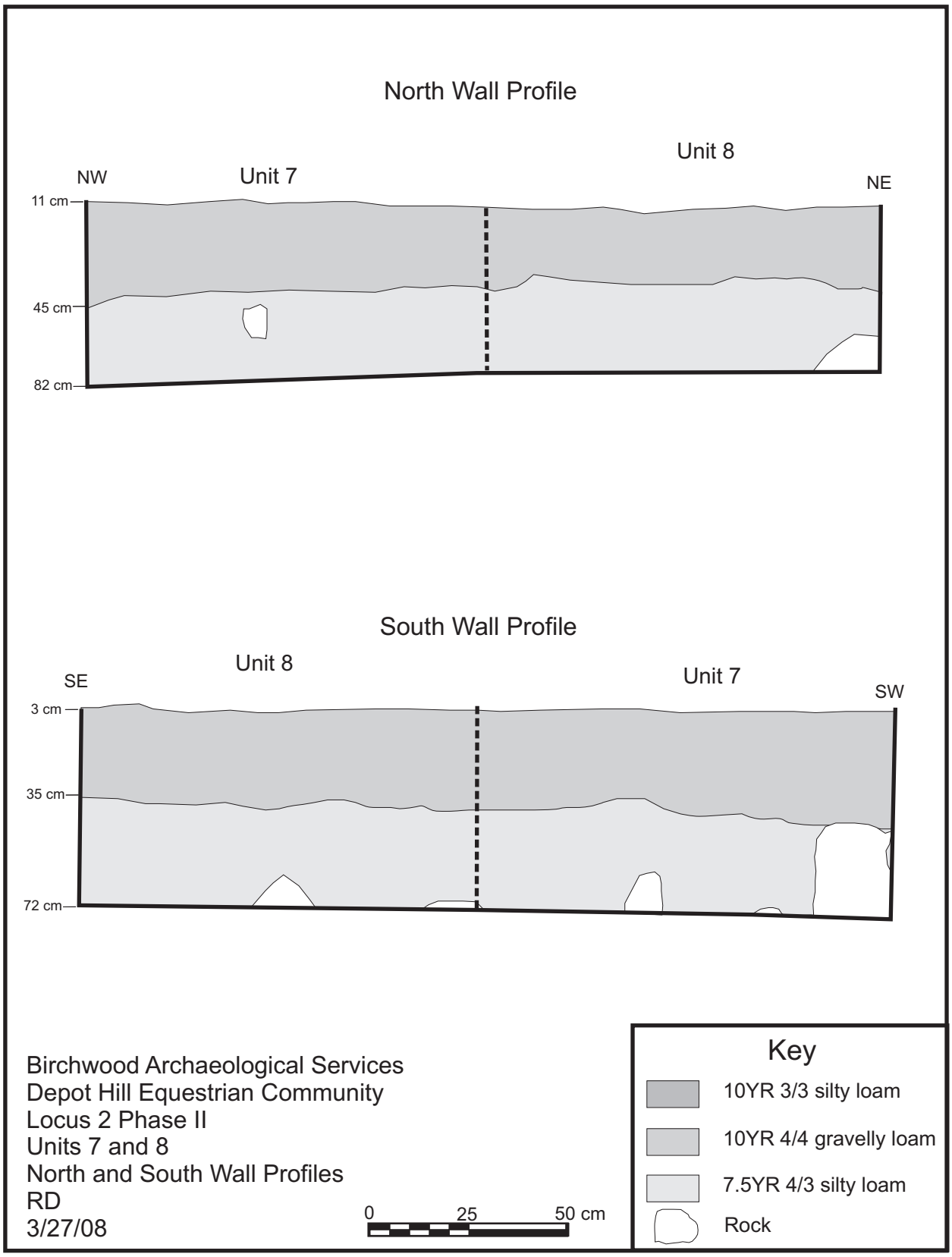


Figure 9. North and south wall profiles of Units 7 and 8 at Locus 3.

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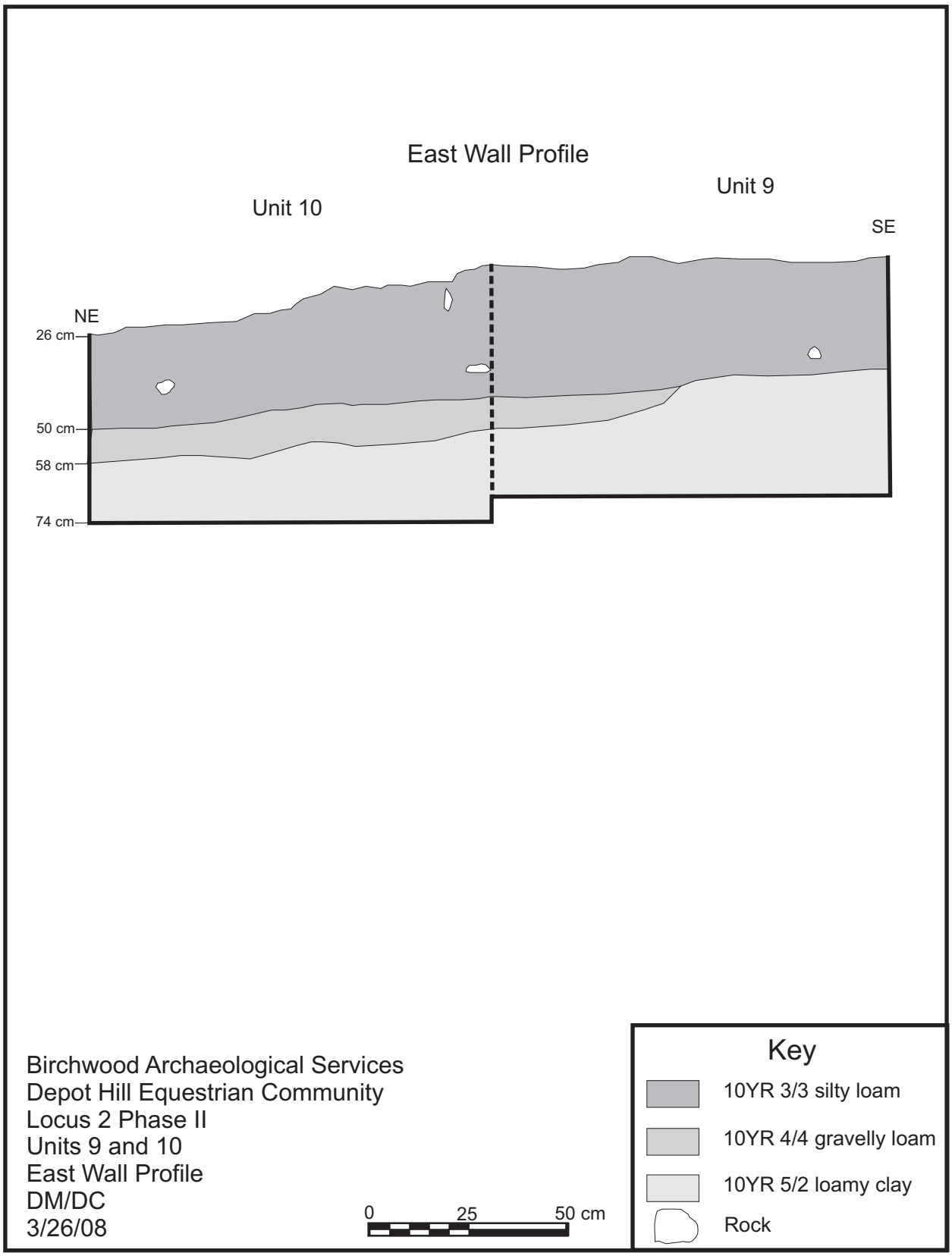


Figure 10. East wall profiles of Units 9 and 10 at Locus 1.

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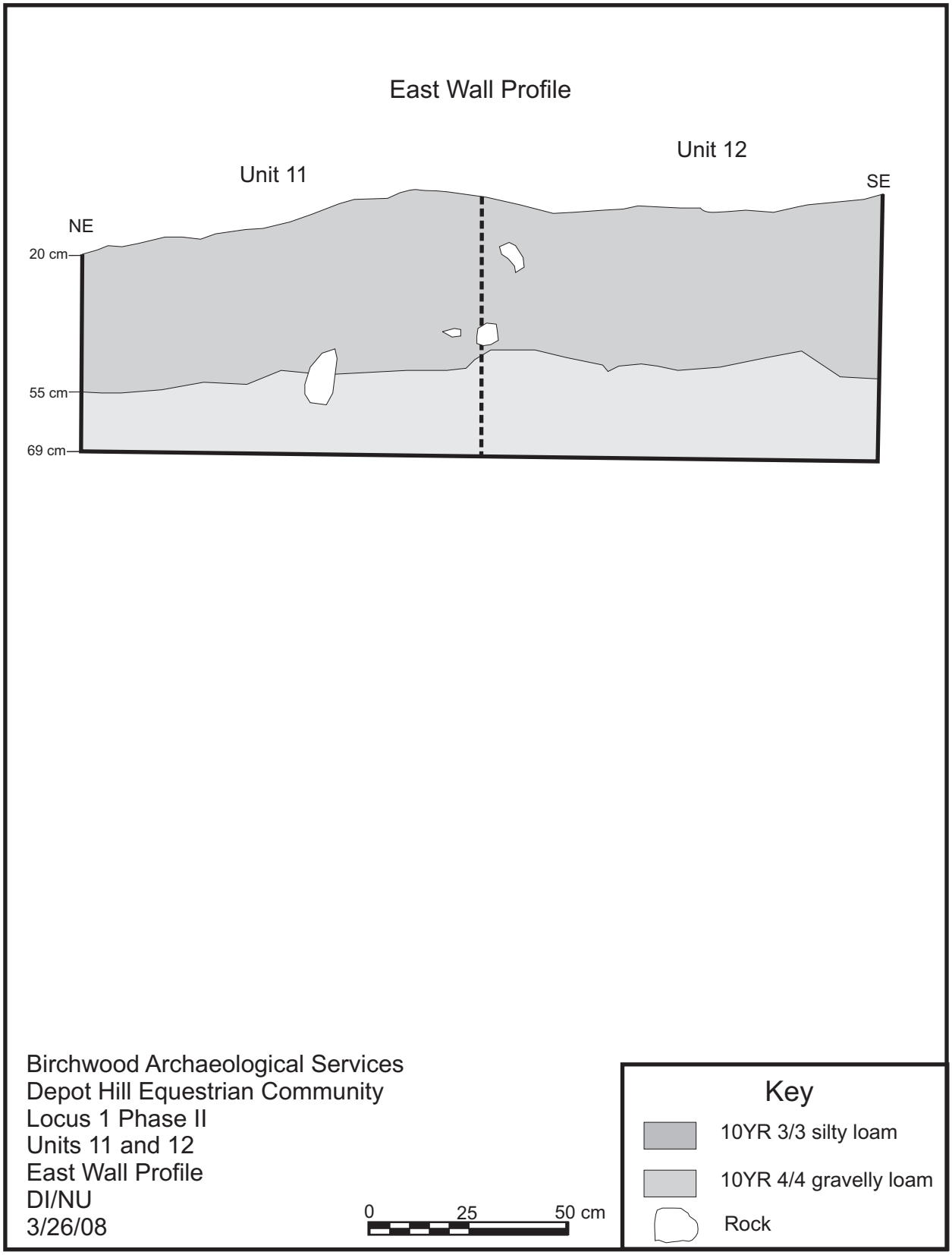


Figure 11. East wall profiles of Units 11 and 12 at Locus 1.

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Appendix B.

Photographs

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Photo 1. Portion of panoramic view from the center of Locus 1, facing west.



Photo 2. Portion of panoramic view from the center of Locus 1, facing southwest.

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Photo 3. Portion of panoramic view from the center of Locus 1, facing southeast.



Photo 4. Portion of panoramic view from the center of Locus 1, facing east.

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Photo 5. Portion of panoramic view from the center of Locus 1, facing northeast.



Photo 6. Portion of panoramic view from the center of Locus 1, facing northwest.

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Photo 7. Portion of panoramic view from the center of Locus 2, facing southeast.



Photo 8. Portion of panoramic view from the center of Locus 2, facing northeast.

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Photo 9. Portion of panoramic view from the center of Locus 2, facing north.



Photo 10. Portion of panoramic view from the center of Locus 2, facing northwest.

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Photo 11. Portion of panoramic view from the center of Locus 2, facing southwest



Photo 12. Portion of panoramic view from the center of Locus 2, facing south.

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Photo 13. Portion of panoramic view from the center of Locus 3, facing north.



Photo 14. Portion of panoramic view from the center of Locus 3, facing northwest.

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Photo 15. Portion of panoramic view from the center of Locus 3, facing southwest.



Photo 16. Portion of panoramic view from the center of Locus 3, facing south.

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Photo 17. Portion of panoramic view from the center of Locus 3, facing southeast.



Photo 18. Portion of panoramic view from the center of Locus 3, facing northeast.

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Photo 19. View of the north wall profile of Units 1 and 2 at Locus 2.



Photo 20. View of the south wall profile of Units 1 and 2 at Locus 2.

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Photo 21. View of the south wall profile of Units 5 and 6 at Locus 2.



Photo 22. View of the north wall profile of Units 5 and 6 at Locus 2.

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Photo 23. View of the west wall profile of Units 1, 3 and 5 at Locus 2.



Photo 24. View of the east wall profile of Units 2, 4 and 6 at Locus 2.

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Photo 25. View of the north wall profile of Units 2, 4 and 6 at Locus 2.



Photo 26. View of the north wall profile of Units 1 and 3 at Locus 2.

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Photo 27. View of the south wall profile of Units 7 and 8 at Locus 3.



Photo 28. View of the north wall profile of Units 7 and 8 at Locus 3

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Photo 29. View of the east wall profile of Units 9 and 10 at Locus 1.



Photo 30. View of the east wall profile of Units 11 and 12 at Locus 1.

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Photo 31. Sampling of prehistoric artifacts from the Depot Hill Site, Locus 1.

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Photo 32. Sampling of prehistoric artifacts from the Depot Hill Site, Locus 2.

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Appendix C.

Shovel Test Pit Records

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Appendix C.

Shovel Test Pit Record

LOCUS 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A - 1	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
A - 1	2	35 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 2	1	0 -31	10YR 3/3 dark brown silty loam	A horizon	N	
A - 2	2	31 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 3	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
A - 3	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 4	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 4	2	28 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 5	2	29 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 6	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
A - 6	2	27 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 7	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
A - 7	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 8	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
A - 8	2	32 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 9	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 9	2	28 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 10	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
A - 10	2	34 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 11	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
A - 11	2	37 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A - 12	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	Y	Quartz biface fragment
A - 12	2	27 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 13	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 13	2	26 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 14	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 14	2	29 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 15	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 15	2	26 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 16	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 16	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 17	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 17	2	26 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 18	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 18	2	29 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 19	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
A - 19	2	27 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
A - 20	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 21	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
A - 21	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 22	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
A - 22	2	39 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 1	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
B - 1	2	28 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 2	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
B - 2	2	31 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 3	1	0 - 70	10YR 3/3 dark brown silty loam	A horizon	N	
B - 4	1	0 - 57	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by rocks
B - 5	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B - 5	2	39 - 69	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 6	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
B - 6	2	28 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 7	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	N	
B - 7	2	21 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 8	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
B - 8	2	31 - 63	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 9	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
B - 9	2	32 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 10	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 10	2	34 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 11	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
B - 11	2	29 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 12	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
B - 12	2	38 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 13	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
B - 13	2	29 - 43	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
B - 14	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 14	2	34 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
B - 15	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 15	2	34 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
B - 16	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
B - 16	2	33 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 17	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 17	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 18	1	0 - 62	10YR 3/3 dark brown silty loam	A horizon	Y	1-pc modern ceramic
B - 19	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
B - 19	2	39 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
B - 20	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B - 20	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 21	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 21	2	34 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 22	1	0 - 53	10YR 4/4 dark yellowish brown silty loam	A horizon		Stopped by decaying rocks
C - 1	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
C - 1	2	43 - 67	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 2	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 2	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 3	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
C - 3	2	24 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 4	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
C - 4	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
C - 5	2	32 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 6	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
C - 6	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 7	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 7	2	30 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
C - 8	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
C - 8	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 9	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 9	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
C - 10	2	23 - 46	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 11	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
C - 11	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 12	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
C - 12	2	40 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 13	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
C - 13	2	40 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 14	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
C - 14	2	33 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 15	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
C - 15	2	23 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 16	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 16	2	30 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 17	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 17	2	30 - 63	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 18	1	0 - 50	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by rocks
C - 19	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 19	2	28 - 61	10YR 4/4 dark yellowish brown clay loam	Bw horizon	N	
C - 20	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
C - 20	2	32 - 60	10YR 4/4 dark yellowish brown clay loam	Bw horizon	N	
C - 21	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 21	2	30 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 22	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
C - 22	2	25 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 1	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
D - 1	2	23 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 2			NOT DUG (5m mark between SF 2 & 3)			
D - 3	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
D - 3	2	28 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 4	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
D - 4	2	33 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
D - 5	2	32 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 1	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E - 1	2	25 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E - 2	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
E - 2	2	30 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 3	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E - 3	2	28 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 4	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E - 4	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 5	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E - 5	2	26 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 1	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
F - 1	2	27 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 2	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
F - 2	2	32 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 3	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
F - 3	2	27 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 4	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
F - 4	2	25 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
F - 5	2	32 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
LOCUS 2						
N5 - E0	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E0	2	37 - 71	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E5	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E5	2	39 - 72	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E10	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	Y	One quartzite flake
N5 - E10	2	21 - 73	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E15	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	Y	Clear glass - reburied
N5 - E15	2	32 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N5 - E20	2	35 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E25	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E25	2	34 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E30	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E30	2	36 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E35	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E35	2	43 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E40	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E40	2	43 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E45	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E45	2	40 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E50	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E50	2	48 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E55	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E55	2	37 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E60	1	0 -32	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E60	2	32 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E0	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E0	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E5	2	29 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E10	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E10	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E15	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	Y	Glass, curved, green
N10 - E15	2	23 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E20	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E20	2	24 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E25	2	25 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N10 - E30	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E30	2	22 - 42	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E35	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	Y	Possible quartzite flake
N10 - E35	2	20 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E40	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E40	2	20 - 39	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E45	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by water
N10 - E50	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E50	2	30 - 42	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E55	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	Y	Plastic bottle top; stopped by water
N10 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E60	2	30 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E0	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E0	2	33 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E5	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E5	2	41 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N15 - E10	1	0 - 54	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E10	2	54 - 66	10YR 4/4 dark yellowish brown silty loam	Bw horizon		Decomposing snale
N15 - E15	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E15	2	29 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E20	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E20	2	31 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E25	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E25	2	30 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E30	2	28 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E35	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E35	2	29 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N15 - E40	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E40	2	25 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E45	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E45	2	28 - 40	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E50	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E50	2	24 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E55	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E55	2	28 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E60	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E60	2	31 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N20 - E0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E0	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E5	2	29 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E10	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E10	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E15	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E15	2	29 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E20	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E20	2	27 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E25	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E30	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E30	2	31 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E35	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E35	2	28 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E40	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E40	2	30 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N20 - E45	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E45	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E50	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E50	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E60	2	30 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E0	1	0 -36	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E0	2	36 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E5	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E5	2	30 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E10	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E10	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E15	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	N	One flake; one quartzite flake
N25 - E15	2	21 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E20	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E20	2	33 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E25	1	0 - 19	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E25	2	19 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E30	2	28 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N25 - E35	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by water
N25 - E40	1	0 - 14	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E40	2	14 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E45	1	0 - 10	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E45	2	10 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E50	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	

SEE NOTE ON PAGE 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N25 - E50	2	29 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E60	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E60	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N30 - E0	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E0	2	41 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E5	2	31 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N30 - E10	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E10	2	38 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E15	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E15	2	33 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E20	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	Y	Quartzite flake
N30 - E20	2	38 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E25	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E25	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E30	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E30	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E35	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E35	2	25 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E40	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E40	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E45	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E45	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E50	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E50	2	28 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N30 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E60	2	30 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N35 - E20	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N35 - E20	2	34 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N40 - E20	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	Y	Window glass
N40 - E20	2	28 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E0	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E0	2	48 - 70	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E5	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E5	2	38 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E10	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E10	2	26 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E15	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E15	2	27 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E20	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E20	2	29 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E25	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E25	2	36 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E30	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E30	2	22 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E35	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E35	2	29 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E40	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E40	2	37 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E45	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
S5 - E45	2	23 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E50	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E50	2	27 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E55	1	0 - 46	10YR 3/3 dark brown silty loam	A horizon	N	Moved 50c S due to standing water; stopped by rocks
S5 - E60	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E60	2	26 - 48	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N0	2	29 - 66	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N5	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N5	2	41 - 70	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
W5 - N10	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N10	2	39 - 61	7.5YR 5/6 strong brown silty loam	Bw horizon	N	
W5 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N15	2	28 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N20	1	0 - 44	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N20	2	44 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N25	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	Y	Quartzite fragment
W5 - N25	2	39 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N30	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N30	2	33 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - S5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - S5	2	31 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
LOCUS 3						
E0 - N0	1	0 - 65	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N05	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N05	2	34 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N10	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E0 - N10	2	30 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N15	2	28 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N20	1	0 - 19	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N20	2	19 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N25	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N25	2	22 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N30	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N30	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N0	1		10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N0	2		10YR 3/3 dark brown silty loam and 10YR 4/4 dark yellowish brown silty loam	Mixed A and Bw Horizon	N	
E5 - N5	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N5	2	35 - 72	10YR 4/4 dark yellowish brown silty loam with gravel	Bw horizon	N	
E5 - N10	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N10	2	26 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N15	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N15	2	26 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N20	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N20	2	23 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N25	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	Y	Small flake of charcoal - discarded
E5 - N25	2	29 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E5 - N30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N30	2	28 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N35	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N35	2	24 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N0	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N0	2	40 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E10 - N5	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N5	2	25 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E10 - N10	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N10	2	31 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N15	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N15	2	22 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N20	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	One bottle glass-green
E10 - N20	2	30 - 41	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	One clear glass
E10 - N25	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	Glass, dark green and clear
E10 - N25	2	23 - 41	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N30	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N30	2	26 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N0	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N0	2	31 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N5	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N5	2	24 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N10	2	23 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N20	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N20	2	22 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N25	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N25	2	30 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E15 - N30	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N30	2	27 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	Y	One piece of poccelain - discarded
E20 - N0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N0	2	29 - 43	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N5	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	Y	One piece of glass - discarded
E20 - N5	2	27 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N10	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E20 - N10	2	28 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N15	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N15	2	25 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N20	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N20	2	26 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N25	2	25 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N0	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N0	2	26 - 39	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E25 - N5	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N5	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N10	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N10	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N15	2	28 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N20	2	35 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N25	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N25	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N30	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N30	2	33 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N0	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N0	2	36 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E30 - N5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N5	2	31 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N10	2	23 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E30 - N15	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E30 - N15	2	20 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N20	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N20	2	32 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N25	1	0-43	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N30	1	0 - 18	10YR 3/3 dark brown silty loam	A horizon	N	Fence stake; stopped by rocks
E30 - N30	2	18 - 46	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

Note: Excavation of all STPs was stopped after the removal of at least 20 of culturally sterile subsoil unless otherwise stated.

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Phase II Site Examination
Depot Hill Farm Equestrian Community Project
Town of Amenia, Dutchess County New York

prepared for

Crawford & Associates Engineering, PC

prepared by

David Moyer and Rebecca Moyer

Birchwood Archaeological Services
2948 County Highway 35
Sidney Center, NY 13839
Phone: 607-265-3444
Fax: 607-265-3459
email: birchwoodarch@yahoo.com

May 2008

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Management Summary

Depot Hill Farm Equestrian Community Project

SHPO Project Review Number:

Involved State and Federal Agencies: DEC

Phase of Survey: II

Location Information
Location: east of Old Route 22/County Route 81, along both sides of Depot Hill Road
Minor Civil Division: Town of Amenia
County: Dutchess

Survey Area (Metric & English)
Length:
Width:
Depth: 8 ft (2.4 m)
Number of Acres Surveyed: 60.7
Number of Square Meters & Feet Excavated:
Percentage of the Site Excavated:

USGS 7.5 Minute Quadrangle Map: Amenia

Archaeological Survey Overview
Number & Interval of Shovel Tests: 229 STPs STPs laid out at 5m (16.4 ft) intervals
Number & Size of Units: 12 1x1 m units
Width of Plowed Strips:
Surface Survey Transect Interval: 5 ft (1.5 m)

Results of Archaeological Survey
Number & name of prehistoric sites identified: 0
Number & name of historic sites identified: 0
Number & name of sites recommended for Phase II/Avoidance: 0

Results of Architectural Survey
Number of buildings/structures/cemeteries within project area: 0
Number of buildings/structures/cemeteries adjacent to project area: 0
Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: 0
Number of identified eligible buildings/structures/cemeteries/districts: 0

Report Author(s): David Moyer and Rebecca Moyer
Date of Report: May 2008

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Executive Summary

Phase II archaeological site examinations have been conducted for three prehistoric loci associated with the proposed Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums including necessary utilities, which will be installed as part of the construction process.

These three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were initially identified as part of a Phase IA/IB cultural resources survey conducted for the above-mentioned project (Moyer and Moyer 2007). As each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that these sites may be able to yield additional artifacts or features which could be used to address important questions about prehistoric life in Dutchess County. For these reasons, Phase II archaeological site examinations were conducted at each of these three sites. Field methods employed at each of the sites consisted of a series of increasingly intensive techniques involving surface walkovers, shovel testing, and the excavation of 1 x 1 m square excavation units.

Locus 1 is situated along a plowed field that has regrown with dense hay grasses. No prehistoric artifacts were recovered as part of the surface inspection. The next phase of the field investigations involved the placement of a total of eighty-one (81) 40 cm diameter shovel test pits (STPs) at 5 m intervals over the entire site boundary as shown in Figure 3. One STP (N15 E90) was not excavated because a previous Phase I STP fell at that location. Of these 80 STPs excavated as part of the close interval testing, only one (0.12 percent) recovered prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. After the shovel testing, a total of four 1 x 1 m excavation units were placed in two areas with high artifact concentrations. A total of 10 prehistoric artifacts were recovered as part of the unit excavations including 5 fragments of quartz shatter, a complete flake, two flake fragments and two biface fragments. No evidence of charcoal or cultural features was noted during the Phase II study.

The recovery of only 10 prehistoric artifacts after such intensive investigations with units placed near separate concentrations suggests that this site is of a relatively low artifact density, while the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered in continued excavation of the site. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2 is situated in a plowed field at the base of a steep slope. One prehistoric artifact was recovered during the surface inspection: a quartz scraper found 271 cm east of STP S5/E55. No evidence of charcoal or features was identified during the walkover. The next phase of investigation at Locus 2 involved the excavation of one-hundred one (101) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site boundary. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake

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was recovered from STP N30E20, while a fragment of quartz shatter was recovered from STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted, and no soil anomalies were encountered in any of the STPs. The final phase of the investigations at the site involved the excavation of six 1 x 1 m square excavation units in a tight cluster near an artifact concentration at the eastern end of the site. In total, 34 prehistoric artifacts were recovered during the Phase II investigations, including 12 fragments of quartz shatter, 9 flake fragments, 5 complete flakes, an expended scraper, and 5 non-temporally diagnostic biface fragments.

Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study, which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered, including a projectile point tip, none of the artifacts appears temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) suggests that the site would be unlikely to encounter prehistoric fire related features yielding macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it may be plausible that fire related features might once have occurred in the vicinity, with little to no evidence at present. Due to the light density of artifacts at the site as well as the lack of temporally diagnostic artifacts or prehistoric cultural features, it does not appear that Locus 2 can substantively address questions about seasonality and temporal sequencing, and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3 is located in a field of harvested corn to the west of Loci 1 and 2. No prehistoric artifacts or cultural features were identified from either the surface inspection or the excavation of 48 STPs in 5 m intervals forming a grid over the initial find location. Because no artifacts were recovered during the walkover or shovel testing, two 1 x 1 m square excavation units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. A total of 9 prehistoric artifacts were recovered from the excavation of the two units, including six fragments of quartz shatter, two flake fragments, and a single fragment of fire cracked rock (FCR).

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort conducted as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers or in the tight interval STP grid suggests that the find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I find spot. The lack of charcoal or staining in any of the excavations at Locus 3 suggests that it is not likely that intact hearths or fire related features would be encountered through further site examination. The lack of diagnostic material from these Units suggests that additional excavation in the immediate vicinity would produce similar results. For these reasons, the site does not appear able to address questions necessary for its inclusion in the National Register of Historic Places.

Based upon the above information, it does not appear that any of the three sites contained sufficient artifact diversity or density to address important research questions about prehistoric lifeways in the lower Taconic region. Consequently, we suggest that the

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performance of an archaeological data recovery is not warranted at any of these three prehistoric sites. These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Introduction

Birchwood Archaeological Services has conducted Phase II archaeological site examinations on three prehistoric lithic scatters initially identified as part of the Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums with the necessary utilities installed as part of the construction process. The area of potential effect (APE) for this project encompasses all areas of proposed ground disturbance including the installation septic and utility lines. Proposed development is expected to impact soils to no more than eight feet (2.4 m) in depth.

Three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were identified as part of the initial Phase IA/IB cultural resources survey conducted for the above referenced project (Moyer and Moyer 2007). As each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that additional artifacts or features which could be used to address important questions about prehistoric life in Dutchess County may be identified through further investigations. For these reasons, Phase II archaeological site examinations were conducted at each of the three sites. This report provides the results of these Phase II archaeological investigations. Fieldwork was conducted between the period of March 10th and March 26th of 2008 and was supervised by David Moyer, RPA. Royce Duda, Nick Ulfik, Doug Idleman and David Crawford assisted in the subsurface investigations.

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Environmental Setting

Dutchess County is situated in southeastern New York State. Two physiographic units occur within the county: Valley and Ridge Province and the New England Province. The project area lies in the Valley and Ridge Province, which includes the Hudson Lowlands and the Low Taconics. The Hudson Lowlands extend eastward from the Hudson River three to six miles, and the Low Taconics extend eight to ten miles east of the Hudson Lowlands (Faber 2002).

The Hudson Lowland, the subsection within the Valley and Ridge Province, is described as containing bedrock comprised of easily eroded sedimentary rock such as shale, greywacke, and siltstone. The bedrock was deposited during the Cambrian and Ordovician time periods Lowlands (Faber 2002).

The project area is located approximately 2.2 miles west of the New York and Connecticut State border on an upland plateau nearly 32.5 km (20.2 miles) east of the Hudson River. Elevation ranges from 633 feet above sea level in the western portion of the project area, to 745 feet above sea level at the eastern end of the APE. A series of unnamed creeks and streams lie within and adjacent to the current proposed project, with Webatuck Creek being the closest named creek in the vicinity at 1.2 miles (2.0 km) to the east. Other creeks nearby include Millbrook Creek 1.8 miles (2.9 km) southeast of the project area, and the Wassaic Creek, which lies 11,222 feet to the west. All of these water sources eventually drain into the Housatonic.

Soils

According to the USDA Web Soil Survey (WSS), two soil series occur in the vicinity of the three prehistoric sites (Figure 2). The relatively level plain at the base of the hill slope where Locus 3 is located is mapped as Georgia silt loam (map unit GsB). Georgia series soils consist of very deep, moderately well drained soils on glaciated uplands. They formed in loamy till (Faber 2002). Permeability is moderate in the solum and slow in the substratum. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. A typical soil profile of Georgia silt loam is provided below in Table 1:

Table 1. Typical soil profile of Georgia silt loam.

Horizon	Depth	Description
Ap	0-8 in. (0-20 cm)	very dark grayish brown (10YR 3/2) loam; moderate fine and medium granular structure; friable; many roots; 5 percent rock fragments; neutral; abrupt smooth boundary
Bw1	8-14 in. (20-36 cm)	brown (10YR 4/3) ped interiors and dark brown (10YR 3/3) exteriors, loam; moderate medium granular structure; friable; many roots; 5 percent rock fragments
Bw2	14-21 in. (36-53 cm)	brown (10YR 4/3) loam; moderate very fine and fine subangular blocky structure; friable; common roots; 5 percent rock fragments; few fine distinct yellowish brown (10YR 5/6) soft masses of iron accumulation; neutral; clear smooth boundary

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Table 1. Typical soil profile of Georgia silt loam (continued)

Horizon	Depth	Description
Bw3	21-26 in. (53-66 cm)	olive brown (2.5Y 4/4) loam; moderate fine and medium subangular blocky structure; friable; common roots; 5 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral; clear smooth boundary
C1	26-36 in. (66-91 cm)	gray (N 5/0), olive brown (2.5Y 4/4), dark grayish brown (2.5Y 4/2), and light olive brown (2.5Y 5/6) loam; moderate medium subangular and angular blocky structure; friable to firm; slightly sticky, slightly plastic; few roots; 10 percent rock fragments; neutral; clear smooth boundary
C2	36-65 in. (91-165 cm)	olive (5Y 4/3) loam; weak fine and medium angular blocky structure; firm to friable, slightly sticky, slightly plastic; few roots; 10 percent rock fragments; many fine distinct grayish brown (2.5Y 5/2) areas of iron depletion and light olive brown (2.5Y 5/4) soft masses of iron accumulation; neutral

Locus 1 and 2 are positioned along gradual slopes to the east of Locus 3, and occur in areas mapped as Stockbridge silt loam (map units SkC, and SkD). Stockbridge series soils are very deep, well drained soils formed in loamy calcareous till. They are nearly level to very steep soils on till plains, smooth hills, low ridges and drumloidal landforms (Faber 2002). Slope ranges from 0 to 60 percent. Permeability is moderate in the surface layer and subsoil and moderately slow or slow in the substratum. A typical profile of Stockbridge silt loam is provided below in Table 2.

Table 2. Typical soil profile of Stockbridge silt loam.

