DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

SILVER PATH ESTATES

Subdivision Application

Incorporated Village of Muttontown, New York

NPV No.04209

Prepared for Submission to:

Members of the Planning Board *(as Lead Agency)*
Incorporated Village of Muttontown
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Muttontown, New York 11791
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SILVER PATH ESTATES
Subdivision Application

Nassau County Tax Lot Numbers: Section 16, Block A, Lots 1006, 1012 & 1099
October 2020

Incorporated Village of Muttontown, Town of Oyster Bay
Nassau County, New York

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SUMMARY

SUMMARY

Introduction

This document is a Draft Environmental Impact Statement ("DEIS") for the project known as the Silver Path Estates Subdivision. The DEIS has been prepared in accordance with Section 8-0109 of the New York State Environmental Conservation Law (State Environmental Quality Review Act or "SEQRA"), the implementing standards and procedures of "SEQR" set forth at Title 6 NYCRR Part 617, and other applicable regulatory standards and guidelines of environmental review and planning practices. Silver Path Estates is proposed on a former 98.92-acre estate containing several buildings and structures, woodlands, some areas of steep and very steep slopes, freshwater wetlands, and bridle paths within the Incorporated Village of Muttontown, Town of Oyster Bay, Nassau County, New York (see **Topographic Map, Attachment 1**). The subject subdivision involves the creation of 20 single-family residential lots, associated on-site streets, proposed parkland that will contain a bridle trail, and two stormwater recharge basins. A 50-foot deep natural buffer is proposed around the perimeter of the site as required by Village Code Chapter 158-16 F, "Subdivision of Land," and a minimum of 30 feet of this buffer will be dedicated parkland and contain the bridle trail. An existing wetland and adjacent upland areas in the southwest corner of the property will also be contained within the area proposed to be set aside as parkland to ensure their protection and retain valued natural qualities. A small family cemetery located at the south end of the site east of the wetland will be contained within the 50-foot perimeter buffer, and a 100-foot easement around the perimeter of the existing cemetery to ensure that it is not encroached upon or disturbed in the future. Existing buildings on-site include one currently occupied residence (i.e., the "Gardener's Greenhouse Cottage") and several other unoccupied residential structures, outbuildings, and accessory structures. The occupied building is estimated to be inhabited by three (3) persons based on **Rutgers University Demographic Multipliers (2006)** (see **Table 1-1**). All buildings and accessory structures will be removed as part of the proposed action with the exception of the Pond Cottage which would be retained for use by the owner of Lot 18 as an accessory structure for non-residential accessory uses (e.g., pool house, etc.).

The proposed project has been designed to conform to the Village of Muttontown's "Residence E-3" (hereafter, "E-3") zoning district with respect to lot yield and development density; minimum lot size, width, and depth; and building setbacks. Moreover, even though homes have not been designed at this stage and will be custom built for individual lot owners, they must be designed to conform to E-3 standards including building height, coverage, minimum and maximum habitable area, and other applicable dimensional standards, and will be subject to site plan review in the future to ensure conformance (see **Section 1.4**). The subdivision has been designed to minimize impacts on the development pattern in the area and to the natural resources and characteristics of the site including its freshwater wetlands and steep and very steep slopes, and allow for a bridle path connection from the adjacent County-owned lands to the east (Muttontown Preserve), the Hoffman Center to the west, and south to the vernal pond and freshwater wetlands near the southwest corner of the property. The proposed subdivision

would retain ±17.47 acres or approximately 17.7 percent of the site in its natural state (±10.53 acres of parkland and the additional portion of the 50-foot perimeter buffer that is outside of the parkland which is ±6.94 acres). An eight-foot wide trail has been provided along the perimeter of the property on the north, east and west sides of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long. The trail meanders between trees within the parkland therefore requiring only the removal of underbrush and trimming of low hanging limbs.

Access to the lots would be from a proposed subdivision road ("Hall Drive") off Muttontown Road proposed approximately 161 feet east of Woodhollow Court. The proposed roadway would be stop controlled at Muttontown Road and two cul-de-sacs with a "turn-around," at each end ("Fan Court East" and "Fan Court West") would be provided from Hall Drive. Sanitary wastewater from future homes will be discharged to individual onsite septic systems on each lot, and stormwater runoff will be collected, temporarily retained, and recharged on-site via a system of catch basins and two stormwater recharge basins[1]: one located on the west side of the property, adjacent to the Hoffman Center, and the other at the northeast corner of the site, adjacent to the Muttontown Preserve.

Project Background and Application History

The subdivision application, project plans and a Long Environmental Assessment Form ("EAF") Part 1 were submitted to the Village in May of 2015 (**Appendix A-1**). The Planning Board determined that the proposed action was a Type I action pursuant to Part 617, Title 6 of the New York Code of Rules and Regulations ("6 NYCRR Part 617") as promulgated under the NYS Environmental Quality Review Act ("SEQRA"), and therefore, would be subject to environmental review under SEQRA. The Village Planning Board conducted a coordinated review in accordance with SEQRA and ultimately assumed the role of "lead agency" for this environmental review due to its local jurisdiction over the subdivision approval process and future site plan approvals for each house lot.

The Planning Board reviewed the EAF Part 1 prepared by the applicant; prepared EAF Parts 2 and 3; and adopted a Positive Declaration on the application on September 2, 2015 (**Appendix A-2**). Under SEQRA, adoption of a Positive Declaration indicates that there is the potential for one or more moderate or large environmental impacts and requires the preparation of an EIS to further evaluate, and as necessary, avoid or mitigate such moderate or large impacts to the maximum extent practicable.

The environmental review for the subdivision application was then the subject of a public scoping session on October 6, 2015, which culminated in the preparation of a final scoping

[1] Runoff on future house lots will be collected and recharged through a series of gutters, leaders and piping and discharged to on-site dry wells on each lot.

document ("Final Scope") which was adopted November 23, 2015 and specified the required scope and content of the DEIS. **Appendix A-3** contains a copy of the Final Scope.

A DEIS was prepared based on the November 23, 2015 Final Scope and the content requirements of SEQRA and was submitted to the Planning Board in October of 2016. The Planning Board and its environmental and engineering consultants (VHB and Bowne AE&T Group, respectively) considered the scope and content of the DEIS relative to the accepted Final Scope to determine its suitability for acceptance. Memos were prepared by VHB and Bowne each dated January 20, 2017 containing recommended revisions to the DEIS to be completed prior to further review and DEIS acceptance and these letters were submitted to the Village for review and ultimate acceptance and authorization of the recommended revisions.

On February 8, 2017, a public meeting was held to determine whether parkland or a fee in-lieu of parkland would be required, and if payment was required, the amount of that payment. The following week, on February 13, 2017, the Village determined that the DEIS was incomplete and should be revised in accordance with the January 20, 2017 memos. On May 3, 2017, a meeting was held between representatives of the Silver Path Estates team, the Village Mayor, and the Village Attorney regarding parkland dedication or fees. On February 14, 2018, the Village Board made a final determination that on-site parkland should be provided for the subdivision and that parkland around the perimeter of the property for a bridal path and along the property frontage encompassing the existing wetland areas were appropriate.

In 2019, the Village made updates to the subdivision regulations (Chapter 158-16) regarding calculation of lot area, and no longer requiring the required 50-foot perimeter buffer for residential subdivisions to be subtracted from lot area. This change in the subdivision regulations increased the total gross lot area available for subdivision by 14.16± acres and the number of lots that could legally be created on this site. Despite the potential increase in total lot yield by the 2019 changes to the Village subdivision regulations, the Applicants have chosen to move forward with the 20 lots rather than an increased yield that would be permissible by the current Village subdivision regulations (see **Section 1.4.1**).

The DEIS has been revised based on the January 20, 2017 comment memos, the Village Board's determination that parkland should be provided on site and the 2019 updates to the Village subdivision regulations (Chapter 158-16). The revised DEIS has been prepared in accordance with the content requirements of the Final Scope as approved by the Village and the procedural requirements of SEQRA and its implementing regulations at 6 NYCRR Part 617 and addresses the comments contained in VHB and Bowne's memos. The purpose of this DEIS is to provide information for the benefit of the public and decision-making agencies with respect to the proposed project, including a detailed project description, an inventory and assessment of existing environmental conditions, identification of potential environmental impacts and proposed mitigation measures, and an examination of alternatives to the proposed action that may reduce potential impacts.

Once the Village accepts the DEIS as adequate in terms of its scope and content, a public review process will begin to provide the public and involved and interested agencies with an opportunity to review the DEIS, provide written and/or verbal comments. These comments will be considered by the Applicant and responses to each substantive comment or question will be provided in a Final EIS ("FEIS").

The EIS record (including the DEIS and FEIS and its responses to agency and public comments) will form the basis for the preparation and adoption of a SEQRA Findings Statements by the lead agency and other involved agencies, to certify compliance to required review procedures, identify potential environmental impacts and mitigations, and provide the foundation for informed decisions with respect to the proposed project or an alternative that meet's the applicant's objectives and avoids or minimizes environmental impacts to the maximum extent practicable.

Project Purpose and Need

The goal of the project sponsor is to subdivide the property and improve private real property in accordance with applicable Village plans and zoning. The purposes, needs and public benefits of the proposed subdivision are as follows:

- Create a residential subdivision that is designed to conform to Village zoning requirements and its land use goals and objectives;
- Provide premium single-family detached homes in a pleasant neighborhood environment;
- Provide required buffers, a trail easement in a portion of the buffer area, and on-site recreational space that will help satisfy public need as identified in the Village and County Comprehensive Plans.
- Protect freshwater wetlands, steep and very steep slopes, wildlife habitat, specimen trees, and historic and cultural resources to the greatest extent possible.
- Generate tax revenues that will exceed the costs of necessary public services, capital improvements and facilities maintenance.

It is the applicant's opinion that the Silver Path Estates Subdivision will help to accommodate anticipated residential growth (as projected in the Village Comprehensive Plan) within an area of the Village that is zoned and otherwise well-suited for the proposed residential use, without significantly or unnecessarily affecting natural resources and public infrastructure. The project will address this apparent need, based on the zoning of the site, future construction of high-quality custom-built single-family homes in an attractive setting and desirable location; while minimizing potential adverse impacts through low density, perimeter buffers, recreational space, protection of natural resources including wetlands and areas of steep and very steep slopes, and protection of cultural resources, including the Pond Cottage and family cemetery. The project will result in substantial increases in property tax revenue for local taxing jurisdictions, which will off-set impacts from increased demand for community services and public infrastructure. Construction of the project will provide temporary jobs for the local building industry and long-term maintenance and contractor jobs will result from the maintenance needs of future homeowners.

Objectives of the Project Sponsor

The objective of the project sponsor is to subdivide the subject site into a low density fully conforming 20-lot residential subdivision in order to construct 20 new homes, while providing permanent open space and a new bridle trail that connects Muttontown Preserve with the Hoffman Center and other parts of the property for use by the public pursuant to a proposed easement consistent with Chapter 55 of the Village Code. All existing buildings and structures will be removed with the exception of the Pond Cottage and main estate driveway. The applicant has designed the subdivision for future construction of homes consistent with the established low-density rural character of the area and to provide quality homes to future residents. The applicant wishes to exercise its right to develop the subject property in accordance with Village zoning, while preserving open space and significant sensitive natural cultural features of the subject site. The past voluntary sale of 18.3 acres from the original estate to Nassau County has resulted in the preservation of this land and the expansion of the adjacent Muttontown Preserve. The proposed perimeter buffer and parkland overlap one another but together cover an area of 17.47± acres while the residential lots will have a minimum net land area of three acres-plus, each, with plenty of space to locate and properly space homes and residential accessory structures without encroaching into steep slope or wetland adjacent areas.

Benefits of the Project

Residential subdivisions exist throughout the surrounding area, and the proposed low-density/large-lot subdivision is consistent with the current rural woodland character of the area while enhancing the built character of the community through the construction of new high-end homes. Furthermore, the proposed action is consistent with relevant sections of the Village and County Comprehensive Plans, as well as the goals and recommendations of the Oyster Bay Special Groundwater Protection Area ("SGPA") and will generate significant property tax revenues.

This report presents an analysis of the setting of the subject site and an assessment of the importance of the various impacts with regard to the proposed project. Potential topics and areas of concern are discussed in detail, and the potential impacts identified in the EAF Part 3 and Final Scope issued by the Planning Board of the Village of Muttontown are addressed. Primary conclusions regarding land use, project benefits and mitigation are as follows:

- The proposed project is designed to conform to E-3 Residence zoning and preserves or protects natural areas including woodlands and wetlands. The project will provide quality housing for persons wishing to live or remain in Muttontown.
- Construction of the project will provide temporary jobs for the local building and construction trades and long-term maintenance and contractor jobs will result from the individual needs of new homeowners.
- The project proposes to provide an equestrian trail corridor connection between Muttontown Preserve and the Hoffman Center for use by the public under a proposed easement consistent with Chapter 55 of the Village Code to help to sustain the sense of place and equestrians' enjoyment of the site.

- The project site (i.e., the former Estate) is eligible for listing on the State and National Registers; therefore, based on input from the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP"), the proposed subdivision retains the Pond Cottage, associated gardens, and the main estate driveway for use as a non-residence accessory use. The design of the subdivision also protects the small cemetery located at the south end of the property from future disturbance by relocating the previously proposed access road farther to the east and including the cemetery and adjacent areas within the parkland or a proposed 0.68-acre cemetery easement. The extension of the parkland over the cemetery was achieved by relocating a section of previously proposed parkland that was near the existing driveway and provided little benefit to the area surrounding the cemetery.
- The project will result in increased tax revenues for local taxing jurisdictions, which will assist in offsetting demand for community services.

The applicant has designed the subdivision to provide the following:

- A lot yield that is permitted by the Village's duly adopted Zoning Map and Zoning Code.
- An aesthetically attractive single-family residential development.
- On-site recreational amenities to serve future residents as well as members of the local equestrian community.
- Open space vistas and retention of high-quality natural vegetation.
- Safe access and on-site streets that are consistent with Village road and drainage standards.
- Conformance to all other applicable land use and environmental requirements.

Project Location, Site History, and Existing Site Conditions

Project Location

The project site is located on the north side of Muttontown Road, west of NYS Route 106 and east of Serenite Lane, in the Incorporated Village of Muttontown, Town of Oyster Bay, Nassau County, New York. The property consists of three commonly owned contiguous parcels identified as Nassau County Tax Lots: Section 16, Block A, Lots 1006, 1012 and 1099. **Figure 1-1** shows the location of the site.

Site History

The Silver Path Estates property (formerly the "Easton Property" and prior to that the "Hall Property") adjoins the Muttontown Preserve, a Nassau County park consisting of 550 acres of fields, woodlands, ponds, trails, and former estate grounds. According to archives, the Hall Property was originally owned by a landscape architect from Argentina, named Diego Suarez, but was purchased by the Hall family from Mrs. Marshall Field Suarez around 1952 or 1953. The property was later determined by the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") to be "eligible" for listing on the State and National Registers of Historic Places under Criterion C, in the areas of country estate architecture and landscape design (see **Appendix G-1**). While the Main House was demolished in 1953 and later the exterior shell of a Georgian-inspired structure was built atop the original foundation in 1989, the current 98.92-acre estate retains some of its original buildings, landscaping and the overall

character of the original plan, though many of the building interiors have been modified over time. Contributing buildings on the estate include: the "Main Home" and attached "East Cottage" and "West Cottage"; "Gardener's Greenhouse Cottage and Garage"; "Pond Cottage"; "Six-Car Garage with Upstairs Chauffeur's Apartment"; former "Barn/Converted Cottage"; and "Pool House" with associated in-ground swimming pool and tennis court. Significant components of the site's landscape design include the U-shaped lawn/forecourt, specimen trees and other plantings, curving driveways and walkways, stone drainage gutters, and cottage gardens.

The property is located within the Oyster Bay Special Groundwater Protection Area ("SGPA") and documentation of past, present or possible occurrences of rare plants, tiger salamanders, and Northern long-eared bats, and a vernal pond. A report was commissioned to address the potential for the New York State listed endangered Tiger Salamander (*Ambystoma tigrinum*) to be present on the site ("Muttontown Field Research Report," dated July, 6, 2011, prepared by Dru Associates, Inc.) but no evidence was found to support the presence of this species (**Appendix D-3**). This finding was later confirmed by NYSDEC in a New York State Endangered Species Act Jurisdictional Determination letter dated July 20, 2015 (**Appendix D-4**).

The "2009 New York State Open Space Plan" contains comprehensive policy and program recommendations that identified conservation projects, including the acquisition of parcels along trail corridors and greenways (i.e. Long Island Trail and Greenway System, Muttontown Preserve Trail System or Muttontown Preserve Enhancement Area). The "Hall Property" is listed on the 2009 New York State Open Space Plan as part of this Enhancement Area (**NYSDEC OPRHP & NYSDOS, 2009**). The "2016 New York State Open Space Plan" also discusses Muttontown Preserve's trail system and identified land adjoining the Preserve as possible acquisition sites to prevent fragmentation of a heavily used horse and foot trail system in the Oyster Bay SGPA, and an area containing rare plants, tiger salamanders, and glacial kettle-hole ponds (**NYSDEC OPRHP & NYSDOS, 2009**). In 2008, 18.3 acres of the Hall Property along the east side of the property was transferred to Nassau County to help preserve important wildlife habit and groundwater resources within the Oyster Bay SGPA and expand the County's recreational trail system (**LIRPB, 1992** and **Fors Karppi, 2008**). The subject subdivision provides numerous impact mitigation strategies which enhance the local trail system and protect slopes, wetlands, cultural resources, and habitat while allowing the private landowner to create a low density subdivision that fully complies with Village zoning.

Existing Site Conditions

The subject property is 98.92 acres in size and is zoned E-3. As noted above, the property is a former estate containing: +/-89.78 acres of native uplands, two (2) small areas of NYSDEC regulated freshwater wetlands totaling 0.61 acres, a small private cemetery ("Weekes" family cemetery) covering 0.12-acres, and existing man-made structures and landscaping. Several short and widely dispersed bridle trails also exist on the site. Some of the trails or former trail segments have become overgrown and appear to have been abandoned (see **Topographic**

Map, **Attachment 1**). Bands of steep slopes[2] and very steep slopes[3] are also scattered throughout the site but are mostly concentrated in the southwest corner of the property. Topography is discussed in detail in **Section 2.1** and topographic contours are shown on **Figure 2-1** and on the **Yield Study** map (see **Attachment 2**) and **2020 Preliminary Map** (see **Attachment 3**).

Wetlands are also located on and adjacent to the property, including a wetland situated in a topographic depression in the southwest corner of the property; a small red maple hardwood swamp located along the southerly property boundary (including areas off-site), east of the cemetery, and west of and associated with a small pond on adjacent property (now or formerly of Patricia Moed); and a small swamp located off-site near the easterly boundary of the property within the Muttontown Preserve.

Most of the site contains successional woodland, with some limited successional old field vegetation, located in a narrow band on the north side of the oval driveway that serves the Main House. The property has been previously disturbed by past residential and equestrian uses. Six (6) residential structures currently exist on the property, and all but the Pond Cottage will be removed under the Proposed Subdivision (see Demolition and Removals Plan, Attachment 3, Sheet 8 of 8).

Adjacent to the east of the subject property is the northern portion of the Nassau County Muttontown Preserve (north of Muttontown Road). To the west are the Hoffman Center, a former estate and current nature sanctuary, and residential properties identified as the "Map of Versailles Estates," Filed April 7, 1961. To the north of the site is "Land Now or Formerly of Kamimian 03 Irrev. Trust" and to the northwest is "Land Now or Formerly of Carnelian Farms, LLC." Adjacent to the south of the subject property is land that is "Now or Formerly of Patricia Moed." **Figure 1-2** provides an illustration of the existing site conditions on a 2016 aerial photograph which is consistent with current development conditions.
The site is located in the following service and/or planning districts:

- Oyster Bay-East Norwich Central School District
- Jericho Water District
- Muttontown Police District
- East Norwich Fire District
- PSEG Long Island Service Area
- Oyster Bay Special Groundwater Protection Area ("SGPA")
- Muttontown Preserve Enhancement Area

[2] Steep Slopes are defined by §190-2 of the Village Zoning Code as: "All areas of land with a topographical gradient of or greater than 15% but less than 25% as measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."
[3] Very Slopes are defined by §190-2 of the Village Zoning Code as: "All areas of land with a topographical gradient of or greater than 25% measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."

- Residence E-3 Zoning District

Project Design and Layout

Overall Site Layout

The project has been designed to maximize retention of contiguous vegetation and open space, maintain viewsheds and community character, reduce use of fertilizer dependent vegetation, preserve steep slopes, provide an equestrian trail connection for locals, and protect wetland and groundwater resources, while providing an attractive residential environment for the benefit of future residents and the surrounding community.

The proposed project is designed in a way that maintains the maximum amount of natural vegetation on-site while providing a land use pattern that is consonant with the lot sizes and pattern of the Village Zoning Code and development in the vicinity of the site. A subdivision plan must not exceed the allowable yield permitted on a property, and therefore, the density must be based on a yield plan that fully complies with Village zoning and subdivision requirements (see Attachment 2, **Yield Plan**). The development must be properly designed and provide essential infrastructure including streets and stormwater recharge areas. It is noted that the Yield Study Plan for the subject property was completed in 2013, prior to the 2019 changes to the subdivision regulations. This Yield Plan established a maximum density of 20 single-family house lots based on the requirements of the E-3 zoning district, including its minimum lot area requirement of 3 acres (130,680 square foot (SF), minimum lot width requirement of 200 feet, minimum lot depth requirement of 250 feet, requirements to remove certain natural features and perimeter buffer areas from yield, and required site infrastructure to serve the site including streets and stormwater recharge basins. At the time the original 2013 Yield Study Plan was prepared, the Village required that all perimeter buffer areas be removed from total gross property area prior to determining maximum yield which had the effect of reducing the total number of lots by 14.16± acres. However, in September 2019, the Village modified this requirement (no longer requiring this deduction), thereby increasing the total gross lot area available for subdivision by 14.16± acres and the number of lots that could legally be created on this site. Despite the potential increase in total lot yield by the 2019 changes to the Village subdivision regulations, the Applicants have chosen to move forward with the 20 lots rather than an increased yield that would be permissible by the current Village subdivision regulations.

The 20 residential lots have gross lot areas ranging between 3.05 and 6.21 acres and an average gross lot size of 3.8 acres. *Net* lot areas (i.e., areas remaining after subtracting on-site freshwater wetlands, adjacent wetland areas, and slopes of 15% or more), range between 3.0 acres (the standard for E3-zoned parcels) and 5.38 acres, with an average *net* lot size of 3.39 acres.

In regard to essential site infrastructure, the proposed subdivision will require the construction of two (2) new roads (Hall Drive and Fan Court East and West), a stormwater collection system including catch basins/drainage piping and two (2) stormwater recharge areas one on the west side of the site adjacent to the Hoffman Center property and one on the northeast side of the property, individual on-site septic systems, and various utility connections. The roads and stormwater system including the collection system in the street and two recharge basins will be maintained by a Homeowners Association ("HOA"). The total land area required for street rights-of-way is 6.59 acres and the total land area for stormwater recharge basins is 5.77 acres (two areas totaling 3.49 and 2.27 acres). Based on the above, the total land needed for streets and recharge basins is 12.36 acres.

The difference between total property area (98.92 acres) and total gross lot area (76.03 acres) is 22.89 acres or 23.1% of the property, which consists of parkland/bridle paths and wetlands (0.61 acres, which is located within lot areas), parkland (10.53 acres), streets (6.59 acres), and recharge basins (5.77 acres). The cemetery (0.12 acres) is located within the parkland area. Covenants, and/or easements meeting the approval of the Village attorney will be filed so that areas containing the wetlands, adjacent wetland areas, steep slopes, and parklands and perimeter buffers will remain undisturbed and naturally-vegetated with the exception of equestrian trail and any other permissible activities that the Village may determine is appropriate. The large lot/low density residential subdivision design along with limitations on building envelopes, required perimeter buffers, and measures to protect wetlands, adjacent wetland areas, and steep and very steep slopes will help to preserve essential wildlife habitat and provide an important connection between the Hoffman Center Wildlife Sanctuary and Muttontown Preserve that will allow animal movement and migration, foster natural stormwater recharge, help to minimize potential impacts to groundwater resources, and maintain some of the rural wooded character of the site.

The applicant has designed the Preliminary Map to achieve the following:

- Provide a lot yield that complies to the maximum permissible density and all other zoning standards and a subdivision layout that is consistent with Village requirements.
- Provide an aesthetically attractive development.
- Avoid significant impacts to the two existing freshwater wetlands on the site.
- Protect steep slopes and avoid unnecessary cut and fill to the maximum extent possible.
- Protect and formalize a bridle path within a proposed 30-foot deep perimeter parkland that will connect Muttontown Preserve which is located on the east to the Hoffman Center which is located to the West and allow access to the vernal pond area and nearly the entire perimeter of the property. Many of the bridle paths developed over time by horseback riders extending from the adjacent parklands were preserved with the previous transfer of tax lot 1098 from the subject site to Nassau County. The existing trails within the interior of site will require realignment.
- Protect the existing cemetery by retaining its fencing, including it within the proposed 50-foot deep non-disturbance perimeter buffer, and ensuring that the proposed Hall Drive right-of-way does not cross over any part of it.

- Retain the Pond Cottage as a representation of the former estate which is classified as eligible for listing on the State and National Registers.
- Remove the remaining existing structures.
- Maintain open space vistas and maximize retention of natural vegetation throughout the site.
- Provide safe access that conforms to Village standards and requirements.
- Conform to all other applicable Village land use, zoning requirements.

Several points were raised by the Village during initial project review and are now incorporated into the Silver Path Estates subdivision design. The subject site lies along the north side of Muttontown Road and abuts substantial public (Muttontown Preserve) and privately-developed lands, so that only one primary vehicle access road is practicable. The 2020 Preliminary Map provides a single vehicle access from Muttontown Road, approximately ±161 feet east of the intersection of Muttontown Road and Woodhollow Court from center line to center line. Locating the site access at this location will provide a greater setback between the access road and the cemetery and will address concerns of some area residents.

Lots will be sold for individual site development and the roads and recharge areas will be maintained by an HOA. The HOA will be responsible for all on-site maintenance and repair of these improvements once accepted, including recharge basin maintenance, maintenance of roads, and snow removal.

The project includes 20 single-family residential lots all of which are three acres (net) or larger in size. A total of 12.36 acres of buffer some of which overlaps with parkland and wetlands setback areas, ±0.61 acres of wetlands, and a combined ±9.38 acres of wetland adjacent areas (upland areas within 100 feet of delineated wetland boundaries) and steep slope areas (areas with slopes of 15% or more) will be protected by covenant, easement, existing regulations, or other means. The proposed lots as shown on the **2020 Preliminary Map** provide ample space for driveway and garage parking for each individual lot, as demonstrated by the **Lot Development Plan** (see **Attachment 3**).

The 98.92 acre site is located on the north side of Muttontown Road across from Woodhollow Court in the Village of Muttontown. Muttontown Road is an east-west rural collector street under the jurisdiction of the Village which connects to Brookville Road to the west and NYS Route 106 to the east. Within the vicinity of the site, Muttontown Road has one travel lane in each direction. The posted speed limit along this roadway is 35 mph, and on-street parking is prohibited.

Woodhollow Court, located opposite the subject property, provides access to residential properties on the south side of Muttontown Road. Its intersection with Muttontown Road is an all-way stop controlled intersection with stops signs at all three approaches. The nearest traffic signal to the site is at the intersection of Muttontown Road and NYS Route 106, approximately three-quarters of a mile east of Woodhollow Road. NYS Route 106 is a major arterial road that provides connections to the Northern State Parkway and Long Island Expressway (I-495).

Lots will be located to either side of the proposed ROW and are generally configured to be deeper than they are wide. The 20 lots, which range in gross land area from 3.05± acres to 6.21± acres (all lots have a net lot area of at least 3.0 acres), will occupy 76.03± acres, with the remaining land occupied by parkland (10.53± acres), internal road right-of-way (6.59± acres), two recharge areas and their access strips (5.77± acres), an existing cemetery (0.12± acres), and wetlands (0.61 acres). The cemetery, wetlands, and wetlands adjacent area are located within the parkland. A 100-foot cemetery easement consisting of 0.68-acres overlaps the parkland, but a small portion of the easement extends beyond the parkland on to Lot 1. All lots will fully conform to Village lot area and setback requirements as detailed in **Table 3-2**, "E-3 Zoning Requirements and Project Conformance"). A 50-foot wide buffer will also be provided around the entire perimeter of the site totaling 12.36± acres some of which is overlapped by parklands and wetland and cemetery easements. The approximate placement of typical houses, driveways, walkways, sanitary systems, drainage, and associated amenities and accessory features is provided in the **Preliminary Subdivision Plan (see Attachment 2**) to demonstrate that lots have suitable building envelopes that can accommodate large homes and customary residential accessory structures that are often associated with high-end homes on large lots (e.g., swimming pools, patios, tennis courts, etc.). The subdivision plans also show the wetlands, wetland adjacent areas and steep slopes that were deducted from the gross land area of the lots, based upon Village Code requirements. Any disturbance to "slopelands" is prohibited without approval from the appropriate Village board.

Water service for the subdivision will be supplied and maintained by the Jericho Water District. Existing water lines on-site will be removed, and a new eight-inch water main will be installed within the paved area of the proposed ROW with lateral service connections to each of the new homes. Connection to the existing water main along Muttontown Road will occur at the entrance to the proposed subdivision access road (i.e., the "Hall Drive" to "Fan Court East" and Fan Court West" ROWs).

Stormwater will be directed to catch basins and piped to one of the subdivision's two (2) stormwater recharge basins. The recharge basins are proposed in lower elevation areas on the property in order to facilitate stormwater collection and recharge and have suitable storage volume to capture the runoff from an 8.5-inch rainfall event. Designated Stormwater Recharge Areas 1 and 2 (See **2020 Preliminary Map** attached) will provide a total storage capacity of 683,000 cubic feet (CF) and 325,000 CF, respectively, for a combined total of 1,008,000 CF. As with the residential lots, the areas to be used for stormwater recharge will include 50-foot deep non-disturbance buffers (except for an 8-foot wide bridle trail within the parkland portion of the buffer) along their common boundaries with the Hoffman Center and Muttontown Preserve to provide adequate separation, as well as natural screening.

Wastewater from each home will be discharged to their own on-site septic system. All new sanitary systems will be designed, sized, sited, and installed in accordance with Nassau County Health Department ("NCHD") standards and regulations. Existing systems serving buildings to

be demolished will be removed or properly abandoned in accordance with NCDH standards and procedures.

The subject property was inspected by Nelson, Pope & Voorhis, LLC (NPV) in order to determine potential environmental and public health concerns and a Phase I Environmental Site Assessment ("ESA") was prepared in May of 2015 and updated in July of 2020 (see **Appendix H**). The Phase I ESA sought to identify "Recognized Environmental Conditions" ("RECs") as defined in ASTM Standards on Environmental Site Assessments for Commercial Real Estate on the subject property, based on the four components of Phase I ESAs: records/database review, site reconnaissance, interviews with persons knowledgeable about the history of the property, and evaluation and reporting. The report prepared for the inspection indicated evidence of four (4) recognized environmental conditions and one (1) de minimus condition in connection with the subject property for follow-up. There is also one minor historic environmental condition associated with two spills that have been investigated, satisfactorily addressed, and closed by the NYSDEC. The updated report will be submitted to the Nassau County Department of Health ("NCDH") for review prior to final subdivision approval.

The subdivision layout has been designed to minimize impacts to the natural area of the site due to its ecological and cultural significance (i.e. freshwater wetlands, adjacent wetland area, sloping topography, a small family cemetery plot) and for proper siting of improvements (i.e. safe vehicle access and optimal stormwater recharge basin locations). A 50-foot wide buffer will be provided per Village requirements along the periphery of the site, which will further insulate the project from adjoining properties.

Based on Village Zoning Code requirements, the proposed 20 single-family lots and their building envelopes were laid out after consideration of existing topography, in order to minimize grading, cut, fill, and the removal of soil resources; reduce impacts from stormwater runoff; and maintain natural land cover to the extent possible. Lots are generally rectangular in shape which helps to ensure suitable lot configurations, widths, and depths; yard setbacks; and appropriate areas for development that foster orderly growth and promote the health, safety, and general welfare of the community. Subdivision's water supply and onsite sewage disposal plans, and applications will be submitted to NCDH for review and approval.