Horizon	Depth	Description
Ap	0-10 in. (0-25cm)	dark brown (10YR 3/3) loam, light brownish gray (2.5Y 6/2) dry; weak coarse granular structure; friable; many fine and very fine roots; 10 percent gravel; moderately acid; clear smooth boundary
Bw1	10-20 in. (25-51 cm)	olive brown (2.5Y 4/4) loam; weak coarse subangular blocky structure; friable; common fine roots; 10 percent gravel; neutral; clear wavy boundary.
Bw2	20-28 in. (51-71 cm)	light olive brown (2.5Y 5/4) loam; weak coarse subangular blocky structure; firm; few fine roots; few weathered limestone fragments in lower part; 10 percent gravel; neutral; gradual wavy boundary
C1	28-42 in. (71-107 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few fine roots; many brown (10YR 4/3) weathered limestone fragments and few grayish brown (2.5Y 5/2) streaks; 15 percent gravel and 2 percent cobbles; neutral; gradual wavy boundary
C2	42-48 in. (107-122 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles; slight effervescence; slightly alkaline; gradual wavy boundary
C3	48-65. (122-165 cm)	olive (5Y 4/3) gravelly loam; weak thick platy structure; firm; few brown (10YR 4/3) and light gray (10YR 7/1) streaks from weathered and partially weathered limestone and quartzite fragments; 15 percent gravel and 2 percent cobbles

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Based upon the above information, all three of the sites occur on till derived uplands and share other similarities with regard to soil texture and horizon sequencing. Given the upland contexts of these three sites, it would appear that the greatest probability for finding prehistoric remains would be in the uppermost soil, with the probability of encountering artifacts falling of in the weakly developed B horizons. Excavation should proceed a minimum of 20 cm or in the case of the excavation units at least two 10 cm levels into culturally sterile subsoil unless otherwise noted.

Prehistoric Context

While much has been discovered and postulated about the western half of Dutchess County along the bluffs of the Hudson River, relatively little is known about the prehistory of the eastern part of the county. A check of site files of the Office of Parks, Recreation, and Historic Preservation and the New York State Museum indicated that two prehistoric sites are known within one mile of the project area. Both of these sites, NYSM 3135 and NYSM 8206, were listed by Arthur Parker in the 1920s. Each site remains unnamed with no cultural affiliation listed, although each refers to the presence of burials. Of the three listed previous surveys in the area, only one identified any prehistoric sites: two small lithic scatters identified as part of the Rivercourse at Troutbeck located over a mile to the south (Walwer and Walwer 2000). Many of the towns and creeks in the vicinity have Algonquin names such as Webutuck, which is defined by Ruttenber as meaning *place of the narrow pass* or *strait* (Ruttenber 1906:42). Beauchamp suggests that this definition is erroneous and gives the name as a form of Wampatuck, meaning *a goose* (Beauchamp 1907:58-59). Other common Algonquian names in the Amenia vicinity include Wassaic, meaning *a rocky place* (Beauchamp 1907:58), and Taconic, meaning *big mountains* (Ruttenber 1906:47).

Glaciers covered the eastern ridges of the Hudson Valley during the Wisconsin glaciation, which ended about 12,000 years ago. People may have begun occupying the area soon after the glaciers retreated. These Paleoindians were organized in highly mobile bands adapted to the tundra and boreal forest environments present at the end of the Pleistocene. While archaeologists have traditionally emphasized the hunting of large megafauna such as mammoth and bison, there is increasing evidence that Paleoindians exploited a diverse array of small game and wild plants. While Ritchie (1994: 4-5) fails to note any fluted points in Dutchess County, several fluted points indicative of Paleoindian occupation occur nearby on the western banks of the Hudson River in Ulster County. In addition to large fluted points commonly thought to be used in hunting large game, unfluted lanceolate points became more common in the latter part of the Paleoindian Period.

Around 7000 B.C., stands of Spruce and Fir rapidly gave way to a denser forest of Pine and deciduous trees, with Oak becoming a dominant species (Salwen 1975). This drier climate supported less game and provided fewer plant resources for human populations. As a result, few sites dating from this Early and Middle Archaic period have been discovered in the region (Funk 1991). Those few sites that have been found dating to this period are often found near water sources and suggest that people lived in small mobile bands and subsisted on gathered and hunted wild resources.

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Beginning around 6500 B.C., the climate became increasingly wetter, resulting in an environment similar to ours today (Salwen 1975). The large number of sites from this period suggests that Late Archaic populations increased significantly at this time. While people continued to live in small, mobile bands, there was an increasing trend toward sedentism. Subsistence practices were highly diverse and included a wide variety of aquatic and terrestrial resources. Late Archaic sites range from small upland camps to large villages near the confluences of major streams.

The Transitional Period (ca. 1300-1000 B.C.) is characterized by the use of steatite vessels and smoking pipes, which gradually give way to large, thick pottery vessels. This period is very much a continuation of Late Archaic life ways, with increasing sedentism and reliance on plant resources. The Woodland Period begins about 1000 B.C. and is marked by the introduction of pottery and the development of an elaborate trade and ceremonial complex. It is during this time that people gradually began to cultivate plants.

The Late Woodland Period began around A.D. 1000 and is differentiated from its predecessor primarily on the basis of projectile point types, pottery styles and diet (Funk 1976). Hoe cultivation also appears during Late Woodland times. Diet was largely made up of cultigens (corn, beans and squash) and game supplemented by fishing and the gathering of aquatic and terrestrial resources. Large, permanent village sites occur along major rivers as well as defensive locations (Ritchie 1994). Small, ephemeral sites also occur, probably used as camps for resource extraction. These smaller sites are located in a wide variety of geographic contexts, ranging from wetlands and backwater drainages to forested uplands. The Late Woodland period in the lower reaches of the Hudson River and coastal New York includes the Windsor and East River Traditions. These cultures are defined on the basis of ceramic typologies (Smith 1950). The Windsor Tradition is restricted to areas around coastal New York. East River culture is divided into an earlier Bowman's Brook Phase and a later Clason's Point Phase (Funk 1976:173183; Ritchie 1994:270). After about A.D. 1400, two distinct cultures emerge in this stretch of the Hudson River Valley: Proto-Esopus people along the western banks of the river and ancestral Wappinger populations located east of the Hudson in Dutchess and Westchester counties (Ritchie and Funk 1973).

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Field Methodology

The first step in the Phase II study was to revisit each of the sites in order to examine any changes that may have taken place following the Phase I survey. In some cases, stakes and rebar representing site datums had been plowed over, requiring that they be relocated and reset. After resetting, datums were recorded using a hand held GPS unit and a 5 m grid was established over the entire site area. This site grid was used in the placement of STPs and excavation units, and tied all measurements to a central point. Once the grid was established, a number of field excavation techniques were employed, each of which are discussed below.

Surface Walkover and Landscape Inventory

After the datum and grid were established, each site was then subjected to a detailed surface inspection. All three of the sites had been plowed the previous season, which provided varying amounts of surface visibility. Locus 1 had regrown a thick cover of dry hay grasses, which provided little surface visibility (Photos 1-6). Locus 2 had grown over with tall weeds in the east, which still provided a fair amount of surface visibility (Photos 7-12). Locus 3 had been planted in corn the previous year, with relatively good ground visibility occurring between the corn stubble (Photos 13-18). With regard to the surface inspection, the walkover consisted of a tight interval, 5 ft (1.5 m), inspection to look for artifacts and evidence of charcoal or cultural features. If artifacts or features were identified, they were flagged and a 5 m diameter area was visually scoured to look for additional artifacts. After the surface walkover was completed, the location of each of the artifacts was mapped in relation to the archaeological site datum.

Shovel Testing

Shovel test pits (STPs) were used to test for buried cultural deposits over a wide area. STPs are small (about 40 cm or 16 inch diameter) holes excavated with a shovel; sediments are screened through 1/4 inch mesh to look for artifacts. STPs are excavated in natural soil layers, as much as possible, and are dug through the topsoil to at least 20 cm (~ 8 inches) into culturally sterile subsoil. STPs were tied into the archaeological site grid using a compass and tape measure. When an STP was placed in an area that was obviously disturbed, an attempt was made to move the shovel test beyond the area of disturbance, to a maximum distance of 3 meters from its original location.

A list of the STPs and their soil profiles is provided in Appendix C. Excavation of STPs was halted 20 cm (8 in.) into culturally sterile subsoil unless noted in the STP records (Appendix C). Appendix E contains the artifact catalog. All prehistoric artifacts were retained for analysis and curation at an appropriate curation facility.

Unit Excavations

One meter square (1 x 1 m) excavation units were placed in areas of high artifact concentrations or where the potential for buried cultural features was inferred. In some areas, these units were excavated beside one another, although each was still excavated and

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screened separately allowing for tighter data control. Units were excavated by hand using trowels and shovels as appropriate. A line level was used to measure elevational depths within the units. Units were excavated in 10 cm levels within natural soil layers to allow for tight vertical control in stratigraphic contexts. All soil was screened through ¼ inch hardware cloth to look for artifacts. All artifacts collected from the screens were bagged according to provenience and sent to our laboratory for further study. Upon completion of a unit, a wall profile was drawn showing soil stratigraphy and cultural features. Walls were chosen by the excavators on the basis of clarity and ability to show complexities within the soil profile. Unit wall profiles were also cleaned and photographed prior to backfilling. Plan views of the unit floors were undertaken whenever a point of interest was noted. Summaries of the unit excavations are provided in Appendix D, and artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

The following sections provide the results of the Phase II investigations for each of these prehistoric archaeological sites.

Locus 1

This site was identified during the surface inspection of a plowed field in the eastern part of the project area (Figure 3). A nearly complete Brewerton side notched projectile point was recovered near the central part of the project area (Photo 31). A closer inspection of the area identified a chert core fragment approximately 23.0 m to the southeast (Photo 31). A total of 19 STPs were excavated directly over the two surface finds, as well as in 1 and 3 m intervals and in 5 m intervals connecting the two finds. No other prehistoric material was recovered from any of these STPs.

Some days later during the subsequent subsurface testing of the unplowed areas, a single contracting stemmed projectile point was recovered from the upper level of STP C-23 (Photo 108). Eight additional STPs were excavated in 1 and 3 m intervals in the four cardinal directions, but no additional prehistoric artifacts were recovered. Because of the proximity of STP C-23 to SF-1 and SF-2, the find was included as part of Locus 1 and the boundary was redrawn accordingly.

Phase II Results

Field Walkover-The first part of the Phase II study involved walking the site in tight 5 ft (1.5 m) intervals to look for additional artifacts and evidence of charcoal or cultural features. While the area had been plowed the previous year, Locus 3 had revegetated with a dense cover of dry grasses, providing little surface visibility (Photos 1-6). Despite our best efforts, no prehistoric artifacts were recovered during the surface inspection. Additionally, no charcoal was noted on the surface during this second field walkover and no prehistoric features were identified.

Shovel Testing-The next phase of the field investigations involved the placement of a total of eighty-one (81) 40 cm diameter shovel test pits (STPs) in 5 m intervals over the entire site as shown in Figure 3. One STP (N15E90) was not excavated as a previous Phase I STP fell at

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that location. STPs ranged in depth between 43 and 70 cm (16.9 and 27.5 in) below the ground surface, and averaged 59.2 cm (23.3 in). The contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 80 STPs excavated as part of the close interval testing, only one (0.12 percent), recovered any prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. A copy of the shovel test pit (STP) record is included in Appendix C, while the artifact catalog for Locus 1 is included in Appendix E.

Unit Excavations-The final phase of the Phase II field methodology involved the excavation of four 1 x 1 m excavation units (Figure 3). Because of the relative lack of additional artifact recovery from the field walkover and shovel testing, units were placed on the basis of the findings of the in initial Phase IA/IB study, with two units (Units 9 and 10) placed adjacent to STP C-23, where the Lamoka Point was recovered. The two other units (Units 11 and 12) were placed in the eastern end of the site where a fragment of a Brewerton side notched projectile point and a chert core fragment were recovered during the Phase I surface inspection. Findings from each of these units are described individually below. Summaries of unit excavations are provided in Appendix D, and artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 9 and 10

The southwest corner of Unit 9 was placed in the western end of the site, exactly one meter north of where a Lamoka projectile point was recovered from STP C-23 during the initial Phase IA/IB survey (Figure 3). Unit 10 was placed directly north of Unit 9 in order to expose a broader area and look for additional artifacts and evidence of cultural features. First, both of the units were leveled at 18 cm below the ground surface. The upper soul consisted of 10YR 3/3 dark brown silty loam. This same soil continued through Levels 2 and 3, with a transition to subsoil noted at approximately 38 cm below the datum, which was located midway along the east wall between the two units. No prehistoric artifacts were recovered from Level 1, although a fragment of quartz shatter was recovered from Level 2 of Unit 9. Level of 3 of Unit 10 was more productive, recovering a complete quartzite flake as well as a quartz flake fragment and a fragment of quartz shatter. Level 4 of Units 9 and 10 consisted of a transition layer, with varying amounts of l0YR 5/2 grayish brown loamy clay that ultimately covered the entire floor of the units at the base of the level, 47 cm below datum. This same grayish brown clay loam continued through Levels 5 and 6 to a depth of 68 cm below datum in Unit 9 and 74 cm below datum in Unit 10. No prehistoric artifacts or evidence of any cultural features were noted in this soil layer. Because of the lack of prehistoric artifacts in the previous three levels, excavation in Units 9 and 10 was halted at 68 cm below datum. An STP was excavated in the center of the excavated area halfway between Units 9 and 10. This STP was excavated to a depth of 139 cm below datum. No artifacts or evidence of features was encountered in the STP. After the STP was excavated, the east wall of Units 9 and 10 were profiled and photographed prior to backfilling (Figure 10, Photo 29).

Units 11 and 12

These two units were placed on the eastern side of the site near where a Brewerton side notch point and a chert core fragment were recovered during the initial Phase IB survey (Figure 3). The southeast corner of Unit 11 was located exactly one meter north of STP N10/E100. Unit 12 was placed directly north of Unit 11 to expose a broader area in which to look for cultural features and artifacts. Because this area contained dense sod while sloped sharply to the east,

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our first step was to remove the sod and level off the Unit at a depth of 28 cm below the datum, which was located in the east wall midway between the two units. The upper soil layer was similar to that found in Units 9 and 10, consisting of 10YR 3/3 dark brown silty loam. Excavations in this area were more promising, with the tip of a quartzite point recovered from Level 1 of Unit 12. This same dark brown soil continued through Levels 2 and 3, with a flake fragment recovered from Level 2 of Unit 11 and two fragments of quartz shatter, a small medial section of a biface fragment, and a modern brass key all recovered from Level 3 of that same unit. No additional artifacts were noted. At a depth of 58 cm below the ground surface, the soil gradually became lighter, and then abruptly changed to a 10YR 4/4 dark yellowish brown silty loam at a depth of 63 cm in Unit 11 and 61 cm Unit 12. During the small 3 cm transition into the subsoil in Level 5 of Unit 12, a possible quartzite point tip was recovered. While this tip was somewhat questionable, it was decided to treat the find as cultural until the find could be washed and better examined under magnification in the lab. Consequently, we extended these two units to a deeper depth to examine the potential for more deeply buried cultural deposits. This same yellowish brown soil continued to a depth of 80 cm below datum. No additional artifacts were recovered from any of these deeper levels, while, following analysis in the laboratory; the possible point tip recovered from Level 5 of Unit 12 was determined to be non-cultural. After completing these units, an STP was excavated in the bottom of Level 8 midway between the units to a depth of 155 cm. The STP proved useful, as the soil changed from the dark yellowish brown subsoil encountered in the upper levels to a 10YR 4/3 clay silt that was encountered at a depth of 106 cm. At 128 cm, the soil changed again to a 10YR 3/3 gravelly loam, after which excavation of the STP was stopped due to the presence of massive gravels. No artifacts were recovered from any of these subsequent soil layers. After completing the STP, the east wall of Units 11 and 12 were drawn and photographed (Figure 11; Photo 30).

Discussion- Overall, the excavation of both the shovel test pits and the excavation units largely failed to identify substantial quantities of artifacts or any evidence of cultural features. Out of the excavation of four 1 x 1 m square units and 80 STPs, only 11 prehistoric artifacts were recovered, consisting primarily of quartz shatter (n=6; 54.5%). The presence of two flake fragments and a complete flake along with the shatter all suggest lithic reduction activities taking place, although no temporally diagnostic material was recovered as part of the Phase II. The presence of two biface tips recovered from the site would suggest that either final stage lithic reduction was taking place or that these bifaces represent tools that were utilized at the site. The presence of utilization (feathering) on one of the bifaces (CAT#16) suggests the latter hypothesis.

Because of the lack of temporally diagnostic artifacts encountered during the Phase II site examinations, artifacts recovered from the Phase I study were used to help determine when the site was occupied. The shale projectile point recovered from STP C-23 appears to be a Lamoka Point, which dates to around 5,500 B.C. to 4,500 years ago. Brewerton Side notched points are somewhat more recent and are a chief characteristic of the Laurentian associated Brewerton Phase. Brewerton points are thought to date to sometime in the Late Archaic Period between 5,000 and 3,750 years ago (Ritchie 1969: 91-92). While information is sparse, it appears that the site might have been occupied sometime during Middle and Late Archaic times.

While much can be speculated about past activities at the site, it is unclear whether additional excavations could provide additional information not already known about the site and it's

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occupants. The recovery of only 11 prehistoric artifacts after intensive investigations with units placed near two separate concentrations suggests that site is of a relatively low artifact density, while the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered through further examination of this site. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2

Locus 2 was initially identified as a single quartzite flake fragment located near the northern end of the southern plowed field during the initial Phase IA/B survey. An intensive survey of the area also identified the tip of a quartzite projectile point 13.2 m to the west (SF-4) and a chert flake fragment approximately 45.0 m to the south (SF-5; Photo 32). A total of 27 STPs were excavated directly over each of these 3 surface finds as well as at 1 and 3 m intervals in each of the four cardinal directions. In addition, 12 STPs were excavated in 5 m intervals between SF-3 and SF-4 and SF-5 as shown in Figure 4. Of these 39 STPs, two recovered prehistoric cultural material within the plowed field: a fragment of a chert core recovered from STP SF-4/3mS and a quartzite flake fragment recovered from STP SF-4/ 5mS. No additional prehistoric artifacts were recovered during the Phase I study and no evidence of hearths or other features was noted. Because of spring flooding, we chose to begin our Phase II investigations of the Depot Hill project at Locus 2 since it appeared to be the driest.

Phase II Results

Field Walkover- Our first step involved re-walking the site in tight 5 ft (1.5 m) intervals to look for charcoal or prehistoric artifacts. This area had been plowed the previous spring during the Phase IA/IB survey (Moyer and Moyer 2007). Locus 2 had grown over with tall weeds in the east, which still provided a fair amount of surface visibility (Photos 7-12). One prehistoric artifact was recovered during the surface inspection: a quartz scraper found 271 cm east of STP S5E55 (Photo 32). No evidence of charcoal or features was identified during this walkover, although an iron horseshoe was located 201 m west of STP S5/E10.

Shovel Testing- The next component of the field investigations involved excavating a total of one-hundred one (101) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site as shown in Figure 4. STPs ranged in depth between 30-73 cm (11.8-28.7 in) below the ground surface, and averaged 56.3 cm (22.1 in). In accordance with the methods outlined in the methodology section, the contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake was recovered from STP N30E20, while a fragment of quartz shatter was recovered from STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. Copies of the shovel test pit (STP) records are included in Appendix C. The artifact catalog for Locus 2 is provided in Appendix D.

Unit Excavations- After the shovel testing was complete, a total of six 1 x 1 m square excavation units were excavated within the site boundary. Because of the cluster of

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prehistoric artifacts noted in the eastern end of the site during the Phase I survey and Phase II walkover, it was decided to excavate Units 1-6 as a 2 x 3 m cluster as shown in the detail of Figure 4. While each of these units was excavated adjacent to one another, they retained their identity allowing for good horizontal control. It was thought that opening up a wide area might allow for the identification of features, which could then be followed in adjacent areas. In order to examine the stratigraphic profile of the center of the cluster, the outside units (Units 1-2 and 5-6) were excavated first and then the central units (3 and 4) were excavated. The southwest corner of Unit 1 was located at grid point N1.0/E2.0. Summaries of unit excavations are provided in Appendix D, while a description of all of the artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 1-6

As stated above, these units were placed in an area of high artifact density in the eastern part of the site, with the southwest corner of Unit 1 being located at grid point N1.0/E2.0 (Figure 4). The area was relatively level, with the site positioned at the base of a moderate slope directly to the east (Photos 7-12). Excavation first progressed with Units 1 and 2, which encountered plowed topsoil consisting of 10YR 3/3 dark brown silty loam. No artifacts were recovered from Level 1 although a quartz flake fragment was recovered from Level 2 of Unit 1. Two fragments of quartz shatter were recovered from Level 2 of Unit 2. While no further artifacts were recovered from Unit 1, Unit 2 continued to recover a small density of primarily quartz material, including a flake fragment from Level 3 and a flake and three fragments of shatter recovered from Levels 5 and 6. This upper topsoil was not notably thick, with a transition to subsoil occurring at a depth of 43 cm below the ground surface. Subsoil consisted of the same 10YR 4/4 dark yellowish brown silty loam encountered in Locus 1. The soil continued to remain mottled to a depth of 47 cm, with a small pocket of 7.5 YR 4/3 silty loam occurring in Unit 1. Iron oxide staining was also faintly apparent in Unit 2. At a depth of approximately 47 cm, the soil changed to encompass solely the yellowish gravelly subsoil. A quartz flake fragment and three fragments of quartz shatter were recovered from Levels 5 and 6 of Unit 2 in the beginning of this subsoil. No prehistoric artifacts were recovered below Level 6. Excavation progressed to a depth of 62 cm in Unit 1 and 72 cm in Unit 2. After completion of the units, the north and south wall were drawn and profiled (Figure 6, Photos 19 and 20).

Units 5 and 6 were excavated concurrently with Units 1 and 2, although the soil stratigraphy appeared less intact. Unit 5 encountered a mottled soil consisting of mixed 10YR 3/3 dark brown silty loam with the 10YR 4/4 gravelly loam subsoil, while the upper 20 cm of topsoil covered the beginning of the soil transition in Unit 6. The transition continued to a depth of between 40 and 42 cm before changing to a yellowish gravel. This heavily mottled soil may reflect an isolated area of deeper plowing. A complete quartz flake was recovered from level 1 of Unit 5, with a quartz projectile point tip recovered from Level 2 and two flake fragments and four fragments of quartz shatter were recovered from Level 3. The only artifact recovered from the upper soil layer in Unit 6 was a series of fused brass gears from a clock or other mechanical device that was located in Level 3 (20-30 cmbd). Quartz artifacts continued to be recovered from the upper part of the subsoil, including a biface fragment recovered from Level 4 of Unit 5 and a core fragment recovered from Level 5. A complete quartz flake was recovered from Level 5 of Unit 6 at a depth of approximately 40-50 cm. Because of the relatively deep cultural material, excavation in these units extended to a depth of 82 cm in Unit 5 and 72 cm in Unit 6 to ensure that no more deeply buried deposits might exist. After

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completing these two units, the north and south walls were photographed and drawn (Figure 8, Photos 21 and 22).

After the other four units were excavated, we turned our attention to Units 3 and 4. Soils tended to follow the same soil progression as in the adjacent units. Unit 3 encountered the beginning of the transition to subsoil at a depth of 37 cm, while Unit 4 contained more mottled topsoil, with subsoil occurring from the surface to a depth of 42 cm. Artifacts were most common in level 1, with a flake fragment and a fragment of quartz shatter recovered from Unit 3 and a biface fragment and a complete flake recovered from Unit 4. A second biface fragment was recovered from Level 3 of Unit 3 near the bottom of the transition. No artifacts were recovered from the subsoil, and the excavation stopped at depths of 65 cm in Unit 3 and 62 cm in Unit 4. After completion of the entire block, an STP was excavated in the center of the block of units, straddling Units 3 and 4. This STP was excavated to a depth of 107 cm below the ground surface before encountering a lens of clay silt of similar color, which extended to a depth of 119 cm. A layer of 10YR 3/4 dark yellowish brown clay sand was found underlying this clay silt, with the STP stopped by water at a depth of 143 cm. After completing the STP, the east and west walls of the block were profiled and photographed (Figure 7; Photos 23-25).

Discussion- Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered including a projectile point tip, none of the artifacts appear temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) all suggests that the site would be unlikely to encounter prehistoric fire related features which might yield macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it does seem plausible that fire related features might have once occurred in the vicinity, with little evidence remaining at present. Due to the light density of artifacts at the site and the lack of temporally diagnostic artifacts or prehistoric cultural features, Locus 2 does not appear likely to address important questions about seasonality and temporal sequencing, and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3

Locus 3 was initially identified in STP O-2, where a single chert flake was recovered from the upper level (Figure 5). Eight additional STPs were excavated in each of the four cardinal directions at one and three meter intervals. A single fragment of fire-cracked rock (FCR) was recovered from STP O-2/3mS. No other prehistoric artifacts were recovered from the other STPs. Two additional STPs were excavated to the south of STP O-2/3mS, but no additional artifacts were recovered. No evidence of charcoal or cultural features was noted during the Phase IA/IB investigations (Moyer and Moyer 2007).

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Field Walkover- We began our investigations by walking a 100 ft (15 m) area around the find in tight 5 ft (1.5 m) intervals to look for additional artifacts and evidence of charcoal or cultural features. This area had been tall grass at the time of the Phase I study but was subsequently plowed and planted in corn, with corn stubble and fallen stalks providing relatively good surface visibility. No prehistoric artifacts were recovered during this surface inspection and no cultural features were identified.

Shovel Testing- After the walkover, the next component of the field investigations involved excavating a total of forty-eight (48) 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a 100 x 100 ft (15 x 15 m) grid over the center of the site as shown in Figure 5. The center of the grid (STP N15/E15) was not excavated as it was previously excavated as part of the Phase I survey. STPs ranged in depth between 41-72 cm (16.1-28.3 in) below the ground surface, and averaged 56.1 cm (22.0 in). As outlined in the methodology section, the contents of each STP were carefully screened through ¼ inch hardware cloth to look for artifacts. Of the 48 STPs excavated, none recovered any prehistoric cultural material. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. Copies of the shovel test pit (STP) records are included in Appendix C. The artifact catalog for Locus 3 is included in Appendix D.

Unit Excavations- The final phase of the Phase II field methodology at Locus 3 involved the excavation of two 1 x 1 m excavation units. Because no artifacts were recovered during the walkover or shovel testing, units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. The presence of fire-cracked rock in the immediate vicinity suggested that prehistoric hearths or fire pits might occur nearby. The southwest corner of Unit 7 was placed at grid point N13/W13, southwest of the initial prehistoric find. Unit 8 was placed directly east of Unit 7 as shown in Figure 5. Summaries of unit excavations are provided in Appendix D, while a description of all of the artifacts recovered from the units are included in the Artifact Catalog (Appendix E).

Units 7 and 8

Units 7 and 8 were excavated concurrently, although each unit retained its individuality in terms of screening and data recordation. The upper soil encountered in these units consisted of the same 10YR 3/3 dark brown silty loam encountered at the other loci. The transition to subsoil was relatively deep, occurring at a depth of 36 cm in both units. All artifacts were recovered from this upper topsoil, and include a flake fragment and two fragments of quartz shatter from Unit 7, and a flake fragment, four fragments of quartz shatter and a fragment of fire-cracked rock recovered from Unit 8. Subsoil consisted of the same gravelly 10YR 4/4 dark yellowish brown silty loam encountered in the other units. Excavation stopped at a depth of 67 cm in Unit 7 and 66 cm in Unit 8. An STP was then excavated in center of the 1 x 2 m block. This STP was excavated to a depth of 84 cm below the ground surface before encountering a second subsoil consisting of 10YR 4/4 dark yellowish brown silty loam mottled with 10YR 5/4 yellowish brown silty sand with large rocks and cobbles. This rocky soil prevented deeper testing at a depth of 136 cm below the ground surface. After completion of the STP, the north and south walls of Units 7 and 8 were photographed and drawn in profile (Figure 5; Photos 27 and 28).

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Discussion- The function of Locus 3 remains unknown, although the presence of FCR during both the Phase I and Phase II surveys does suggest that prehistoric fire-related features such as hearths and roasting pits may have once occurred nearby. However, the lack of charcoal or dark staining suggests that any features that may have occurred in the vicinity have been destroyed by plowing activities and runoff from the adjacent hillside. A total of 9 prehistoric artifacts were recovered during the Phase II study of Locus 3: all from the Unit excavations. The assemblage consists of six fragments of quartz shatter, two quartzite flake fragments, and a fragment of quartzite fire cracked rock.

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort conducted as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers and in the STP grid suggests that this find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I artifact location. The lack of charcoal or staining in any of the excavations suggests that intact hearths or fire related features are not likely to be encountered, and the lack of diagnostic material from the Units suggests that additional excavation in the immediate vicinity would likely produce similar results to these Phase II investigations. For these reasons, the site does not appear able to address the kinds of important questions necessary for inclusion in the National Register of Historic Places. No further archaeological work is recommended.

Interpretations and Discussion

While none of the sites appear to have sufficient cultural features or artifact density to adequately address many of the questions that archaeologists have about the prehistory of the southern Taconics, there are several interesting things that may be inferred from the data recovered as part of the Phase II study.

A total of 54 prehistoric artifacts were recovered from the three sites. This assemblage is relatively small considering the fact that 12 units and 229 STPs were excavated as part of this study. Frequency and percentage of artifact types from each of these sites is provided below in Table 3.

Table 3.
Frequency and percentage of prehistoric artifacts by locus

Site	Shatter	Flake Frags.	Whole Flakes	Scraper	Biface Frags.	Cores	FCR	Total
Locus 1	6 (11.1%)	2 (3.70%)	1 (1.85%)	0 (0.00%)	2 (3.70%)	0 (0.00%)	0 (0.00%)	**11 (20.3%)**
Locus 2	12 (22.2%)	9 (16.6%)	5 (9.25%)	1 (1.85%)	5 (9.25%)	2 (3.70%)	0 (0.00%)	**34 (62.9%)**
Locus 3	6 (11.1%)	2 (3.70%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (1.85%)	**9 (16.7%)**
Total	**24 (44.4%)**	**13 (24.0%)**	**6 (11.1%)**	**1 (1.85%)**	**7 (12.9%)**	**2 (3.70%)**	**1 (1.85%)**	**54 (100.0%)**

As shown in the above table, quartz and quartzite shatter made up the most common artifact type encountered at each of the three sites. Flake fragments make up the second most common artifact type, followed by biface fragments and complete flakes. The fact that biface

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fragments were more common than complete flakes may represent breakage or plow damage, or the high number of biface tips and medial sections may represent breakage as the result of latter stage lithic reduction or retouching. Only two cores were recovered from the site, with both of these finds being from Locus 2. Each of these cores appears fragmentary and may have been expended and discarded rather than lost or cached for later reuse.

With regard to the whole flakes recovered, dimensions ranged from 6.1 to 14.4 mm in length and 10.5 to 16.8 mm in width (See Table 4). Flake thickness ranged between 2.2 and 4.5 mm. Mean flake size was 11.14 x 12.18 x 3.26 mm, which suggests that middle and latter stage lithic reduction was taking place at the sites. Two of the five flakes showed evidence of cortex over more than 50% of the dorsal surface, suggesting that primary lithic reduction may also have taken place in the vicinity.

Table 4.
Complete flakes recovered as part of the Phase II investigations

Cat. #	Provenience	Material	Wt. (g)	Dimensions (mm)
6	Locus 2 N30 E20 LVL 1	Quartz	0.3	10.7x10.3x3.2
10	Locus 1 Unit 10 L3	Quartzite	1.3	15.4x16.8x4.0
29	Locus 2 Unit 4 L1 0-15	Quartz	0.2	9.1x8.7x2.2
30	Locus 2 Unit 5 L1	Quartz	1.2	14.4x14.6x4.5
37	Locus 2Unit 6 L5 40-52	Quartz	<0.1	6.1x10.5x2.4

Temporality

With regard to temporality, two diagnostic projectile points were recovered during our investigations, both of which were recovered from Locus 1 during the initial Phase I survey. A Lamoka point, which dates to around 7,500 to 4,500 years ago, was recovered from the eastern end of the site, and a fragment of a Brewerton side notched pint was recovered from the western side. Brewerton Side notched points are somewhat more recent and are a chief characteristic of the Laurentian associated Brewerton Phase. Brewerton points are thought to date to sometime in the Late Archaic Period between 5,000 and 3,750 years ago (Ritchie 1969: 91-92).

While information is sparse, it appears that the site might have been occupied sometime during Middle and Late Archaic times. However, an isolated Levanna projectile point was recovered on the opposite (north) side of Depot Hill Road in STP Z-4 during the initial Phase IA/IB survey (Moyer and Moyer 2007). Levanna points are relatively recent, dating to latter part of the Late Woodland Period (between 1,500-350 years ago). While the find occurred some distance to the south of the three loci, it may be that these sites were utilized for far longer than suggested by the limited evidence recovered from these three sites.

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Site Function

Site function can be one of the most difficult things to determine about a prehistoric site, especially when presented with such a limited amount of evidence as was recovered as part of the Phase II investigations. Clearly, lithic reduction was a common activity at all of these sites, with quartz shatter, flakes, flake fragments, and cores making up between 81.8 and 88.8 percent of the total assemblages from each of these sites. The presence of a scraper and seven biface fragments all suggest other activities taking place at the sites, likely encompassing an array of hunting and other resource procurement activities. The scraper appeared heavily worn, and may have been discarded after its utility was gone.

While no hearths or fire-related prehistoric features were encountered, a single fragment of fire-cracked rock (FCR) recovered from Locus 3 may represent cooking activities or possibly drying or roasting activities. Roasting was likely not a major activity at the site, since large roasting features usually produce high densities of FCR and are often located in greater proximity to rivers and other water sources.