<u>Clearing, Grading and Drainage System</u>

The 20 new homes will be similar to large single-family homes constructed in the surrounding area. It is expected that each of the homes will contain 6 bedrooms and will be designed to conform to minimum setback, maximum building height, maximum building area, maximum and minimum habitable floor area, and maximum principal building length guidelines established by the Village for the E-3 zoning district (**Section 3.1**). Building permits and site plan approvals will be secured for each home following final subdivision approval.

Portions of the site were previously disturbed by past residential and equestrian activities. Five principal and accessory residential buildings are present on-site, including a mansion (Main

House) with two attached cottages, gardener's greenhouse cottage and attached garage, pond cottage, six-car residential garage with upstairs apartment for the chauffer, a small barn which had been converted to a cottage, and pool house, as well as an abandoned in-ground swimming pool and tennis court. All of structures, with the exception of the pond Cottage, are proposed for removal under the Proposed Plan. Disturbance to vegetated areas will be minimized to the maximum extent possible by clearing only the immediate areas surrounding structures to be demolished and clearing and grading in connection with the proposed subdivision and development. The following Chapters of the Village Code are instrumental in ensuring a quality subdivision design and protection of environmental resources:

- Chapter 57 ("Stormwater Management and Erosion and Sediment Control")
- Chapter 74 ("Freshwater Wetlands")
- Chapter 158 ("Subdivision of Land") to protect slope lands, freshwater wetlands, natural buffers between subdivisions and provide minimum storm water management requirements and controls
- Chapter 172 ("Trees") to regulate the removal, substantial alteration or destruction of trees and other protected vegetation
- Chapter 190 (Zoning), Article XII, "Slopelands."

Pursuant to Village Code, Chapter 172-4 (B), "Trees," "Issuance of permits; rules and regulations," "Construction," a plan shall be prepared showing the location of trees that will be removed during approved construction to be submitted to the Tree Warden simultaneously with the building permit application. No cutting or removal in connection with construction will be permitted until the tree removal plan is approved by the Tree Warden. The existing indigenous and naturalized tree canopy of the property, to the extent reasonably possible, shall remain in its natural state, consistent with the goals and purposes of this chapter and the use of the proposed construction.

Freshwater wetlands and adjacent upland areas within 100 feet of wetlands are important for open space and wildlife habitat and flood and water resource protection, and as such will be protected in a natural undisturbed condition. Wetlands on-site encompass a total of 0.61 acres. Upland wetlands buffer areas (i.e., upland areas within 100 feet of wetlands) on the site cover ±3.6 acres or approximately 3.7 percent of the site. Although the site contains steep slopes and most of the property is more gently sloping with slopes of less than 10 percent, grading will be necessary to ensure proper drainage.

A maximum cut of ±20-21 feet in the two recharge basins and ±13 feet at the intersection of Hall Drive and Fan Court and a maximum fill of ±16.5 feet along the Hall Drive ROW between Stations 4+00 and 5+00 are proposed. Total estimated cut for roadways and recharge basins under the proposed 2020 Preliminary Map design is 107,564 CY and the total estimated fill is 29,276 CY of fill for a total net cut of 78,288 CY. It is not possible to incorporate all of the projected cut back into the site; however, all effort will be made to balance cut and fill as much as possible using on-site materials excavated for drainage structures and regrading to limit the need for soil import or export. Similarly, all efforts will be made to retain soil on individual

house lots so that excess soil does not have to be shipped off-site. The **2020 Preliminary Map** depicts existing and proposed surface contours and elevations. **Street Profiles for Hall Drive and Fan Court West** are provided on Sheet C-102 and **Profile for Fan Court East** is shown on Sheet C-103. Existing topography can be viewed on the **Topographic Map**.

The project has been designed to conform to applicable engineering standards; however, grading, site elevations and overall subdivision and lot development plans will be subject to detailed Village engineering and site plan reviews. All cut and fill areas will be graded consistent with standard engineering practices and will be stabilized using groundcovers. Any undisturbed slopes that are outside the grading limit lines and are stable will remain undisturbed. No additional runoff is to be directed into this area from the development sites.

The demolition, clearing and grading process for the subdivision roads and drainage system are expected to take approximately two months to complete. Grading activity will be conducted internally within the site and will not impact adjacent properties. In addition, construction management techniques outlined in **Section 4.6** will ensure that erosion and sedimentation control measures are implemented.

A detailed Grading Plan will be prepared for each lot after the subdivision's road and drainage work is completed and review will be conducted during individual site plan review processes. However, the project engineer has estimated that a total of 107,564 CY of cut is necessary to construct the proposed subdivision roads and recharge basins, 29,276 CY of this volume will be reused on-site as fill, and the rest (78,288 CY) would be shipped off site. Some of the gross cut can be used in areas that need fill or will otherwise be reincorporated back into the site to meet engineering requirements and reduce the export of materials and related impacts as much as possible. The level of cut and ultimate off-site shipment is necessary because of the unique nature of the site's steep and rolling topography, even without significantly disturbing delineated "steep" and "very steep" slopes. Excess excavated material over the required fill, will be exported for use as fill elsewhere. In cases where topsoil must be exported from the site, as per Chapter 158-16 (E), "Preservation of Natural Cover," no topsoil will be removed outside Village boundaries without first receiving the consent of the Board of Trustees. If soils are determined to have unacceptable characteristics for the work being performed, they will be disposed at an approved construction and demolition debris landfill. Excess material can be removed from the site using trucks having a load capacity of +/-20 cubic yards (CY) but this is not expected to be necessary.

The steepest slopes on the property will remain largely undisturbed during site grading and construction of the proposed subdivision streets and stormwater recharge basins. Exceptions include two small areas located along the proposed Hall Drive ROW, the intersection of Hall Drive and Fan Court, and a few small areas along the Fan Court ROW where moderate-to-steep and very steep slopes exist. In total, 70,168 SF or 1.61 acres of steep slopes and 8,991 SF or 0.21 acres of very steep slope will have to be disturbed. An additional 7,178 SF or 0.16 acres of steep slopes and 991 SF or 0.02 acres of very steep slopes will have to be disturbed as part of

lot development. Total slope disturbance, therefore, is 77,346 SF or 1.78 acres of steep slopes and 9,982 SF or 0.23 acres of very steep slopes. These areas will be protected by project limiting fences during construction and of steep and very steep slopes can be largely addressed by site grading and cut and/or fill as necessary, slope stabilization and erosion and sedimentation controls. Disturbances to steep and very steep slopes ("slopelands") as part of road and drainage facilities construction and lot developments will require approvals from the appropriate Village Board.

All stormwater runoff generated by impervious surfaces from an 8.5-inch rainfall event will be captured within the proposed drainage system and be discharged into the ground in accordance with Village drainage requirements. The drainage system for the subdivision has been designed to accommodate the volume of runoff that would be generated from an 8.5-inch rainfall event, and consists of a series of interconnected catch basins and storm drains leading to two stormwater recharge basins, one in the northeast corner of the property ("Recharge Area #2") and the other on the west side near the Hoffman Center ("Recharge Area #1") (see **Attachment 3**). The site will be graded to direct stormwater to the stormwater collection system to ensure that it is recharged on site. A total of 700,400 cubic feet (CF) of storage is required to accommodate runoff from an 8.5-inch rainstorm which is only 70 percent of the total 1,008,000 CF of storage to be provided (683,000 cubic feet of storage in Stormwater Recharge Area #1 and a minimum of 325,000 cubic feet of water in Stormwater Recharge Area #2. The two recharge basins will have a depth from base to the high water mark of between 10 and 12 feet. Drainage calculations are provided on the **2020 Preliminary Map**.

Erosion and sedimentation control measures for road and drainage improvements and individual house lot development include: silt fencing, slope matting, curb and grate inlet protection, stabilized construction entrances, dust control measures, and compliance with a New York State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) and an Erosion Control Plan (see **Attachment 3**). As discussed in **Section 1.5**, the project will include a Stormwater Pollution Prevention Plan ("SWPPP"), which will include measures to address potential runoff and/or erosion impacts during construction, as well as post-construction. The SWPPP will be subject to Village and NYSDEC reviews and approvals and will be part of the required SPDES permit. An erosion control detail plan is attached (see **Attachment 3**). The SWPPP will be based on the standards and guidelines of the "New York State Stormwater Design Manual" and "New York State Standards and Specifications for Erosion and Sediment Control."

<u>Vehicle Access and Internal Road System</u>

Access to the proposed development will be from Muttontown Road, approximately 161 feet east of Woodhollow Court when measured from centerline to centerline. Proposed rights-of-way will be 70 feet wide with 22 feet of paved width in each travel lane and a 6-foot pervious median in between. The ROW will extend an additional 10 feet beyond its curbing to provide clear space and areas for utilities and road maintenance. Internal traffic will be controlled by signage (e.g., speed limit and stop signs) and street markings. A Typical Pavement Section is

shown on the **2020 Preliminary Map**. The new development will be provided with only one access point, via a proposed street, near the mid-point of the property's frontage on Muttontown Road. The internal road system for the new lots is estimated to have a total combined length of +/-0.75 of a mile.

The Fire code requires a turnaround if the cul-de-sac is more than 150', which are provided. The street is designed as a dead-end road or "cul-de-sac" with one "turn-around" area on the west side of the property (Fan Court West) and one at the northeast end (Fan Court East). The Fire code also require a second access if there are more than 30 lots. The Applicant proposes only 20 lots. The turnaround areas are not closer than 100 feet from the property line and not less than the minimum lot depth prescribed by Chapter 190, Zoning. The turnaround diameter also complies with the minimum 80-foot outside diameter and 100-foot street property line diameter. The dead-end street is longer than 900 feet, but the road has been designed as a divided roadway with center mall. The ROW width is 70 feet as shown by the Typical Road Profile (see **2020 Preliminary Map**, Sheet 1 of 8) and is designed in such a manner that either side of the roadway could be used, in emergencies, for two-way traffic. Based on the above considerations, the dead streets have been properly designed.

On-street parking spaces will not be provided. Instead, all parking will be provided within garages and on driveways within the proposed lots. The roads will be curbed and a drainage system consisting of catch basins that will convey road runoff via subsurface pipes to one of two proposed recharge basins is proposed (see **Section 1.4.2**). A subdivision HOA will be responsible for maintaining the on-site street system and drainage facilities.

Sanitary Wastewater Disposal and Water Supply Systems

The project is designed to conform to NCDH's Manual of On-Site Sewage Disposal requirements. The Manual allows discharge of not more than 900 gallons per day (gpd) per residence or a maximum total of 18,000 gpd for the 20 lots, unless advanced sewage treatment is provided. The proposed project will not exceed the allowable flow for the site; therefore, lots will be served by individual on-site septic systems. The subdivision will be reviewed by the NCDH for conformity to its subdivision wastewater requirements, water supply connections and drainage design. Anticipated irrigation demand is calculated at an average of +/-26,229 gallons per day over the course of a year based upon an estimated +/-14.7 acres of landscaped area within the 98.92-acre subdivision (See **Table 1-1** for the complete calculation). Total maximum anticipated water consumption on average per day over the course of a year is 44,229 gpd (18,000 gpd domestic use, plus 26,229 gpd for irrigation).

Potable drinking water will be provided from the Jericho Water District distribution system. The project will tap into an existing water main that exists within the Muttontown ROW and an eight-inch diameter water main will be extended on to the site along the proposed subdivision streets. Service lines will be extended from the subdivision streets to each of the lots and connect to the future residences. All necessary connections, meters, easements, and installations will be provided to an ensure adequate water supply.

Site Landscaping

An estimated +/-29.5 acres or 38.8 percent of the 76.03 acres would be cleared for principal and accessory structures, driveways, patios, lawns and landscaping (not including clearing needed for the proposed streets, recharge basins and the bridle trail) and a tree removal permit will be required from the Village Trustees pursuant to Chapter 172, "Trees," of the Village Code.[4] As required by Village Code §158-16 (F) ("Subdivision of Land"), Article IV ("Design Standards"), the project will include a 50-foot deep naturally-vegetated buffer along the perimeter of the project site to remain undisturbed except for an eight-foot wide bridle trail that will meander between trees through the park portion of the buffer and require only brush removal and trimming of branches within the trail easement.

A mix of evergreen tree species will be planted along the subdivision-facing edges of the proposed stormwater recharge basins to enhance vegetative screening, and native grasses will be planted within the center island of the proposed streets to improve the visual character of these internal roadways. The evergreen species will include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*). The trees will be planted at heights of 10 to 12 feet and will be arranged in a staggered double row as depicted on the "**Planting and Tree Removal Plan**" (Sheet C-105). Street trees are not required and are not proposed. The center median grasses will consist of indigenous little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*). Disturbed areas such as street shoulders will be seeded with an ecology mix. The amounts, types, and locations of landscaping on individual lots will be determined through the site plan design and review process.

Landscaping and plantings associated with streets and drainage areas including any screening will be maintained by the subdivision's HOA, while individual lawns and lot landscaping will be the responsibility of private property owners. As with roads and drainage, landscaping in common areas associated with ROWs and recharge basins is expected to be subject to performance bonding requirements, to ensure plant survival. Areas that may be landscaped are shown on the **Lot Development Plan** (Sheet C-104). Irrigation demand for future lawns and other landscaping is estimated to be ±26,229 gpd/year. Landscaped areas may be temporarily fertilized and based on an estimated 14.7 acres of landscaped area and considering that each lot will have its own on-site septic system, nitrogen concentration in site recharge may increase from an estimated 0.22 mg/l to 0.98 mg/l which is well below the 10 mg/l standard for drinking water and protective of surface waters and freshwater wetlands. See NPV's "Simulation of Nitrogen in Recharge" ("SONIR") Microcomputer Model in **Appendices C-1, C-2, and C-3** which projects existing and future nitrogen loading.

[4] This is an estimate based on the approximate size of homes anticipated, sufficient space for a full complement of accessory structures on each lot (swimming pool, decking, tennis court) as is permitted under existing zoning, and lawn area. Actual clearing on lots could differ depending on specific site plans and developer and owner preferences.

Construction plans shall be prepared for all required subdivision improvements including but not limited to street signs, street lighting at proposed road intersections, only, and the installation of street trees, as part of the subdivision application. In general, outdoor lighting will be provided to establish a safe and secure environment with illumination only in those areas where it is necessary. Illumination will not extend beyond the property boundaries and diffuse lighting is not expected due to the sizes of the lots, setbacks, and naturally vegetated buffers.

Village Code Chapter 94 ("Lighting, Exterior") was amended in 2009, that included Sections 94-1, 94-2, 94-3, 94-4, and 94-5 of the code of Muttontown to promote and protect the public welfare by regulating the appearance of lighting and prevention of light trespass from exterior lighting located on private property within the Village in order to ensure a nighttime appearance within the Village which is consistent with the Village's character and overall architectural quality.

Lighting on the proposed lots is expected to be consistent with typical residential needs to ensure home safety and security and may include porch and patio lights, swimming pool and tennis lights, and flood lights as needed. Illumination of home sites is not expected to extend beyond the property boundaries due to the large size of the lots, large setbacks and the perimeter buffer which will remain wooded/natural except for the equestrian trail. The Planning Board will have the opportunity to review detailed site plans in the future and place additional restrictions or require additional mitigations if warranted.

Construction Schedule and Operations

A Limited Phase II Investigation should be conducted prior to demolition to determine the precise locations of all of the underground storage tanks situated on the property using Ground Penetrating Radar technology, and to collect soil samples in the vicinity of the storage tanks in order to ensure that a prior release has not occurred. In addition, the discharge points of the floor drains should be located and sampled in order to ensure that the discharge points have not been adversely impacted by prior uses of the subject property.

The Nassau County Public Health Ordinance also requires that the owner or applicant/ developer obtain a certificate from the Health Department stating that the premises and its buildings/structures are free of rodent infestation. Therefore, prior to demolition activities, NCDH will be contacted to schedule a site inspection and rodent survey. If rodents are not present on the subject property, the NCDH will issue a "Rodent Free" Certificate which must be obtained in conjunction with the permit for building demolition. If rodents are present, a private exterminator must be hired to remove the rodent population from the site. The NCDH inspector will then issue a "Rodent Free" Certificate once the rodents have been removed to the satisfaction of the inspector. All necessary permits required for demolition of the existing structures and future development will be obtained prior to the initiation of site construction activities.

Existing underground and basement fuel storage tanks must be examined, cleaned, and removed, and the empty tanks and any recovered hazardous material must be disposed in accordance with applicable regulations. Floor drains and mechanic's pits in the garages must also be remediated if contamination is determined to be present by the Limited Phase II Investigation and the drains and any recovered hazardous materials must be removed and properly disposed. Existing drums located on the subject property will be removed and properly disposed. If the groundwater well on the subject property is no longer in use, it should be abandoned in accordance with all applicable regulatory agency requirements. In addition, the electrical transformer in the basement of the mansion must be removed and properly disposed prior to demolition in accordance with applicable regulatory agency requirements. Finally, if the buildings are to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56. ACM must be removed prior to demolition and properly disposed.

All work will be performed in accordance with applicable regulations outlined under Article XI, "Toxic and Hazardous Materials Storage, Handling and Control," of the Nassau County Public Health Ordinance and the findings and recommendations of a Phase II ESA. The results and recommendations of the July 9, 2020 Updated Phase I ESA are summarized in **Sections 2.2.1** and **2.2.2**. The full ESA Updated Phase I report is available for review in **Appendix H**.

Clearing necessary for road and drainage improvements will be conducted in accordance with the **Planting and Tree Removal Plan** (see **Attachment 3**, Sheet C-105) and all buildings and accessory structures, with the exception of the Pond Cottage, will be removed in accordance with the proposed "**Demolition and Removals Plan**" (see **Attachment 3**, Sheet C-108) provided with the DEIS. Additional clearing will occur on individual lots after individual site plan approvals.

Next a survey of road alignment and vertical control will be completed to establish proper grades for road construction and the recharge basins will be dug. Grading for future lot development will occur after individual site plan approvals. Areas requiring erosion and sediment control will be addressed by erecting silt fencing downslope of material stockpiles and areas to be disturbed. Inlet protection will be provided to prevent eroded debris from entering nearby catch basins, including on-site and any off-site basins that are downslope and in close proximity to disturbed areas. As construction begins, construction equipment, worker vehicles, and materials will be staged, parked, and loaded/unloaded within the confines of the site. All construction access will be from the proposed subdivision road off Muttontown Road. Muttontown Road will be accessed from NYS Route 106 only, with no unnecessary access or egress through residential areas. Once construction of the individual dwellings is completed, landscaping will be planted, soils will be stabilized. Road surface asphalt lifts will be completed once construction vehicle use of roads is completed.

"Rumble strips" will be placed at the construction entrance to remove soil from truck tires and reduce the amount of sediment being tracked onto Muttontown Road. A water truck will be

available if needed to wet excessively dry soils. It is anticipated that excavation of recharge basins, grading, and road and utility installation will take approximately 8 months to complete, with individual home construction completed based on sales. Construction-related impacts will be minimized by limiting access to just one street and controlling traffic flow by stop sign. Development will be concentrated toward the interior of the property and a substantial combined 17.47 acres of open space/parkland and 50+-foot deep buffers will be provided around the perimeter of the property. Construction activity will be restricted to typical work hours (Monday through Friday between 8 AM and 6 PM, except on State holidays, when most are either awake or at work, thereby reducing potential noise-related impacts. The grading concept attempts to incorporate cut from the proposed recharge basins, drainage and utility installations, and road construction into the site along the road and in other areas where it will be needed or can be accommodated. Soil excavated from basements or individual lots will be assessed further during detailed site plan reviews and should be reused on-site as much as possible to reduce the total number of truck trips during the development process.

Coverage under NYSDEC's Phase II SPDES General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP 0-20-001, General Permit) will be obtained prior to the initiation of construction activities. Prior to filing for coverage, the NYSDEC requires that a SWPPP be prepared for the parcel for post-construction stormwater management. The SWPPP will help to ensure compliance with water quality and quantity requirements pursuant to Technical Guidance and GP 0-20-001, requirements and an Erosion and Sediment Control Plan incorporating the recommendations of the NYSDEC Technical Guidance manual, and use of measures including the following to minimize impacts:

- Silt fencing and staked hay or straw bales, storm drain inlet protection, and good housekeeping procedures.
- Construction trucks, equipment and employee vehicles will be parked and loaded/unloaded on-site.
- "Rumble strips" will be placed at the site construction entrance to prevent soil on truck tires from being tracked onto the public road system.
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures.
- Construction of the buildings and structures can then begin concurrent with the utility installations. Once heavy construction is complete, finish grading will occur followed by soil preparation using topsoil mix, turf, and installation of the landscaping, which will be performed while the structures are being completed.
- The drainage system and revegetation plan will provide permanent stormwater management and control once construction is completed.

Development of the property is not anticipated to significantly increase erosion/sedimentation or stormwater impacts, due to proper site grading procedures, erosion controls, soil stabilization, and drainage system design. The Notice of Intent ("NOI") requesting coverage under the General Permit will be filed in accordance NYSDEC requirements, prior to the

initiation of construction activities at the subject property. Full development of the property is expected to take 36 months.

Impact Evaluation: Natural Environmental Resources

Topography

Impacts

The **2020 Preliminary Map (Attachment 3)** illustrates that steeply sloping areas will be primarily within the deed restricted areas controlled by covenants and restrictions filed with the County and Village that limit how the identified area may and may not be used in order to protect wetland buffers, perimeter buffers, slopes, the stormwater recharge area on the west side of the property, and in the yard setbacks of lots. The steepest slopes on the property will remain largely undisturbed during site grading and construction of the proposed subdivision streets and stormwater recharge basins. Exceptions include the western recharge basin, two small areas located along the proposed Hall Drive ROW, the intersection of Hall Drive and Fan Court, and a few small areas along the Fan Court ROW where moderate-to-steep and very steep slopes exist (shown on the 2020 Preliminary Map in light grey and dark grey shading, respectively). In total, 70,168 SF or 1.61 acres of steep slopes and 8,991 SF or 0.21 acres of very steep slope will have to be disturbed. An additional 7,178 SF or 0.16 acres of steep slopes and 991 SF or 0.02 acres of very steep slopes will have to be disturbed as part of lot development. Total slope disturbance, therefore, is 77,346 SF or 1.78 acres of steep slopes and 9,982 SF or 0.23 acres of very steep slopes. These areas will be protected by project limiting silt fences during construction and areas of steep and very steep slopes can be largely addressed by site grading and cut and/or fill as necessary, slope stabilization and erosion and sedimentation controls. Disturbances to steep and very steep slopes ("slopelands") as part of road and drainage facilities construction and lot developments will require approvals from the Village Planning Board.

Road profiles showing existing and proposed grades for the proposed subdivision roads and areas requiring cut and fill are provided on attached Sheets C-102 **(Profiles for Fan Court West and Hall Drive)** and C-102 **(Profile for Fan Court East)**. The steepest stretch of roadway will be along Hall Drive where the slopes reach gradients of ±7.7 to ±7.8 percent. Areas of net cut will be primarily at the north end of Hall Drive at its intersection with Fan Court West and to a lesser extent at the south end of Hall Drive at its intersection with Muttontown Road. Areas of cut along Fan Court West are primarily at the west end of the street at the turn-around and areas of cut along Fan Court East exists along most of the length of the road. Areas of fill are present midway along the Hall Drive between stations 2+00 and 8+00). Fan Court West will be finished at a grade of ±1.5 percent and Fan Court East will vary between approximately one (1) percent and its maximum proposed grade of ±6 percent near lots 9 and 15. The total net cut for roads and drainage under the 2020 Preliminary Map is 107,564 CY, the total fill is 29,276 CY, and the net cut is estimated to be 78,288 CY. The **2020 Preliminary Map** shows existing and proposed topographic contours along the streets, as well as in the recharge basins.

The current location and alignment of Hall Drive is preferred by the Village over its previous location, as it is farther from the cemetery and is the preferred location of nearby residents. Moreover, building envelopes depicted on the proposed subdivision map are sufficiently large to allow flexibility for locating future principal and accessory residential structures. As a practical matter, therefore, it is expected that during home construction, areas containing steep slopes will be avoided to the maximum extent possible in order to reduce unnecessary and costly cutting, filling and grading and to provide harmony between the natural and human-built environments. As with the subdivision, any steep or very steep slopes covering an area of least 25 feet in horizontal length by 25 feet in horizontal width that may be disturbed on the proposed lots will be considered further during individual site plan reviews and may be subject to conditions set forth in a Village slopes permit. Soil cut from areas such as recharge basins, and in the future, basement areas, will be incorporated back into the site to the extent possible to eliminate the need for importing and exporting soil to and from the property.

Mitigation

- An Overall Earthwork plan has been prepared and drainage calculations and erosion control details are provided and a Stormwater Pollution Prevention Plan (SWPPP) and Erosion Control Plan will be submitted to address impacts associated with slope disturbance and the modification of existing surficial landforms and drainage patterns (see **2020 Preliminary Map, Attachment 3**). Techniques identified by the above referenced plans to stabilize slopes, prevent or mitigate erosion and sedimentation, ensure proper drainage, and prevent other topography-related impacts include but are not necessarily limited to: delineation of site clearing limits (e.g., along natural buffer areas and proposed open space), silt fencing downslope of work area perimeters and soil stockpile areas, use of stockpile stabilization methods such as seeding or mulching for periods of non-disturbance lasting longer than 7 days, drainage inlet protection, check dams and temporary diversion swales, perimeter berms, development and/or reseeding/ revegetation of bare soils as soon as possible after disturbance, use of retaining walls in areas with abrupt grade changes, curbing and street crowns to ensure the collection of stormwater along proposed streets, and the capture and recharge of stormwater flows from impervious surfaces on-site through a system of catch basins, leaching pools, and new and expanded recharge basins that are designed in conform with professional engineering standards and specifications.
- The existing topographic landforms on the property are not considered unique or otherwise exceptional natural features. Most of the steeply sloping areas will be avoided as most are located outside the limits of the proposed building envelopes and road rights-of-way or are in areas that will remain natural, and Village requirements for excluding areas of steep slopes from yield help to create larger lots to facilitate the proper siting of improvements. However, some disturbances to steep and very steep slopes will be necessary as discussed above. Grading will be limited to what is necessary to provide suitable street beds, home sites, and stormwater recharge areas. Placement of structures will be such to avoid areas of steep and very steep slopes to the maximum extent practicable.

- Coverage under the General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP-0-20-001, General Permit) will be sought and a SWPPP and erosion and sedimentation plan will be prepared.
- Areas containing steep and very steep slopes will be reviewed by the appropriate Village Board during subdivision review and subsequent site plan reviews for individual house lots.
- Clearing, excavation, movement and placement of soil, finish grading, demolition and other construction activities will take place Monday through Friday, between the hours of 8:00 AM and 6:00 PM, except on designated New York State holidays as specified by § 104-3 G of the Village of Muttontown Code. Construction vehicles will be staged on-site and will under no circumstances be parked within the rights-of-way of any public or off-site privately owned street.

Soils

Impacts

Limitations to development noted in the Soil Survey are not expected to significantly impact the proposed development of the subject property for residential purposes and can be mitigated through engineering, project design, and removal and replacement if necessary. The most significant limitations to development resulting from the soils present on the subject property based on the Soil Survey and test hole data are expected to be related to drainage and leaching capabilities due to the presence of hardpan and associated slow percolation, wetness, slope and possible shallow depth to perched water due to this condition. Excavation and replacement of poorly drained and compacted soils with clean sand where drainage recharge and sanitary leaching will occur, installation of foundation drains, suitable grading, and other engineering practices can help to overcome these limitations. In addition, limitations were also noted with regard to recreational areas due to small stones and slopes. Most of the site contains gently sloping topography. Areas containing steep slopes will be avoided to the extent possible, while cut, fill, grading, slope stabilization, and erosion and sedimentation controls will help to address other slope issues where disturbance is unavoidable.

Stormwater runoff will be captured by stormwater catch basins along the proposed streets, conveyed via storm drains, and temporarily stored and recharged into the ground at one of the two proposed stormwater recharge basins. The recharge basins are designed to hold a combined total of 1,008,000 CF of stormwater which is 222,177 CF more than the projected 785,823 CF of storage space required to serve the proposed subdivision, based on an 8.5-inch rainstorm. The proposed drainage and stormwater recharge system is designed to address runoff from individual house lots but in some instances supplemental drainage improvements such as on-site leaders, gutters and drywells or leaching pools will be needed to manage some of the runoff from driveways, buildings and accessory structures on individual lots. The need for such minor supplemental improvements will be determined during individual site plan preparation and Village engineering reviews.

Public sanitary sewers are not available in the area but due to the large sizes of the proposed lots and level of wastewater loading anticipated, each lot will have its own on-site sanitary disposal system (i.e., septic system). Septic systems must comply with NCDH standards, including any and all requirements for system siting (setbacks), design, and installation, including that systems discharge to suitable soils to ensure adequate wastewater disposal and leaching and that adequate separation distance between the discharge points of leaching pools and the water table. Suitable soils for septic system functioning are typically clean sand of a texture, depth and sorting that allows filtration of wastes without systems backing up or wastewater being discharged too quickly which can affect wastewater treatment and impact groundwater; particularly, if there was a shallow depth to groundwater which is not the case. Based on information from the Nassau County Soil Survey and data collected on- and adjacent to the site from several test holes, soil on the property consists primarily of a mix of sand, loam and "hardpan[5]." Clay is also prevalent in Test Hole 4. Loams consist of a mix of soil textures (e.g., sand, silt, and clay), which together, can reduce soil pore space (depending on the mix), thereby restricting the rate of wastewater recharge. Clay can be generally defined as very fine weathered soil particles that are arranged in a pattern (i.e. its soil structure) that greatly restricts if not prevents wastewater percolation through the soil. Hardpan can consist of various soil textures; however, the particles composing hardpan have been compacted and/or are cemented together by natural substances, creating an impervious or near impervious boundary that restricts recharge.

Removing and replacing "restrictive" soils with well drained coarser textured sand helps to prevent wastewater from backing up within system leaching pools. Caution must be exercised, however, to ensure that very coarse excessively drained soils or gravels are avoided; particularly, if depth to groundwater is shallow, as they can greatly reduce wastewater "residence time" in the soil and reduce effluent treatment. Depth to the regional groundwater table is expected to be between 120 and 215 feet below ground surface at the site depending on the exact location and surface elevation. This depth to groundwater is substantial and is beneficial for filtering wastewater, regardless of the rapidity of recharge. Again, the large sizes of the lots will help to ensure that a suitable number of leaching pools can be sited on lots and ensure compliance with NCDH requirements.

Phase I Environmental Site Assessment

It was the opinion of the environmental professional that prepared the Phase I ESA that there is evidence of four (4) recognized environmental conditions, no (0) controlled recognized environmental conditions, one (1) *de minimus* condition, and one (1) historic environmental condition in connection with the subject property, based on the reconnaissance, interviews or regulatory agency records review conducted as part of this Phase I ESA, subject to the methodology and limitations of the Phase I ESA report. Mitigations are included in the list below. Performing the listed actions will help to further identify any possible soil

[5] "Hardpan" is defined as: A hardened or cemented soil horizon, or layer, often composed of clay at or below the surface, produced by cementation of soil particles by relatively insoluble materials such as silica, iron oxide, calcium carbonate or organic matter.

contamination and other potential issues relating to past activities involving the use, storage or handling of hazardous materials and will help to ensure that any identified issues are addressed in accordance with applicable requirements.