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Part III: Summary and Recommendations

Phase II archaeological site examinations have been conducted for three prehistoric sites associated with the proposed Depot Hill Farm Equestrian Community Project, located east of Old Route 22/County Route 81, along both sides of Depot Hill Road, in the Town of Amenia, Dutchess County, New York. The project involves the development of approximately 60.7 acres for residential use. Residences will consist of house with basements built as condominiums with necessary utilities installed as part of the construction process.

These three prehistoric sites, dubbed Locus 1, Locus 2 and Locus 3, were initially identified as part of a Phase IA/IB cultural resources survey conducted for the above project (Moyer and Moyer 2007). Because each of the sites consisted of two or more prehistoric artifacts recovered in close proximity to one another, it was thought that these sites might be able to yield additional artifacts or features that could be used to address important questions about prehistoric life in Dutchess County. For these reasons, Phase II archaeological site examinations were conducted at each of these three sites. The field methods employed at each of the sites consisted of a series of increasingly intensive techniques involving surface walkovers, shovel testing, and the excavation of 1 x 1 m square excavation units.

Locus 1 is situated along a plowed field that had re-grown with dense hay grasses. No prehistoric artifacts were recovered as part of the surface inspection. The next phase of the field investigations involved the placement of a total of 81 40 cm diameter shovel test pits (STPs) in 5 m intervals over the entire site boundary as shown in Figure 3. One STP (N15E90) was not excavated because a previous Phase I STP fell at that location. Of these 80 STPs excavated as part of the close interval testing, only one (0.12 percent) recovered any prehistoric artifacts: a fragment of quartz shatter recovered from the upper level of STP N0/E50. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. After the shovel testing a total of four 1 x 1 m excavation units were placed in two areas with high artifact concentrations. A total of 10 prehistoric artifacts were recovered as part of the unit excavations including 5 fragments of quartz shatter, a complete flake, two flake fragments and two biface fragments. No evidence of charcoal or cultural features was noted during the Phase II study.

The recovery of only 11 prehistoric artifacts after such intensive investigations with units placed near two separate concentrations suggests that site is of a relatively low artifact density, and the lack of charcoal or evidence of fire related features suggests that little information about seasonality or radiocarbon samples would be encountered. For these reasons, the site does not appear eligible for inclusion in the National Register of Historic Places and no data recovery work appears warranted.

Locus 2 was situated in a plowed field at the base of a steep slope. One prehistoric artifact was recovered during the surface inspection: a quartz scraper found on the surface 271 cm east of STP S5E55. No evidence of charcoal or features was identified during the walkover. The next phase of investigation at Locus 2 involved the excavation of 101 40 cm diameter shovel test pits (STPs) in 5 m intervals to form a grid over the site boundary. Of the 101 STPs excavated, five (4.95 percent) recovered prehistoric artifacts. A complete quartz flake was recovered from STP N30E20, while a fragment of quartz shatter was recovered from

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STP N10/E35. Additionally, three flake fragments were recovered from STPs N5/E10, N25/E15 and N25/W5, respectively. No evidence of charcoal was noted and no soil anomalies were encountered in any of the STPs. The final phase of the investigations at the site involved the excavation of six 1 x 1 m square excavation units in a tight cluster near an artifact concentration at the eastern end of the site. In total, 34 prehistoric artifacts were recovered during the Phase II investigations, including 12 fragments of quartz shatter, 9 flake fragments, 5 complete flakes, an expended scraper, and 5 non-temporally diagnostic biface fragments.

Excavations at Locus 2 provided the highest artifact density with regard to both the surface inspection and the shovel testing, although recovery was still relatively meager. A total of 34 artifacts were recovered as part of the Phase II study which encompassed six 1 x 1 m square excavation units and 101 STPs. While five bifaces were recovered including a projectile point tip, none of the artifacts appears temporally diagnostic. The lack of charcoal, dark staining, or fire cracked rock (FCR) all suggest that further investigations at the site would be unlikely to encounter prehistoric fire related features that might yield macrobotanical remains or radiocarbon samples. Given the fact that the area has been subjected to plowing and erosion from the adjacent hill slope to the west, it does seem plausible that fire related features might once have occurred in the vicinity, with little evidence remaining. Because of the light density of artifacts at the site and the lack of temporally diagnostic artifacts and prehistoric cultural features, Locus 2 does not appear likely to address important questions about seasonality and temporal sequencing and would likely not be considered eligible for inclusion on the National Register of Historic Places.

Locus 3 is located in a field of harvested corn to the west of Loci 1 and 2. No prehistoric artifacts or cultural features were identified from either the surface inspection or the excavation of 48 STPs in 5 m intervals to form a grid over the initial find spot. Because no artifacts were recovered during the walkover and shovel testing, two 1 x 1 m square excavation units were placed adjacent to the Phase I findings in hopes of identifying additional artifacts. A total of 9 prehistoric artifacts were recovered from the excavation of the two units, including six fragments of quartz shatter, two flake fragments, and a single fragment of fire cracked rock (FCR).

Overall, the artifact assemblage from Locus 3 is somewhat sparse given the level of effort expended as part of the Phase II site examinations. The lack of additional prehistoric artifacts in any of the walkovers or in the STP grid suggests that this find is relatively isolated, with no artifacts occurring within one hundred feet (15 m) of the initial Phase I find spot. The lack of charcoal or staining in any of these excavations suggests that intact hearths or fire related features would likely not be encountered, and the lack of diagnostic material from the Units suggests that additional excavation in the immediate vicinity would likely produce similar results. For these reasons, the site does not appear able to address the kinds of important questions necessary for inclusion in the National Register of Historic Places.

Based upon the above information, it would appear that none of the three sites contained sufficient artifact diversity of density to address important questions about prehistoric lifeways in the lower Taconic region. Consequently we suggest that no archaeological data recovery is warranted at any of these three prehistoric sites. These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

SEE NOTE ON PAGE 1

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Appendix A.

Figures

SEE NOTE ON PAGE 1

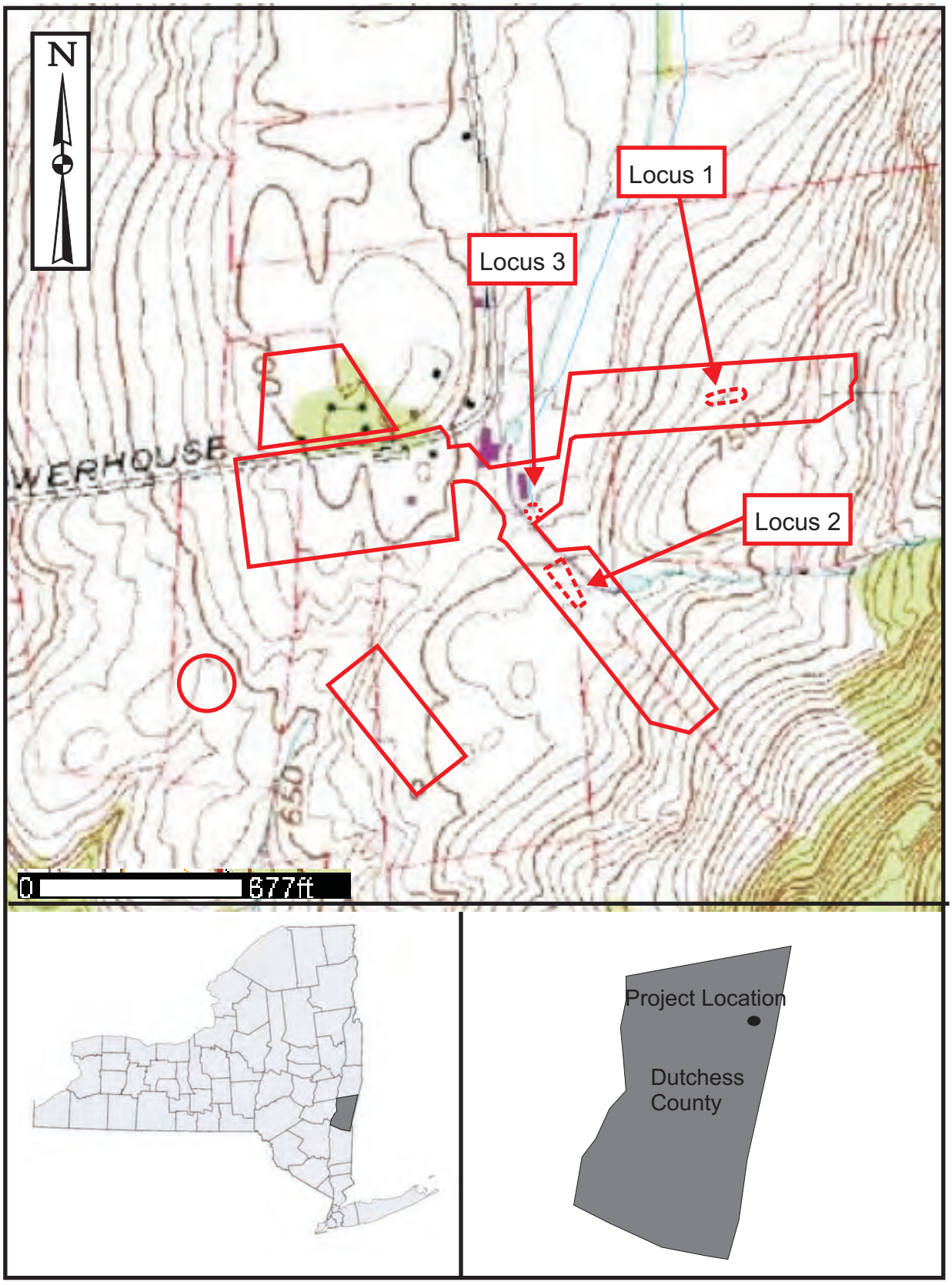


Figure 1. Map showing the location of the project area on Amenia USGS 7.5 minute topographic map.

SEE NOTE ON PAGE 1

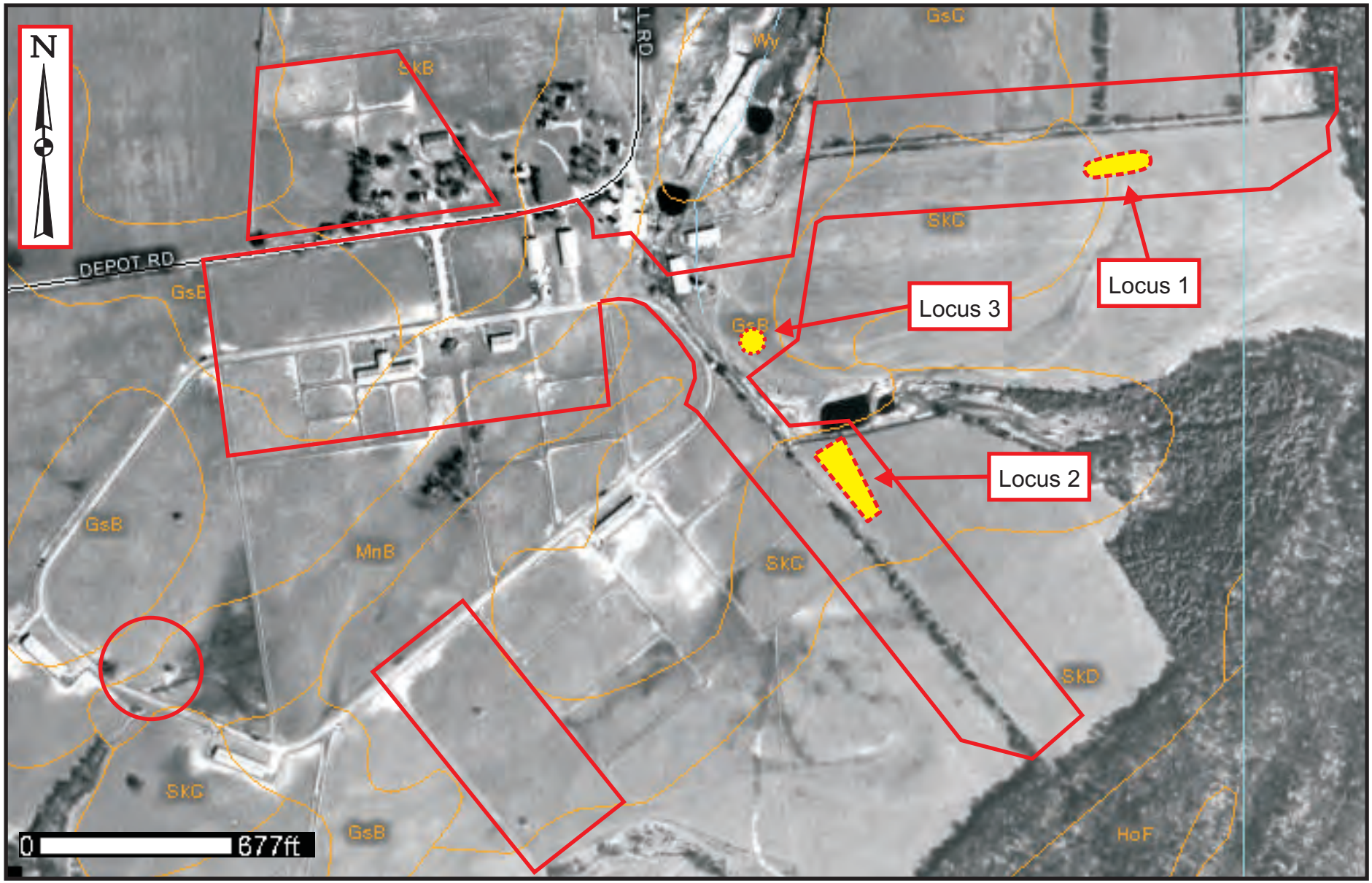


Figure 2. NRCS soils map with the proposed construction indicated.

SEE NOTE ON PAGE 1

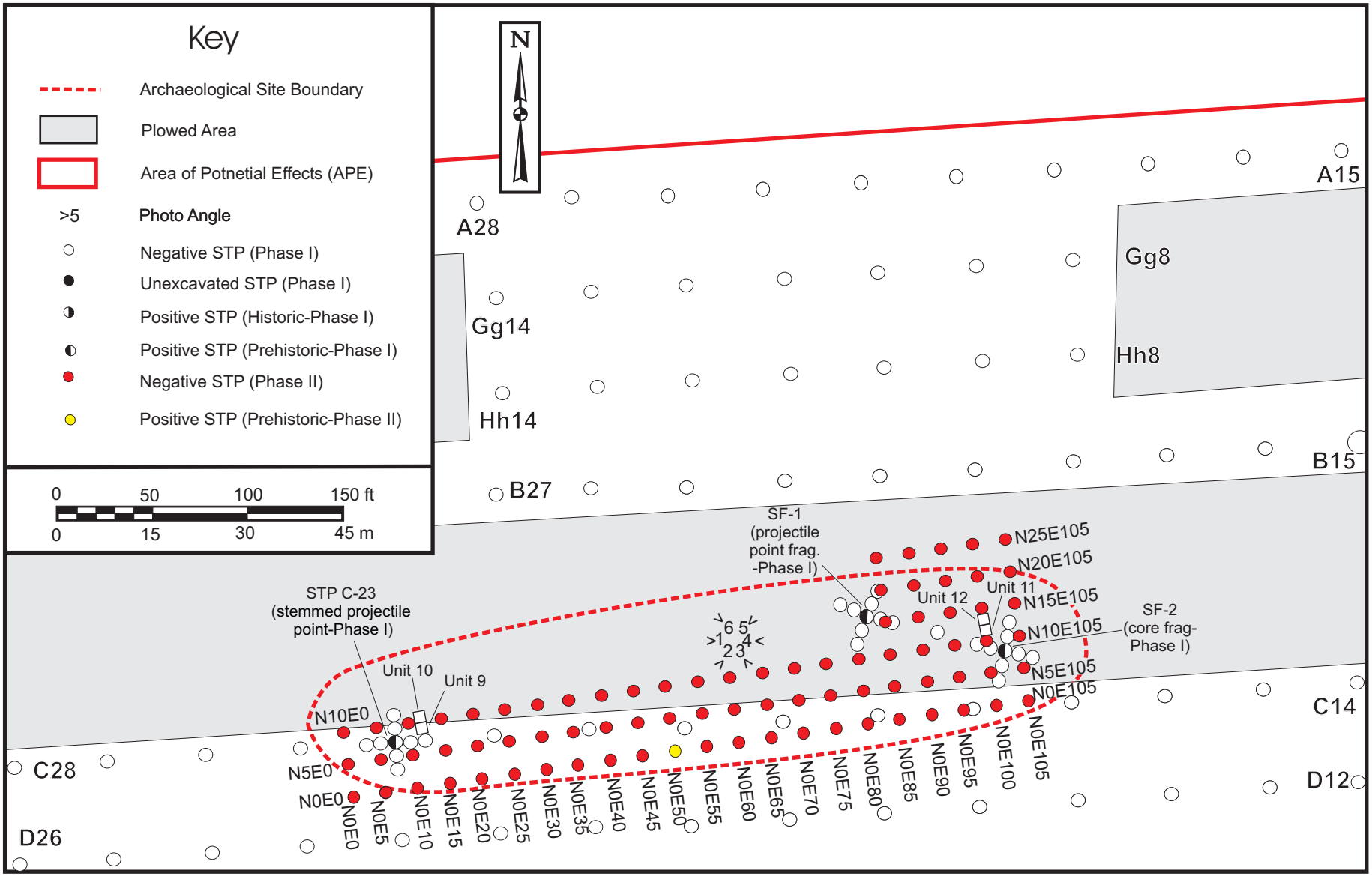


Figure 3. Map showing the location of subsurface testing at Locus 1.

SEE NOTE ON PAGE 1

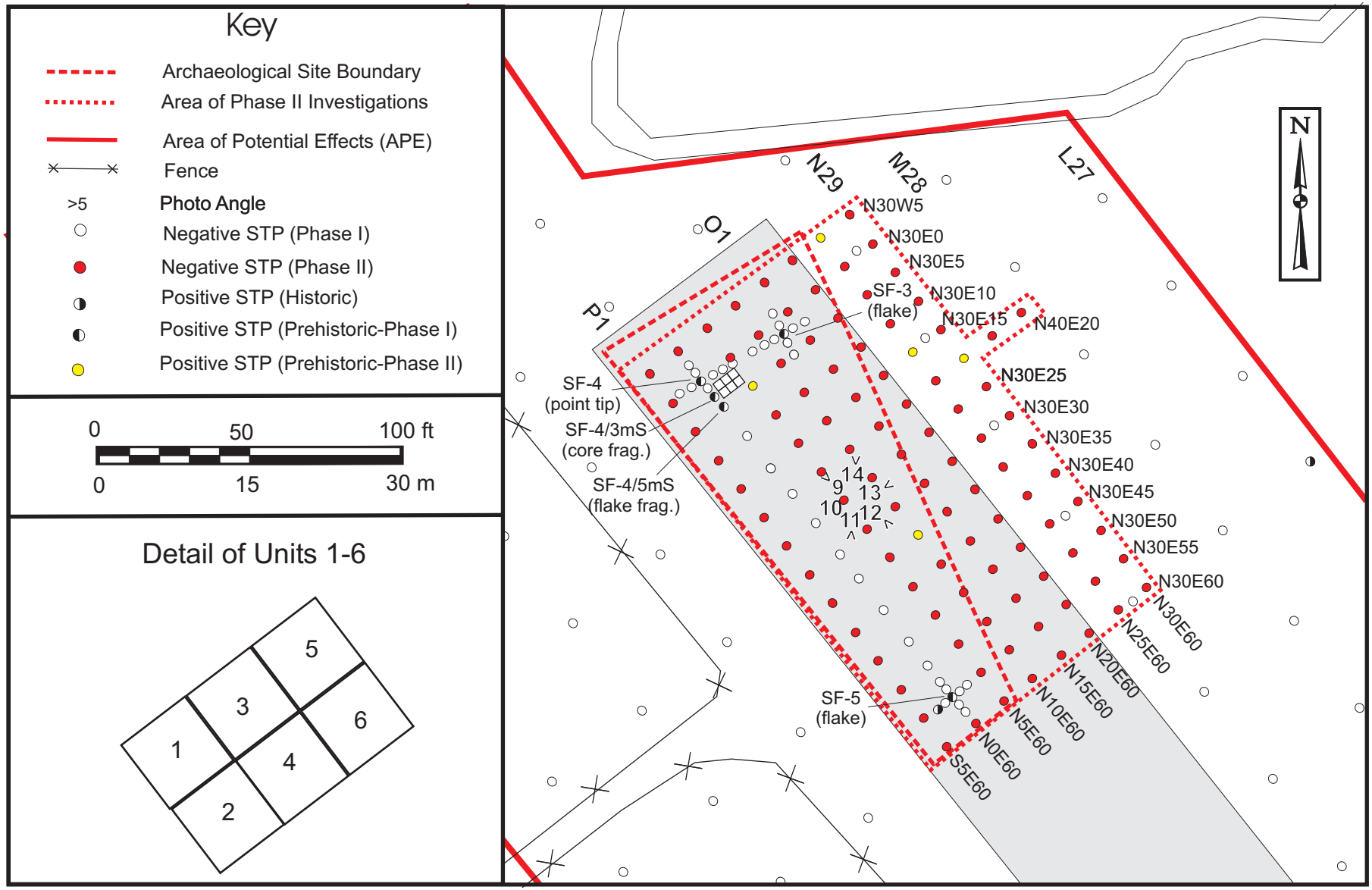


Figure 4. Map showing the location of subsurface testing at Locus 2.

SEE NOTE ON PAGE 1

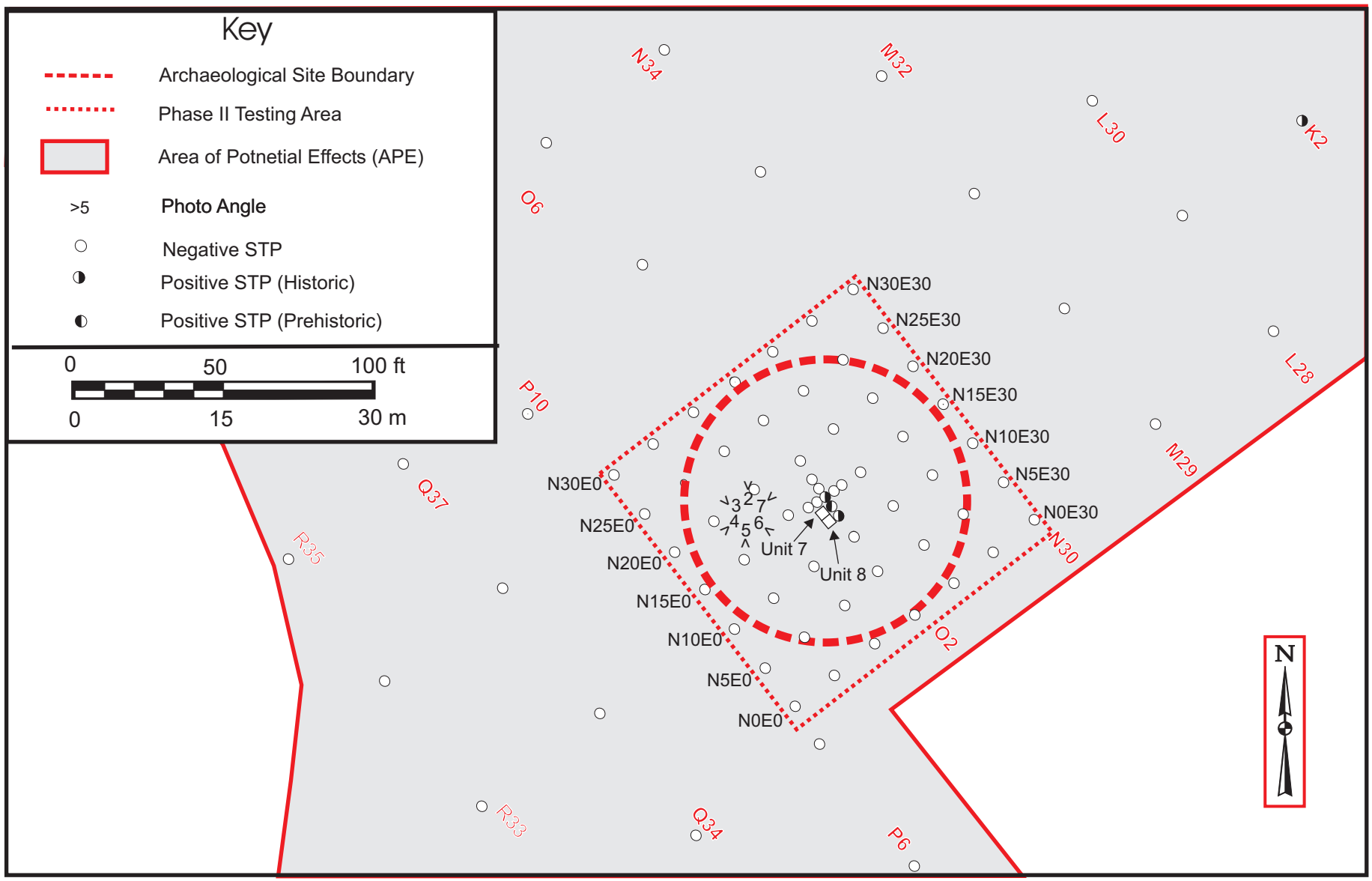


Figure 5. Map showing the location of subsurface testing at Locus 3.

SEE NOTE ON PAGE 1

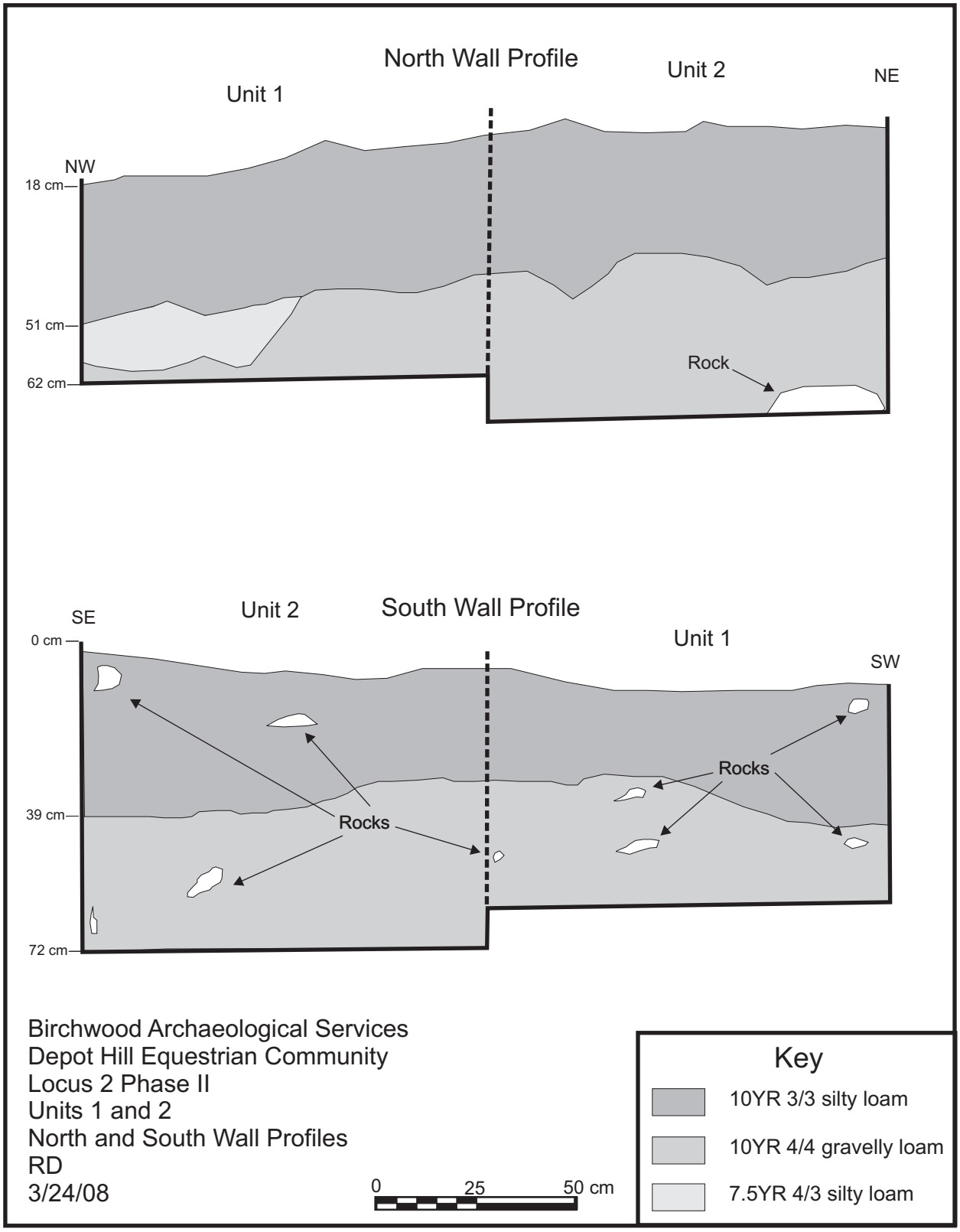


Figure 6. North and south wall profiles of Units 1 and 2 at Locus 2.

SEE NOTE ON PAGE 1

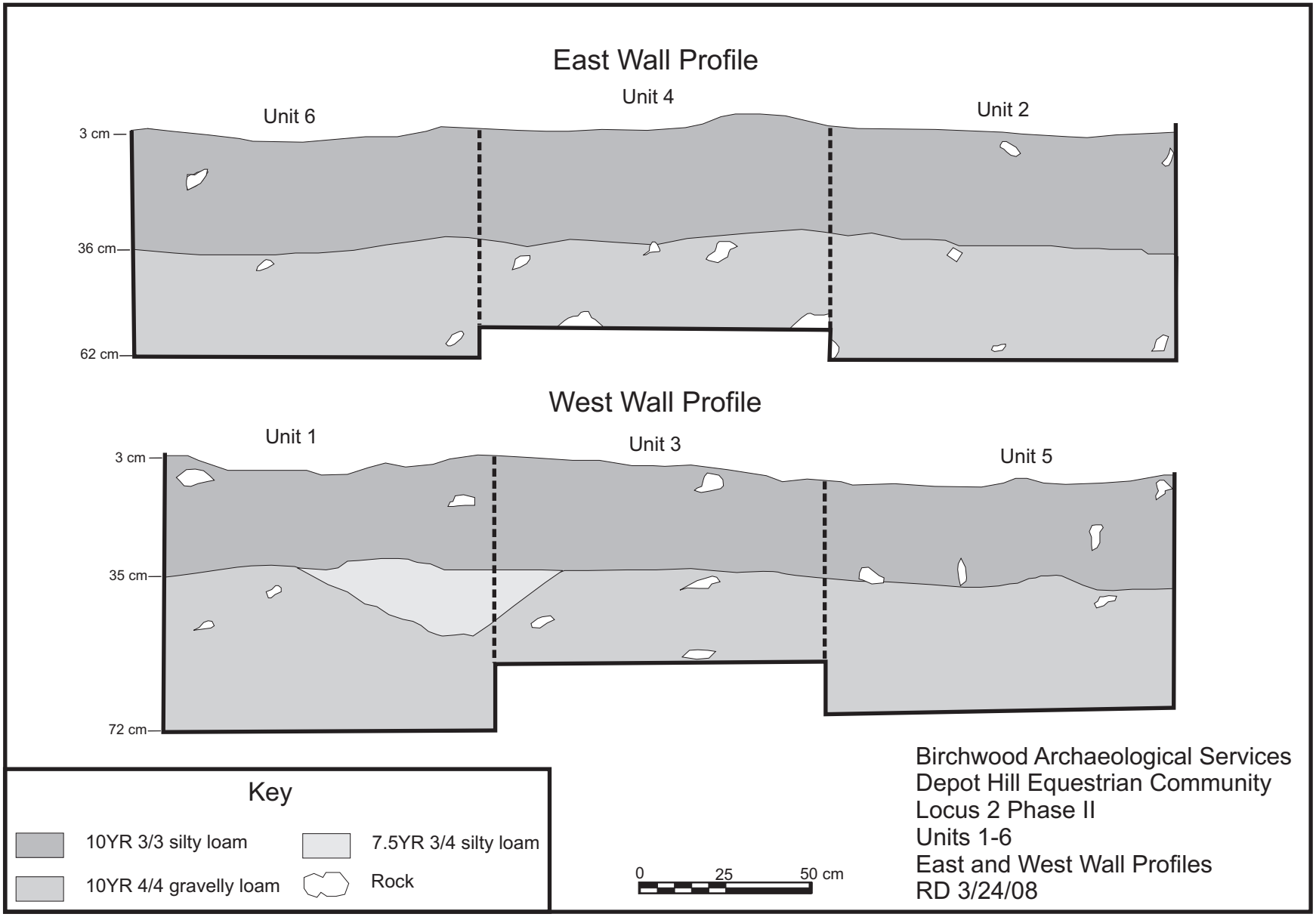


Figure 7. East and west wall profiles of Units 1 through 6 at Locus 2.