Mitigation

- Soil conditions were carefully considered as part of project engineering in order to ensure that soil limitations are properly addressed, and potential impacts are mitigated. This included an initial review of the Nassau County Soil Survey data as well as the drilling of several test holes on-site to analyze actual on-site soil conditions.
- Erosion-prevention measures during the construction process include: 1) minimizing the time that bare soil is exposed to the elements; 2) use of groundcovers (seeding if prolonged exposure is necessary and paving/construction); 3) erection of project limiting fencing to prevent unnecessary clearing and ground disturbance; 4) installation of silt fencing to capture sediment transported by runoff from being carried off-site, 5) wetting of dusty areas to limit windblown sediment from being transported off-site; 6) incorporation of cut back into the site to the extent possible; 7) use of rumble strips to prevent the tracking of dirt onto Muttontown Road; and 8) use of inlet protection and drainage diversions to prevent siltation of drainage infrastructure to preserve system capacity.
- Foundation drains and waterproofing can help to address concerns associated with restrictive drainage around building foundations.
- The majority of deeper subsurface soils identified by the test hole locations indicate the presence of hardpan that could affect proper functioning of drainage and sanitary systems. If necessary, the area around the base of proposed leaching pools will be excavated and backfilled with clean coarse grained backfill to ensure that drainage systems function properly.
- Stormwater infrastructure is designed to conform to the requirements of the Village Code and Village Engineer and all future onsite sanitary systems will be designed, sited, and installed in accordance with NCDH requirements. Existing sanitary systems serving buildings to be removed will be abandoned in accordance with and under the supervision of the NCDH and the NCDH will oversee the installation of new systems.
- Site grading, reseeding, and revegetation/landscaping will help to address slope constraints and stabilize soils during the construction process. Areas of steep slopes will be avoided to the maximum extent practicable.
- Preservation of natural areas including perimeter buffers will limit disturbance and related impacts, while avoidance of wetlands and adjacent wetland areas will prevent impacts and reduce development constraints associated with saturated surface soils.
- A Limited Phase II Investigation should be conducted to determine the precise locations of all of the underground storage tanks located on the property using Ground Penetrating Radar technology, and to collect soil samples from the vicinity of the storage tanks in order to ensure that a prior release has not occurred. If tanks are identified on-site, the tanks and surrounding soils should be inspected to determine the presence of any contamination and the tank and any contaminated soil above established thresholds should be addressed in accordance with applicable standards and specifications.
- Remove any residual contents of the underground and basement fuel storage tanks and any associated contamination based on the recommended Limited Phase II Investigation and dispose of the tanks and any associated residual materials in accordance with applicable standards and requirements.

- After discharge points of floor drains are located and sampled remove any adversely drains in accordance with applicable regulations. If contamination is present above regulatory levels, soil will be removed and disposed in accordance with applicable standards and regulations.
- The empty drum identified on-site will be removed and properly disposed to protect soil and groundwater from being contaminated by leaks, spills or dumping, if any residual material is still contained in the drum.
- Remove and properly dispose of the electrical transformer associated with the Main House and dispose of it in accordance with applicable regulatory agency requirements.
- If the buildings are to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56. ACM must be removed prior to demolition. Proper removal and disposal of ACM will help to prevent soil from becoming contaminated or fine asbestos material from becoming airborne.
- Abandon the existing groundwater well in accordance with all applicable regulatory agency requirements.

Geology

Impacts

Excavations will be required for catch basins and subsurface piping, two stormwater recharge basins, individual on-site sanitary waste disposal systems, future construction of foundations, and installation of energy and water utilities. Grading will be required to provide suitable surfaces for streets, driveways, home construction, and drainage control (see **Overall Earthwork Plan** (Sheet C-106) for information relating to road and drainage construction). There are no unique landforms or geologic features on the subject property and essential earthwork is not expected to have a significant long-term adverse effect since erosion controls and more than adequate drainage systems will be installed (see also **Section 4.6, Construction-Related Impacts**). The required work would in fact be expected to improve surficial geologic conditions in some places as compacted and/or cemented soil (hardpan) would be removed and replaced with clean sand as necessary to facilitate drainage and wastewater disposal and eliminate potential dampness in the subsoil around foundations.

Depth to the regional/primary groundwater table is estimated to be between 120 and 215 feet below ground surface at the site, depending on ground surface (bgs) elevation at the point of measurement. Excavations would not be completed to depths that would come anywhere near the natural groundwater table or be expected to so significantly alter soil permeability as to affect hydrogeologic conditions in the Sole Source Aquifer. It is expected that the most extensive excavation of the site will be in the sections of the site that will accommodate the proposed project's two (2) recharge basins. Both recharge basins will be within areas with a generally lower surface elevation to promote positive drainage. Overall, cuts in recharge areas will range from +/- existing grade to a base depth of +/-21-22 feet bgs. Total cut is estimated to be 76,510 CY. In addition, grading will be required for stormwater collection and distribution facilities as well as roadways, utility installations and eventually building foundations.

Future foundation excavations will be open temporarily and will backfilled after foundations are poured. The only geological resource that may be impacted by site grading and excavations are surface soils which were discussed in the previous section.

In order to provide for a site-wide drainage system that will operate efficiently and effectively, a grading program will be undertaken including following a detailed Grading Plan to be prepared as part of detailed site plans for individual lot development. In general, it is expected that the maximum amount of excavated soil possible will be retained for reuse elsewhere on the site, thereby minimizing the cost and impacts of importing new material to the site, but since 76,510 CY of soil will have to be cut during site development. Excess excavated material will be shipped off site and disposed at a facility licensed or registered to receive the material and/or possibly sold to contractors if the soil is clean and suitable for reuse at other development sites on Long Island. If unacceptable soil characteristics are encountered (compact soil/hardpan, clay rich soils, etc. which may impede stormwater or wastewater percolation), this material will be transported off-site and deposited at an approved construction and demolition debris facility.

Section 2.2.2 "Soils": "Anticipated Impacts" discusses subsurface conditions and possible impacts and constraints to development. **Section 2.2.3** provides soil "Mitigations" to address any soil and surficial geologic conditions that may affect future road and basement construction and the suitability of the soils for absorbing and filtering wastewater and stormwater.

Mitigation

- The proposed lots are very large and will fully accommodate anticipated sanitary sewage flow without the need for NCDH variances or advanced sewage treatment facilities; however, some soil may have to be removed and replaced with clean sand to enhance leaching.
- A Phase Environmental Site Assessment (ESA) indicated that a Limited Phase II ESA should be prepared to determine if there is any contamination of soils on-site from underground structures such as underground storage tanks and floor drains. If contamination is identified above maximum standards, the soil will be removed and replaced with suitable soils.

Water Resources

Impacts

Surface Water and Wetlands

As discussed in **Section 2.4.1**, a total of 21 topographic depressions were examined on the site based on their soil, vegetation, and hydrologic characteristics to determine if any of these features may be classified as wetlands under Federal, State and/or local regulations. Based on these investigations, it was verified there are only two wetlands on-site as previously determined from several field investigations, and these wetlands are shown on the attached Subdivision Maps and on the Freshwater Wetlands Map provided in **Figure 2-4. Appendix D-6** contains the full Wetlands Investigation Study report.

The proposed plans also include a minimum 100-foot setback and buffer around both wetlands on the site. One-hundred foot setbacks and buffers are also provided from off-site ponds (Moed property) or wetlands where the 100-foot "adjacent areas" extend on to the subdivision property (Muttontown Preserve wetland). These setbacks will help to provide protection to these wetlands and surface waters by restricting clearing, ground disturbance, construction and other activities and encroachments near these environmentally sensitive and ecologically important features.

The subject property, as indicated by FEMA FIRM Panel No. 36059C0133G, is located entirely within a FEMA "X" zone, and is therefore, outside of any FEMA designated "100-Year Special Flood Hazard Area." Wetlands, vernal and perennial ponds on-site and near the subject property are enclosed features which are located in topographic depressions over impermeable, semi-impermeable, compacted fine grained soils or hardpan. A 100-foot wetlands setback/non-disturbance buffer will be provided around each of the identified wetlands, the on-site vernal pond and perennial pond located adjacent to the site to ensure that future development does not encroach into areas that may be affected by an extreme or catastrophic event and that emergency flood storage is available, while also providing protection to the natural functions and the environmental integrity of these features. Based on the proposed plans, future homes will actually be located much farther from the wetlands than the 100-foot wetland setback and will be constructed no less than 6 or 7 feet higher than wetlands and surface water features. In comparison, the home on adjacent property (formerly of Patricia Moed) is just +/-2 feet above the perennial pond.

The quality and water level in surface waters and wetlands can sometimes be affected by stormwater runoff if it contains pollutants and/or is discharged directly to these features such as would be the case with a point/pipe discharge. Most stormwater on the property will be collected in catch basins and routed by gravity through interconnected storm drains to one of two proposed recharge basins. These recharge basins will be far from any wetlands or surface waters and roof gutters, leaders and drywells will be used as needed on individual lots. The recharge basins will be excavated and graded so that the 548,856 cubic feet (CF) of stormwater anticipated from an 8.5-inch rainstorm in Stormwater Recharge Area 1 and the projected 236,967 CF of stormwater in Stormwater Recharge Area 2 (total of 785,823 CF) can be fully accommodated on-site by 683,000 CF of storage in Stormwater Recharge Area 1 and 325,000 CF in Stormwater Recharge Area 2 (total of 1,008,000 CF). Drainage for the subdivision is based on 100 percent capture of an 8.5" rainfall event from impervious surfaces and a factor of 0.3 for vegetated areas across several stormwater drainage areas. The drainage capacity of the recharge basins has therefore been designed and will be constructed in accordance with requisite standards. Rainfall falling on the proposed streets will be directed to various catch basins and piped to one of the two recharge basins. In addition, the large oversized lots due to the large-lot zoning (minimum three acres), required perimeter buffers, wetlands setbacks, and restrictions on disturbances to steep and very steep slopes, the elimination of wetland areas and steep slopes from lot yield, as well as strict limitations on lot coverage by the Village Zoning

Code, will ensure that much of the property remains naturally vegetated or is landscaped and can absorb and infiltrate much of the precipitation falling on-site.

Wastewater discharge can also sometimes affect surface waters and wetlands if septic systems are not properly sited, installed and designed. Another issue that can arise is the presence of impervious or semi-impervious soil media such as hardpan or clay lenses which restrict infiltration and may cause effluent to flow laterally along the restrictive unit's surface or result in sanitary effluent backup that could potentially affect surface waters and wetlands. Septic systems must comply with NCDH's minimum required 100-foot setback from surface waters and provide the required system capacity to meet NCDH requirements. Also, the low-density/large lot subdivision design, with lots ranging between 3.05 acres and 6.21 acres of gross lot area, and compliance to NCHD standards will help to ensure that on-site wastewater can be accommodated without significant impacts to surface waters and wetlands or groundwater resources.

Depth to groundwater is estimated to range between 120 and 215 feet bgs at the site, depending on ground surface elevation at the point of measurement. This significant depth to the regional water table can provide considerable stormwater and wastewater filtration, diffusion, chemical transformation, biological breakdown, and attenuation of certain pollutants as well as temporary effluent storage when properly designed. Infiltration into suitably drained soils, whether native or replaced in the case of poorly drained soils, also helps to prevent potential lateral/horizontal flow and direct seepage into surface waters or wetlands.

Erosion and sediment controls are discussed in detail in **Sections 1.4.2 "Clearing, Grading and Drainage Systems," 1.5, "Construction Schedule," 2.1, "Topography," 2.2, "Soils,",** and **4.6, "Construction Related Impacts,"** to among other things, protect surface waters and wetlands.

<u>Groundwater Volume</u>

The property overlies Groundwater Management Zone I which is a deep flow system containing the Upper Glacial and Magothy Aquifers. Current water use at the subject site, including domestic (+/-750 gpd) and irrigation water (+/-6,969 gpd) is estimated to be +/-7,719 gpd while projected total water withdrawal once the subdivision is fully occupied is expected to be +/-18,000 gpd for domestic water use (20 new homes) and +/-26,229 gpd for irrigation purposes for a total of +/-44,229 gpd.[6] It is expected that all domestic water that is withdrawn will be recharged back into the ground while approximately half of the irrigation water used will make its way back into the ground.[7] New impervious surfaces including proposed subdivision roads, future houses, private driveways and accessory structures will generate stormwater runoff that will either be directly recharged into the ground on lawns, landscaping and naturally wooded

[6] The irrigation demand figure is based on the average daily use over the course of one year.

[7] This is a conservative estimate based on typical recharge under natural conditions. Use of modern and efficient water conserving irrigation systems that provide water directly to roots rather than by spray, are controlled by timers and/or weather forecasts, and operate at night can reduce the amount of irrigation water that is lost by evaporation and infiltration.

areas) or will be captured by the proposed drainage system and discharged to one of two on-site stormwater recharge basins, in order to maximize onsite recharge associated with impervious man-made features. Based on NPV's SONIR model, total existing on-site recharge is estimated to be 63.92 million gallons per year ("mgy") and future recharge is projected to be 78.91 mgy.

Groundwater Quality

The large-lot low-density design of the proposed 20-lot subdivision[8] ensures that the proposed parcels comply with Village dimensional requirements for the E-3 zoning district, that the number of lots is within the maximum yield for the property, and there is sufficient space to safely accommodate required individual on-site sanitary systems and stormwater recharge basins.[9] A total of +/-17.47 acres or +/-17.7 percent of the site, including +/-10.53 acres of parkland containing +/-0.61 of an acre of wetlands, +/-3.04 acres of wetland buffer area,[10] the +/-0.12-acre cemetery, and an additional +/-6.94 acres of perimeter buffer that extends beyond the parkland will be protected.[11] The only part of this area that will be disturbed is an eight-foot wide bridle trail meandering within the 30-foot parkland area, constructed only by the removal of underbrush. The protection of these areas will help to maintain natural conditions on-site and limit clearing and the establishment of fertilizer-dependent landscaping.[12] As previously mentioned, a total of 18.3 acres of the subject property was acquired by the County and incorporated into the Muttontown Preserve several years ago, which has helped to maintain the low density rural wooded nature of the area. Moreover, the Jericho Water District is required to frequently and periodically monitor the drinking water it provides, ensure that the water it delivers to its customers is potable, and take appropriate action to protect, treat or find new potable sources of water if the quality of the water becomes compromised.

[8] Gross lot areas range between +/-3.05 and +/-6.21 acres and the average gross lot area is 3.8 acres.

[9] The yield of a property proposed for subdivision in the Village of Muttontown is determined by first calculating the raw land area of the site. The raw land area is that portion of the property that is available for development after elimination of wetlands, wetland adjacent areas (i.e. 100-foot buffers around the wetland), areas containing steep and very steep slopes as defined by Village Code, and 50-foot deep perimeter buffers around the property. Once the above features are delineated and the raw land area has been determined, a subdivision map showing the property divided into lots having the minimum lot area, lot width and street frontage requirements of the respective zoning district can be drawn. The ultimate lot yield also takes into consideration the need for adequate space for roads and drainage infrastructure designed in compliance with Village requirements to serve the subdivision. The reference to accommodating stormwater recharge basins simply means that adequate space has been set aside to capture, hold, filter and recharge stormwater from the street system based on the required design storm. Providing suitable stormwater recharge facilities helps to prevent flooding and attenuate some pollutants that may be in runoff.

[10] The wetlands buffer area actually encompasses a total of +/-3.64 acres; however, +/-0.60 of an acre extends over a portion of the perimeter buffer area. In order to prevent double counting and protected areas, the +/-0.60 of an acre of the wetlands buffer has been taken out of this calculation. Another way of looking at the total estimate is +/-13.83 acres of perimeter buffer and 3.64 acres of wetland buffer.

[11] The perimeter buffer will remain in its natural condition except for an 8-foot wide bridle path in the park portion of the buffer which will be available for the public to use. The 8-foot wide bridle path by itself will cover an estimated 1.75 acres (8 feet x 1.81 miles). See proposed 50-foot buffer and parkland depicted on the 2020 Preliminary Map.

Drainage plans indicate the subdivision will contain two stormwater recharge areas, each with its own recharge basin (see **attached** plans and drainage calculations). Stormwater Recharge Area 1 is expected to generate an estimated 548,856 cubic feet (CF) of runoff based on an 8.5-inch rainstorm and its ±3.49-acre recharge basin area located on the west side of the property near the Hoffman Center, will provide a total of 683,000 CF of storage. Stormwater Recharge Area 2 would generate an estimated 236,967 CF of runoff and its ±2.27-acre recharge basin located in the northeast corner of the property will provide 325,000 CF of storage. Based on these calculations, it is clear that the proposed drainage design will provide more than ample stormwater storage and recharge area to accommodate the largest of rainfalls with an overall combined surplus of 222,177 CF of storage in the two recharge basins (total storage is 1,008,000 CF; total storage required is 785,823 CF).

Stormwater generated within the proposed subdivision streets will be captured using a system of street catch basins which will pipe the runoff to one of two drainage recharge basins to be constructed on-site, one in the northeast corner of the site and the other on the west side of the property near the Hoffman Center site. Individual home sites will also have drainage infrastructure which would likely include roof gutters, leaders, and drywells for roofs, driveways, and other impervious structures. Subdivision buffer areas and large portions of each of the proposed large lots is expected to remain pervious and vegetated thereby promoting natural stormwater discharge. The drainage design will be constructed and installed in accordance with the standards and requirements of a Stormwater General Permit and Stormwater Pollution Prevention Plan (“SWPPP”) and must comply with Village Engineer specifications to receive final Engineering approval.

Septic systems will be designed, sited and installed to fully comply with NCHD standards based on a minimum 6-bedroom multiplier (900 gpd) for lots larger than one acre, except by waiver after demonstrating that a 5-bedroom multiplier (750 gpd) is appropriate.

Depth to groundwater ranges between 120 and 215 feet below ground surface beneath the site depending on surface elevation at the point of measurement, thereby providing more than sufficient separation distance between septic system discharge points and natural groundwater. If soils with restricted permeability are encountered during sanitary (or drainage system) installation, soil around the systems will be removed and replaced with a collar of clean permeable sand to ensure proper effluent leaching and prevent effluent perching.

Finally, the SONIR model discussed previously in this DEIS indicates that overall nitrate loading will increase from an existing estimated value of 0.22 mg/l to 0.98 mg/l which is far below the potable drinking water standard of 10 mg/l used by federal, state and county agencies to regulate drinking water quality.

Oyster Bay Special Groundwater Protection Area

In 1992, the Long Island Regional Planning Board ("LIRPB") released, "The Long Island Comprehensive Special Groundwater Protection Area Plan" which contained recommendations for the Oyster Bay SGPA. As previously noted, SGPAs are classified as critical environmental areas ("CEAs") and SEQRA requires an evaluation of potential impacts on SGPAs in Suffolk and Nassau County and determination of consistency with the comprehensive management plan for SGPAs.

The Plan's overall recommendations are quite general in scope but include policies for promoting the conservation and sustainability of potable groundwater supplies where groundwater quality is good and remediation where groundwater quality has been compromised. The Plan indicates that in order to reduce contaminant loads, the density of future development must be reduced below that "currently" permitted density through changes in zoning (for both sewered and unsewered areas), more effective site plan review is needed, and the acquisition or other means of preservation of critical lands should be pursued. Existing point or non-point sources should be minimized or eliminated, and the establishment of new activities already associated with groundwater problems should be prevented. In addition, extensions of public sanitary sewers into previously unsewered areas is to be discouraged, as such facilities would tend to increase density, and result in consequential impacts on groundwater quality and quantity. Project consistency with the Plan was examined and no significant impacts or inconsistencies were identified.
The Nassau County Public Health Ordinance ("NCPHO") (June 2014) provides the overarching policy guidelines to protect the health and safety of the public. The NCPHO addresses various public health and safety topics. One particularly relevant section of the Ordinance, relative to the subject project, is Article X, "Groundwater Protection; Regulation of Sewage and Wastewater" which places considerable focus on septic systems in SGPAs. The policies, standards and regulations contained within the NCPHO provide the regulatory framework for the NCDH to ensure that the standards of the NCPHO are implemented and enforced. The primary applicable issues relating to the subject subdivision are assuring that sewage treatment practices are sufficient to safeguard public health and mitigate impacts on the environment. Based on the preceding, the project does not conflict with the recommendations of the Oyster Bay SGPA or Article X of the NCPHO.

Depth to groundwater, excluding any perched water at the site (perched water was not encountered in any of the six test holes) ranges between approximately 120 feet and 215 feet below the ground surface (bgs) based on site topography and water table information (**Figures 2-1** and **2-5**). Cutting and filling will be required for grading in some areas and excavations will be required for the construction of stormwater recharge basins, residential foundations and installation of site infrastructure and utilities; however, the depths will not even be close to deep enough to intersect the natural groundwater table. The depth to groundwater from the regraded land surface will be sufficient to allow proper filtration of stormwater that is recharged from leaching pools and the recharge basins proposed on the property. If unsuitable soils are encountered during infrastructure installation, they will be removed and replaced with clean sand to ensure a suitable rate of subsurface drainage to prevent subsurface systems from

backing up. The low density of the subdivision, preservation or protection of a total of +/-17.47 acres of land on-site in its native natural condition, compliance with NCDH wastewater disposal standards, and temporary retention and recharge of stormwater on-site, will help to minimize potential impacts to local groundwater quality and hydrogeologic conditions. Drainage system designs will be reviewed in detail by the Village Planning Board and Village Engineer as part of the subdivision review process. The area is served by a public water purveyor (JWD) which will supply drinking water that is routinely monitored for contaminants and treated as necessary to ensure the delivery of potable water to JWD customers.

Mitigation

- There are wetlands on or adjacent to the project site. Delineation, preservation, and protection by establishing a 100-foot wetlands buffer as passive parkland, as well the instituting erosion and sediment controls and best management practices during construction will mitigate potential groundwater and surface water impacts.
- The increase in recharge volume resulting from the proportionately low additional impermeable surfaces is not expected to cause a significant adverse impact on the water table (e.g., water table mounding), flooding or backup of sewage or stormwater due to the significant unsaturated depth underlying the site. As a result, no mitigation is required or proposed.
- Prior to development, existing sanitary systems will be located, inspected, cleaned if necessary, and removed or abandoned in accordance with NCDH and EPA standards.
- Individual on-site sanitary wastewater systems will be designed, sited, and installed in accordance with NCDH requirements. Potential impacts from wastewater are further reduced by controlling lot density with no lot being less than 3.12 acres of gross land area or 3.0 acres of net land area, replacing any restrictive soils such as clay or compacted fine grained material that are encountered with clean sand to promote infiltration, and providing buffers around wetlands to protect these features from clearing, building encroachment, and sanitary effluent.
- Stormwater will be captured, retained, and recharged on-site through two stormwater recharge basins that can contain the runoff from an 8.5-inch rainstorm and still have as much as 222,177 CF of surplus storage. Individual lots will be required to provide on-site drainage also in accordance with applicable Village requirements.
- Stormwater generated from the proposed subdivision streets, driveways, and roofs of homes will be captured and recharged on-site through a system of catch basins which will be piped to one of two separate stormwater recharge basins on-site. Gutters, leaders, and drywells will be provided on individual lots to address roof and accessory structure runoff. Stormwater systems will be designed in accordance with state and local specifications.
- The drainage system for the project will be designed, sited, and installed in accordance with state and local requirements and will be subject to review and approval by the Village Engineer. An Erosion and Sediment Control Plan and SWPPP will also be prepared, and a SPDES General Permit will be sought. As a result, no further mitigation is required or proposed.

- The SONIR computer model results for the proposed project indicate that the concentration of nitrogen in recharge is anticipated to increase from 0.22 mg/l at the currently undeveloped site to 0.98 mg/l which is far below the maximum 10 mg/l standard for drinking water. The discharge of wastewater via individual on-site septic systems on over-sized lots is an integral factor in this project achieving such a low nitrate recharge concentration.
- Based upon information presented in the NURP Study, the stormwater recharge anticipated to be generated by the proposed project is not anticipated to contain significantly high concentrations of pollutants. Stormwater facilities will be constructed in accordance with state and local regulations and will be required to meet the satisfaction of NCDPW and the Village. A SWPPP will be prepared and a SPDES General Permit will be sought.
- Under the proposed plan, wetlands will be avoided, and no construction or other disturbance will take place within 100 feet upland of flagged wetland boundaries. Clearing limits will be established and silt fencing will be installed to prevent the siltation of on-site and adjacent wetlands and surface waters.

Ecological Resources

Vegetation Impacts

Impacts

The impacts to the ecological resources of a project site are generally a direct result of clearing of natural vegetation, an increase in human activity and associated wildlife stressors, and the resulting loss and fragmentation of wildlife habitat. Most of the proposed development is currently wooded (89.41% of the site), with the remainder being comprised of a mix of successional old fields, wetlands, and terrestrial cultural habits including lawns and gardens, and impervious surfaces, including existing paved surfaces/driveways, buildings, a pool house, swimming pool, tennis court, and other minor man-made structures. It is anticipated that under the proposed development, a total of (±60.97 update later) acres of natural vegetation would be retained, which consists of the remnant coastal oak-heath forest, the entirety of the on-site wetlands, and a portion of the successional old field.

The estimated future habitat quantities are listed in **Section 2.5.2, Table 2.7** and include approximately ±60.36 acres (60.9%) of natural vegetated area as well as ±0.61 acres of wetlands (±0.22 acres of red maple swamp and ±0.39 acres of vernal pond) ±14.7 acres (14.9%) of landscaped area, ±5.77 acres (5.8%) of stormwater recharge areas (including ±4.52 acres of storage area and ±1.25 acres of mixed natural area, landscaped, access driveway/gravel, and cleared land), and ±17.48 acres (17.7%) of impervious surfaces. Clearing as a result of the proposed subdivision would be interspersed throughout the site, further fragmenting existing habitats. It is noted that a 50-foot deep natural buffer will be provided around the perimeter of the existing property boundary and thirty feet of this depth will be set aside as parkland containing an eight-foot wide naturally surfaced bridle path for use by the public. The bridle path will meander through the perimeter parkland area, thereby eliminating the need to

remove any additional trees; however, some underbrush will have to be cleared along the path and some limbs may need to be trimmed, resulting in a loss of some native understory and ground cover vegetation. In addition, no new disturbance is proposed within 100 feet of the on-site NYSDEC-regulated freshwater wetlands. As a result, the site will continue to provide some natural habitat for wildlife to utilize, though the removal of the existing woodland vegetation on the property is expected to result in changes to the sizes and characteristics of site habitats; particularly, the coastal oak-heath forest. Tree (removal) Permits will be required from the Village prior to site disturbance and future lot development, and trees will be retained where practicable. For the purposes of this assessment, it is assumed that clearing will be limited to the areas of clearing depicted for each lot on the **Lot Development Plan**.

As stated in the DEIS, the NY Natural Heritage Program identified the presence of two endangered and two threatened species of plants and one high quality occurrence of an uncommon ecological community type in the vicinity of the subject property. The rare species, however, were not identified on the site during numerous field investigations, and the vernal pond located on the property is of fair quality and not the high quality uncommon ecological community that was identified in the area by the NYNHP. It is also noted that no physical disturbance will occur within the vernal pond or its adjacent upland areas defined as 100 feet from the flagged wetland boundary, and this area will be contained within an area to be set aside as public parkland and protected by filed covenants and restrictions that will be agreed upon by the Applicant and Village. As such, no significant impacts to rare, threatened, or endangered plant species or any uncommon natural communities are anticipated from the proposed subdivision and future development.

Exploitably vulnerable species are classified as such primarily because they are more likely to be indiscriminately collected or removed, rather than actual rarity within the State, and existing regulations do not prohibit a property owner from removing these plant species from a site. While some loss of these species will occur as a result of the proposed project, significant impacts to the regional populations of these species are not anticipated, as sufficient habitat is available in the region, including in the adjacent Preserve.

Tree Removal and Proposed landscaping

A **Planting and Tree Removal Plan** (Sheet C-105) is attached to the DEIS. The tree survey has been updated and is attached to the DEIS. There is a total of 5,763 trees on-site with a 7-inch caliper or greater diameter. The locations of these trees are shown on the Planting and Tree Removal Plan (Sheet C-105) in Attachment 3. Of these 5,763 trees, a total of 862 would be removed during the subdivision infrastructure construction phase and an estimated 1,701 additional trees will be removed during the lot development stage. The total number of trees with a seven-inch caliper diameter or more to be removed is 2,563. The total number of seven-inch or larger trees to remain on-site is 3,200. The trees to be removed are located primarily within the oak-heat forest.

Regarding planting, a mix of evergreen tree species will be planted along the edges of the proposed stormwater recharge basins to provide vegetative screening and native grasses will be planted within the center island of the access road to soften and improve the appearance and character of the roadway. The evergreen species will include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*) which will provide quality screening. The trees will be planted at heights of 10 to 12 feet and will be arranged in a staggered double row as depicted on the "**Planting and Tree Removal Plan**" (Sheet C-105). The interiors of the recharge basins and shoulders of street rights-of-way will be seeded with an ecology seed mix after disturbance and finish grading. Street trees are not required by the Village/Village Code and are not proposed. Center median grasses will consist of native little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*). The amounts, types, and locations of future landscaping on individual house lots will be determined in the future through the site plan design and review process.

Irrigation demand for future lawns and other landscaping is estimated to be ±26,229 gpd on average, annually. Landscaped areas may be fertilized and based on an estimated 14.7 acres of landscaped area, nitrogen concentration in site recharge may increase from an estimated 0.22 mg/l to 0.98 mg/l which is well below the 10 mg/l standard for drinking water and protective of surface waters and freshwater wetlands. See **Appendices C-1, C-2, and C-3**.

Wildlife Impacts

Most of the property is dominated by a remnant coastal oak-heath forest. However, based on numerous site inspections, correspondence with environmental agencies, and literature and database reviews, the property is not known to contain any threatened or endangered flora or fauna but does contain a small population of common birds, mammals, amphibians and reptiles, as well as eastern box turtles which are classified as a NYS special concern species. The proposed project will favor those wildlife species that prefer edge and rural-suburban habitats and those that are tolerant of human activity. Most of the species expected on the property are at least somewhat tolerant of human activity, but others will be impacted by proposed and future clearing, construction, and increase in human activity. It is also expected that particular species of wildlife (particularly avian species) will migrate to undisturbed areas adjacent or near the site as a result of development, and species such as the eastern box turtle could be captured and relocated to the Muttontown Preserve.

A minimum 50-foot deep perimeter buffer will be maintained along the existing property line, with the exception of an 8-foot wide bridle trail which is proposed as part of the parkland requirement. Retention of vegetation within this buffer is expected to allow for marginal wildlife corridors and habitat for species that are tolerant and/or dependent on human activity. In addition, 100-foot deep non-disturbance buffers will be provided around existing on-site wetlands and the vernal pond and areas of steep and very steep slopes will be avoided and left natural to the maximum extent possible per the Village Code. Approximately +/-60.36 acres of natural vegetation are estimated to remain after construction is completed based on the

proposed **2020 Preliminary Map**. This area would include perimeter buffers and parkland areas with the exception of the eight-foot wide bridle path, wetland adjacent areas, the cemetery easement area, areas of steep and very steep slopes to remain undisturbed, and lot perimeter areas for screening but the exact amount of remaining natural vegetation cannot be fully ascertained until all of the lots have gone through site plan review and been approved by the Village. Although the anticipated 14.7 acres of landscaped vegetation will provide less habitat than existing natural areas, the landscaping is expected to provide some limited habitat for human tolerant species, while also providing screening and enhanced aesthetic qualities.

In determining impacts on the existing wildlife populations, it can be assumed that an equilibrium population size will be established for each species as determined by availability essential resources within the habitat. Thus, the removal of habitat resulting from the proposed project will result in a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, and population sizes of many species are controlled below the carrying capacity by other factors, it does provide a worst-case scenario in determining the impacts from habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife that will remain on the site and in the area, under post-development conditions.

In the short term, adjacent property will experience an increase in the abundance of some wildlife populations due to displacement of individuals during the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat south and east of the site where larger areas of preserved natural open space currently exist. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding land would be expected to result in a net decrease in population size for most species.

Regarding future use of the proposed perimeter parkland as a bridle path, and any potential impacts on wildlife, the site has been used by equestrians for years, and the Village is requiring the perimeter parkland areas be made available to the public for the continuation of this use. It is expected that wildlife that encounter equestrians will take cover or retreat from the area temporarily until riders have passed and human and domesticated animal activities have subsided. Some human tolerant species such as common human tolerant birds and other animals are expected to be little affected by horseback riders and these species should not suffer long-term impacts or permanent displacement from such activities.

As previously noted, surveys were conducted by Dru Associates between 2009 and 2011 to determine whether endangered tiger salamanders are present on the site, and if present, whether impacts on this species may occur (see **Appendix D-3**). Minnow trapping, drift fences, egg mass searches and larval searches were conducted during appropriate seasons in the on-site ponds. Results of this survey indicated that that only spotted salamanders are utilizing the on-site ponds and that no tiger salamanders were observed on-site. Further, the Dru

Associates report asserts that limited habitat for herpetofauna is present within the on-site wetlands, suggesting extremely limited use by spotted salamanders. On July 20, 2015, the NYSDEC reviewed this report and supplemental data collected by NYSDEC staff, and issued a determination indicating that the species no longer occupies the subject property, is unlikely to reoccupy the property, and that the site would not fall under NYS ECL Article 11 regulations (**Appendix D-4**). Therefore, no impacts to this species are anticipated from the proposed project.