SEE NOTE ON PAGE 1

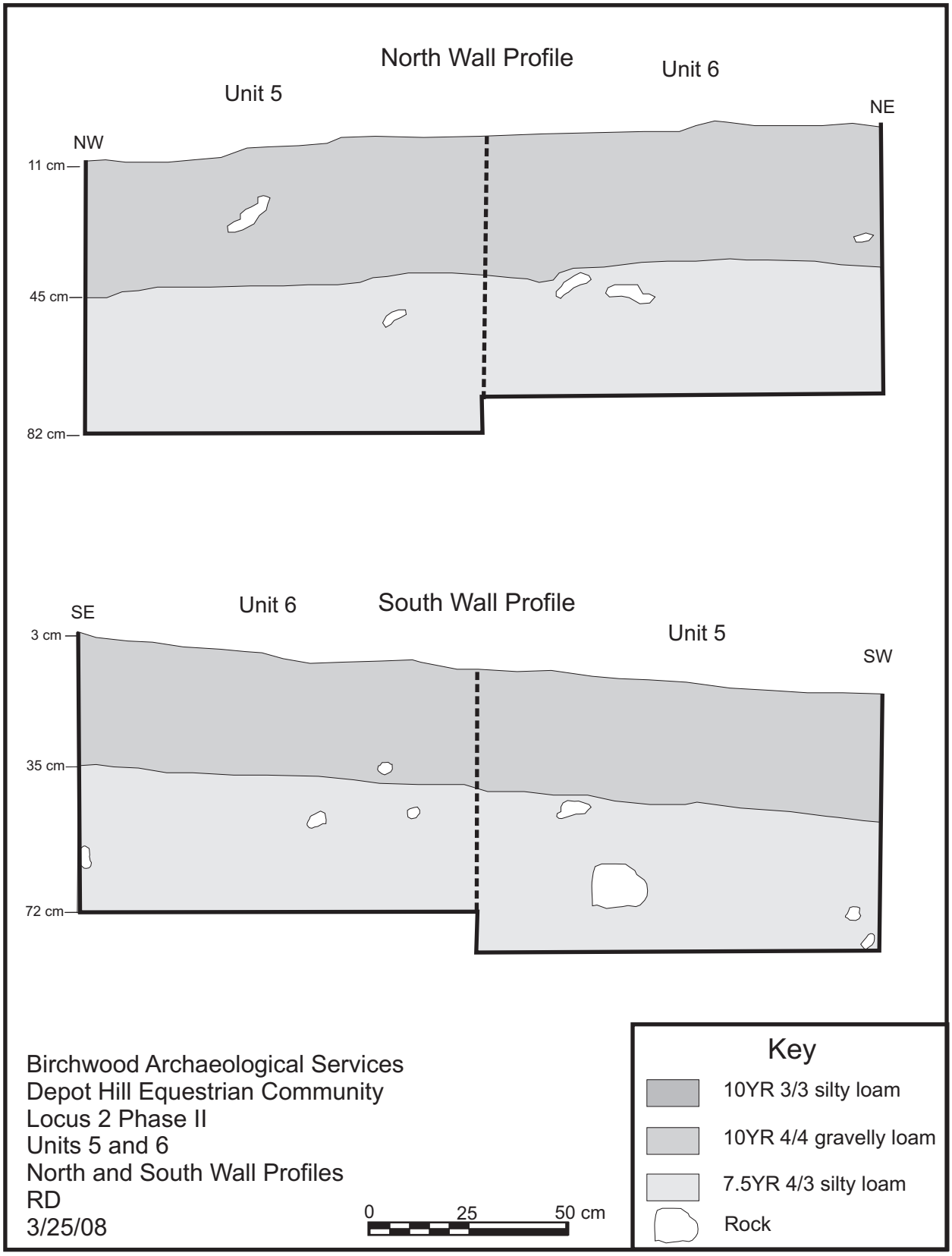


Figure 8. North and south wall profiles of Units 5 and 6 at Locus 2.

SEE NOTE ON PAGE 1

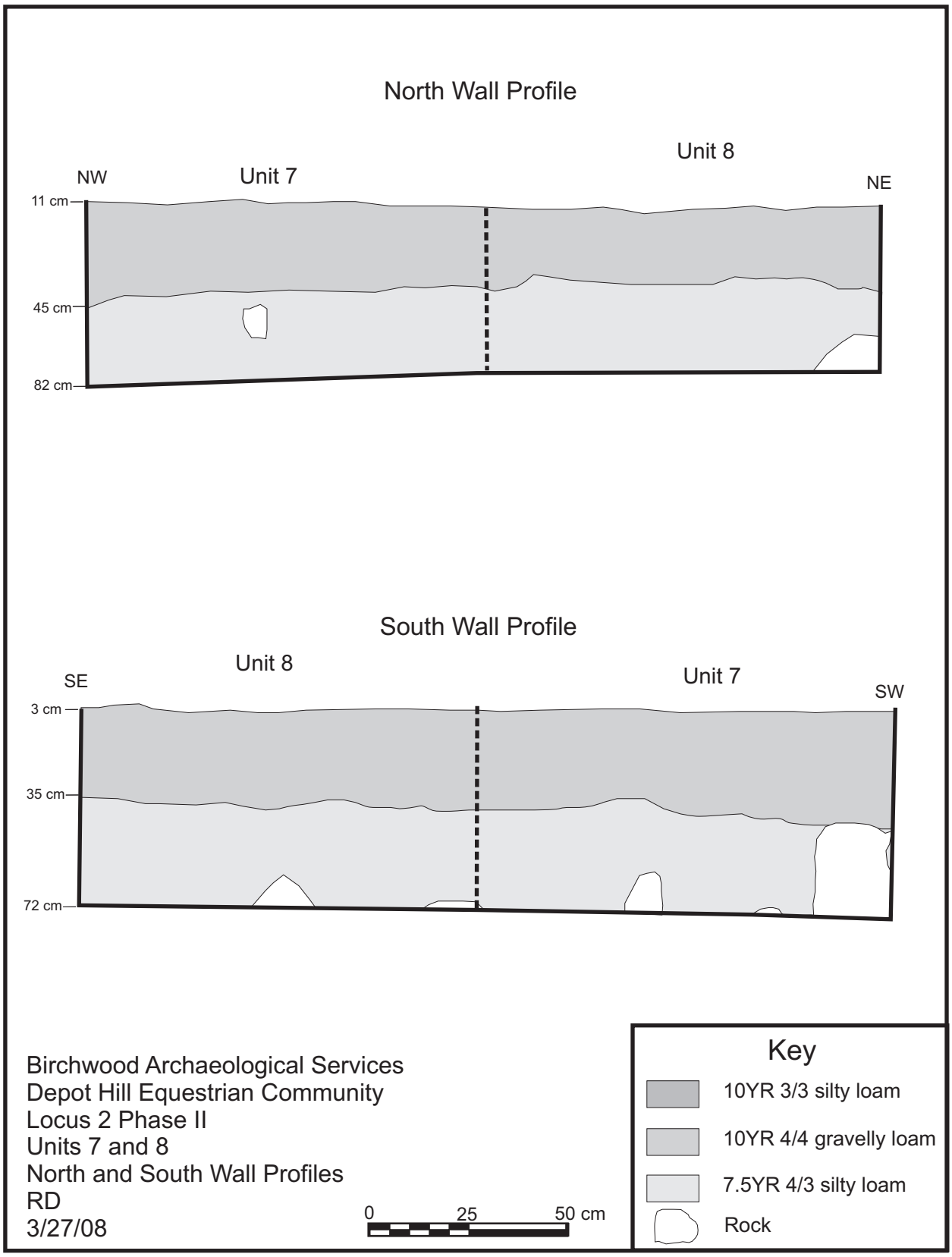


Figure 9. North and south wall profiles of Units 7 and 8 at Locus 3.

SEE NOTE ON PAGE 1

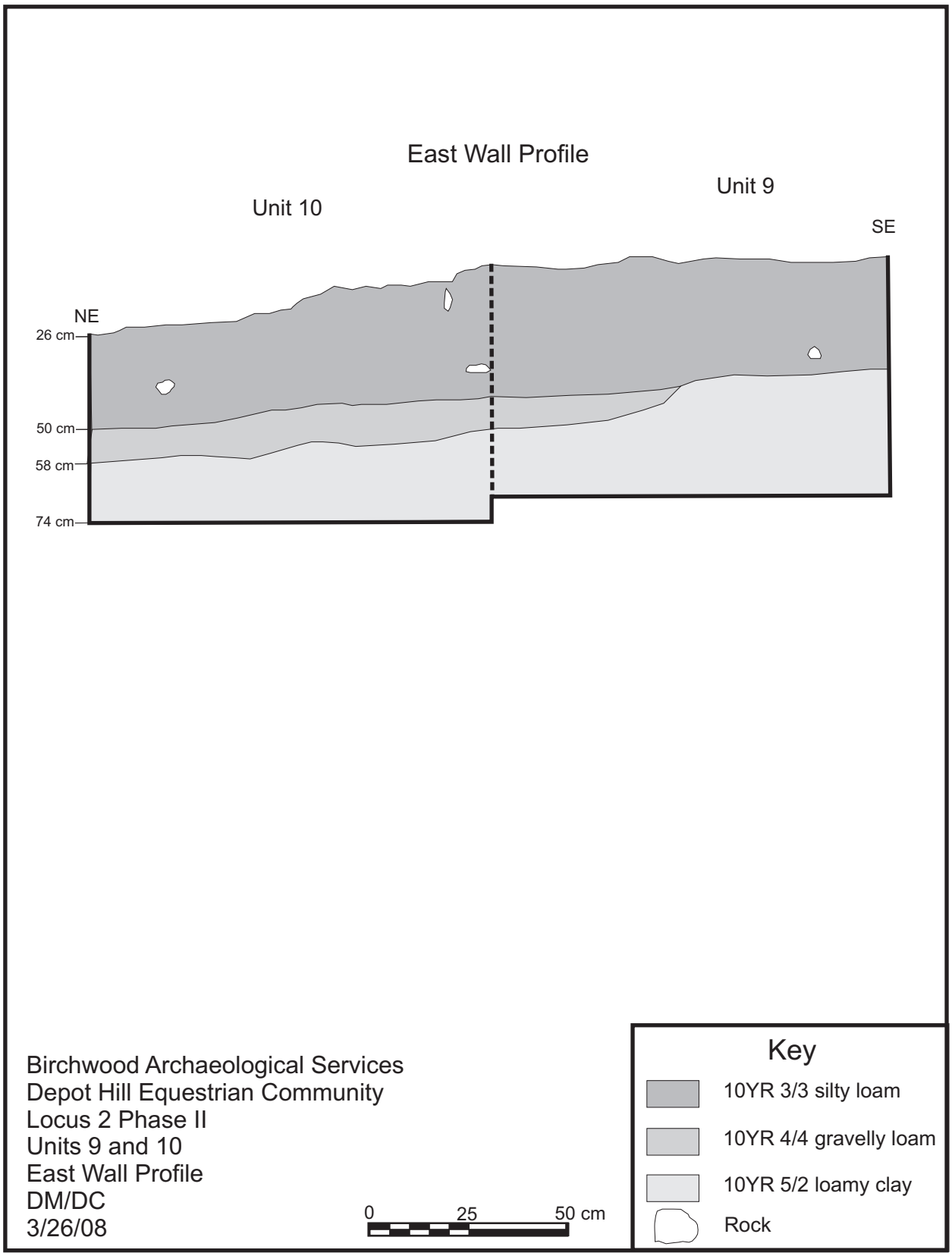


Figure 10. East wall profiles of Units 9 and 10 at Locus 1.

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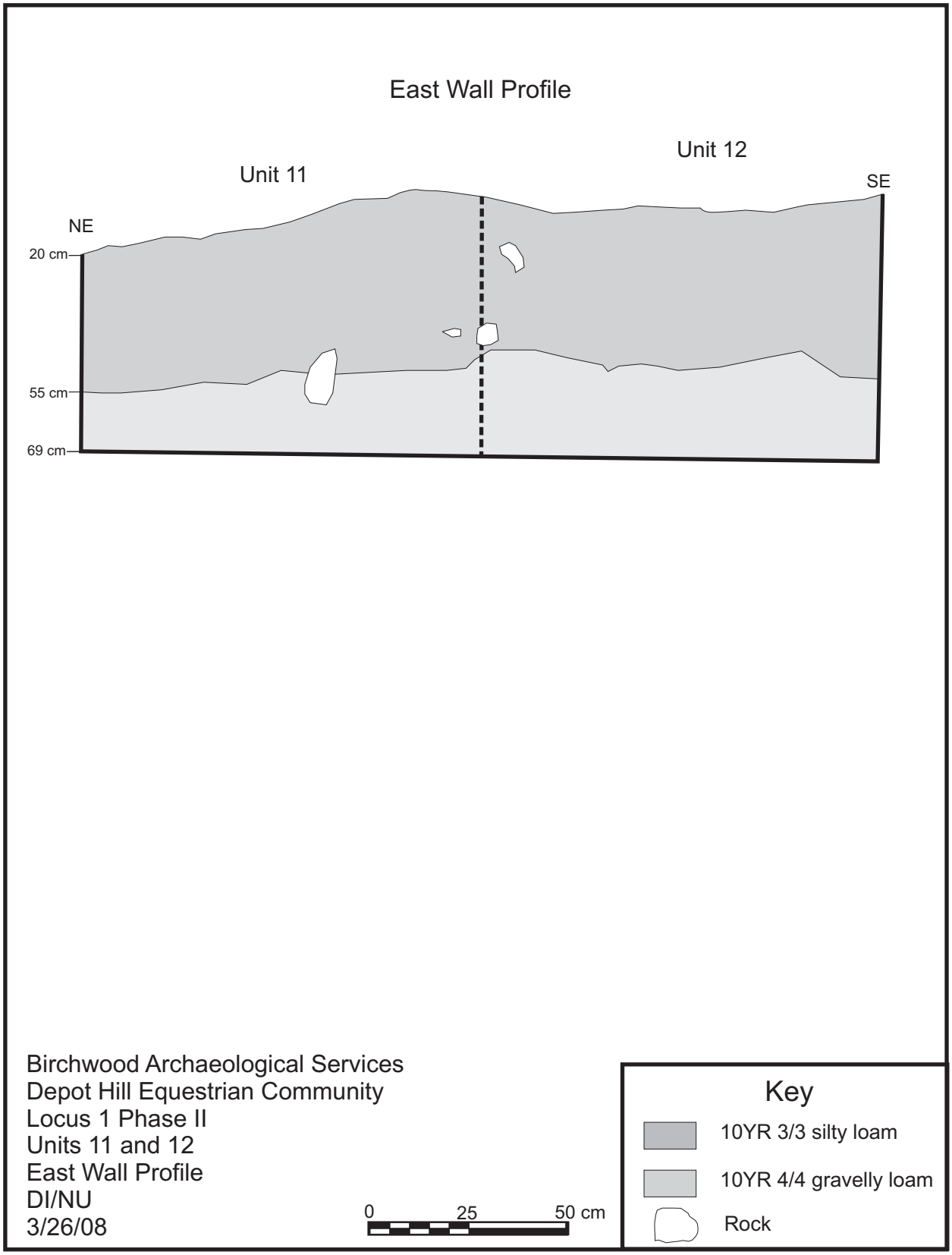


Figure 11. East wall profiles of Units 11 and 12 at Locus 1.

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Appendix B.

Photographs

SEE NOTE ON PAGE 1



Photo 1. Portion of panoramic view from the center of Locus 1, facing west.



Photo 2. Portion of panoramic view from the center of Locus 1, facing southwest.

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Photo 3. Portion of panoramic view from the center of Locus 1, facing southeast.



Photo 4. Portion of panoramic view from the center of Locus 1, facing east.

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Photo 5. Portion of panoramic view from the center of Locus 1, facing northeast.



Photo 6. Portion of panoramic view from the center of Locus 1, facing northwest.

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Photo 7. Portion of panoramic view from the center of Locus 2, facing southeast.



Photo 8. Portion of panoramic view from the center of Locus 2, facing northeast.

SEE NOTE ON PAGE 1



Photo 9. Portion of panoramic view from the center of Locus 2, facing north.



Photo 10. Portion of panoramic view from the center of Locus 2, facing northwest.

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Photo 11. Portion of panoramic view from the center of Locus 2, facing southwest



Photo 12. Portion of panoramic view from the center of Locus 2, facing south.

SEE NOTE ON PAGE 1



Photo 13. Portion of panoramic view from the center of Locus 3, facing north.



Photo 14. Portion of panoramic view from the center of Locus 3, facing northwest.

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Photo 15. Portion of panoramic view from the center of Locus 3, facing southwest.



Photo 16. Portion of panoramic view from the center of Locus 3, facing south.

SEE NOTE ON PAGE 1



Photo 17. Portion of panoramic view from the center of Locus 3, facing southeast.



Photo 18. Portion of panoramic view from the center of Locus 3, facing northeast.

SEE NOTE ON PAGE 1



Photo 19. View of the north wall profile of Units 1 and 2 at Locus 2.



Photo 20. View of the south wall profile of Units 1 and 2 at Locus 2.

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Photo 21. View of the south wall profile of Units 5 and 6 at Locus 2.



Photo 22. View of the north wall profile of Units 5 and 6 at Locus 2.

SEE NOTE ON PAGE 1



Photo 23. View of the west wall profile of Units 1, 3 and 5 at Locus 2.



Photo 24. View of the east wall profile of Units 2, 4 and 6 at Locus 2.

SEE NOTE ON PAGE 1



Photo 25. View of the north wall profile of Units 2, 4 and 6 at Locus 2.



Photo 26. View of the north wall profile of Units 1 and 3 at Locus 2.

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Photo 27. View of the south wall profile of Units 7 and 8 at Locus 3.



Photo 28. View of the north wall profile of Units 7 and 8 at Locus 3

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Photo 29. View of the east wall profile of Units 9 and 10 at Locus 1.



Photo 30. View of the east wall profile of Units 11 and 12 at Locus 1.

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Photo 31. Sampling of prehistoric artifacts from the Depot Hill Site, Locus 1.

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Photo 32. Sampling of prehistoric artifacts from the Depot Hill Site, Locus 2.

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Appendix C.

Shovel Test Pit Records

SEE NOTE ON PAGE 1

Appendix C.

Shovel Test Pit Record

LOCUS 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A - 1	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
A - 1	2	35 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 2	1	0 -31	10YR 3/3 dark brown silty loam	A horizon	N	
A - 2	2	31 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 3	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
A - 3	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 4	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 4	2	28 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 5	2	29 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 6	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
A - 6	2	27 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 7	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
A - 7	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 8	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
A - 8	2	32 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 9	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 9	2	28 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 10	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
A - 10	2	34 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 11	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
A - 11	2	37 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

SEE NOTE ON PAGE 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A - 12	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	Y	Quartz biface fragment
A - 12	2	27 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 13	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 13	2	26 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 14	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 14	2	29 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 15	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 15	2	26 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 16	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
A - 16	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 17	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
A - 17	2	26 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 18	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
A - 18	2	29 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 19	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
A - 19	2	27 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
A - 20	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 21	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
A - 21	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
A - 22	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
A - 22	2	39 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 1	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
B - 1	2	28 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 2	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
B - 2	2	31 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 3	1	0 - 70	10YR 3/3 dark brown silty loam	A horizon	N	
B - 4	1	0 - 57	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by rocks
B - 5	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	

SEE NOTE ON PAGE 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B - 5	2	39 - 69	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 6	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
B - 6	2	28 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 7	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	N	
B - 7	2	21 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 8	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
B - 8	2	31 - 63	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 9	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
B - 9	2	32 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 10	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 10	2	34 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 11	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
B - 11	2	29 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 12	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
B - 12	2	38 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 13	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
B - 13	2	29 - 43	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
B - 14	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 14	2	34 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
B - 15	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 15	2	34 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
B - 16	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
B - 16	2	33 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 17	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 17	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 18	1	0 - 62	10YR 3/3 dark brown silty loam	A horizon	Y	1-pc modern ceramic
B - 19	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
B - 19	2	39 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
B - 20	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	

SEE NOTE ON PAGE 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B - 20	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 21	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
B - 21	2	34 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
B - 22	1	0 - 53	10YR 4/4 dark yellowish brown silty loam	A horizon		Stopped by decaying rocks
C - 1	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
C - 1	2	43 - 67	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 2	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 2	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 3	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
C - 3	2	24 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 4	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
C - 4	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
C - 5	2	32 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 6	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
C - 6	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 7	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 7	2	30 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
C - 8	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
C - 8	2	34 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 9	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 9	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
C - 10	2	23 - 46	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 11	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
C - 11	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 12	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
C - 12	2	40 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 13	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	

SEE NOTE ON PAGE 1

STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
C - 13	2	40 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 14	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
C - 14	2	33 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 15	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
C - 15	2	23 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 16	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 16	2	30 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 17	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 17	2	30 - 63	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 18	1	0 - 50	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by rocks
C - 19	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
C - 19	2	28 - 61	10YR 4/4 dark yellowish brown clay loam	Bw horizon	N	
C - 20	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
C - 20	2	32 - 60	10YR 4/4 dark yellowish brown clay loam	Bw horizon	N	
C - 21	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
C - 21	2	30 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
C - 22	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
C - 22	2	25 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 1	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
D - 1	2	23 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 2			NOT DUG (5m mark between SF 2 & 3)			
D - 3	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
D - 3	2	28 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 4	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
D - 4	2	33 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
D - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
D - 5	2	32 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 1	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E - 1	2	25 - 62	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E - 2	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
E - 2	2	30 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 3	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E - 3	2	28 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 4	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E - 4	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E - 5	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E - 5	2	26 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 1	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
F - 1	2	27 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 2	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
F - 2	2	32 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 3	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
F - 3	2	27 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 4	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
F - 4	2	25 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
F - 5	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
F - 5	2	32 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
LOCUS 2						
N5 - E0	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E0	2	37 - 71	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E5	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E5	2	39 - 72	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E10	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	Y	One quartzite flake
N5 - E10	2	21 - 73	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E15	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	Y	Clear glass - reburied
N5 - E15	2	32 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N5 - E20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N5 - E20	2	35 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E25	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E25	2	34 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E30	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E30	2	36 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E35	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E35	2	43 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E40	1	0 - 43	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E40	2	43 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E45	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E45	2	40 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E50	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E50	2	48 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N5 - E55	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E55	2	37 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N5 - E60	1	0 -32	10YR 3/3 dark brown silty loam	A horizon	N	
N5 - E60	2	32 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E0	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E0	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E5	2	29 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E10	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E10	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E15	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	Y	Glass, curved, green
N10 - E15	2	23 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E20	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E20	2	24 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E25	2	25 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N10 - E30	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E30	2	22 - 42	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E35	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	Y	Possible quartzite flake
N10 - E35	2	20 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N10 - E40	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E40	2	20 - 39	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E45	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by water
N10 - E50	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E50	2	30 - 42	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N10 - E55	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	Y	Plastic bottle top; stopped by water
N10 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N10 - E60	2	30 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E0	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E0	2	33 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E5	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E5	2	41 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N15 - E10	1	0 - 54	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E10	2	54 - 66	10YR 4/4 dark yellowish brown silty loam	Bw horizon		Decomposing snale
N15 - E15	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E15	2	29 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E20	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E20	2	31 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E25	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E25	2	30 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E30	2	28 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N15 - E35	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E35	2	29 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N15 - E40	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E40	2	25 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E45	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E45	2	28 - 40	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E50	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E50	2	24 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E55	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E55	2	28 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N15 - E60	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N15 - E60	2	31 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N20 - E0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E0	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E5	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E5	2	29 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E10	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E10	2	28 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E15	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E15	2	29 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E20	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E20	2	27 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E25	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E30	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E30	2	31 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E35	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E35	2	28 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E40	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E40	2	30 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N20 - E45	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E45	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E50	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E50	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N20 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N20 - E60	2	30 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E0	1	0 -36	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E0	2	36 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E5	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E5	2	30 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E10	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E10	2	35 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E15	1	0 - 21	10YR 3/3 dark brown silty loam	A horizon	N	One flake; one quartzite flake
N25 - E15	2	21 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E20	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E20	2	33 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E25	1	0 - 19	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E25	2	19 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N25 - E30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E30	2	28 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N25 - E35	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	Stopped by water
N25 - E40	1	0 - 14	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E40	2	14 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E45	1	0 - 10	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E45	2	10 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E50	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N25 - E50	2	29 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N25 - E60	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
N25 - E60	2	24 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by water
N30 - E0	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E0	2	41 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E5	2	31 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
N30 - E10	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E10	2	38 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E15	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E15	2	33 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E20	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	Y	Quartzite flake
N30 - E20	2	38 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E25	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E25	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E30	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E30	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E35	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E35	2	25 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E40	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E40	2	29 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E45	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E45	2	36 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E50	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E50	2	28 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E55	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N30 - E55	2	26 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N30 - E60	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
N30 - E60	2	30 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N35 - E20	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
N35 - E20	2	34 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
N40 - E20	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	Y	Window glass
N40 - E20	2	28 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E0	1	0 - 48	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E0	2	48 - 70	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E5	1	0 - 38	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E5	2	38 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E10	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E10	2	26 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E15	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E15	2	27 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E20	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E20	2	29 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E25	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E25	2	36 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E30	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E30	2	22 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E35	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E35	2	29 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E40	1	0 - 37	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E40	2	37 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E45	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
S5 - E45	2	23 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E50	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E50	2	27 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
S5 - E55	1	0 - 46	10YR 3/3 dark brown silty loam	A horizon	N	Moved 50c S due to standing water; stopped by rocks
S5 - E60	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
S5 - E60	2	26 - 48	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N0	2	29 - 66	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N5	1	0 - 41	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N5	2	41 - 70	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
W5 - N10	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N10	2	39 - 61	7.5YR 5/6 strong brown silty loam	Bw horizon	N	
W5 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N15	2	28 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N20	1	0 - 44	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N20	2	44 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N25	1	0 - 39	10YR 3/3 dark brown silty loam	A horizon	Y	Quartzite fragment
W5 - N25	2	39 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - N30	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - N30	2	33 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
W5 - S5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
W5 - S5	2	31 - 65	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
LOCUS 3						
E0 - N0	1	0 - 65	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N05	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N05	2	34 - 56	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N10	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E0 - N10	2	30 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N15	2	28 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N20	1	0 - 19	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N20	2	19 - 45	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N25	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N25	2	22 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E0 - N30	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E0 - N30	2	25 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N0	1		10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N0	2		10YR 3/3 dark brown silty loam and 10YR 4/4 dark yellowish brown silty loam	Mixed A and Bw Horizon	N	
E5 - N5	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N5	2	35 - 72	10YR 4/4 dark yellowish brown silty loam with gravel	Bw horizon	N	
E5 - N10	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N10	2	26 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N15	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N15	2	26 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N20	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N20	2	23 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N25	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	Y	Small flake of charcoal - discarded
E5 - N25	2	29 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E5 - N30	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N30	2	28 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E5 - N35	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
E5 - N35	2	24 - 44	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N0	1	0 - 40	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N0	2	40 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E10 - N5	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N5	2	25 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E10 - N10	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N10	2	31 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N15	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N15	2	22 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N20	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	One bottle glass-green
E10 - N20	2	30 - 41	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	One clear glass
E10 - N25	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	Glass, dark green and clear
E10 - N25	2	23 - 41	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E10 - N30	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E10 - N30	2	26 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N0	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N0	2	31 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N5	1	0 - 24	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N5	2	24 - 49	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N10	2	23 - 50	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N20	1	0 - 22	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N20	2	22 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E15 - N25	1	0 - 30	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N25	2	30 - 51	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E15 - N30	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	N	
E15 - N30	2	27 - 55	10YR 4/4 dark yellowish brown silty loam	Bw horizon	Y	One piece of poccelain - discarded
E20 - N0	1	0 - 29	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N0	2	29 - 43	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N5	1	0 - 27	10YR 3/3 dark brown silty loam	A horizon	Y	One piece of glass - discarded
E20 - N5	2	27 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N10	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E20 - N10	2	28 - 64	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N15	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N15	2	25 - 53	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N20	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N20	2	26 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E20 - N25	1	0 - 25	10YR 3/3 dark brown silty loam	A horizon	N	
E20 - N25	2	25 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N0	1	0 - 26	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N0	2	26 - 39	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E25 - N5	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N5	2	28 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N10	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N10	2	35 - 61	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N15	1	0 - 28	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N15	2	28 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N20	1	0 - 35	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N20	2	35 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N25	1	0 - 34	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N25	2	34 - 57	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E25 - N30	1	0 - 33	10YR 3/3 dark brown silty loam	A horizon	N	
E25 - N30	2	33 - 60	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N0	1	0 - 36	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N0	2	36 - 58	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E30 - N5	1	0 - 31	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N5	2	31 - 52	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N10	1	0 - 23	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N10	2	23 - 54	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	Stopped by rocks
E30 - N15	1	0 - 20	10YR 3/3 dark brown silty loam	A horizon	N	

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STP	Level	Depth (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E30 - N15	2	20 - 47	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N20	1	0 - 32	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N20	2	32 - 59	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	
E30 - N25	1	0-43	10YR 3/3 dark brown silty loam	A horizon	N	
E30 - N30	1	0 - 18	10YR 3/3 dark brown silty loam	A horizon	N	Fence stake; stopped by rocks
E30 - N30	2	18 - 46	10YR 4/4 dark yellowish brown silty loam	Bw horizon	N	

Note: Excavation of all STPs was stopped after the removal of at least 20 of culturally sterile subsoil unless otherwise stated.

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Phase IB Cultural Resources Survey
Keane Stud Farm Residential Development Project, Town of Amenia, Dutchess County New York

prepared for

Juan Torres
5021 Route 44
Amenia, NY 12501

prepared by

David Moyer, Brian Broad Rose and Douglas Idleman

Birchwood Archaeological Services
131 Marion Avenue
Gilbertsville, NY 13776
www.birchwoodarchaeology.com

July 2022

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Management Summary

Phase IB Cultural Resources Survey, Keane Stud Farm Residential Development Project, Town of Amenia, Dutchess County New York

SHPO Project Review Number:

Involved State and Federal Agencies: DEC

Phase of Survey: IB

Location Information
Location: both sides of Depot Hill Road
Civil Division: Town of Amenia
County: Dutchess

Survey Area (Metric & English)
Length: 9,147 ft (2.8 km)
Width: 9,147 ft (2.8 km)
Depth: >5 ft (1.5 m)
Number of Acres Surveyed: 108.02
Number of Square Meters & Feet Excavated:
Percentage of the Site Excavated:

USGS 7.5 Minute Quadrangle Map: Amenia

Archaeological Survey Overview
Number & Interval of Shovel Tests: 813 STPs (40 cm round) in 15 m (49.2 ft) intervals; 32 STPs at 1 m (3.3 ft) intervals; 33 STPs at 2 m (6.6 ft) intervals; 5 STPs placed directly over surface finds.
Number & Size of Units:
Width of Plowed Strips:
Surface Survey Transect Interval:

Results of Archaeological Survey
Number & name of prehistoric sites identified: 1- Keane Stud Farm Precontact Site
Number & name of historic sites identified: 0
Number & name of sites recommended for Phase II/Avoidance:1- Keane Stud Farm Precontact Site

Results of Architectural Survey
Number of buildings/structures/cemeteries within project area: 0
Number of buildings/structures/cemeteries adjacent to project area: 2
Number of previously determined NR listed or eligible buildings/structures/cemeteries/districts: 0
Number of identified eligible buildings/structures/cemeteries/districts: 0

Report Author(s): David Moyer, Brian Broad Rose and Douglas Idleman

Date of Report: July 2022

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Introduction

Birchwood Archaeological Services was contracted to conduct a Phase IB cultural resources investigations for the areas of potential effect (APE) for the Keane Stud Farm Residential Development Project, located in the Town of Amenia, Dutchess County, New York. The overview had been requested to assess the potential that significant cultural resources may be located within the project area. The survey had been requested to assess the potential that significant cultural resources may be located within the project area. The investigation was performed in compliance with Section 14.09 of the New York State Historic Preservation Act (NYSHPA).

The project involves the creation of residential lots as well as roadways and utility connections. The area of potential effect (APE) for this project includes 108.02 +/- acres of building envelopes, of which approximately 68.93 acres can be plowed and disked. The project also includes approximately 9,147 linear ft (2.8 km) of new roadways incorporating a 50 ft (15 m) right-of-way.

A Phase IA/IB cultural resources survey was previously conducted for portions of the project area in July of 2007 (Birchwood Archaeological Services 2007). This report provides a summary of known historic and archaeological resources in the project vicinity which was used in the development of the current Phase IB study. These Phase IB field excavations were designed to look for historic and precontact artifacts and intact cultural deposits that ,may be impacted by the proposed subdivision.

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Environmental Setting and Soils

Dutchess County is situated in southeastern New York State. Two physiographic units occur within the county: Valley and Ridge Province and the New England Province. The project area lies in the Valley and Ridge Province, which includes the Hudson Lowlands and the Low Taconics. The Hudson Lowlands extend eastward from the Hudson River three to six miles, and the Low Taconics extend eight to ten miles east of the Hudson Lowlands (Faber 2002).

The Hudson Lowland, the subsection within the Valley and Ridge Province, is described as containing bedrock comprised of easily eroded sedimentary rock such as shale, greywacke, and siltstone. The bedrock was deposited during the Cambrian and Ordovician time periods Lowlands (Faber 2002).

The project area is located approximately 2.2 miles west of the New York and Connecticut State border on an upland plateau nearly 32.5 km (20.2 miles) east of the Hudson River. Elevation ranges from 633 feet above sea level in the western portion of the project area, to 745 feet above sea level at the eastern end of the APE. A series of unnamed creeks and streams lie within and adjacent to the current proposed project, with Webatuck Creek being the closest named creek in the vicinity at 1.2 miles (2.0 km) to the east. Other creeks nearby include Millbrook Creek 1.8 miles (2.9 km) southeast of the project area, and the Wassaic Creek which lies 11,222 feet to the west. All of these water sources eventually drain into the Housatonic.

The USDA Web Soil Survey (WSS) maps three soil types as occurring within the project area (Figure 2). The Georgia silt loam series (map unit GsB) is mapped throughout the project area sporadically interspersed with the Massena and Stockbridge Silt loams (map units MnB and SkB, SkC, and SkD).

The Georgia silt loam series soils consist of very deep, moderately well drained soils on glaciated uplands. They formed in loamy till (Faber 2002). Permeability is moderate in the solum and slow in the substratum. Saturated hydraulic conductivity is moderately high or high in the solum and moderately low or moderately high in the substratum. A typical soil profile of Georgia silt loam is provided below in Table 1:

Table 1. Typical soil profile of Georgia silt loam.

Horizon	Depth	Description
Ap	0-8 in. (0-20 cm)	very dark grayish brown (10YR 3/2) loam
Bw1	8-14 in. (20-36 cm)	brown (10YR 4/3) and dark brown (10YR 3/3) loam
Bw2	14-21 in. (36-53 cm)	brown (10YR 4/3) loam
Bw3	21-26 in. (53-66 cm)	olive brown (2.5Y 4/4) loam
C1	26-36 in. (66-91 cm)	gray (N 5/0), olive brown (2.5Y 4/4), dark grayish brown (2.5Y 4/2), and light olive brown (2.5Y 5/6) loam
C2	36-65 in. (91-165 cm)	olive (5Y 4/3) loam

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Massena silt loam (map unit MnB) is also mapped as occurring interspersed throughout each portion of the project area. The Massena series soils consist of very deep, somewhat poorly drained or poorly drained soils on uplands (Faber 2002). They are nearly level to strongly sloping soils that formed in till dominated by siliceous rock with some limestone. A typical profile of Massena silt loam is provided in Table 2.

Table 2. Typical soil profile of Massena silt loam.

Horizon	Depth	Description
Ap	0-7 in. (0-18)	very dark grayish brown (10YR 3/2) silt loam
Bw	7-13 in. (18-33 cm)	olive brown (2.5Y 4/3) loam
Bg	13-23 in. (33-58 cm)	dark grayish brown (2.5Y 4/2) loam
Cg1	23-46 in. (58-117 cm)	dark grayish brown (2.5Y 4/2) loam
Cg2	46-80 in. (117-203 cm)	dark grayish brown (2.5Y 4/2) loam

The Stockbridge silt loam series (map units SkB, SkC, and SkD) is the remaining soil unit mapped as within various portions of the project area. Stockbridge series soils are very deep, well drained soils formed in loamy calcareous till. They are nearly level to very steep soils on till plains, smooth hills, low ridges and drumloidal landforms (Faber 2002). Slope ranges from 0 to 60 percent. Permeability is moderate in the surface layer and subsoil and moderately slow or slow in the substratum. A typical profile of Massena silt loam is provided below in Table 3.

Table 3. Typical soil profile of Stockbridge silt loam.

Horizon	Depth	Description
Ap	0-10 in. (0-25cm)	dark brown (10YR 3/3) loam
Bw1	10-20 in. (25-51 cm)	olive brown (2.5Y 4/4) loam
Bw2	20-28 in. (51-71 cm)	light olive brown (2.5Y 5/4) loam
C1	28-42 in. (71-107 cm)	olive (5Y 4/3) gravelly loam
C2	42-48 in. (107-122 cm)	olive (5Y 4/3) gravelly loam
C3	48-65 in. (122-165 cm)	olive (5Y 4/3) gravelly loam

The above soil profiles suggest that both historic and prehistoric resources may be found in the A and Bg/Bw horizons overlaying parent material, which typically extends to between 74 and 81 cm (29-32 in) below the ground surface. Subsurface testing was conducted to a minimum depth of 20 cm (8 in.) into the B/C or C horizon whenever possible and unless otherwise noted.

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This soil information is based upon the results of the prior Phase I studies conducted on the property as well as other documentary sources examined prior to the initiation of fieldwork. As a result, it may be necessary to modify the subsurface testing strategy to meet unexpected soils, disturbances and other obstructions. The results of the subsurface testing and how they compare with the above soils information is discussed in the *Results* section of this report.

Previously Identified Precontact and Historic Resources

The initial Phase IA/IB Study (Birchwood Archaeological Services 2007) identified two previously recorded precontact sites within one mile of the project area. Subsurface testing as part of this initial survey identified three additional precontact sites, all of which were examined as part of Phase II site examinations (Birchwood Archaeological Services 2008). In addition, the literature review indicated that there is one previously identified historic site within one mile of the project. Individuals wishing to learn more about the previously known archaeological resources in the project vicinity are referred to the Phase IA/IB report.

Archaeological Sensitivity

An assessment of whether significant cultural resources are likely to be present within a project area must consider what is known of the prehistory of the area, including likely locations of archaeological sites and proximity to known sites; and the history of the immediate area, including whether any historic structures or features are known to exist within the project boundaries. An assessment must also consider that if cultural resources *are* located on a parcel, will they likely retain *integrity* (without which they would not be considered significant). Modifications to the land may serve to destroy all or portions of any cultural deposits that may exist.

Due to the high density of precontact sites in the project vicinity, including sites located on the Keane Stud Farm property, the project area is considered highly sensitive for \ precontact archaeological resources. The property is considered moderately sensitive for historic resources due the proximity of a known historic archaeological site and the long history of occupation in the Amenia area. Those interested in learning more about the historic and prehistoric resources in the project vicinity are referred to the prior Phase IA/IB report (Birchwood Archaeological Services 2007).

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Field Methodology

Phase IB Field investigations were conducted to identify any historic or prehistoric cultural resources that may be impacted by the proposed project. The Phase IB fieldwork was conducted during the period between May 24th and June 8th of 2022 and was supervised by David Moyer, RPA. Field Archaeologists Royce Duda, Brian Broad Rose, and Silas Moyer assisted in the subsurface investigations. Representative photographs were taken of the project area including adjacent visible structures and areas of disturbance (Appendix B).

A series of field methods consisting of a combination of shovel testing the intensive surface inspection of freshly plowed fields were conducted within the proposed roadways and building envelopes as shown in Figure 3. More detailed information regarding these field methods is provided below.

Intensive Surface Inspection- Wherever possible, the proposed building envelopes were plowed and disked prior to the Phase IB field investigations in order to look for artifacts and evidence of cultural features. This was accomplished by archaeologists walking along the furrows of the plowed fields at intervals spaced 1.5 m (5 feet) apart. If a prehistoric artifact was encountered during the survey, the radius around the find was carefully examined for other artifacts, and shovel testing was used to look for buried remains in the vicinity. One shovel test pit was excavated directly over the original find spot while eight additional test pits were excavated at one and three meter intervals in the four cardinal directions using the methodology described below until two negative test pits were reached in all directions.

Subsurface Testing- Standard shovel test pits (STPs) were used to test for buried cultural deposits. STPs are small (about 50 cm or 20 inch diameter) holes excavated with a shovel; sediments are screened through 1/4 inch mesh to look for artifacts. STPs are excavated in natural soil layers, as much as possible, and are dug through the topsoil to at least 20 cm (~ 8 inches) into culturally sterile subsoil.

STPs were placed using a compass and tape at 10 m (32.8 ft) intervals in all areas of proposed ground disturbance. When an STP was placed in an area that was obviously disturbed (e.g., in a ditch along the side the road) or in standing water, an attempt was made to move the shovel test beyond the area of disturbance, to a maximum distance of 3 meters from its original location. A list of the STPs and their soil profiles is provided in Appendix C. Excavation of STPs was halted 20 cm (8 in.) into culturally sterile subsoil unless noted in the STP records.

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Results

Intensive Surface Inspection

Approximately 68.93 acres of the 108.02 +/- acre APE (63.8%) was plowed and disked at the time of the current study. A total of fourteen of the 27 building envelopes were completely plowed and disked. The western part of Lot 14 was plowed while the eastern part was tested using shovel testing (Photos 41-46). In the plowed areas the fieldwork consisted of walking along the furrows of the plowed fields at intervals spaced 1.5 m (5 feet) apart. Representative photographs were taken of the plowed fields showing their condition at the time of the investigations (Photos 13-20, 35-40, 47-56 and 58-69).

A total of five precontact artifacts were recovered from the surface of the plowed fields as part of the intensive surface inspection. SF-1 is a flake fragment recovered from the plowed field in Lot 13 (Photos 72 and 73), while SF-2 was a flake fragment recovered from Lot 5 (Photos 19 and 20). The remaining surface finds (SF-3, SF-4 and SF-5) were all found along the western edge of the plowed field in Lot 17 (Photos 53-56). All of the artifacts recovered were made from white quartzite (Photo 74). Shovel test pits were excavated directly over each of the five precontact find spots as well as at one and three meter intervals radiating from the find spots as stated in the *Field Methodology*. No additional test pits were placed between SF-4 and SF-5 due to their proximity as shown in Figure 4. One of these additional test pits, SF-5/3mE, recovered an additional quartzite flake fragment and was designed a precontact archaeological site. More information regarding this site is provided in the following section.

Subsurface Examinations

Subsurface testing was conducted in all areas of proposed ground disturbance where plowing was not possible. A total of 817 STPs were initially laid out in 15 m (49.2 ft) intervals to create a grid over the areas of proposed construction as shown in Figure 3. STPs were labeled according to transect, with numerical labels used to further designate individual holes. Out of the 817 STPs laid out, four (0.5 %) could not be excavated due to existing roadways. In addition, 76 STPs were excavated around prehistoric find spots within the building envelopes. This brought the total number of test pits excavated as part of this project to 889. Of these 889 STPs, ten (1.1 %) recovered cultural material. Precontact artifacts were recovered from three of the test pits including a projectile point recovered from STP S-4, a flake fragment recovered from STP Q-7, and another single flake fragment from STP KK-7 (Photo 74). All of the artifacts recovered were made from locally available quartzite with the exception of the small flake fragment recovered from STP S-4, which was made from a dull gray chert. Eight additional shovel test pits were excavated at one and three meters in four cardinal directions as discussed in the *Field Methodology* section. No additional artifacts were recovered from any of these test pits and each of these original find spots were designated isolated finds.

In addition to the precontact artifacts, the shovel testing recovered a number of historic and modern artifacts, including a fence staple recovered from STP E-26, fragments of modern bottle glass recovered from STPs F-10 and J-5, a .308 cartridge casing recovered from STP M-4, and fragments of aluminum foil recovered from STP PP-1. These finds were found over a wide area and do not appear to represent a concentration or historic archaeological site.

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STPs ranged in depth from 28 to 61 cm (11.0 to 24.0 in) below the ground surface, with an average STP depth of 44.9 cm (17.7 in). Soils encountered were similar to the typical soil profiles examined prior to the fieldwork (Tables 1-3). Topsoil generally consisted of 10YR 4/2 grayish brown or 10YR 4/3 dull yellowish brown silty loam overlaying a subsoil consisting of 10YR 5/6 yellowish brown silt loam. Topsoil in the plowed field was notably drier and consequently lighter in color, ranging between 10YR 4/4 and 10YR 4/6 brown silt loam. While the soil was generally rocky, dampness in the soils facilitated easy excavation, and only two of the STPs (Y-5 and XX-5; 0.2%) were stopped by rocks at depths of 28 and 33 cm (11.0 and 12.9 in) below the ground surface, respectively. No evidence of charcoal or any soil anomalies were noted as part of the subsurface investigations.

The Keane Stud Farm Precontact Site- This site was identified during the surface inspection of a plowed field in Lot 17 (Figure 4). Two precontact artifacts (SF-4 and SF-5) were recovered 6.5 meters (21.3 ft) apart from one another in the western part of the plowed field (Photos 55 and 56). Both of the artifacts appear to be flake fragments made from white quartzite. A total of 16 STPs were excavated directly over the three surface finds, as well as in one and three meter intervals connecting the finds as shown in Figure 4. One of these additional test pits, STP SF-5/3mE, recovered an additional quartzite flake fragment. No other prehistoric material was recovered from any of these additional STPs. No evidence of charcoal or cultural features was encountered as part of the excavations.

Because of the presence of multiple artifacts within a concentrated area, the find spot was designated a precontact archaeological site. The site boundary is shown in Figure 4. None of the artifacts recovered showed evidence of use wear under light (20x) magnification. Both the prior Phase IA/IB study and the current Phase IB study recovered Lamoka and side notched Brewerton projectile points, suggesting a comparatively high amount of local activity during Middle and Late Archaic times. While lithic reduction is the only activity directly attributable to the artifacts recovered, other activities may have taken place on the site. Current research suggests that small lithic sites like this have the potential to answer significant questions about past lifeways (Funk 1976; Reith 2008). The archaeology of the Amenia area is less studied than other portions of the Hudson Valley. This is partially due to the lack of development in eastern Dutchess County as well as the area's close proximity to the state border. The Keane Stud Farm Precontact Site may relate to sites farther east in the Litchfield Hills, where archaeological occupation better documented (Lavin and Mozzi 1996). Because the Keane Stud Farm Precontact Site holds the potential to address important research questions about the past, it may be eligible for the National Register of Historic Places (NRHP), while the three precontact isolated finds identified as part of the survey do not appear elligible for NRHP inclusion.

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Summary and Recommendations

A Phase IA/IB cultural resources survey has been completed for the proposed Keane Stud Farm Residential Subdivision located in a rural area around Depot Hill Road in the Town of Amenia, Dutchess County, New York. The project involves the creation of residential lots as well as roadways and utility connections. The area of potential effect (APE) for this project includes 108.02 +/- acres of building envelopes, of which approximately 68.93 acres can be plowed and disked. The project also includes approximately 9,147 linear ft of new roadways incorporating a 50 ft right-of-way.

The project involves the creation of residential lots as well as roadways and utility connections. The area of potential effect (APE) for this project includes 108.02 +/- acres of building envelopes, of which approximately 68.93 acres can be plowed and disked. The project also includes approximately 9,147 linear ft (2.8 km) of new roadways incorporating a 50 ft (15 m) right-of-way.

A Phase IA/IB cultural resources survey was previously conducted for portions of the project area in July of 2007 (Birchwood Archaeological Services 2007). Approximately 17.2 acres of the current APE has been previously surveyed as part of this prior study. The current Phase IB study involves includes the examination of the remaining untested portions of the most current project design.

The Phase IB field examinations consisted of a combination of shovel testing and the intensive surface inspection of recently plowed fields within the APE boundaries. Four precontact isolated finds and one precontact archaeological site were identified as part of the current study. Artifacts recovered include three flake fragments made from white quartzite all located within an area measuring approximately 6.5 meters (21.3 ft). Because of the high concentration of artifacts in a discrete area, the finds were incorporated into a precontact archaeological site, designated the Keane Stud Farm Precontact Site. This site may be considered eligible for inclusion in the National Register of Historic Places under Criterion D for its ability to provide important information about the past. In consultation with the project engineers, it was possible to avoid any impact to the site through the redesign of the building envelope for Lot 17.

Based upon the results of the survey, we recommend that no further work is necessary at any of the four isolated precontact finds. The Keane Stud Farm Precontact Site will be avoided through the redesign of the building envelope as shown as a green line on Figure 3. As a result of the redesign, we find that the project will have No Effect on any significant archaeological resources within the project boundaries. We recommend that the proposed project be allowed to proceed and that no additional archaeological studies appear necessary. These recommendations are subject to the review and concurrence of the New York State Office of Parks, Recreation, and Historic Preservation.

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Appendix A.

Figures

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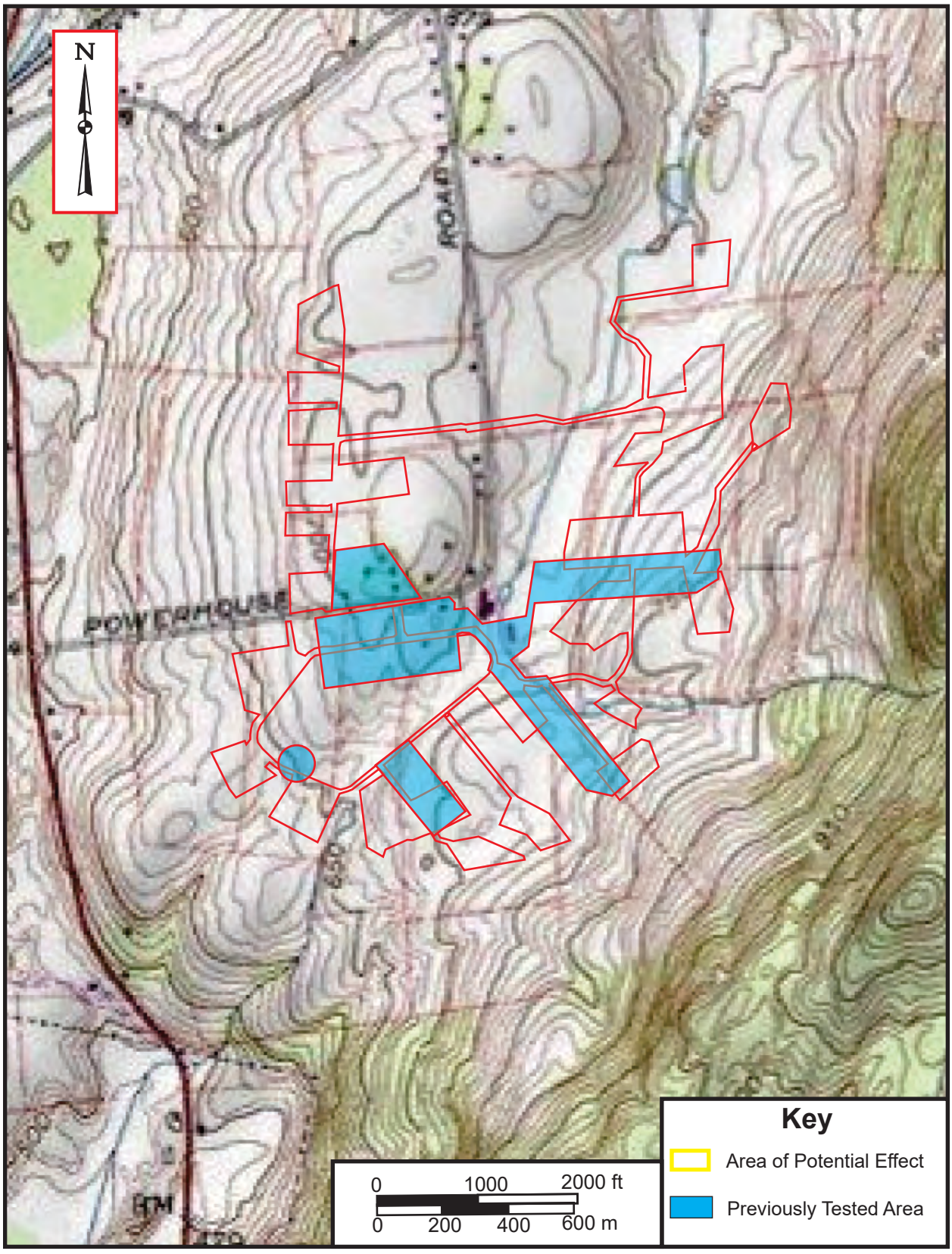


Figure 1. Map showing the location of the project area on USGS Amenia topographic map.

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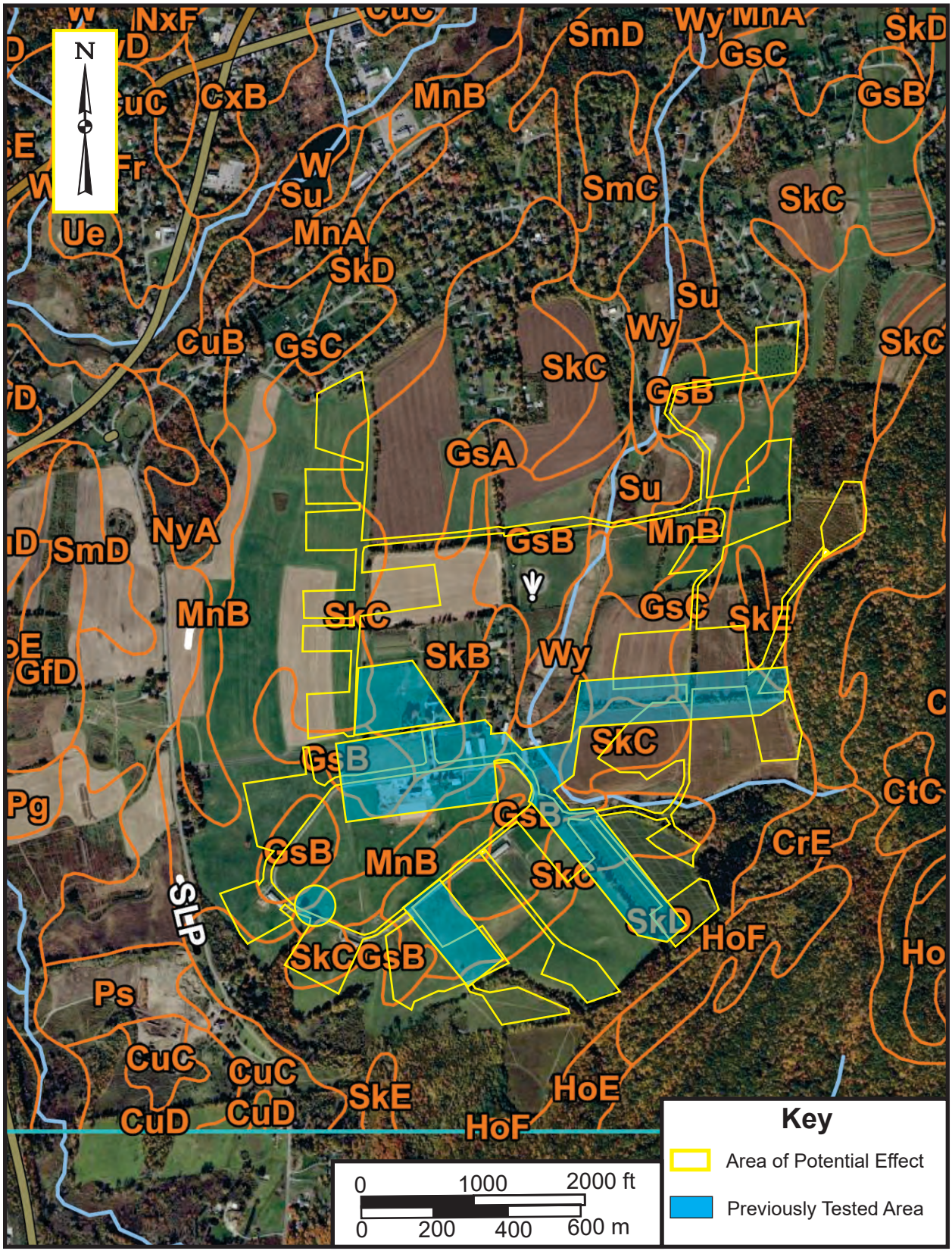


Figure 2. Portion of NRCS soil map with project area indicated.

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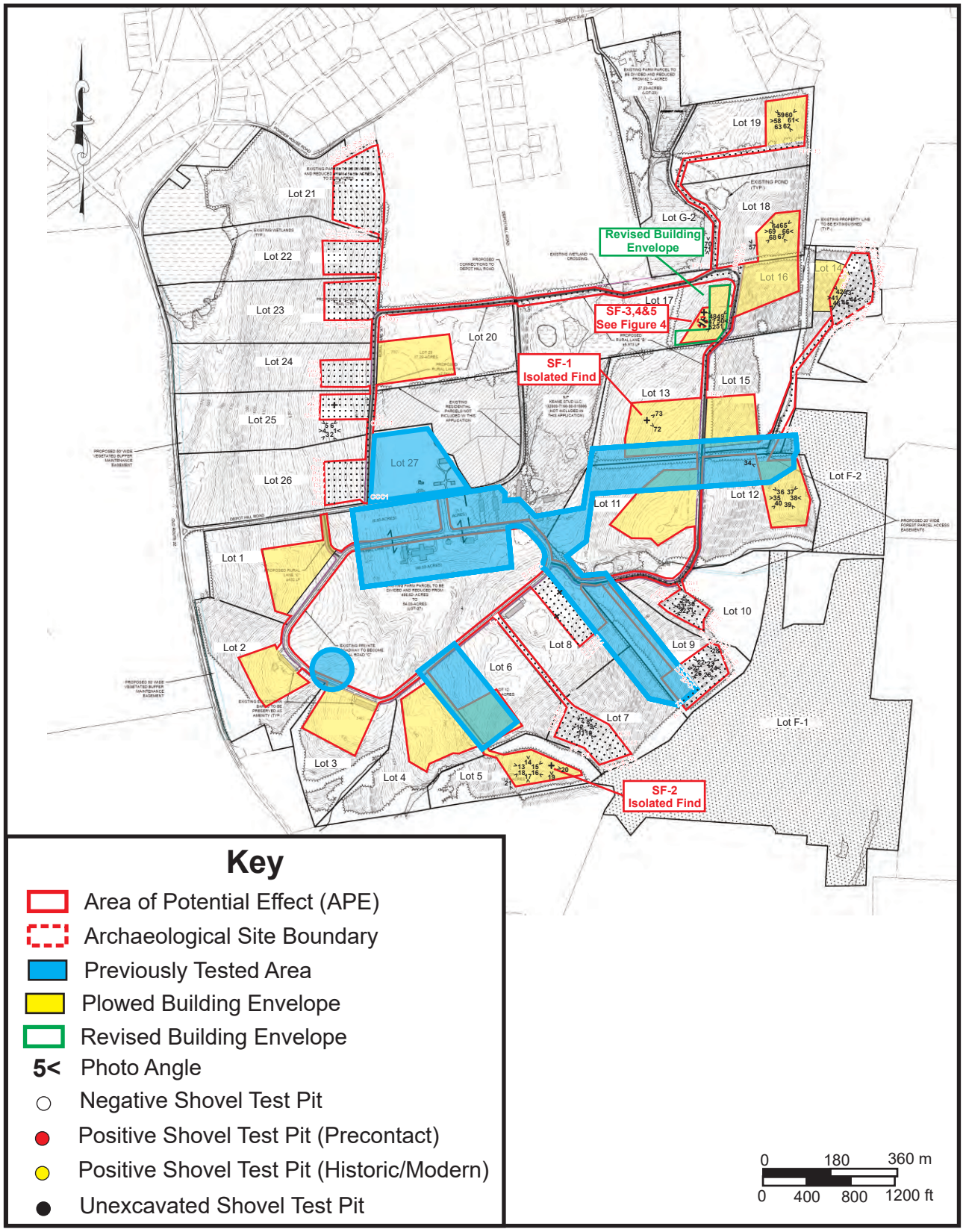


Figure 3. Map showing the location of the Phase IB field investigations within the project boundaries.

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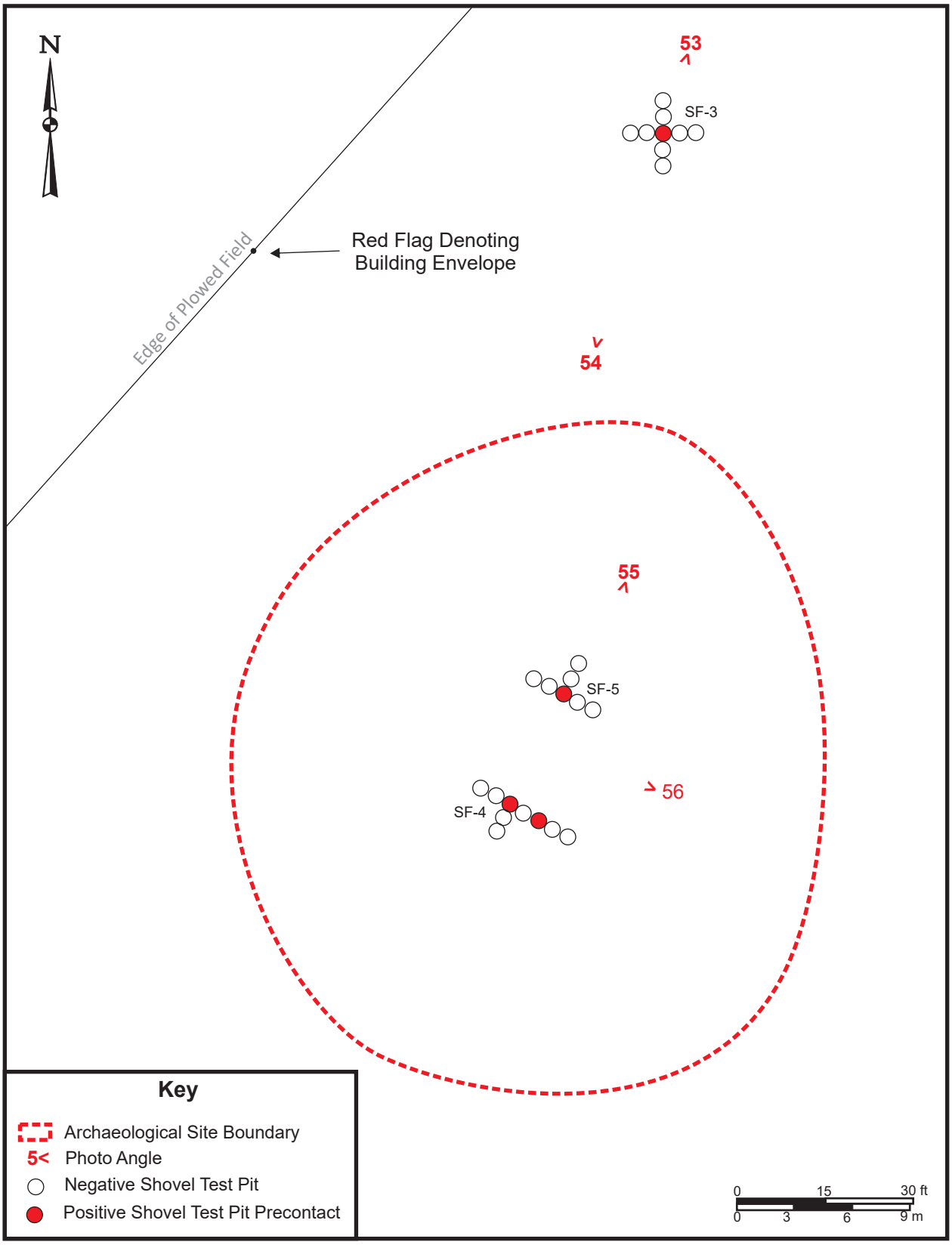


Figure 4. Map showing subsurface testing at the Kean Stud Farm Precontact Site.

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Appendix B.

Photographs

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Photo 1. Portion of panoramic view from Lot 25, facing east.



Photo 2. Portion of panoramic view from Lot 25, facing southeast.

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Photo 3. Portion of panoramic view from Lot 25, facing southwest.



Photo 4. Portion of panoramic view from Lot 25, facing west.

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Photo 5. Portion of panoramic view from Lot 25, facing northwest.



Photo 6. Portion of panoramic view from Lot 25, facing northeast.

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Photo 7. Portion of panoramic view from Lot 7, facing northwest.



Photo 8. Portion of panoramic view from Lot 7, facing northeast.

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Photo 9. Portion of panoramic view from Lot 7, facing east.



Photo 10. Portion of panoramic view from Lot 7, facing southeast.

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Photo 11. Portion of panoramic view from Lot 7, facing southwest.



Photo 12. Portion of panoramic view from Lot 7, facing west.

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Photo 13. Portion of panoramic view from the plowed field at Lot 5, facing northwest.



Photo 14. Portion of panoramic view from the plowed field at Lot 5, facing north.

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Photo 15. Portion of panoramic view from the plowed field at Lot 5, facing northeast.



Photo 16. Portion of panoramic view from the plowed field at Lot 5, facing southeast.

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Photo 17. Portion of panoramic view from the plowed field at Lot 5, facing south.



Photo 18. Portion of panoramic view from the plowed field at Lot 5, facing southwest.

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Photo 19. View of supplemental testing around Surface Find 2 in the plowed field at Lot 5, facing north.



Photo 20. View of Surface Find 2 in the plowed field at Lot 5, facing northwest.

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Photo 21. View of house to the south of Lot 5 on an adjacent parcel, facing southeast.



Photo 22. Portion of panoramic view from Lot 9, facing northwest.

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Photo 23. Portion of panoramic view from Lot 9, facing northeast.



Photo 24. Portion of panoramic view from Lot 9, facing east.

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Photo 25. Portion of panoramic view from Lot 9, facing southeast.



Photo 26. Portion of panoramic view from Lot 9, facing southwest.

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Photo 27. Portion of panoramic view from Lot 9, facing west.



Photo 28. View of rifle targets adjacent to Lot 9, facing northwest.

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Photo 29. Portion of panoramic view from Lot 10, facing north.



Photo 30. Portion of panoramic view from Lot 10, facing northeast.

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Photo 31. Portion of panoramic view from Lot 10, facing southeast.



Photo 32. Portion of panoramic view from Lot 10, facing southwest.

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Photo 33. Portion of panoramic view from Lot 10, facing northwest.



Photo 34. View of bedrock outcropping along the edge of the field in Lot 12, facing east.

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Photo 35. Portion of panoramic view from the plowed field at Lot 12, facing west.



Photo 36. Portion of panoramic view from the plowed field at Lot 12, facing northwest.

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Photo 37. Portion of panoramic view from the plowed field at Lot 12, facing northeast.



Photo 38. Portion of panoramic view from the plowed field at Lot 12, facing east.

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Photo 39. Portion of panoramic view from the plowed field at Lot 12, facing southeast.



Photo 40. Portion of panoramic view from the plowed field at Lot 12, facing southwest.

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Photo 41. Portion of panoramic view from the partially plowed area at Lot 14, facing west.



Photo 42. Portion of panoramic view from the partially plowed area at Lot 14, facing northwest.

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Photo 43. Portion of panoramic view from the partially plowed area at Lot 14, facing northeast.



Photo 44. Portion of panoramic view from the partially plowed area at Lot 14, facing east.

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Photo 45. Portion of panoramic view from the partially plowed area at Lot 14, facing southeast.



Photo 46. Portion of panoramic view from the partially plowed area at Lot 14, facing southwest.

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Photo 47. Portion of panoramic view from the plowed field at Lot 17, facing west.



Photo 48. Portion of panoramic view from the plowed field at Lot 17, facing northwest.

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Photo 49. Portion of panoramic view from the plowed field at Lot 17, facing northeast.



Photo 50. Portion of panoramic view from the plowed field at Lot 17, facing east.

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Photo 51. Portion of panoramic view from the plowed field at Lot 17, facing southeast.



Photo 52. Portion of panoramic view from the plowed field at Lot 17, facing southwest.