Habitat that may be suitable for threatened northern long-eared bats was identified on-site; therefore, acoustical surveys by a certified wildlife biologist were requested to determine the presence/absence of the species on the site. A copy of the full report detailing the survey methodology and results is provided in **Appendix D-5.** As indicated in Appendix B of this report, the survey protocol was submitted to the USFWS on June 23, 2015 for approval prior to conducting the surveys and approval was granted on July 13, 2015 to conduct the surveys as outlined in the submission. As per the protocol, two acoustical detectors were set up for two nights (July 28 and July 30, 2015) to gather call data. The call data was then reviewed by software designed to identify bat calls and were also reviewed manually due to the presence of the eastern red bat and the little brown bat. Neither software identification nor manual identification revealed the presence of the northern long-eared bat. As a result, this species is not expected to be found on site and impacts as a result of the proposed development are not expected for this species. The findings of the survey and assessment have been filed with the USFWS, a copy of which is provided in **Appendix D-5**. Preventative mitigation measures are included in the Mitigation section below for the northern long-eared bat as a precaution.

No other threatened or endangered wildlife species were identified or expected on the site given the habitats present and the extensive ecological surveys performed. The red-headed woodpecker, whip-poor-will, common nighthawk, eastern spadefoot toad, eastern hognose snake, worm snake and eastern box turtle are, however, special concern species that may be located on the site based on habitat, and of these species, only the eastern box turtle was observed in the field.

NYS special concern species are defined by 6 NYCRR §182.2(u) as:

> "...native species of fish and wildlife found by the department to be at risk of becoming threatened in New York based on the criteria for listing in section 182.4(a) of this Part and that are listed species of special concern in subdivision (c) of section 182.5 of this Part. Species of special concern do not qualify as either endangered or threatened, as defined in subdivisions (e) and (y) of this section but have been determined by the department to require some measure of protection to ensure that the species does not become threatened. Species of special concern are listed in subdivision (c) of section 182.5 of this Part and are protected wildlife pursuant to Environmental Conservation Law section 11-0103(5)(c)."

To address concerns over impacts on eastern box turtles on the subject property, and to address the above requirement, an **Eastern Box Turtle Protection Plan** was created to protect this species (**Appendix D-7**).

Finally, the proposed large lot/low density subdivision will include a 50-foot deep perimeter buffer along the shared boundary between the subject property and adjacent properties which will not only retain native vegetation and a wildlife corridor between Muttontown Preserve, the subject property, and the Hoffman Center, but will also provide visual screening and buffering to mitigate other impacts. As previously noted, some wildlife on the subject property may migrate to adjacent properties, but some may also be lost due to a loss of habitat. An eastern box turtle protection plan was prepared, and necessary analyses have been undertaken to demonstrate that endangered or threatened wildlife are not present not known to be present on the site. Based on project design, conformance with the Village Code, and identified mitigation below, significant adverse impacts are not expected on wildlife, ecological communities or to adjacent wildlife preserves.

Mitigation

- Some native plant species which provide food and shelter to wildlife will be utilized in some of the landscaped areas, but several species of common ornamental evergreen species will be used for the purposes of screening.
- Invasive plant species that are listed in Nassau County Local Law 22-2010 and in 6 NYCRR Part 575, Sections 575.3 (“Prohibited invasive species”) and 575.4 (“Regulated invasive species”) will not be utilized in the landscaping and shall not be used to landscape any future house lots.
- The loss of woodland habitat on the property will be partially mitigated by the proposed preservation of woodland within the buffers around the property, adjacent to the wetlands and within individual lots, including areas containing steep and very steeply sloping areas.
- Minimize disturbance to the maximum extent practicable, including delineating tree clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- The most sensitive area of the site which includes the wetlands and wetland buffers in the southwest part of the site will be retained and a 100-foot adjacent upland area will remain undisturbed.
- Where practicable, trees will be retained during the development of individual plots and a Tree Permit will be sought from the Village.
- Because it is the disease (WNS) and not habitat that is currently limiting the population of Northern long-eared bats, removal of trees from the landscape is generally not considered harmful unless there are potentially bats within the trees during the time they are harvested or otherwise removed from the landscape. To protect NLEB from unintentional harm, the Department encourages the voluntary implementation of all forest management activities during the hibernation period-November 1 through March 31 throughout the state and December 1 through February 28 in Suffolk County-when bats are not expected to be present.
- Leave snag and cavity trees uncut unless their removal is necessary for protection of human life and property. Snag and cavity trees are defined under DEC Program Policy ONR-DLF-2 Retention on State Forests.
- If any bats are observed flying from a tree, or on a tree that has been cut, tree management activities in the area should be suspended and DEC Wildlife staff notified as soon as possible. A

permit may be required to continue work, or you may have to wait until November 1 to resume activities.

- If your project is located within 5 miles of a known hibernation site or 1.5 miles of a documented summer occurrence, please see Protection of Northern Long-eared Bats for additional guidance.
- Implement an Eastern Box Turtle Protection Plan to protect this New York State special concern species. See protection plan provided in **Appendix D-7** of this DEIS.

Human Environmental Resources

Impacts

Land Use and Open Space

The proposed project will not change the type of land use on the property (i.e., low-density single-family residential). In this sense, it will not significantly impact the general pattern of land use in the area or the type and density of development envisioned by the Village as reflected in its Zoning Code and pursuant to the Village's own E-3 zoning district. It is acknowledged, however, that the project will increase the overall density of the residential use of the site from a single currently occupied dwelling[13] to 20 new single-family detached homes and accessory buildings such as a pool house on Lot 18 (former Pond Cottage); however, the project will fully comply with the Village's minimum three-acre zoning which was established pursuant to the Village Master Plan to maintain a desired density. In fact, the proposed subdivision, on average, will consist of one new dwelling unit for every 3.39 acres, after excluding areas required for streets, stormwater recharge, and parkland including wetlands, adjacent wetland areas, and the bridle path (i.e., average net lot size). A 50-foot deep buffer is also proposed around the entire perimeter of the 98.92-acre property which adds 12.36 acres of land that will not be disturbed. The 50-foot buffer will contain the 30-foot deep strip of parkland which will contain an 8-foot wide bridle path for public use which will meander throughout the perimeter parkland. This trail was partially constructed in the northern, eastern and westerns portions of the property, and required only limited underbrush removal with the 30-wide proposed parkland area. (The total 50-foot perimeter buffer including areas of parkland within it is 12.36 acres.) Moreover, the previous sale of 18.3 acres from the subject property (i.e., tax lot 1098 from the former Hall property) to Nassau County for open space preservation, has reduced the total development potential of the original estate property and increased the amount of open space in the area. At the same time, the proposed land development will provide additional property tax revenues for the Village and Town and make use of an underutilized residentially zoned property which contains several structures that have been vacant and abandoned for many years.

Zoning

The proposed subdivision is designed to fully conform to the dimensional standards, maximum lot yield, and land use requirements of the Village of Muttontown's E-3 zoning district. As a

[13] Three of the existing dwellings are vacant.

result, changes to the site's zoning and/or zoning variances are not necessary, and no significant impacts to land use and community zoning patterns are expected.

The project provides various lot sizes all with net lot areas that are equal to or larger than required by Code which reflects the applicant's desire to provide a range of lot sizes for potential homebuyers and facilitate the review and approval processes, and allows for preservation of the sites' freshwater wetlands, 100-foot wetland setbacks extending upland of the wetland boundary. These areas along with the proposed building envelopes and perimeter buffers will help to protect natural resources such as woodlands, wetlands, wildlife habitat, recreational resources (open space, parks and an improved on-site equestrian path system), groundwater recharge areas, rural scenic qualities/community character and the like. Buffers and wetlands setbacks, as well as the proposed parklands can be formalized through properly drafted and executed legal instruments such as a declaration of covenants and restrictions and/or conservation easements in a form that is satisfactory to the Village attorney. The Subdivision also provides park space that is accessible by the public for a proposed equestrian trail connection along the northern, eastern and western perimeters of the property connecting the Muttontown Preserve to the Hoffman Center, and south to the vernal pond in accordance with Chapter 55 ("Equestrian Bridle Paths") of the Village Code and the established standards outlined by the Village Trustees by Resolution at its February 14, 2020 public hearing.

Section 3, Table 3-3 lists the lot and building requirements under the E-3 zoning district and examines conformance to applicable E-3 zoning standards for the subdivision which were deemed appropriate for the site by the Village upon adoption and subsequent revisions of its Official Zoning Map and Zoning Code. It is also noteworthy that the adjacent properties are either already developed or owned by the County or a private not-for-profit organization for preservation, so that the proposed project does not have the potential to increase the possibility for development of these nearby sites as part of "spin-off" or growth-inducing development.[14] As a result, the proposed project is not expected to significantly impact the pattern or character of zoning in the area.

Plans

The proposed subdivision was determined to be consistent with relevant recommendations of the 1969 *Village Comprehensive Master Plan*, *2016 New York State Open Space Conservation Plan, 2001 Nassau County Open Space Plan, 1998 Nassau County Comprehensive Plan, 1992 Long Island Special Groundwater Protection Area Plan*, and 2014 *Nassau County Public Health Ordinance (NCPHO) as discussed in extensive detail in Sections 2.4.2 and 3.1.2 of the DEIS.*

[14] "Spin-off" or "growth-induced" development is secondary growth that is driven by the demands and opportunities that a new development presents (For example, new housing for employees of a large well-paying regional business that attracts new residents looking for work from outside the area). The cumulative effects of a project and the secondary development stemming from it, can further affect land use patterns and exacerbate traffic conditions, delivery of community services, and need for additional public infrastructure, and affect natural resources and other aspects of a community, depending on the type, scale, density, and intensity of a project, the demands it generates, and the opportunities it presents.

Mitigation

- Mitigations have been incorporated into the project plans. No further mitigation is provided as:
  - The project is not anticipated to significantly change the nature of land use of the area as the project proposes a low-density single-family residential development that is designed to conform to Village zoning and is consistent with the large lot/low-density wooded single-family residential and open space character of the area.
  - The proposed subdivision plat contains just 20 lots with gross lot areas ranging between 3.05 and 6.21 acres with an average gross lot size of 3.8 acres. Net lot areas (i.e., areas remaining after subtracting on-site freshwater wetlands, adjacent wetland areas, and slopes of 15% or more) for the protection and perpetuation of these resources range between 3.0 acres and 5.38 acres, with an average net lot size of 3.39 acres.
  - The proposed lots are designed to conform to the dimensional requirements of the Village Residence E-3 zoning district.
  - The proposed project is consistent with Plans that govern the subject property, including the New York State Open Space Conservation Plan, Nassau County Comprehensive Plan, and the Nassau County Open Space Plan.
  - The proposed project will protect 0.61-acre of wetlands, an additional 100-foot buffer around the wetlands, and perimeter buffer for screening and use as open space and a horseback riding trail that extends from the Muttontown Preserve around the northern perimeter of the site and south along the western property boundary to the Hoffman Center property.
  - Consistency with recommendations of the Oyster Bay Special Groundwater Protection Area including previous sale of an 18.3-acre portion of the subject property (Lot 1098) now or formerly owned by the County of Nassau) and incorporated into the Muttontown Preserve for open space and protection of natural resources

Community Services

Impacts

Public Schools

Letters were sent to the Oyster Bay-East Norwich Central School District on July 20, 2015 and June 29, 2020 requesting information about the School District and any issues, concerns or recommendations the District may have. The School District responded to the July 20, 2015 by letter dated August 20, 2015 which provided information about the current enrollment in its elementary, junior-high, and high schools and the per student costs to educate general education students and students with disabilities. The School District also responded to NPV's July 20, 2020 letter by letter dated July 28, 2020 which updated the current enrollment and costs per student. The information received is provided in **Section 3.2.1** and all correspondence are provided in **Appendix E**.

The proposed project will involve the construction of 20 new single-family homes in place of one existing occupied home and is expected to generate a total of 29 students, of which 22 are anticipated to be enrolled within public schools in the Oyster Bay-East Norwich Central School District. This represents 21 more students than is currently projected to attend the public school system from existing on-site residential uses. The Pond Cottage structure is being retained but is to be used as an accessory structure and therefore is not expected to generate school age children that would otherwise affect the school district.

The estimated 22 school-aged children anticipated to attend public schools within the Oyster Bay-East Norwich Central School District will result in additional costs to the school district; however, this cost will be offset by the school tax revenue generated by the proposed project upon full taxation, with a substantial surplus that will benefit the school district as noted in **Table 3-5** in **Section 3.2.2**. The ratio of special education students to the total enrollment within the Oyster Bay-East Norwich Central School District is approximately 13.9%.[15] For lack of any other statistics to use as a basis for projection, it is assumed that the portion of special education students will remain constant with the development of the proposed project. When applied to the estimated 22 school-aged children that are projected to attend public schools, it is anticipated that 19 of these students would be enrolled within the general education program, while three (3) of these students would be enrolled within the school district's special education program. Given the assumptions regarding the per-pupil expenditures of $24,423 for general education students and $42,237 for special education students, it is estimated that the 22 public-school students will result in additional costs to the Oyster Bay-East Norwich Central School District amounting to approximately $590,748 per academic year.

As seen in **Table 3-6** of **Section 3.2.2**, the proposed project is anticipated to levy tax revenues for the Oyster Bay-East Norwich Central School District, estimated to total $1.1 million per year, upon full build-out and full taxation. These property tax revenues would cover all associated expenses incurred by the 22 public-school students, resulting in a net surplus revenue to the school district of over $521,000 per year upon full taxation of the property. This is shown in **Table 3-5**. Additional revenues will also be generated through various other sources and factored into the school district's financial planning. This net revenue could ease the district's need to tap into additional fund balances and could also help alleviate an increased burden on other taxpayers throughout the district.

The additional students generated by the subdivision will increase demands on the School District but will be mitigated by the increased property tax revenues generated by subdivision.

<u>Property Taxes</u>

Real estate tax revenue supports community services. The largest recipient of tax revenue is the Oyster Bay-East Norwich Central School District. Other Village, Town and County

[15] New York State Department of Education, data specific to the 2017-18 academic year.

community services are also supported by tax revenues and will receive an increase in tax revenues from the proposed project.

The assessed valuation for the proposed project was determined based on an analysis of 11 comparable single-family homes, five of which are in the Stone Hill Subdivision located off of Jericho Turnpike in the Village of Muttontown; the other six comparable properties are located in other parts of Muttontown. Comparables were constructed between 2010 and 2019 (average 2013), were between 4,500 SF and 8,100 SF (average 6,356 SF) and contained between 4 and 7 bedrooms for an average of 5.6 bedrooms. Listing prices/sold prices of the 11 comparables ranged between $2,280,000 and $5,200,000, with an average listing/selling price of $3,201,682. Sales prices are expected to be more than full value for taxation purposes and ultimately, it is the assessor who determines this value. A reasonable full value for the new homes on the subject site is estimated to be $64,033,636, or $3,201,682 per lot for County taxing purposes, based on new construction of a six (6) bedroom home. This is considered to be reasonable given the setting with restricted clearing and existing comparable sales in the Village.

Full value is adjusted to determine total assessment by a factor of 0.25% of value for County taxing purposes, and 10% of value for Village taxing purposes. As a result, each home is expected to have a total assessment of $8,004 for County purposes and $501,475 for Village taxing purposes. This taxable value is then used to compute the tax amount. For the school tax levy, the tax rate per $100 of assessed value is 694.760 and is 25.415 for library tax, both levied by the Oyster Bay-East Norwich Central School District. This results in a tax amount of $55,610 for school tax and $2,034 for library tax for each new home.

The proposed development will increase total annual taxes generated by the subject property from $433,061 to $1,667,829, for an increase of $1,234,768. School taxes, which comprise the largest portion of the property taxes, will increase from $291,959 to $1,112,200 for an increase of $820,241 annually, which is approximately 281 percent higher than is currently generated from the subject property.

Police Protection

NPV sent letters to the Muttontown Police Department on July 20, 2015 and again on June 29, 2020 requesting information about the police department and any issues, concerns or recommendations the Department may have regarding the proposed Subdivision. NPV received correspondence dated November 19, 2015 from the Chief of Muttontown Police, Phil T. Pulaski which provided information relating to the location of the Village police station (which is just a +/-1.5 mile drive from the project site) and states:

> "…the concern I have with our capacity to serve your location is related to the proposed subdivision's maintenance of the roadways. The roadways must be properly maintained, plowed, salted, etc., to allow easy and safe access by emergency vehicles to the entire community."