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Photo 53. View of Surface Find 3 in the plowed field at Lot 17, facing south.



Photo 54. View of Surface Find 3 in the plowed field at Lot 17, facing north.

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Photo 55. View of Surface Finds 4 and 5 at the Keane Stud Farm Precontact Site, facing south.



Photo 56. View of Surface Finds 4 and 5 at the Keane Stud Farm Precontact Site, facing northwest.

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Photo 57. View of pond and pavilion on Lot 18, facing northwest.



Photo 58. Portion of panoramic view from plowed field at Lot 19, facing west.

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Photo 59. Portion of panoramic view from plowed field at Lot 19, facing northwest.



Photo 60. Portion of panoramic view from plowed field at Lot 19, facing northeast.

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Photo 61. Portion of panoramic view from plowed field at Lot 19, facing east.



Photo 62. Portion of panoramic view from plowed field at Lot 19, facing southeast.

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Photo 63. Portion of panoramic view from plowed field at Lot 19, facing southwest.



Photo 64. Portion of panoramic view from the plowed field at Lot 18, facing northwest.

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Photo 65. Portion of panoramic view from the plowed field at Lot 18, facing northeast.



Photo 66. Portion of panoramic view from the plowed field at Lot 18, facing east.

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Photo 67. Portion of panoramic view from the plowed field at Lot 18, facing southeast.



Photo 68. Portion of panoramic view from the plowed field at Lot 18, facing southwest.

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Photo 69. Portion of panoramic view from the plowed field at Lot 18, facing west.



Photo 70. View of cattle crossing along the existing roadway, facing north.

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Photo 71. View of cattle crossing along the existing roadway, facing south.



Photo 72. View of supplemental testing around Surface Find 1 at Lot 13, facing northwest.

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Photo 73. View of supplemental testing around Surface Find 1 at Lot 13, facing southwest.

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Photo 74. Precontact artifacts recovered as part of the Phase IB survey. 1= (SF-1) quartzite flake fragment recovered from Lot 13. 2= (SF-2) projectile point fragment recovered from Lot 5. 3= (SF-3) flake fragment recovered from Lot 17. 4 = (SF-4) flake fragment recovered from Lot 17. 5 = (SF-5) flake fragment recovered from Lot 17. 5 = (SF-5) fragment of quartzite shatter recovered from Lot 17. 6= small chert flake fragment recovered from STP S-4. 7= projectile point recovered from STP Q-7. 8= flake fragment recovered from STP KK-7. 9= flake fragment recovered from STP SF-5/3mE.

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Appendix C.

Shovel Test Pit Records

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Appendix C.

STP Records

STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A-1	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-1	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-2	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-2	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-3	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-4	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-4	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-5	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-5	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-6	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-6	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-7	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-7	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-8	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-8	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-9	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-9	2	21	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-10	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-10	2	22	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-11	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-11	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-12	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-12	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-13	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-13	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
A-14	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-14	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-15	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-15	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-16	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-16	2	20	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-17	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-17	2	24	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-18	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-18	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-19	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-19	2	21	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-20	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-20	2	23	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-21	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-21	2	24	55	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-22	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-22	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
A-23	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
A-23	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-1	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-1	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-2	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-3	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-3	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-4	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-4	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-5	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-5	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-6	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-6	2	19	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-7	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B-7	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-8	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-8	2	19	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-9	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-10	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-10	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-11	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-11	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-12	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-12	2	20	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-13	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-13	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-14	1	0	12	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-14	2	12	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-15	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-15	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-16	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-16	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-17	1	0	11	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-17	2	11	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-18	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-18	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-19	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-19	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-20	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-20	2	10	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-21	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-21	2	10	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-22	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-22	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-23	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-23	2	14	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B-24	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-24	2	22	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-25	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-25	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-26	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-26	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-27	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-27	2	15	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-28	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-28	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-29	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-29	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-30	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-30	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-31	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-31	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-32	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-32	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-33	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-33	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-34	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-34	2	14	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-35	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-35	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-36	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-36	2	14	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-37	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-37	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-38	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-38	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-39	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-39	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-40	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
B-40	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-41	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-41	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-42	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-42	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-43	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-43	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-44	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-44	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
B-45	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
B-45	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-1	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-1	2	24	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-2	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-2	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-3	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-3	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-4	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-4	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-5	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-5	2	20	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-6	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-7	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-8	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-8	2	18	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-9	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-9	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-10	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-10	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-11	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-11	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
C-12	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-12	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-13	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-13	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-14	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-14	2	15	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-15	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-15	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-16	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-16	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-17	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-17	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-18	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-18	2	16	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-19	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-19	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-20	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-20	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-21	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-21	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-22	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-22	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-23	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-23	2	17	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-24	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-24	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-25	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-25	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-26	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-26	2	19	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
C-27	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
C-27	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
D-1	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-2	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-2	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-3	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-3	2	13	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-4	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-4	2	14	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-5	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-5	2	15	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-6	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-6	2	13	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-7	1	0	12	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-7	2	12	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-8	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-8	2	15	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-9	1	0	11	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-9	2	11	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-10	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-10	2	14	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-11	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-11	2	14	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-12	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-12	2	13	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-13	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-13	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-14	1	0	46	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-14	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-15	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-15	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-16	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-16	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-17	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-17	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
D-18	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-18	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-19	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-19	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-20	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-20	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-21	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-21	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-22	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-22	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-23	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-23	2	20	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-24	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-24	2	18	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-25	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-25	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
D-26	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
D-26	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-1	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-1	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-2	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-3	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-4	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-5	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-5	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-6	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-6	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-7	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-7	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-8	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E-8	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-9	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-10	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-10	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-11	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-11	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-12	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-12	2	15	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-13	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-13	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-14	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-14	2	16	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-15	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-15	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-16	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-16	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-17	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-17	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-18	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-18	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-19	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-19	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-20	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-20	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-21	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-21	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-22	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-22	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-23	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-23	2	15	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-24	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-24	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
E-25	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
E-25	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
E-26	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	fence staple reburied
E-26	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-1	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-2	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-3	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-4	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-5	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-5	2	21	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-6	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-7	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-8	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-8	2	17	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-9	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-10	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	1 glass reburied
F-10	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-11	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-11	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-12	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-12	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-13	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-13	2	22	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-14	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-14	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-15	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
F-15	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-16	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-16	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-17	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-17	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-18	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-18	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-19	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-19	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-20	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-20	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-21	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-21	2	19	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-22	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-22	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-23	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-23	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
F-24	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
F-24	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-1	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-1	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-2	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-2	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-3	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-4	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-5	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-5	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-6	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-6	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-7	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-7	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
G-8	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-8	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-9	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-10	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-10	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-11	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-11	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-12	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-12	2	15	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-13	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-13	2	13	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-14	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-14	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-15	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-15	2	16	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-16	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-16	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-17	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-17	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-18	1	0	11	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-18	2	11	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-19	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-19	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-20	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-20	2	9	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-21	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-21	2	8	32	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-22	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-22	2	9	32	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-23	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
G-23	2	23	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
G-24	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
G-24	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-1	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-1	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-2	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-3	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-3	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-4	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-4	2	15	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-5	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-5	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-6	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-7	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-7	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-8	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-8	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-9	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-10	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-10	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-11	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-11	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-12	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-12	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-13	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-13	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-14	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-14	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-15	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-15	2	21	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-16	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-16	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
H-17	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-17	2	23	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-18	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-18	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-19	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-19	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-20	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-20	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-21	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-21	2	23	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-22	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-22	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
H-23	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
H-23	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-1	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-1	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-2	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-3	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-3	2	20	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-4	2	17	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-5	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-5	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-6	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-6	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-7	2	18	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-8	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-8	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-9	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-9	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-10	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
I-10	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-11	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-11	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-12	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-12	2	23	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-13	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-13	2	21	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-14	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-14	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-15	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-15	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-16	1	0	6	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-16	2	6	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-17	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-17	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-18	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-18	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-19	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-19	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-20	1	0	25	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-20	2	25	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-21	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-21	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
I-22	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
I-22	2	7	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-1	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-1	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-2	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-3	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-4	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-4	2	18	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
J-5	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	2 glass reburied
J-5	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-6	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-7	2	19	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-8	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-8	2	15	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-9	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-10	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-10	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-11	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-11	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-12	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-12	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
J-13	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
J-13	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-1	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-1	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-2	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-3	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-4	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-4	2	7	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-5	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-5	2	10	31	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-6	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-6	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-7	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-8	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
K-8	2	19	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-9	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-9	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-10	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-10	2	20	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-11	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-11	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-12	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-13	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-13	2	7	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-14	1	0	11	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-14	2	11	31	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-15	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-15	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-16	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-16	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-17	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-17	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-18	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-18	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-19	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-19	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-20	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-20	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-21	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-21	2	16	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-22	1	0	11	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-22	2	11	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-23	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-23	2	7	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-24	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-24	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
K-25	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-25	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-26	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-26	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-27	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-27	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-28	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-28	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-29	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-29	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
K-30	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
K-30	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-1	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-1	2	19	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-2	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-2	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-3	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-3	2	13	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-4	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-4	2	16	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-5	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-5	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-6	2	16	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-7	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-7	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-8	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-8	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-9	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-10	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-10	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-11	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
L-11	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
L-12	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
L-12	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-1	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-2	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-3	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-3	2	13	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-4	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	rifle shell reburied
M-4	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-5	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-5	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-6	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-6	2	18	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-7	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-7	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-8	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-8	2	20	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-9	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-9	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-10	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-10	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-11	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-11	2	15	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-12	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-12	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
M-13	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
M-13	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-1	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-1	2	19	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-2	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
N-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-3	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-4	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-4	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-5	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-5	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-6	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-6	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-7	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-7	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-8	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-8	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-9	2	18	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-10	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-10	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-11	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-11	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
N-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
N-12	2	17	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-1	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-1	2	7	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-2	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-2	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-3	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-3	2	7	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-4	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-4	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-5	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-5	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-6	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-6	2	8	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-7	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
O-7	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-8	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-8	2	7	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-9	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-9	2	7	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-10	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-10	2	7	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
O-11	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
O-11	2	8	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-1	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-1	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-2	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-3	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-4	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-4	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-5	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-5	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-6	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-6	2	19	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-7	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
P-8	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
P-8	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-1				not dug road			
Q-2	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-2	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-3	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-3	2	22	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-4	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-4	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-5	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
Q-5	2	23	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-6	1	0	26	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-6	2	26	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	flake
Q-7	2	23	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 1mN	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 1mN	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 3mn	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 3mn	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 1mE	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 1mE	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 3mE	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 3mE	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 1mS	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 1mS	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 3mS	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 3mS	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 1mW	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 1mW	2	21	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-7 3mW	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-7 3mW	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-8	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-8	2	24	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-9	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-9	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-10	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-10	2	22	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-11	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-11	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-12	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-12	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Q-13	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-13	2	24	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
Q-14	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
Q-14	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-1				not dug road			
R-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-2	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-3	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-4	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-4	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-5	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-5	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-6	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-6	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-7	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-8	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-8	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-9	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-9	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-10	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-10	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-11	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-11	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-12	2	17	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-13	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-13	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
R-14	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
R-14	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-1				not dug road			
S-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-2	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
S-3	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	quartzite point
S-4	2	15	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 1mN	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 1mN	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 3mN	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 3mN	2	10	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 1mE	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 1mE	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 3mE	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 3mE	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 1mS	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 1mS	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 3mS	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 3mS	2	19	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 1mW	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 1mW	2	7	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-4 3mW	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-4 3mW	2	8	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-5	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-5	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-6	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-6	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-7	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-8	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-8	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-9	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-9	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-10	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-10	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-11	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-11	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
S-12	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-12	2	16	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-13	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-13	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
S-14	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
S-14	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-1				not dug road			
T-2	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-2	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-3	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-3	2	8	28	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-4	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-4	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-5	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-5	2	9	32	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-6	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-6	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-7	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-7	2	10	29	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-8	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-8	2	8	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-9	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-9	2	9	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-10	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-10	2	8	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-11	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-11	2	7	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-12	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-12	2	8	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-13	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-13	2	10	31	10YR 5/6 yellowish brown silt loam	B Horizon	N	
T-14	1	0	6	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
T-14	2	6	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
U-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-1	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
U-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-2	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
U-3	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-3	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
U-4	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-4	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
U-5	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-5	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
U-6	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
U-6	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-1	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-1	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-2	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-2	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-3	1	0	14	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-3	2	14	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-4	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-4	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-5	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-5	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-6	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-6	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
V-7	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
V-7	2	21	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-1	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-1	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-2	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-2	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-3	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-3	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-4	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
W-4	2	23	55	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-5	1	0	14	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-5	2	14	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-6	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-6	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
W-7	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
W-7	2	21	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-1	1	0	14	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-1	2	14	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-2	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-2	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-3	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-3	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-4	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-4	2	21	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-5	1	0	26	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-5	2	26	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
X-6	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
X-6	2	22	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Y-1	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-1	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Y-2	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-2	2	18	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Y-3	1	0	7	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-3	2	7	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Y-4	1	0	24	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-4	2	24	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Y-5	1	0	11	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-5	2	11	28	10YR 5/6 yellowish brown silt loam	B Horizon	N	stopped by rocks
Y-6	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
Y-6	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-1	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-1	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
Z-2	1	0	13	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-2	2	13	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-3	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-3	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-4	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-4	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-5	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-5	2	9	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-6	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-6	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-7	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-7	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-8	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-8	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-9	1	0	13	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-9	2	13	32	10YR 5/6 yellowish brown silt loam	B Horizon	N	
Z-10	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
Z-10	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-1	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-1	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-2	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-2	2	18	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-3	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-3	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-4	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-4	2	21	55	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-5	1	0	25	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-5	2	25	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-6	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-6	2	22	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-7	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-7	2	21	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-8	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
AA-8	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AA-9	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
AA-9	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-1	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-1	2	23	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-2	1	0	24	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-2	2	24	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-3	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-3	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-4	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-4	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-5	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-5	2	21	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-6	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-6	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-7	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-7	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-8	1	0	25	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-8	2	25	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BB-9	1	0	25	10YR 4/2 grayish brown silt loam	A Horizon	N	
BB-9	2	25	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-1	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-1	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-2	1	0	7	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-2	2	7	35	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-3	1	0	13	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-3	2	13	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-4	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-4	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-5	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-5	2	9	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-6	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-6	2	21	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
CC-7	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-7	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CC-8	1	0	15	10YR 4/2 grayish brown silt loam	A Horizon	N	
CC-8	2	15	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-1	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-1	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-2	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-3	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-4	1	0	27	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-4	2	27	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-5	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-5	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-6	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-6	2	22	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DD-7	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DD-7	2	22	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-1	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-1	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-2	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-2	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-3	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-3	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-4	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-4	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-5	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-5	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EE-6	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
EE-6	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-1	1	0	7	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-1	2	7	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-2	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
FF-2	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-3	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-3	2	9	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-4	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-4	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-5	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-5	2	16	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-6	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-6	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-7	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-7	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-8	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-8	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FF-9	1	0	14	10YR 4/2 grayish brown silt loam	A Horizon	N	
FF-9	2	14	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-1	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-1	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-2	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-2	2	22	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-3	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-3	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-4	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-4	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-5	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-5	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-6	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-6	2	23	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-7	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-7	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-8	1	0	26	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-8	2	26	57	10YR 5/6 yellowish brown silt loam	B Horizon	N	
GG-9	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
GG-9	2	21	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
HH-1	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-1	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-2	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-2	2	10	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-3	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-3	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-4	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-4	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-5	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-5	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-6	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-6	2	10	31	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-7	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-7	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-8	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-8	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
HH-9	1	0	14	10YR 4/2 grayish brown silt loam	A Horizon	N	
HH-9	2	14	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-1	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-1	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-2	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-2	2	20	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-3	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-3	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-4	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-4	2	20	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-5	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-5	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-6	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-6	2	21	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-7	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-7	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-8	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
II-8	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
II-9	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
II-9	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-1	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-1	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-2	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-2	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-3	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-3	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-4	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-4	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-5	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-5	2	19	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-6	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	Y	1 coal reburied
JJ-6	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-7	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-7	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-8	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-8	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
JJ-9	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
JJ-9	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-1	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-1	2	8	26	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-2	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-2	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-3	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-3	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-4	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-4	2	8	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-5	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-5	2	10	31	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-6	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-6	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
KK-7	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	quartzite flake
KK-7	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 1mN	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 1mN	2	10	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 3mN	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 3mN	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 1mE	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 1mE	2	9	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 3mE	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 3mE	2	9	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 1mS	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 1mS	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 3mS	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 3mS	2	19	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 1mW	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 1mW	2	22	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-7 3mW	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-7 3mW	2	20	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-8	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-8	2	10	34	10YR 5/6 yellowish brown silt loam	B Horizon	N	
KK-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
KK-9	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-1	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-1	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-2	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-2	2	19	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-3	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-3	2	20	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-4	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-4	2	20	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-5	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-5	2	18	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-6	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
LL-6	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-7	2	19	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-8	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-8	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
LL-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
LL-9	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-1	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-1	2	20	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-2	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-2	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-3	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-3	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-4	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-4	2	23	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-5	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-5	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-6	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-6	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-7	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-7	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-8	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-8	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
MM-9	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
MM-9	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-1	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-2	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-2	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-3	1	0	7	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-3	2	7	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-4	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-4	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
NN-5	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-5	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-6	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
NN-7	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
NN-7	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-1	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-1	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-2	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-2	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-3	1	0	12	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-3	2	12	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-4	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-4	2	21	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-5	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-5	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-6	2	16	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
OO-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
OO-7	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-1	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	Y	aluminum foil discarded
PP-1	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-2	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
PP-2	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-3	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
PP-3	2	22	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-4	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
PP-4	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-5	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
PP-5	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-6	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
PP-6	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
PP-7	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
PP-7	2	21	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-1	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-1	2	8	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-2	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-2	2	9	29	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-3	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-3	2	8	25	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-4	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-4	2	9	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-5	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-5	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-6	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-6	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
QQ-7	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
QQ-7	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-1	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-1	2	8	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-2	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-2	2	8	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-3	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-3	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-4	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-4	2	8	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-5	1	0	10	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-5	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-6	1	0	8	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-6	2	8	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
RR-7	1	0	9	10YR 4/2 grayish brown silt loam	A Horizon	N	
RR-7	2	9	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-1	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-1	2	17	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-2	1	0	16	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-2	2	16	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
SS-3	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-3	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-4	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-4	2	20	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-5	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-5	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-6	1	0	17	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-6	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SS-7	1	0	19	10YR 4/2 grayish brown silt loam	A Horizon	N	
SS-7	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-1	1	0	23	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-1	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-2	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-2	2	22	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-3	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-3	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-4	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-4	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-5	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-5	2	21	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-6	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-6	2	21	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
TT-7	1	0	18	10YR 4/2 grayish brown silt loam	A Horizon	N	
TT-7	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
UU-1	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
UU-1	2	21	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
UU-2	1	0	20	10YR 4/2 grayish brown silt loam	A Horizon	N	
UU-2	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
VV-1	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	
VV-1	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
VV-2	1	0	21	10YR 4/2 grayish brown silt loam	A Horizon	N	
VV-2	2	21	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
VV-3	1	0	22	10YR 4/2 grayish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
VV-3	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
WW-1	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
WW-1	2	10	30	10YR 5/6 yellowish brown silt loam	B Horizon	N	
WW-2	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
WW-2	2	10	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	
WW-3	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
WW-3	2	9	36	10YR 5/6 yellowish brown silt loam	B Horizon	N	
WW-4	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
WW-4	2	9	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-1	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-1	2	21	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-2	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-3	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-4	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-4	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-5	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-5	2	19	33	10YR 5/6 yellowish brown silt loam	B Horizon	N	stopped by rocks
XX-6	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-6	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-7	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-7	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-8	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-8	2	15	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-9	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-9	2	14	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-10	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-10	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-11	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-11	2	15	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-12	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
XX-13	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-13	2	10	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-14	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-14	2	14	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-15	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-15	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-16	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-16	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-17	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-17	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-18	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-18	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-19	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-19	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-20	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-20	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-21	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-21	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-22	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-22	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-23	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-23	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-24	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-24	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-25	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-25	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-26	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-26	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-27	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-27	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-28	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-28	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-29	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
XX-29	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-30	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-30	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-31	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-31	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-32	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-32	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-33	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-33	2	16	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-34	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-34	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
XX-35	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
XX-35	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-1	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-2	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-2	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-3	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-4	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-4	2	19	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-5	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-5	2	22	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-6	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-6	2	21	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-7	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-7	2	19	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-8	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-8	2	23	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-9	2	18	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-10	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-10	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
YY-11	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-11	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
YY-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
YY-12	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-1	1	0	26	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-1	2	26	55	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-2	1	0	10	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-2	2	10	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-3	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-3	2	23	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-4	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-4	2	9	32	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-5	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-5	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-6	1	0	9	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-6	2	9	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-7	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-7	2	22	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-8	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-8	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
ZZ-9	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
ZZ-9	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-1	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
AAA-1	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-2	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
AAA-2	2	19	41	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-3	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
AAA-3	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-4	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
AAA-4	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-5	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
AAA-5	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
AAA-6	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
AAA-6	2	19	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BBB-1	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
BBB-1	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BBB-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
BBB-2	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
BBB-3	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
BBB-3	2	15	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-1	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-1	2	14	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-2	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-2	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-3	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-4	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-4	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-5	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-5	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-6	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-6	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-7	2	18	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-8	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-8	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-9	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-9	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-10	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-10	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-11	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-11	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-12	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
CCC-13	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-13	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
CCC-14	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
CCC-14	2	14	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-1	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-1	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-2	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-2	2	15	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-3	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-3	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-4	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-5	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-5	2	15	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-6	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-6	2	14	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-7	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-7	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-8	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-8	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-9	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-9	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-10	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-10	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-11	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-11	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-12	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-12	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-13	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-13	2	14	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-14	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-14	2	15	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-15	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-15	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-16	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
DDD-16	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-17	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-17	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-18	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-18	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-19	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-19	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-20	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-20	2	14	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-21	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-21	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-22	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-22	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-23	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-23	2	15	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-24	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-24	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-25	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-25	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-26	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-26	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-27	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-27	2	14	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-28	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-28	2	16	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-29	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-29	2	15	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-30	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-30	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-31	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-31	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-32	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-32	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
DDD-33	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-33	2	14	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-34	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-34	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-35	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-35	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-36	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-36	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-37	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-37	2	19	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-38	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-38	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-39	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-39	2	15	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-40	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-40	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-41	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-41	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-42	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-42	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-43	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-43	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-44	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-44	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-45	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-45	2	14	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-46	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-46	2	19	51	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-47	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-47	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-48	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-48	2	18	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-49	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
DDD-49	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-50	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-50	2	19	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-51	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-51	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-52	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-52	2	14	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-53	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-53	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-54	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-54	2	17	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-55	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-55	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-56	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-56	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-57	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-57	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-58	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-58	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-59	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-59	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-60	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-60	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-61	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-61	2	14	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-62	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-62	2	17	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-63	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-63	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
DDD-64	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
DDD-64	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-1	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-1	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
EEE-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-2	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-3	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-4	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-4	2	18	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-5	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-5	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-6	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-6	2	18	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-7	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-8	1	0	13	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-8	2	13	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-9	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-9	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-10	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-10	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-11	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-11	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-12	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-12	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-13	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-13	2	21	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-14	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-14	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-15	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-15	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-16	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-16	2	15	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-17	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-17	2	19	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-18	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
EEE-18	2	21	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-19	1	0	14	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-19	2	14	42	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-20	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-20	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-21	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-21	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-22	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-22	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-23	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-23	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-24	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-24	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
EEE-25	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
EEE-25	2	21	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-1	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-1	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-2	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-2	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-3	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-3	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-4	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-4	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-5	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-5	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-6	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-6	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-7	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-7	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-8	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-8	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-9	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-9	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
FFF-10	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-10	2	19	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-11	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-11	2	16	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-12	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-12	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-13	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-13	2	19	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-14	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-14	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-15	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-15	2	17	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-16	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-16	2	21	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-17	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-17	2	20	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-18	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-18	2	21	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-19	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-19	2	18	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-20	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-20	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-21	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-21	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-22	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-22	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-23	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-23	2	15	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-24	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-24	2	20	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-25	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-25	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-26	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

SEE NOTE ON PAGE 1

STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
FFF-26	2	20	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-27	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-27	2	16	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-28	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-28	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-29	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-29	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-30	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-30	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-31	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-31	2	17	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-32	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-32	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-33	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-33	2	20	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-34	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-34	2	16	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-35	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-35	2	17	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-36	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-36	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-37	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-37	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-38	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-38	2	17	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-39	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-39	2	18	47	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-40	1	0	15	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-40	2	15	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-41	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-41	2	16	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
FFF-42	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-42	2	18	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	

SEE NOTE ON PAGE 1

STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
FFF-43	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
FFF-43	2	20	49	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-1	1	0	16	10YR 4/4 brown silt loam	A Horizon	N	
SF-1	2	16	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 1mN	1	0	15	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 1mN	2	15	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 3mN	1	0	17	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 3mN	2	17	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 1mE	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 1mE	2	18	43	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 3mE	1	0	17	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 3mE	2	17	47	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 1mS	1	0	19	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 1mS	2	19	43	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 3mS	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 3mS	2	18	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 1mW	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 1mW	2	20	48	10YR 4/6 brown silt loam	B Horizon	N	
SF-1 3mW	1	0	17	10YR 4/4 brown silt loam	A Horizon	N	
SF-1 3mW	2	17	46	10YR 4/6 brown silt loam	B Horizon	N	
SF-2	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-2	2	20	48	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 1mN	1	0	19	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 1mN	2	19	49	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 3mN	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 3mN	2	20	50	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 1mE	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 1mE	2	18	46	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 3mE	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 3mE	2	18	47	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 1mS	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 1mS	2	20	48	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 3mS	1	0	17	10YR 4/4 brown silt loam	A Horizon	N	

SEE NOTE ON PAGE 1

STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
SF-2 3mS	2	17	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 1mW	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 1mW	2	20	49	10YR 4/6 brown silt loam	B Horizon	N	
SF-2 3mW	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-2 3mW	2	18	46	10YR 4/6 brown silt loam	B Horizon	N	
SF-3	1	0	24	10YR 4/4 brown silt loam	A Horizon	N	
SF-3	2	24	50	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 1mN	1	0	20	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 1mN	2	20	47	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 3mN	1	0	15	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 3mN	2	15	38	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 1mE	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 1mE	2	18	45	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 3mE	1	0	21	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 3mE	2	21	48	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 1mS	1	0	18	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 1mS	2	18	49	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 3mS	1	0	19	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 3mS	2	19	54	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 1mW	1	0	15	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 1mW	2	15	40	10YR 4/6 brown silt loam	B Horizon	N	
SF-3 3mW	1	0	10	10YR 4/4 brown silt loam	A Horizon	N	
SF-3 3mW	2	10	40	10YR 4/6 brown silt loam	B Horizon	N	
SF-4	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4	2	17	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 1mN	1	0	20	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 1mN	2	20	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 3mN	1	0	27	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 3mN	2	27	61	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 1MmE	1	0	5	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 1MmE	2	40	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 3MmE	1	0	5	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 3MmE	2	5	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
SF-4 1mS	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 1mS	2	19	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 3mS	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 3mS	2	19	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 1mW	1	0	18	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 1mW	2	18	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-4 3mW	1	0	17	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-4 3mW	2	17	38	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5	1	0	5	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5	2	5	40	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 1mE	1	0	5	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 1mE	2	5	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 3mE	1	0	19	10YR 4/3 dull yellowish brown silt loam	A Horizon	Y	1 flake
SF-5 3mE	2	19	48	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 5mE	1	0	27	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 5mE	2	27	44	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 7mE	1	0	21	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 7mE	2	21	45	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 1mS	1	0	5	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 1mS	2	5	39	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 3mS	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 3mS	2	22	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 1mW	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 1mW	2	24	54	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-5 3mW	1	0	23	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-5 3mW	2	23	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6	1	0	16	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6	2	16	37	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 1mN	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6 1mN	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 3mN	1	0	8	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6 3mN	2	8	43	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 1mE	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	

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STP	Lvl	from (cm)	to (cm)	Soil Description	Soil Interpretation	Artifacts (Y/N)	Comments
SF-6 1mE	2	22	52	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 3mE	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6 3mE	2	22	46	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 1mW	1	0	24	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6 1mW	2	24	53	10YR 5/6 yellowish brown silt loam	B Horizon	N	
SF-6 3mW	1	0	22	10YR 4/3 dull yellowish brown silt loam	A Horizon	N	
SF-6 3mW	2	22	50	10YR 5/6 yellowish brown silt loam	B Horizon	N	

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Appendix D.

Artifact Catalog

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Appendix D.

Artifact Catalog

Cat #.	Provenience	Level	Depth from	to	Qty.	Material	Description / Object	Mass (g)	Comments
1	SF-1				1	QUARTZITE	FLAKE FRAGMENT	1.3	
2	SF-2				1	QUARTZITE	PROJECTILE POINT FRAGMENT	4.3	SIDE NOTCHED
3	SF-3				1	QUARTZITE	FLAKE FRAGMENT	2.8	
4	SF-4				1	QUARTZITE	FLAKE FRAGMENT	7.6	
5	SF-5				1	QUARTZITE	SHATTER	5.8	
6	S-4	1	0	15	1	QUARTZITE	FLAKE FRAGMENT	0.3	
7	Q-7	1	0	23	1	QUARTZITE	PROJECTILE POINT	5.5	LAMOKA
8	KK-7	1	0	10	1	QUARTZITE	FLAKE FRAGMENT	2.4	
9	SF-5/3mE	1	0	19	1	QUARTZITE	FLAKE FRAGMENT	10.2	

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APPENDIX F

ADDITIONAL CONSERVATION ANALYSIS EXHIBITS

Conservation Resource Impact Analysis Summary

Keane Stud Subdivision – Conservation Area(s) Exhibit, dated 5/4/2023

Depot Hill Farm Development – RDO Alternative Land Use, dated 12/19/2007

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Keane Stud Subdivision
Conservation Resources Impact Analysis Summary

Conservation Item	Proposed Keane Stud Conventional Subdivision	No Build / No Action	Permissible Conventional Subdivision	Conservation Subdivision ---------- w/ Density Bonus	Depot Hill Farm/ Conservation Subdivision Alternative Buildout	RDO – Depot Hill Alternative Land Use (2009) (Only Parcel #403720)
Density						
Total # of Lots	• 26 new agricultural development parcels lots • 1 equestrian/ agricultural parcel • 1 existing developed (ag) residential parcel • 1 existing farm parcel w/ Fed. Wetland Easement • 2 conservation parcels	4 existing parcels	48 residential lots	94 residential lots --- 155 residential lots	137 residential lots (Depot Hill) 34 residential lots (Conservation Subdivision) 171 total residential lots	170 townhouse units 200 guest hotel/spa/ 400-seat performing arts center
Total Conservation Area (acres | %)	559.5 | 79.2%[9]	N/A	N/A	352.5 | 50.0% to 493.4 | 70%	519.1 | 73.6%	360.6 | 80% (#403720 Only)
Approx. Number of New Residents[1,2]	±104	±19 residents (3 new, 3 existing residences)	±192	±376 --- ±620	±684	±680
Approx. Number of School Age Children[8]	±23	±5	±42	±82 --- ±135	±149	±148
Average Lot Size compared to Existing Lot Acreage (Acres)	±23-acres	Existing Lots. No change.	RR:10 acres RA: 5 acres	Min Lot Size: 0.18-acres (8,000 SF)	Min Lot Size: 0.18-acres (8,000 SF)	Min Lot Size: 0.18-acres (8,000 SF)
Anticipated Water Demand/Wastewater Generation for Residential Purposes (gallons per day)[3,4]	11,440 (gpd)	2,090 (gpd) (19 total bedrooms)	21,120 (gpd)	41,360 (gpd) --- 68,200 (gpd)	75,240+ (gpd) (Not including non-residential RDO uses.)	74,800+ (gpd) (Assumed figure is 2-3x by Alternative RDO development.)
Increased Traffic Generation (AM and PM peak hours vehicle trips)[3,5]	AM Peak: 19.5 PM Peak: 26.3	AM Peak: 4.5 PM Peak: 6.1	AM Peak: 36.0 PM Peak: 48.5	AM Peak: 70.5 PM Peak: 94.9 --- AM Peak: 116 PM Peak: 157	AM Peak: 128.3+ PM Peak: 172.7+ (Not including non-residential RDO uses.)	AM Peak: 127.5+ PM Peak: 171.7+ (Assumed figure is 2-3x by Alternative RDO development.)

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Keane Stud Subdivision
Conservation Resources Impact Analysis Summary

Increase in Municipal Solid Waste Generation[3,6] (pounds per day)	425.36 (lbs/day)	77.71 (lbs/day)	785.28 (lbs/day)	1,537.8 (lbs/day) ——————— 2,535.8 (lbs/day)	2,797.56+ (lbs/day)	2,781.2+ (lbs/day) (Assumed figure is 2-3x by Alternative RDO development.)
Annual Electricity Consumption (kilowatt hours)[3,7]	276,432 (kWh)	63,792 (kWh)	510,336 (kWh)	998,562 (kWh) ——————— 1,647,960 (kWh)	1,818,072+ (kWh)	1,807,440+ (kWh) (Assumed figure is 2-3x by Alternative RDO development.)
Supporting Infrastructure Required	Rural Lanes	None Required	Rural Lanes	• Rural Lanes • Wastewater Treatment Plant • Water Tower • Sidewalks • Street Lighting	• Rural Lanes • Wastewater Treatment Plant • Water Tower • Residential Garages • Private Community Center • Sidewalks • Street Lighting	• Rural Lanes • Wastewater Treatment Plant • Water Tower • Residential Garage/Parking Areas • Commercial Garage/Parking Area • Sidewalks • Street Lighting/Commercial Lighting
Zoning						
Site Plan Review Required for Construction	Yes	No site plan review required for residences <5,000 SF and Ag Structures <10,000 SF	Yes	Yes	Yes	Yes
Construction w/n Scenic Protection Overlay District	Yes	Potentially	Yes	Yes	Yes	Yes
Conformance w/ Intended Bulk Regulation Requirements (RA) (RR)	Yes	Yes	Yes	No	No	No
Uses Permitted on Site	• Residential • Agricultural (Equestrian) • Agriculture/Open Space Areas	• Residential • Agriculture/Open Space Areas • All Special Permit Uses (Residential & Non-Residential)	• Residential • Agriculture/Open Space Areas • All Special Uses (Residential & Non-Residential)	• Residential • Agriculture/Open Space Areas	• Residential • Private Accessory Community Structures • Agriculture/Open Space Areas	• Residential (Multifamily) • Private Accessory Community Structures • Open Space Areas • Lodging Facility (Hotel/Resort w/ Spa) • Service Business (performing arts center) • Agriculture/Open Space Areas

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Keane Stud Subdivision
Conservation Resources Impact Analysis Summary

Modification of Underlying Zoning District's Permitted Uses / Bulk Regulation Req.	No	No	No	No	Yes	Yes
Resort Development Overlay (RDO) District Benefits Utilized	No	No	No	No	Yes	Yes
Development w/n Stream Corridor Overlay (SCO)	Yes: Utilization of Existing Agricultural Stream Crossings Required.	Potentially	Yes: Utilization of Existing Agricultural Stream Crossings Required.	Yes: Utilization of Existing Agricultural Stream Crossings Required.	Yes: Utilization of Existing Agricultural Stream Crossings Required.	Yes: Utilization of Existing Agricultural Stream Crossings Required.
Restricted Building Areas	Yes. Building Envelopes Implemented.	No	No	Yes; 50% of total land required to be placed under Conservation Easement; Open space may be increased for density bonus	Yes; 80% of RDO Parcel (#403720) land placed under Conservation Easement; Min 50% conservation subdivision parcel placed in easement.	Yes; 80% of total land placed under Conservation Easement
Construction						
Length of New Road (Rural Lane) Required (Linear Feet)	±9,261 LF	None	+9,261 LF min. (Assumes greater road length to accommodate large conventional layout)	+9,261 LF min. (Assumes greater road length to accommodate higher density conservation layout)	±16,706 LF	±11,063 LF
Municipal/Common Wastewater Treatment Plant Required	No. Dwellings will be served by individual septic systems	N/A	No, dwellings will be served by individual septic systems	Yes. High-Density layout and smaller lot sizes provide insufficient space for private septic systems.	Yes	Yes
Municipal/Common Water Treatment Infrastructure Required	No, dwellings will be served by individual wells	Dependent on Ag. needs	No, dwellings will be served by individual wells	Potentially, dependent on dwelling locations and configuration	Yes	Yes
Enhanced Visual Mitigation Provided	Yes	No	Potentially	Yes	Yes	Yes
New Residential Lot Curb Cuts to Existing Public Roads	No, existing entrances to be utilized. New Rural Lanes to be connected to Depot Hill Road.	Yes	Yes + New Rural Lanes to be connected to Depot Hill Road.	Potentially + New Public/Private Roads to be connected to Depot Hill Road.	Yes + New Public/Private Roads to be connected to Depot Hill Road.	No

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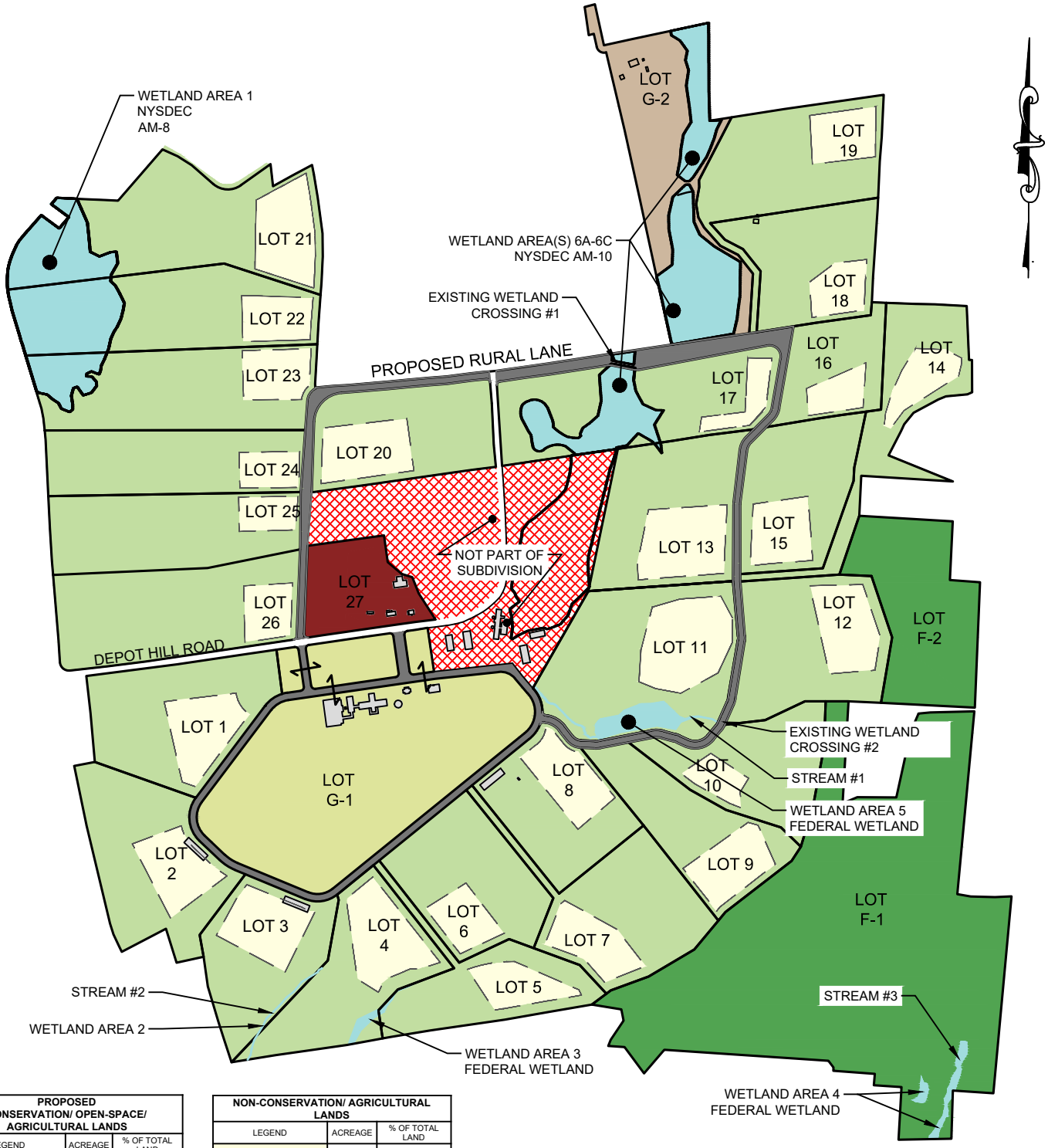
Keane Stud Subdivision
Conservation Resources Impact Analysis Summary

Table Notes:

The following table is used to summarize the various impacts that the proposed action and viable alternatives may have on conservation resources identified and defined in the "Keane Stud Subdivision – Conservation Analysis". All impacts summarized in the chart are estimated, as future development for proposed parcels will ultimately be determined by the property owner. The notes provided below outline development assumptions used to generate post-construction figures included in the Conservation Resource Impact Analysis Summary:

1. All residential lots are assumed to be provided with a single-family residence (unless otherwise specified).
2. All single-family residences are assumed to be constructed with four (4) bedrooms, with an occupancy of one (1) person per bedroom.
3. Only residential uses have been assessed as part of this analysis, with non-residential use components (RDO Development) expected to add to potential impacts.
4. Water/Wastewater demand/generation is assumed at 110 gallons per day (gpd) per bedroom. (NYSDEC Typical Per-Unit Hydraulic Loading Rates)
5. Single family homes: 0.75 trips per residence in AM; 1.01 trips per residence in PM. (6th Edition of the ITE Trip Generation Report)
6. Municipal Solid Waste Generation is calculated at a rate of 4.09 lbs/person/day (2018 Disposal Rate – 2023 Draft NYS Municipal Solid Waste Management Plan)
7. Electricity consumption for residential units is assumed 10,632 kilowatt-hours (kWh) per household. (2021 Average Annual Electricity Consumption – U.S. Energy Information Administration)
8. Anticipated Number of Public School Children is estimated using 0.87 children per house hold multiplier based on Burchell, Robert W., Listoken, David, et al. Rutgers University Center for Urban Policy Research, Residential Demographic Multipliers - Estimates of Occupants of New Housing (New York State), June 2006.
9. See Keane Stud Subdivision – Conservation Analysis, Appendix F – "Conservation Area(s) Exhibit".

SEE NOTE ON PAGE 1



PROPOSED CONSERVATION/ OPEN-SPACE/ AGRICULTURAL LANDS		
LEGEND	ACREAGE	% OF TOTAL LAND
KEANE STUD EQUESTRIAN FACILITY (G-1)	52.3	7.4%
DEED RESTRICTED OPEN-SPACE/ AGRICULTURAL AREAS	357.9	50.8%
WETLANDS/WATER COURSES	38.6	5.5%
FOREST PRESERVATION PARCELS (F1 & F2)	109.5	15.5%
TOTAL	**559.5**	**79.2%**

NON-CONSERVATION/ AGRICULTURAL LANDS		
LEGEND	ACREAGE	% OF TOTAL LAND
TOTAL BUILDING ENVELOPE AREA	101.5	14.4%
FARM PARCEL W/ FED. WETLAND EASEMENT (G-2)	14.8*	2.1%
DEVELOPED RESIDENTIAL FARM PARCEL (LOT 27)	9.6	1.4%
RURAL LANE RIGHT-OF-WAY (R.O.W.)	20.7*	2.9%
TOTAL	**146.6**	**20.8%**

*EXCLUDING WETLAND AREAS TO BE PRESERVED.

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL ▪ ENVIRONMENTAL ▪ STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522

Tel: (845) 877-0555 Fax: (845) 877-0556

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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

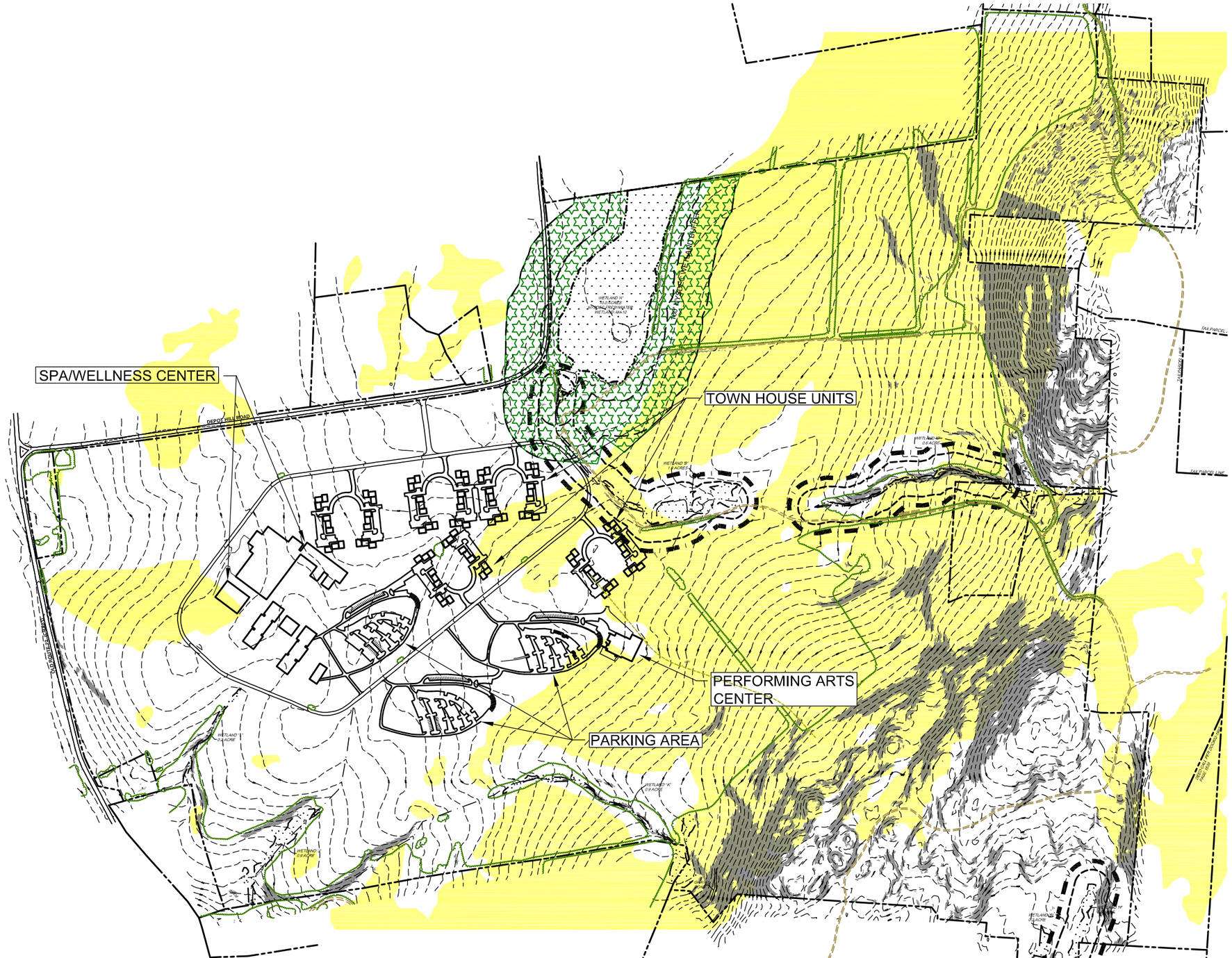
CONSERVATION AREA(S) EXHIBIT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	JOB NO.	SHEET NO.
5/4/2023	1" = 1000'	RED	RED	#21-006	1 of 1

SEE NOTE ON PAGE 1

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SEE NOTE ON PAGE 1



LEGEND

- 1210 EXISTING CONTOUR 10' INTERVAL
- PROPERTY LINE
- EDGE OF PARKING LOT
- EXISTING/PROPOSED EDGE OF PAVEMENT
- ACOE WETLAND BOUNDARY
- STATE WETLAND BOUNDARY
- STATE WETLAND 100' BUFFER
- EXISTING WATERCOURSE
- EXISTING TREELINE
- EXISTING TRAIL
- PROPOSED BUILDING
- 150' STREAM CORRIDOR OVERLAY ZONE
- 100' STREAM PROTECTION OFFSET - NO PRIMARY STRUCTURES
- 300' ENDANGERED SPECIES HABITAT SETBACK
- SLOPES GREATER THAN 30%
- SCENIC PROTECTION OVERLAY

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 600 ft.

NOTES:

1. 170 TOWN HOUSE UNITS ARE PROPOSED.
2. 11,063 LF (2.09 MI.) OF ROAD PROPOSED.

SEE NOTE ON PAGE 1

DEPOT HILL FARM

TOWN OF AMENIA — DUTCHESS COUNTY

RDO ALTERNATIVE LAND USE

CRAWFORD & ASSOCIATES
ENGINEERING, P.C.
551 Warren Street, Hudson New York 12534

© COPYRIGHT

DATE 12/19/07	DRAWN BY: NRV	H:\WORK\2773.0\DRAWINGS\BLOCKS\CONSERVATION ANALYSIS BLOCKS\RDO ALT.DWG	
	DESIGNED BY: CPB		
SCALE 1"=600'	CHECKED BY: BKN	C&A JOB# 2773.0	DRAWING: FIGURE 27.D.1
	APPROVED BY: BKN		

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SEE NOTE ON PAGE 1

APPENDIX G

CONCEPTUAL SUBDIVISION PLANS

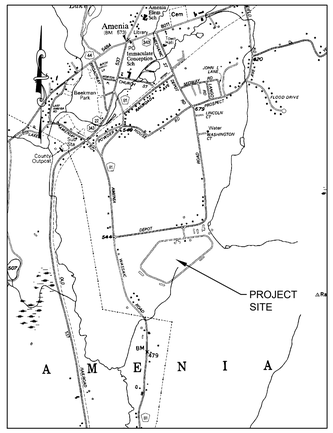
Keane Stud Subdivision – Conceptual Subdivision Plan Set, dated 9/15/2021, revised 7/25/2022

SEE NOTE ON PAGE 1

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SEE NOTE ON PAGE 1

VICINITY PLAN

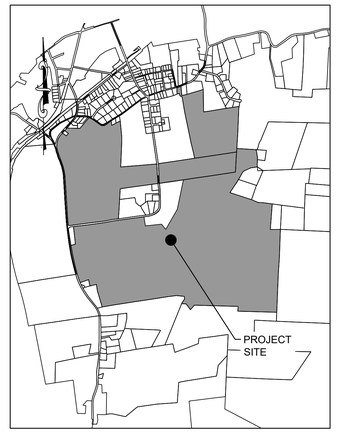


SCALE: 1" = 2000'

KEANE STUD SUBDIVISION

PRELIMINARY SUBDIVISION SKETCH PLAN
TOWN OF AMENIA
DUTCHESS COUNTY, NY

TAX PARCELS



SCALE: 1" = 2000'

PLANS PREPARED FOR:

KEANE STUD LLC.
217 DEPOT HILL RD
AMENIA, NY 12501

PROJECT PARCELS

TAX GRID No. : 132000-7166-00-403720
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 216 DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: SL KEANE STUD LLC
PO BOX 37
AMENIA, NY 12501
LOT SIZE: 450.728-ACRES
(441.992 ACRES SOUTH OF DEPOT HILL & 9.632 ACRES ON THE NORTH)

TAX GRID NO. : 132000-7167-00-515033
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 37.072-ACRES

TAX GRID NO. : 132000-7167-00-570145
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 18 PROSPECT AVENUE
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 62.133-ACRES

TAX GRID NO. : 132000-7167-00-212034
ZONING DISTRICT: SUBURBAN RESIDENTIAL "SR"
PROPERTY ADDRESS: AMENIA-WASSAIC
AMENIA, NY 12501
PROPERTY OWNER: CLARE MICHAEL LLC
1 NORTH FRANKLIN
CHICAGO, IL 60606
LOT SIZE: 154.992-ACRES

TOTAL PROJECT ACREAGE=704.925-ACRES

ADJACENT PROPERTY OWNERS

RAYMOND E. WHEELER, JR
17 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001764206000

WILLIAM S. PARKER, JR
784 OLD ROUTE 22
AMENIA, NY 12501
FOR PROPERTY:132000007167001740221000

JESSICA E. MCGINNESS
4 RAILROAD AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001743230000

JOSEPH G. PLATT
3 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001713920200000

WARREN K. GORDON
4 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000055434200000

THOMAS SIDERIS
20 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167000046227900000

FREDERICK A. LATTRELL
13 POWDERHOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001715420800000

MAUREEN PAAR, LT
28 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167000053433800000

PATRICK D. WEBER
17 CHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001717421600000

STONE RESOURCE INC
459 BOG HOLLOW RD
WASSAIC, NY 12592
FOR PROPERTY:132000007167001713921100000

RICHARD STEVENER
12 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001440526900000

JEAN TAYLOR
10 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001439726900000

JAMES M. MURPHY
200 DEPOT HILL RD
AMENIA, NY 12501
FOR PROPERTY:132000007167000036591200000

WILLIAM F. MURPHY, JR
178 DEPOT HILL RD
AMENIA, NY 12501
FOR PROPERTY:132000007167000037993200000

RUDOLPH J. ESCHBACH
131 LEEDSVILLE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167000082587000000

JESSICA DECARLO
PO BOX 412
WASSAIC, NY 12592
FOR PROPERTY:132000007167000015464900000

AMY LAMARCHE
550 OLD ROUTE 22
AMENIA, NY 12501
FOR PROPERTY:132000007167000014463900000

TARA MORENO
190 DEPOT HILL RD
AMENIA, NY 12501
FOR PROPERTY:132000007167000038290200000

MICHAEL G. PEEK
610 OLD ROUTE 22
AMENIA, NY 12501
FOR PROPERTY:132000007166000010680500000

TIM LEE
PO BOX 412
WASSAIC, NY 12592
FOR PROPERTY:132000007166000001746070000

ANTHONY ROBERT
23 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167000047035000000

PATRICIA CHRISTENSEN, LT
21 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167000046632600000

JESSE MORGAN HILLS
292 ST JOHNS PL APT 59
BROOKLYN, NY 11238
FOR PROPERTY:132000007167000049030400000

RICHARD SYMS, TTEE
PO BOX 623
SHARON, CT 06069
FOR PROPERTY:132000007167000043014500000

DIANA STOETZNER
20 OHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001721720900000

MICHAEL S. BUTTS
18 OHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001719519500000

GERALD M. RASSMAN
PO BOX 101
AMENIA, NY 12501
FOR PROPERTY:132000007167001701211800000

NEIL J. NEWVINE
13 LOWER POWDER HOUSE
AMENIA, NY 12501
FOR PROPERTY:132000007167001704416500000

JASON KELLER
2 GLOVER LN
DOVER PLAINS, NY 12522
FOR PROPERTY:132000007167001702514700000

WILLIAM MAYHEW
440 ROUTE 82
HUDSON, NY 12534
FOR PROPERTY:132000007167001707218700000

MICHAEL A. COLLINS
PO BOX 468
AMENIA, NY 12501
FOR PROPERTY:132000007167001442027200000

GEORGE W. MILES
PO BOX 725
MILLERTON, NY 12546
FOR PROPERTY:132000007167001441531500000

JEFFREY J. JOHNSON
713 LANGO RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001438830700000

JOHN NOWAK
11 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001439828700000

SHIRLEY COOKINGHAM
54 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167000024017600000

KONSTANTIN OLEYNIKOV
6740 BOOTH ST APT 11
FOREST HILLS, NY 11375
FOR PROPERTY:132000007167001439729900000

ROSANNY URENA
20 LANGO RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001440633300000

LORNA L. SHERMAN
1068 OLD ROUTE 22
MILLERTON, NY 12546
FOR PROPERTY:132000007167001705817700000

JOHN S. RUSSELL
41 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001721018200000

SUSAN COLLERAN, TRUSTEE
17 JOHN L RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001442433200000

ERIK VOIGT
49 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001722819200000

EUNICE A. HAFFORD
PO BOX 555
AMENIA, NY 12501
FOR PROPERTY:132000007167001442991400000

ELIZABETH RENWICK
496 OLD ROUTE 22
AMENIA, NY 12501
FOR PROPERTY:132000007166000028530000000

JESS MARMER
PO BOX 257
AMENIA, NY 12501
FOR PROPERTY:132000007167001443130000000

N Y S
22 MARKET ST
POUGHKEEPSIE, NY 12601
FOR PROPERTY:132000007167001711321400000

MAYHEW WILLIAM
440 ROUTE 82
HUDSON, NY 12534
FOR PROPERTY:132000007167001709520000000

THOMAS K. MCENIFF
204 PALM CIR
ATLANTIS, FL 33462
FOR PROPERTY:132000007167001441933800000

TIMOTHY R. WHITEHEAD
PO BOX 155
AMENIA, NY 12501
FOR PROPERTY:132000007167000025218400000

VERNON MARK STORMS
13 JOHN L RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001443623230000

BRYAN A M LANGLANDS
13 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001441629700000

BRIAN F. MURPHY
PO BOX 46
AMENIA, NY 12501
FOR PROPERTY:132000007167001443927700000

JOHN LA CURTO
PO BOX 249
AMENIA, NY 12501
FOR PROPERTY:132000007167001710018200000

JAMES BRIAN WALSH
17 PROSPECT AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167000044133100000

COUNTY ORGANIC RECYCLING
1160 MAMARONECK AVE
WHITE PLAINS, NY 10605
FOR PROPERTY:132000007166000005160100000

RICHARD SYMS, TTEE
PO BOX 623
SHARON, CT 06069
FOR PROPERTY:132000007167000031515350000

SL KEANE WOODS LLC
5021 ROUTE 44
AMENIA, NY 12501
FOR PROPERTY:132000007166000023550500000

SL KEANE WOODS LLC
5021 ROUTE 44
AMENIA, NY 12501
FOR PROPERTY:132000007166000030075620000

SL KEANE STUD LLC
PO BOX 37
AMENIA, NY 12501
FOR PROPERTY:132000007166000040372000000

MICHAEL NAVARRETE
121 72ND ST W APT 11D
NEW YORK, NY 10023
FOR PROPERTY:132000007166000074464000000

SL KEANE WOODS LLC
5021 ROUTE 44
AMENIA, NY 12501
FOR PROPERTY:132000007166000055452200000

PANAGIOTIS STEFANOPOULOS
4957 ROUTE 22
AMENIA, NY 12501
FOR PROPERTY:132000007166000077087100000

PATRICK LAWLOR
22 OHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001722422200000

TARA EGAN
150 TULIP AVE
FLORAL PARK, NY 11001
FOR PROPERTY:132000007166000034589900000

JENNIFER S. JAFFE
61 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001825621300000

WILLIAM M. CONNOLLY
26 OHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001825824800000

ROBERT C. BEACH
55 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001724424000000

JOHN P. KELLEHER
19 OHANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001718523300000

WILLIAM E. MURPHY, JR
178 DEPOT HILL RD
AMENIA, NY 12501
FOR PROPERTY:132000007166000033394800000

JERRY SCOTT MURPHY
164 DEPOT RD
AMENIA, NY 12501
FOR PROPERTY:132000007166000037596800000

KEVIN M. BOYD
73 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001827823200000

KATHLEEN ALLISON HOWARD
24 O'HANDLEY DR
AMENIA, NY 12501
FOR PROPERTY:132000007167001724023400000

ANDREW S. MURPHY
174 DEPOT RD
AMENIA, NY 12501
FOR PROPERTY:132000007166000035693500000

GEORGE F. WILKENS
67 POWDER HOUSE RD
AMENIA, NY 12501
FOR PROPERTY:132000007167001826722300000

CLARE MICHAEL LLC
1 FRANKLIN N STE 625
CHICAGO, IL 60606
FOR PROPERTY:132000007066000097787500000

PANAGIOTIS STEFANOPOULOS
PO BOX 592
AMENIA, NY 12501
FOR PROPERTY:132000007167000071107300000

PANAGIOTIS STEFANOPOULOS
PO BOX 592
AMENIA, NY 12501
FOR PROPERTY:132000007166000068599100000

KEVIN BROOKS
10 RAILROAD AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001715024200000

DAVINCI VIEW LLC
PO BOX 469
AMENIA, NY 12501
FOR PROPERTY:132000007167000078111200000

PANAGIOTIS STEPHANOPOULOS
PO BOX 592
AMENIA, NY 12501
FOR PROPERTY:132000007166000085599200000

WILSON LOPEZ
18 RAILROAD AVE
AMENIA, NY 12501
FOR PROPERTY:132000007167001716224700000

MICHAEL S. LEVIN
189 AMENIA UNION RD S
AMENIA, NY 12501
FOR PROPERTY:132000007166000091432300000

RHAMELIA INC
PO BOX 11
SHARON, CT 06069
FOR PROPERTY:132000007167000051503300000

DAIN C. WISDOM
14 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000061524300000

JOHN PRINCIPATO
11 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000062326500000

ROMAN CATHOLIC CHURCH OF
PO BOX 109
AMENIA, NY 12501
FOR PROPERTY:132000007167001309925200000

JOHN HAAS
9 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000061528000000

DAVINCI VIEW LLC
PO BOX 469
AMENIA, NY 12501
FOR PROPERTY:132000007167000056726100000

JILL ANN TOWNER
16 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000063524400000

VICTORIA R. JASMIN
PO BOX 643
AMENIA, NY 12501
FOR PROPERTY:132000007167000049829000000

[illegible]
PO BOX 643
AMENIA, NY 12501
FOR PROPERTY:132000007167001700500000000

OLD [illegible]
781 OLD ROUTE 22
BROOKFIELD, CT 06804
FOR PROPERTY:132000007167001701400700000

RHAMELIA INC
PO BOX 11
SHARON, CT 06069
FOR PROPERTY:132000007167000057014500000

JENNIFER O'BRIEN GAREMORE
6 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000057634000000

SHANE MORRIS
8 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000058229100000

RICHARD A. BUSHEY
12 FLOOD DR
AMENIA, NY 12501
FOR PROPERTY:132000007167000059825400000

KIERAN MCELROE
PO BOX 643
AMENIA, NY 12501
FOR PROPERTY:132000007167000063524000000

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT I AM FAMILIAR WITH THIS MAP, ITS CONTENTS AND LEGENDS AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON AND TO THE FILING OF THIS PLAN IN THE OFFICE OF THE CLERK OF THE TOWN OF HYDE PARK, DUTCHESS COUNTY, NY.

SIGNED THIS _____ DAY OF _____2022

_____ OWNER'S SIGNATURE

PLANNING BOARD APPROVAL

APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE TOWN OF AMENIA, NEW YORK, ON THE _____ DAY OF _____ 20 _____ SUBJECT TO ALL REQUIREMENTS AND CONDITIONS OF SAID RESOLUTION. ANY CHANGE, ERASURE, MODIFICATION OR REVISION OF THIS PLAT, AS APPROVED, SHALL VOID THIS APPROVAL.

SIGNED THIS _____ DAY OF _____ , 20_____ BY

_____
CHAIRPERSON

DRAWING LIST

TITLE SHEET	SHEET 0 OF 16
EXISTING CONDITIONS PLAN	SHEET 1 OF 16
OVERALL SUBDIVISION PLAT	SHEET 2 OF 16
PRELIMINARY SUBDIVISION PLAT 1	SHEET 3 OF 16
PRELIMINARY SUBDIVISION PLAT 2	SHEET 4 OF 16
PRELIMINARY SUBDIVISION PLAT 3	SHEET 5 OF 16
PRELIMINARY SUBDIVISION PLAT 4	SHEET 6 OF 16
PRELIMINARY SUBDIVISION PLAT 5	SHEET 7 OF 16
PRELIMINARY SUBDIVISION PLAT 6	SHEET 8 OF 16
RURAL LANE "A" - 1	SHEET 9 OF 16
RURAL LANE "A" - 2	SHEET 10 OF 16
RURAL LANE "B" - 1	SHEET 11 OF 16
RURAL LANE "B" - 2	SHEET 12 OF 16
RURAL LANE "B" - 3	SHEET 13 OF 16
RURAL LANE "B" - 4	SHEET 14 OF 16
LANDSCAPE SCREENING PLAN	SHEET 15 OF 16
DETAILS	SHEET 16 OF 16

RED NOTES:
1. ALL PARCEL BOUNDARIES ARE BASED ON TAX MAP DATA. EXISTING/PROPOSED PARCEL BOUNDARIES WILL BE REVISED TO REFLECT ACTUAL SURVEY INFORMATION.
2. ALL SHOWN TOPOGRAPHIC INFORMATION IS BASED ON 2021 LIDAR CONTOUR DATA PROVIDED KIRK HORTON, L.S.
3. WETLAND BOUNDARY AS REPRESENTED ON THESE PLANS ACCURATELY DEPICTS THE LIMITS OF FRESHWATER WETLAND AS DELINEATED BY ECOLOGICAL SOLUTIONS ON OR BEFORE JULY 2021. WETLAND BOUNDARY LOCATION BASED UPON ACTUAL FIELD SURVEY BY KIRK HORTON, L.S. ON OR BEFORE AUGUST 2021.

DATE	REVISION	DATE	REVISION
12/29/2021	REVISED FOR PLANNING BOARD SUBMISSION		
07/26/2022	REVISED FOR PLANNING BOARD SUBMISSION		

*SEE NOTE ON PAGE**

ENGINEERING, DESIGN, & PLANS PREPARED BY:

RENNIA ENGINEERING DESIGN, PLLC

CIVIL • ENVIRONMENTAL • STRUCTURAL

6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0555 FAX: (845) 877-0556

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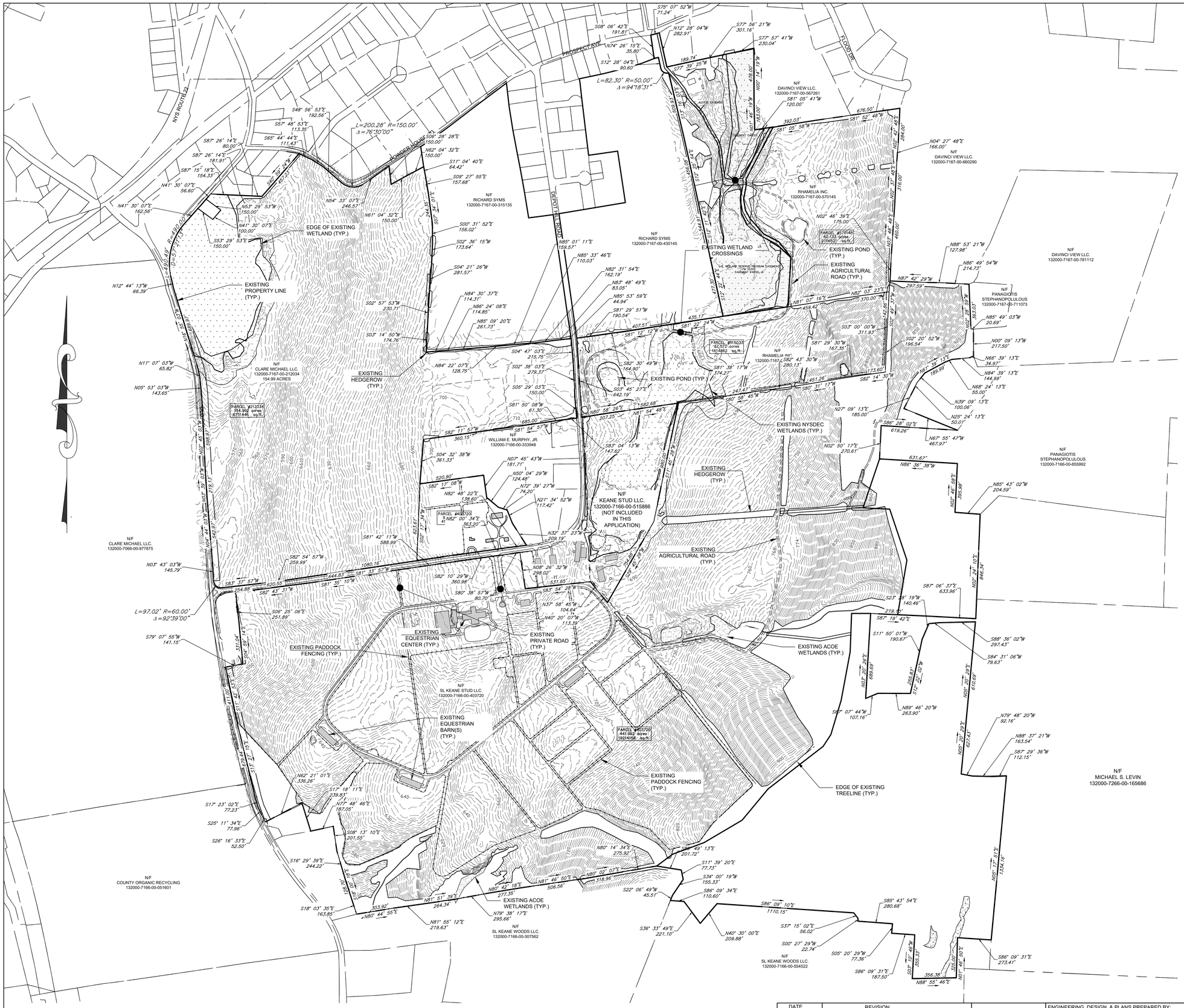
IT IS A VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSON TO ALTER THESE PLANS, SPECIFICATIONS OR REPORTS IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER.

KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

TITLE SHEET

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	AS SHOWN	RED	RED	RAR	21-006	0 of 16



AQUIFER OVERLAY DISTRICT NOTE:
THE AQUIFER OVERLAY DISTRICT (AQO) ENCOMPASSES THE ENTIRE TOWN OF AMENIA, INCLUDING THE PROPOSED PROJECTS LOCATION. ALL LAND USES AND ACTIVITIES WITHIN THE THE AQO ARE SUBJECT TO THE REGULATIONS SET FORTH IN SECTION 121-15 OF THE TOWN CODE OF THE TOWN OF AMENIA, AQUIFER OVERLAY DISTRICT, AS AMENDED FROM TIME TO TIME.

RESORT DEVELOPMENT OVERLAY DISTRICT NOTE:
PER THE TOWN OF AMENIA MUNICIPAL CODE §121-18 "RESORT DEVELOPMENT OVERLAY DISTRICT (RDO)" THE RDO IS INTENDED TO PROVIDE USE AND DESIGN FLEXIBILITY TO ENCOURAGE RESORT DEVELOPMENT ON APPROPRIATELY LARGE PROPERTIES. PROVIDED THESE PROPERTIES FIT THE RURAL CHARACTER OF THE TOWN AND PROTECTS ITS SCENIC, HISTORIC, AND ENVIRONMENTAL RESOURCES. THIS DISTRICT PROVIDES A PROCEDURE FOR MASTER PLANNED DEVELOPMENT OF PROPERTIES OF OVER 200 ACRES TO PROMOTE TOURISM, RECREATION, AND OPEN SPACE PROTECTION.

STREAM CORRIDOR OVERLAY DISTRICT NOTE:
PER THE TOWN OF AMENIA MUNICIPAL CODE §121-14 "STREAM CORRIDOR OVERLAY DISTRICT (SCO)" THE SCO IS DESIGNED TO PROTECT THE TOWN'S STREAM CORRIDORS BY PRESERVING THEIR SCENIC CHARACTER, BIODIVERSITY, AND WATER QUALITY. THIS DISTRICT REGULATES THE LAND USES WITHIN STREAM CORRIDORS TO PROTECT WATER QUALITY, SCENIC RESOURCES, AND THE OVERALL COMMUNITY APPEARANCE IN ADDITION TO REDUCING THE RISK OF FLOOD DAMAGE.

SCENIC VISUAL PROTECTION OVERLAY DISTRICT NOTE:
PER THE TOWN OF AMENIA MUNICIPAL CODE §121-14 "SCENIC PROTECTION OVERLAY DISTRICT (SPO)" THE SPO IS DESIGNED TO PROTECT SCENIC ROAD CORRIDORS, THE HARLEM VALLEY RAIL TRAIL, AND HIGHLY VISIBLE SCENIC AREAS IS NECESSARY TO PRESERVE THE ATTRACTIVE RURAL, HISTORIC AND AGRICULTURAL QUALITIES OF THE TOWN.

PROJECT PARCELS

TAX GRID No. : 132000-7166-00-403720
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 216 DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: SL KEANE STUD LLC
PO BOX 37
AMENIA, NY 12501
LOT SIZE: 450.728-ACRES
(441.992 ACRES SOUTH OF DEPOT HILL & 9.632 ACRES ON THE NORTH)

TAX GRID NO. : 132000-7167-00-515033
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: DEPOT HILL ROAD
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 37.072-ACRES

TAX GRID NO. : 132000-7167-00-570145
ZONING DISTRICT: RURAL AGRICULTURAL "RA"
PROPERTY ADDRESS: 18 PROSPECT AVENUE
AMENIA, NY 12501
PROPERTY OWNER: RHAMELIA INC.
PO BOX 11
SHARON, CT 06069
LOT SIZE: 62.133-ACRES

TAX GRID NO. : 132000-7167-00-212034
ZONING DISTRICT: SUBURBAN RESIDENTIAL "SR"
PROPERTY ADDRESS: AMENIA-WASSAIC
AMENIA, NY 12501
PROPERTY OWNER: CLARE MICHAEL LLC
1 NORTH FRANKLIN
CHICAGO, IL 60606
LOT SIZE: 154.992-ACRES

TOTAL PROJECT ACREAGE=704.925-ACRES

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

RED NOTES:
1. ALL PARCEL BOUNDARIES ARE BASED ON TAX MAP DATA. EXISTING/PROPOSED PARCEL BOUNDARIES WILL BE REVISED TO REFLECT ACTUAL SURVEY INFORMATION.
2. ALL SHOWN TOPOGRAPHIC INFORMATION IS BASED ON 2021 LIDAR CONTOUR DATA PROVIDED KIRK HORTON, L.S.
3. WETLAND BOUNDARY AS REPRESENTED ON THESE PLANS ACCURATELY DEPICTS THE LIMITS OF FRESHWATER WETLAND AS DELINEATED BY ECOLOGICAL SOLUTIONS ON OR BEFORE JULY 2021. WETLAND BOUNDARY LOCATION BASED UPON ACTUAL FIELD SURVEY BY KIRK HORTON, L.S. ON OR BEFORE AUGUST 2021.

SEE NOTE ON PAGE 1

DATE	REVISION
12/29/2021	REVISED FOR PLANNING BOARD SUBMISSION
07/25/2022	REVISED FOR PLANNING BOARD SUBMISSION

ENGINEERING, DESIGN, & PLANS PREPARED BY:
RENNIA ENGINEERING DESIGN, PLLC
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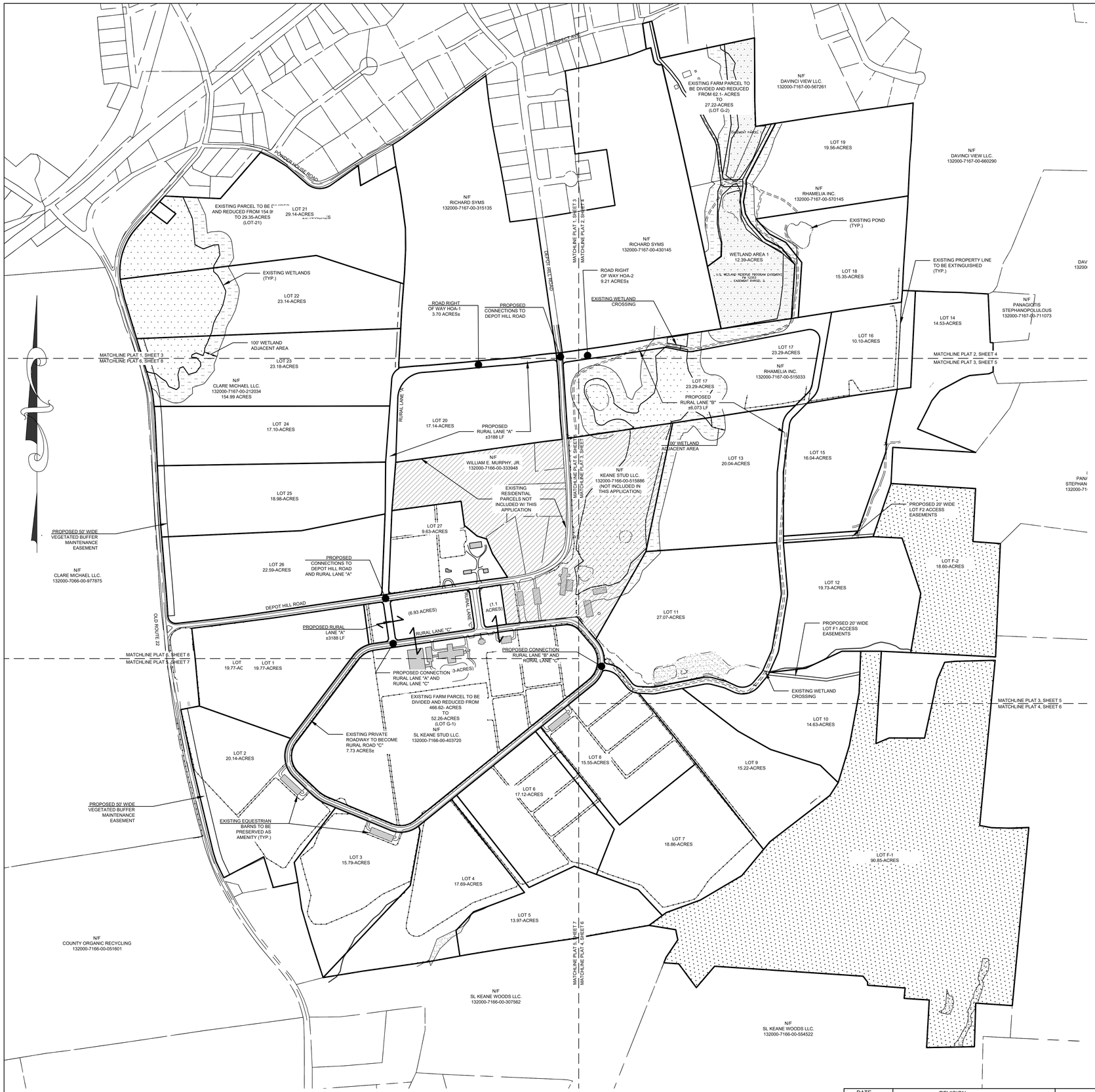
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KEANE STUD SUBDIVISION
TOWN OF AMENIA — DUTCHESS COUNTY, NY

EXISTING CONDITIONS PLAN

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 300'	RED	RED	RAR	21-006	1 of 16



BULK REGULATIONS

RURAL AGRICULTURAL "RA" | RURAL RESIDENTIAL "RR"

	LOT #	EXISTING ACREAGE	PROPOSED ACREAGE (MIN. LOT SIZE 10-ACRES | 5-ACRES)	ROAD FRONTAGE (MIN. ON A TOWN ROAD) 250'	FRONT BUILDING SETBACK (MIN. FROM TOWN ROAD) 40.0'	HOME OWNER'S ASSOCIATION (HOA) STATUS
EXISTING PARCEL #212034	20	--	17.14	624.00	--	IN HOA
	21	466.62	29.14	882.00	--	IN HOA
	22	--	23.14	333.00	--	IN HOA
	23	--	23.18	599.00	--	IN HOA
	24	--	17.10	419.00	--	IN HOA
	25	--	18.98	359.00	--	IN HOA
	26	--	22.59	602.00	--	IN HOA
EXISTING PARCEL #403720 & #403720	1	--	19.77	920.00	--	IN HOA
	2	--	20.14	706.00	--	IN HOA
	3	--	15.79	666.00	--	IN HOA
	4	--	17.69	314.00	--	IN HOA
	5	--	13.97	50.00	--	IN HOA
	6	--	17.12	756.00	--	IN HOA
	7	--	18.86	50.00	--	IN HOA
	8	--	15.55	635.00	--	IN HOA
	9	--	15.22	327.00	--	IN HOA
	10	--	14.63	733.00	--	IN HOA
	11	--	27.07	1156.00	--	IN HOA
	12	--	19.73	987.00	--	IN HOA
	13	--	20.04	1061.00	--	IN HOA
	14	--	14.53	50.00	--	IN HOA
	15	--	16.60	1044.00	--	IN HOA
	27	--	9.63	888.00	81.3' (EX. BLDG)	IN HOA
	G-1	154.99	52.23	972.70	50.4' (OFFICE)	IN HOA
	F-1	--	90.85	N/A	--	OWNED BY HOA
	F-2	--	18.60	N/A	--	OWNED BY HOA
EXISTING PARCEL #515033	16	--	10.10	718.00	--	IN HOA
	17	40.00	23.29	1922.00	--	IN HOA
EXISTING PARCEL #570145	18	--	15.35	778.00	--	IN HOA
	19	--	19.56	50.00	--	IN HOA
	G-2	62.10	27.22	530.00	179.5' (GRN. HSE.)	NOT IN HOA
RURAL ROAD(S) R.O.W. PRIVATE ROADS		--	7.73	N/A	--	OWNED BY HOA
	RURAL LANES	--	20.65	N/A	N/A	OWNED BY HOA

NOTES:
1. FLAG LOT. AS PER SECTION 105-21.F.2, FLAG LOTS SHALL HAVE A MINIMUM FRONTAGE OF 25' AND WILL BE NOT LESS THAN 50' IN LOT WIDTH.
2. EXISTING NONCONFORMING.
3. LOT G-2 IS TO REMAIN NOT PART OF THE HOA, SINCE IT IS THE PARENT PARCEL TO REMAIN IN THE CURRENT OWNERSHIP AND WILL BE ACCESSED FROM PROSPECT AVENUE AND NOT FROM THE RURAL ROADS PROPOSED AS PART OF THE SUBDIVISION.

SUBDIVISION NOTES
1) ABUTTING FLAG LOTS: WHEN APPLICABLE, ABUTTING FLAG LOTS UNDER A SIGNLE OWNERSHIP SHALL UTILIZE A SINGLE DRIVEWAY TO PROVIDE ACCESS TO THE SITE.
2) ACCESSWAY OWNERSHIP: ACCESSWAYS PROVIDED FOR THE FLAG LOTS WILL NOT BE FURTHER SUBDIVIDED AND WILL REMAIN UNDER THE CONTROL OF INDIVIDUAL LOT OWNERS IN PERPETUITY.

LEGEND

- PROPOSED LOTS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- PROPOSED BUILDING ENVELOPES
- BUILDING SETBACKS
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING TREE LINE

PLAT NOTES:
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0 300' 600'
GRAPHIC SCALE

*SEE NOTE ON PAGE

DATE	REVISION
10/20/2021	SUBDIVISION LAYOUT REVISIONS
12/29/2021	REVISED FOR PLANNING BOARD SUBMISSION
07/21/2022	REVISED FOR PLANNING BOARD SUBMISSION
07/[illegible]/2022	REVISED FOR PLANNING BOARD SUBMISSION

PRELIMINARY

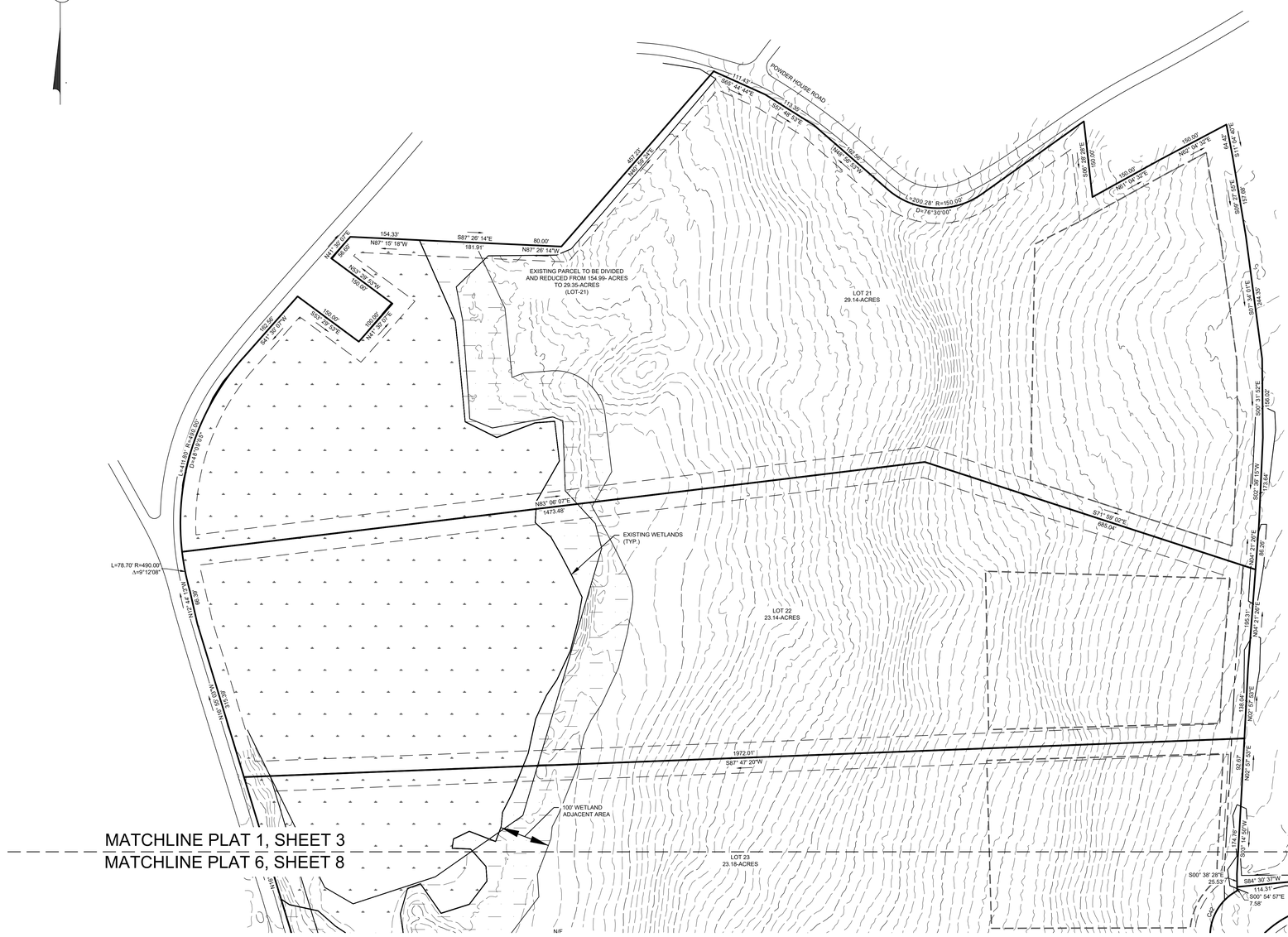
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KEANE STUD SUBDIVISION
TOWN OF AMENIA — DUTCHESS COUNTY, NY

OVERALL SUBDIVISION PLAT

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 300'	RED	RED	RAR	21-006	2 of 16



0 100' 200'

1" = 100'
GRAPHIC SCALE

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

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SEE NOTE ON PAGE 1.

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PRELIMINARY

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KEANE STUD SUBDIVISION
TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-1

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	3 of 16

MATCHLINE PLAT 1, SHEET 3

MATCHLINE PLAT 2, SHEET 4

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

S75° 07' 52"W 71.24'
191.81'
S15° 40' 49"E 30.00'
N74° 26' 15"E 35.80'
L30
Chord 38.93'
L=62.34' R=50.00'
189.74'
S77° 39' 25"W
301.16'
S77° 56' 21"W
230.04'
S77° 53' 41"W
N00° 14' 19"W 478.00'
EXISTING FARM PARCEL TO BE DIVIDED AND REDUCED FROM 62.1± ACRES TO 27.22-ACRES (LOT O-2)
ACCESS EASEMENT
S15° 40' 49"E 30.00'
S15° 40' 49"E 30.00'
EASEMENT PARCEL
N01° 48' 19"W 183.00'
S81° 05' 41"W 120.00'
S81° 05' 58"W 31.10'
S81° 05' 58"W 961.01'
S81° 52' 48"W 676.50'
LOT 19
19.56-ACRES
N07° 26' 04"E 217.68'
N/F
RHAMELIA INC.
132000-7167-00-570145
N/F
DAVINCI VIEW LLC.
132000-7167-00-660290
N02° 37' 48"E 294.00'
N04° 27' 49"E 166.00'
N02° 37' 48"E 244.68'
N02° 37' 48"E 711.92'
N03° 48' 48"E 466.00'
N10° 14' 29"E 117.60'
N00° 14' 29"E 97.18'
N00° 14' 29"E 117.60'
N00° 14' 29"E 97.18'
S81° 23' 37"W 1147.27'
EXISTING POND (TYP.)
S41° 44' 44"E 197.56'
S82° 44' 44"E 137.61'
N82° 44' 44"W 136.12'
S07° 15' 16"W 30.47'
S07° 15' 16"W 30.47'
PARCEL #570145
62.133 acres
2706521 sq.ft.
N/F
RICHARD SYMS
132000-7167-00-430145
WETLAND AREA 1
12.39-ACRES
U.S. WETLAND RESERVE PROGRAM EASEMENT
FM 12353
EASEMENT PARCEL 2
S14° 26' 21"E 30.47'
S14° 26' 21"E 30.47'
N00° 38' 30"E 303.16'
S05° 38' 44"W 411.26'
LOT 18
15.35-ACRES
N03° 48' 48"E 466.00'
EXISTING PROPERTY LINE TO BE EXTINGUISHED (TYP.)
96.91'
N87° 42' 29"W
200.68'
N87° 42' 29"W
127.98'
N88° 53' 21"W
214.73'
N86° 49' 54"W
N/F
PANAGIOTIS STEPHANOPOULOUS
132000-7167-00-711073
N04° 50' 42"E 87.91'
370.00'
S82° 03' 41"W
156.47'
S81° 06' 34"W
N81° 07' 16"E 251.75'
L30
N81° 44' 47"E 530.48'
LOT 14
14.53-ACRES
N00° 29' 58"W 363.03'
N85° 49' 03"W 20.69'
EXISTING WETLAND CROSSING
435.17'
S81° 22' 24"W
407.51'
S81° 12' 12"W
355.43'
S81° 58' 08"W
N81° 12' 12"E 396.51'
N81° 29' 23"E 175.09'
N82° 36' 40"E 165.09'
C45
R=1000.00'
S78° 50' 41"E 135.03'
C46
L=144.82' R=1000.00'
N79° 18' 28"E 869.43'
LOT 16
10.10-ACRES
LOT 17
23.29-ACRES
N07° 46' 24"W 869.53'
S02° 46' 24"E 721.42'
S02° 46' 24"E 759.
S03° 56' 26"W 333.98'
PARCEL #515033
37.072 acres
1614862 sq.ft.
N/F
RHAMELIA INC.
132000-7167-00-514093
ROAD RIGHT OF WAY HOA-2
9.21 ACRES±

MATCHLINE PLAT 2, SHEET 4

MATCHLINE PLAT 3, SHEET 5

RED NOTES:
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*SEE NOTE ON PAGE 4 X

100' 200'
1" = 100'
GRAPHIC SCALE

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07/25/2022	REVISED FOR PLANNING BOARD SUBMISSION

PRELIMINARY

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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-2

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	4 of 16

MATCHLINE PLAT 2, SHEET 4

MATCHLINE PLAT 3, SHEET 5

MATCHLINE PLAT 6, SHEET 8

MATCHLINE PLAT 3, SHEET 5

PARCEL #515033
37.072 acres
1614862 sq.ft.

N/F
RHAMELIA INC.
132000-7167-00-515033

PROPOSED
RURAL LANE "B"
±6,073 LF

100' WETLAND
ADJACENT AREA

LOT 13
20.04-ACRES

LOT 15
16.04-ACRES

LOT 11
27.07-ACRES

LOT 12
19.73-ACRES

LOT F-2
18.60-ACRES

N/F
KEANE STUD LLC.
132000-7166-00-515886
(NOT INCLUDED IN
THIS APPLICATION)

N/F
PANAGIOTIS
STEPHANOPOLULOUS
132000-7166-00-855992

PROPOSED 20' WIDE
LOT F2 ACCESS
EASEMENTS

PROPOSED 20' WIDE
LOT F1 ACCESS
EASEMENTS

EXISTING WETLAND
CROSSING

PROPOSED CONNECTION
RURAL LANE "B" AND
RURAL LANE "C"

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

MATCHLINE PLAT 3, SHEET 5

MATCHLINE PLAT 4, SHEET 6

RED NOTES:

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SEE NOTE ON PAGE 2

1" = 100'
GRAPHIC SCALE

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PRELIMINARY

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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-3

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	5 of 16

MATCHLINE PLAT 3, SHEET 5
MATCHLINE PLAT 4, SHEET 6

MATCHLINE PLAT 5, SHEET 7
MATCHLINE PLAT 4, SHEET 6

EXISTING WETLAND CROSSING

LOT 10
14.63-ACRES

LOT 9
15.22-ACRES

LOT 8
15.55-ACRES

LOT 7
18.86-ACRES

LOT F-1
90.85-ACRES

PARCEL #403720
441.992 acres
19214158 sq.ft.

N/F
SL KEANE WOODS LLC.
132000-7166-00-554522

N87° 17' 53"W 95.20'
S78° 53' 29"W 194.13'
N14° 59' 18"W 82.13'
N05° 46' 44"W 52.46'
L=208.39' R=1453.00'
D=8°13'41"
S78° 53' 29"W 162.31'
N87° 17' 53"W 95.20'
S89° 29' 40"E 1023.90'
S89° 29' 40"E 1023.90'
S89° 30' 16"E 478.52'
S72° 14' 09"E 389.37'
S46° 57' 47"E 188.73'
N10° 39' 07"E 389.00'
N10° 44' 07"E 90.29'
N20° 07' 17"E 14.92'
N67° 11' 21"E 731.92'
S39° 37' 29"E 611.78'
N67° 36' 29"E 989.82'
N71° 29' 41"E 304.69'
N69° 49' 29"W 175.32'
N69° 49' 29"W 231.42'
S69° 47' 36"W 270.97'
S89° 29' 54"W 369.53'
S20° 49' 40"W 353.58'
N19° 46' 47"E 71.17'
N67° 24' 16"E 123.31'
S53° 23' 16"W 37.40'
S53° 23' 16"W 160.71'
N80° 14' 34"E 275.92'
N80° 02' 01"E 318.96'
201.72' S80° 49' 13"E
S24° 39' 19"W 306.36'
S20° 49' 40"W 45.01'
S24° 39' 19"W 55.03'
110.60' S86° 09' 34"E
271.01' S39° 37' 29"E
N50° 30' 00"E 288.88'
S86° 09' 10"E 1110.15'
S00° 27' 29"W 22.74'
S00° 27' 29"E 95.03'
S85° 43' 54"E 280.69'
S00° 20' 29"E 77.09'
187.50' S86° 09' 31"E
S03° 19' 46"W 355.33'
N01° 48' 50"E 325.00'
S86° 09' 31"E 273.41'
N00° 20' 29"W 627.43'
N00° 20' 29"E 689.16'
N00° 20' 29"E 689.69'
S11° 22' 29"W 256.83'
263.90' N89° 46' 20"W
N79° 48' 20"W 92.16'
N88° 37' 21"W 163.54'
S87° 29' 36"W 112.15'
N00° 11' 51"E 1004.16'

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

RED NOTES:
1. ALL PARCEL BOUNDARIES ARE BASED ON TAX MAP DATA. EXISTING/PROPOSED PARCEL BOUNDARIES WILL BE REVISED TO REFLECT ACTUAL SURVEY INFORMATION.
2. ALL SHOWN TOPOGRAPHIC INFORMATION IS BASED ON 2021 LIDAR CONTOUR DATA PROVIDED KIRK HORTON, L.S.
3. WETLAND BOUNDARY AS REPRESENTED ON THESE PLANS ACCURATELY DEPICTS THE LIMITS OF FRESHWATER WETLAND AS DELINEATED BY ECOLOGICAL SOLUTIONS ON OR BEFORE JULY 2021. WETLAND BOUNDARY LOCATION BASED UPON ACTUAL FIELD SURVEY BY KIRK HORTON, L.S. ON OR BEFORE AUGUST 2021.

SEE NOTE ON PAGE 1

0 100' 200'
1" = 100'

DATE	REVISION
12/29/2021	REVISED FOR PLANNING BOARD SUBMISSION
07/25/2022	REVISED FOR PLANNING BOARD SUBMISSION

PRELIMINARY

ENGINEERING, DESIGN, & PLANS PREPARED BY:
RENNIA ENGINEERING DESIGN, PLLC
CIVIL • ENVIRONMENTAL • STRUCTURAL
6 Dover Village Plaza, Suite 5, P.O. Box 400, Dover Plains, NY 12522
Tel: (845) 877-0558 Fax: (845) 877-0556

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KEANE STUD SUBDIVISION
TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-4

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	6 of 16

MATCHLINE PLAT 6, SHEET 8

MATCHLINE PLAT 5, SHEET 7

LOT 1
19.77-ACRES

LOT 2
20.14-ACRES

LOT 3
15.79-ACRES

LOT 4
17.69-ACRES

LOT 5
13.97-ACRES

LOT 6
17.12-ACRES

LOT 8
15.55-ACRES

(46.03-ACRES)

EXISTING FARM PARCEL TO BE DIVIDED AND REDUCED FROM 466.62- ACRES TO 52.26-ACRES (LOT G-1)

N/F
SL KEANE STUD LLC.
132000-7166-00-403720

EXISTING PRIVATE ROADWAY TO BECOME RURAL ROAD "C" 7.73 ACRES±

PROPOSED CONNECTION RURAL LANE "A" AND RURAL LANE "C"

PROPOSED CONNECTION RURAL LANE "B" AND RURAL LANE "C"

PROPOSED 50' WIDE VEGETATED BUFFER MAINTENANCE EASEMENT

EXISTING EQUESTRIAN BARNS TO BE PRESERVED AS AMENITY (TYP.)

N/F
SL KEANE WOODS LLC
132000-7166-00-307562

MATCHLINE PLAT 5, SHEET 7

MATCHLINE PLAT 4, SHEET 6

LEGEND

IIIC RECYCLING
5-00-051601

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

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SEE NOTE ON PAGE 2

1" = 100'
GRAPHIC SCALE
200'

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KEANE STUD SUBDIVISION

TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-5

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	7 of 16

MATCHLINE PLAT 1, SHEET 3
MATCHLINE PLAT 6, SHEET 8

MATCHLINE PLAT 6, SHEET 8
MATCHLINE PLAT 3, SHEET 5

MATCHLINE PLAT 6, SHEET 8
MATCHLINE PLAT 5, SHEET 7

100' WETLAND ADJACENT AREA

LOT 23
23.18-ACRES

N/F
CLARE MICHAEL LLC.
132000-7167-00-212034
154.99 ACRES

PARCEL #212034
154.992 acres
6751446 sq.ft.

LOT 24
17.10-ACRES

LOT 25
18.98-ACRES

LOT 26
22.59-ACRES

LOT 1
19.77-ACRES

LOT 20
17.14-ACRES

LOT 27
9.63-ACRES

PARCEL #403720
9.632 acres
419578 sq.ft.

(6.93 ACRES)

(1.1 ACRES)

(46.03-ACRES)

ROAD RIGHT OF WAY HOA-1
3.70 ACRES±

PROPOSED CONNECTIONS TO DEPOT HILL ROAD

PROPOSED RURAL LANE "A"
±3188 LF

PROPOSED CONNECTIONS TO DEPOT HILL ROAD AND RURAL LANE "A"

PROPOSED RURAL LANE "A"
±3188 LF

RURAL LANE "A"

RURAL LANE "B"

RURAL LANE "C"

PROPOSED CONNECTION RURAL LANE "A" AND RURAL LANE "C"

PROPOSED CONNECTION RURAL LANE "B" AND RURAL LANE "C"

N/F
WILLIAM E. MURPHY, JR.
132000-7166-00-333948

EXISTING RESIDENTIAL PARCELS NOT INCLUDED W/ THIS APPLICATION

PROPOSED 50' WIDE VEGETATED BUFFER MAINTENANCE EASEMENT

DEPOT HILL ROAD

OLD POST RD

LEGEND

- PROPOSED LOTS
- PROPOSED BUILDING SETBACKS
- PROPOSED "RURAL LANE"
- PROPOSED DRIVEWAY
- PROPOSED HORSE TRAIL
- EXISTING PROPERTY LINE(S)
- EXISTING FENCE
- EXISTING WETLANDS
- EXISTING POND
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED HEDGEROW
- EXISTING TREE LINE

GRAPHIC SCALE
0 100' 200'
1" = 100'

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KEANE STUD SUBDIVISION
TOWN OF AMENIA — DUTCHESS COUNTY, NY

PRELIMINARY SUBDIVISION PLAT-6

DATE	SCALE	DESIGNED BY:	DRAWN BY:	CHECKED BY:	JOB NO.	SHEET NO.
9/15/2021	1" = 100'	RED	RED	RAR	21-006	8 of 16