A homeowners association ("HOA") will be formed and will be responsible for maintaining the subdivision roads and ensuring safe and unrestricted access by police and all others at all times. This would include plowing, sanding, deicing, and general road maintenance. The costs of maintaining the roads will be covered by HOA fees paid by each property owner in accordance with applicable NYS laws. **Appendix E** includes a copy of Chief Pulaski's letter.
No response to the June 29, 2020 letter had been received by the time the DEIS was finalized.

Fire Protection/Rescue and Ambulance Services

Letters were sent to the East Norwich Volunteer Fire Company on July 20, 2015 and June 29, 2020 requesting information about the Company's fire-fighting and emergency medical response services and input on any issues, concerns or recommendations the Company may have. East Norwich Volunteer Fire Company Fire Chief, Wayne R. Placella, responded in his October 25, 2015 correspondence that there are:

> "[n]o present issues or concerns at this time other than the fire hydrants will be adequately spaced apart (500ft)."

Hydrants will be spaced in accordance with Chief Placella's requirements. The proposed streets are designed to allow safe and efficient access by large vehicles such as fire trucks and sufficient turning radii are provided at the ends of Fan Courts East and Fan Court West. Proposed streets will be maintained, plowed, sanded and/or deiced by a private maintenance staff or contractor hired by the HOA at the HOA's expense to ensure unrestricted emergency access to every house lot. The Chief had no comment and raised no concerns regarding the delivery of ambulance services to future residents of the 20-lot subdivision. The Chief's letter is available for review in **Appendix E**.

No response to the June 29, 2020 letter had been received by the time the DEIS was finalized.

Solid Waste Handling

The proposed 20 lot subdivision is expected to have a population of +/-85 persons[16] which would be expected to generate +/-374 lbs. per day or +/-68.26 tons per year. The 85 new residents are a small fraction of the Village's total population and will not significantly increase solid waste generation. Private solid waste carter(s) would be hired by the HOA or individual households and solid waste would be shipped to a licensed solid waste disposal facility.

As per Chapter 150, "Solid Waste," Article II, "Recycling," the Village will provide each homeowner with color-coded recyclable materials containers. Residents are responsible for separating their recyclables from non-recyclable refuse and placing them in Village-approved containers that have been designated for each recyclable waste stream and leave the

[16] The projected population, as previously established in Section 1, Table 1-1, is based on 4.23 persons per 5-bedroom single-family detached residence valued at greater than $748,500 in the State of New York (Burchell et al, 2006).

respective containers out for pickup by a private carter on the scheduled day of pickup. Newsprint must be bundled and securely tied with a string or placed in a brown paper bag. The privately contracted carter must pick up the recyclables and deliver them to the appropriate recycling facility.

Public Water Supply

The total projected water demand one the subdivision is constructed and fully occupied is +/-18,000 gpd of domestic water use (900 gpd per home) and +/-26,229 gpd for irrigation purposes for a total of +/-44,229 gpd.[17] An October 15, 2015 email correspondence from Peter Logan of the Jericho Water District (see **Appendix E**) indicates that the District does not currently impose water use restrictions; however, it was noted that the District's greatest concern is the anticipated increase in water consumption as the site goes from two active residences to 20 active residences and additional site landscaping. Mr. Logan also noted that although the District does not have water restrictions or caps, Nassau County regulations do restrict lawn watering. An eight-inch water main must be installed on the subdivision property to serve each of the proposed house lots. Laterals will also have to be installed from the street to each home to provide individual service connections. The applicant will begin the process of water main design and formal agreements with the Water District upon the issuance of a preliminary approval of the subdivision (so the roadway and lot layout are known).

A letter was sent to Jericho Water District on June 29, 2020 requesting any input, issues, concerns or recommendations the JWD may have regarding its current ability to provide service to the proposed subdivision and a reminder email was sent to Mr. Logan on August 19, 2020. A response was received from Mr. Logan by email dated September 23, 2020 stating:

> Attached is a "Deposit for Study" agreement and the proposal from our engineers, D&B Engineers & Architects, to perform a feasibility study on the impact that Silver Path Estates will have on my district's infrastructure. Kindly execute the agreement, and forward that along with a check for the cost of the study, to me at your earliest convenience.

See **Section 2.4.2, "Water Resources,"** for more on drinking water.

Wastewater Treatment

Total projected wastewater generation for the proposed subdivision, as determined in **Section 1** of this DEIS is 18,000 gpd based on NCDH's 900 gpd standard for single-family residences on any lot larger than one acre.[18] Wastewater treatment and disposal will involve the construction of individual on-site septic systems for each home. Systems will be designed, sited, and

[17] Assumes all landscaped areas are irrigated at 24.0 inches/year (one inch per week over a six month irrigation season) which is averaged over the course of one year to get average gpd.

[18] NCDH can waive this requirement for 5-bedroom homes when it can be demonstrated that 750 gpd is appropriate.

installed in accordance with NCDH standards and requirements. Soils at each sanitary system location will be inspected and any soil encountered during excavation that are found to be unacceptable will be removed and replaced with clean sand of a texture and to a depth acceptable to the NCDH to ensure suitable system functioning and public health and environmental protection. Siting of sanitary systems will be in accordance with required setbacks including setbacks from wetlands, waterbodies, property lines, and other applicable setback requirements. Lots at the site will be very large and range from 3.05 acres to 6.21 acres with an average gross lot size of 3.8 acres +/-165,528 SF and have an average net lot size of 3.39 acres or ±147,688 SF (ranging from 3.00 acres to 5.38 acres). The minimum 3.00-acre (i.e., at least ±130,680 SF) net lot size proposed for the subject subdivision far exceeds the minimum 40,000 SF lot size requirement per single-family dwelling established by Article X of the NCPHO. In fact, the proposed net areas of the lots exceed the County's minimum lot size standard by between 3.27 and 5.86 times the minimum requirement (See **Section 3.1.2** for additional discussion of Article X of the NCPHO). These large lot sizes also provide ample space to properly site sanitary systems on each lot to avoid areas of steep slopes and comply with system setbacks. Considering the substantial depth to groundwater in the area, a commitment to ensure properly drained soils are provided around leaching pools should restrictive soils be encountered, the large lot sizes of the proposed lots, which fully comply with Village lot area standards and the recommendations of the SGPA Plan and NCPHO, and necessary review and approval by the NCDH, no significant impacts from on-site wastewater disposal are anticipated.

Energy Supply

PSEG Long Island responded to an original request for confirmation of service indicating in its October 20, 2015 letter that:

> "…PSEG will provide service to the above referenced project in accordance with our filed tariff schedules in effect at the time service is required.

A copy of the letter from PSEG is available for review in **Appendix E**.

The cost to extend National Grid's utilities is $101/foot (in 2016 dollars) but with a 20-lot subdivision the utility would provide 2,000 feet of line free of charge. The estimated distance from NY 106 to Woodhollow Court is +/-4,137 feet and from Brookville Road to Woodhollow Court it is +/-2,519 feet. National Grid will need to know the anticipated total natural gas demand from the subdivision before they can guarantee service (memo to file, **Appendix E**). In addition, National Grid has stopped processing new applications for gas service due to NYSDEC's denial of a water quality permit for the Williams Pipeline ("NESE" project); nevertheless, progress has been made between the involved parties and it appears that the moratorium may be lifted soon (or already has been lifted), which would allow for new connections. If and when this happens, it will be necessary for the project sponsor to confirm gas availability with National Grid prior to final project approvals. In the event that a gas main cannot be extended to the site, service is denied, or the applicant chooses not to extend gas to

the site for some unforeseen reason, homes will have to rely on individual home heating fuel oil tanks and be served by private oil delivery companies.

The Applicant is not planning on extending natural gas service to the property at this time.

Mitigation

- Fire hydrants will be spaced in accordance with Chief Placella's recommendations.
- Subdivision streets are designed so that emergency vehicles can access each proposed house lot, maneuver through the subdivision and be able to easily turn large vehicles such as fire trucks around.
- Subdivision streets will be maintained, plowed, sanded and/or deiced to ensure unrestricted emergency access to house lots during inclement weather. Subdivision streets, recharge basins, associated street drains and other commonly held subdivision assets will be maintained by a private maintenance staff or contractor that is hired by and paid for by an HOA through the assessment of HOA fees.

Traffic

Impacts

Trip Generation

The trip generation estimates for the traffic to be generated by the proposed twenty (20) single family homes was calculated using the statistical data provided in the manual, *Trip Generation*, *10th Edition*, published by the Institute of Transportation Engineers (ITE). Land Use Code 210 – Single Family Detached Housing) was used to calculate the trips for proposed dwelling units. It is expected that the site will generate a total of 19 trips during the AM peak hour (5 entering, 14 exiting), 22 trips during the PM peak hour (14 entering, 8 exiting) and 35 trips during the Saturday midday peak hour (19 entering, 16 exiting). The trip generation volumes are presented in **Table 3-8** in **Section 3.3.2**.

As indicated in **Table 3-8**, the site is not expected to generate many trips during the weekday AM and PM peak hours and Saturday midday peak hour. The most trips expected to be generated are thirty-five (35) during the Saturday midday peak or an average of approximately one trip every two minutes. It is assumed that the distribution of these residential single-family trips will follow the typical commuter distribution pattern. Therefore, the projected trips will disperse more towards the east in the morning peak period where access to the major highways (LIE and Northern State Parkway) and LIRR train station are located, with the reverse pattern occurring in the evening peak hour. Saturday will experience a more even distribution. It is not expected that these trips will generate any significant traffic impact on Muttontown Road considering the relatively low projected site volumes and the currently low roadway volumes. See also **Section 3.3.2, Table 3-9** for a summary of the 2022 No Build volumes and 2022 Build volumes.

Site Access Analysis

As stated in the traffic analysis, the Proposed Access will be constructed on Muttontown Road approximately 160 feet east of Woodhollow Court to form the stop-controlled leg of a T-intersection. The roadway is designed with two, 22-foot wide travel lanes (one each direction) and will extend into the site to providing access to each of the proposed residential home driveways. The Alternate Access is located approximately 1,100 feet east of Woodhollow Court in the proximity of the existing site driveway.

The future capacity and levels of service at the Muttontown Road and the access points were evaluated for the future weekday AM and PM peak hours and the Saturday midday peak hour. The traffic volume used in the intersection capacity analysis were calculated by adding the estimated trips to be generated by the residential units during the weekday AM, PM and Saturday midday peak hours to the estimated 2022 No Build Volumes on Muttontown Road during these same peak periods. The intersection capacity analysis was performed in accordance with the standard methodology outlined in the *Highway Capacity Manual* 6th Edition (HCM 6). The process is conducted using the Highway Capacity Software (HCS 7 release 7.8.5), which incorporates this methodology to evaluate the operations of an unsignalized intersection such as the site access. Level of service (LOS) is a measure of the operation of the intersection represented by associating a range of values LOS A through F with the amount of delay attributed to each movement. A LOS "A" value represents very little delay, whereas a LOS "F", the worst condition, represents average delays of over 50 seconds per vehicle. The detailed capacity analysis worksheets are attached (Attachment 2) of the Traffic Impact Study in **Appendix F** of this DEIS.

As shown in **Table 3-10**, all the approaches will operate at levels of service A, with control delays of less than 10 seconds per vehicle.

Mitigation

It is the professional opinion of Nelson + Pope that the volume of traffic generated by the proposed project will not create significant impacts to the adjacent roadway during the peak periods. The location of both the Proposed Access and the Alternative Access would operate in a safe manner. Either driveway will intersect a section of Muttontown Road with a very low traffic volume and low frequency of accidents. Identified traffic-related mitigation is as follows:

- For the Proposed Access, trimming of brush within the Village right-of-way in the vicinity of the proposed access road is recommended to optimize sight distance.
- Additionally, Nelson + Pope recommend the installation of an advance intersection warning sign on the north side of Muttontown Road for westbound traffic if this site access is pursued. This sign will provide motorists with additional notice that they are approaching a T-intersection.
- During grading operations, truck traffic to and from the site will be routed along major roadways and truck drivers will be instructed to avoid secondary residential streets to the maximum extent practicable. The 98.92-acre property has ample space to fully accommodate construction vehicles and provide equipment and materials staging areas during the construction process, thereby keeping work vehicles off public rights-of-way.

Community Character and Cultural Resources

Impacts

Visual Resources

The proposed development will change the visual appearance of the subject site, by removing some existing natural vegetation and estate structures and replacing all but one of the structures (the Pond Cottage) with 20 new homes and associated accessory structures, two subdivision streets, and two stormwater recharge basins. However, the project proposes to preserve a 50-foot deep wooded buffers around the entire perimeter of the site, with the exception of the street opening for the new subdivision road from Muttontown Road and an eight-foot wide bridle path through the park portion of the perimeter, as well as land around the wetland in the southwest portion of the site. The buffer and parkland will consist of an estimated +/-17.47 acres of native woodlands providing significant natural buffering that will help to maintain the rural character of Muttontown Road, nearby nature preserves, and adjacent house lots. A trail has been installed along the perimeter of the property on the north, east and west sides of the property, which involved only removal of existing underbrush in certain portions of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long. **Appendix B-2** provides photographs along the perimeter of the property, demonstrating the existing buffer conditions along the perimeter of the property and the existing screening that exists along the trail area. The photographs demonstrate that adjoining properties are largely screened from the trail location due to the extent of existing vegetation and topography, with the exception of the northwest portion of the property (see photograph #11) and northern portion of the property (in the vicinity of photograph #6) where the adjoining homes are cleared to the property line. Supplemental evergreen screening can be provided in these locations to provide additional screening of the proposed perimeter parkland area and trail.

The proposed building envelopes are at least 150 feet from any existing adjacent home. Lots having frontage on Muttontown Road will be setback at least 125 feet from this road and lots having frontage on proposed interior (subdivision) streets will be setback at least 75 feet in accordance with the required front yard setback line. Perimeter buffers, wetlands buffers, parkland areas and restrictions posed by building envelopes will provide significant natural buffering along Muttontown Road. The proposed Subdivision Road off of Muttontown Road ("Hall Drive") will require the removal of trees and grading that will open up views of the interior of the subdivision along the new street from the perspective of a passerby along Muttontown Road. However, since the alignment of the road at this location is not perfectly straight, and the road will be sloped, deep views into and out of the site are not expected.

The two proposed stormwater recharge basins are located in areas where there is no adjacent clearing or development, and which are heavily wooded. The closest structure or development to the proposed recharge basins is over 600 feet away. The outward sides of the recharge

basins facing adjacent (off-site) properties will be screened by the 50-foot perimeter buffer and the internal facing sides of the recharge basins (facing proposed lots) will be lined by a double staggered row of mixed evergreen trees planted at 10-12 feet in height that will provide year round screening. Proposed trees for recharge basin screening include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*). The "**Planting and Tree Removal Plan**" (Sheet C-105) depicts the location, arrangement, and density of the proposed vegetative screening.

Chain-link fencing will also be installed around the perimeters of both recharge basins to keep unauthorized persons from entering these spaces. The preserved land that is adjacent to the recharge basins are not likely to be cleared or developed and any future development on nearby privately owned land would be expected to comply with Village setbacks and other applicable requirements. The recharge basins will be set into the ground in topographically low-lying areas and will therefore be primarily subsurface features.

Street trees are not required by Village Code and are therefore not proposed; however, native grasses will be planted within the center islands of the access road (Hall Drive) and cross street (Fan Court East/Fan Court West) to improve the appearance of these features. Center median grasses will consist of native little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*).

Care was taken to limit disturbances to steep slope areas by first identifying and delineating them and then avoiding disturbance to the extent practicable during site preparation and construction. Areas that are disturbed during the construction process will be reseeded with an ecology mix. Wetlands will be protected from development activities by the 100-foot wetlands non-disturbance buffers and temporary project limiting fencing can be provided along the wetland setback boundaries if needed to prevent over-clearing and other encroachments during construction. The removal of trees for development is an unavoidable impact of the proposed action, and most other development projects, but considerable effort has been taken to limit clearing, provide buffers and open space, and ensure that significant natural features are protected, and natural vegetation is retained to the extent possible. In addition, some of the trees, shrubs and ground covers that must be removed, will be replaced with landscaping to stabilize soils, and prevent erosion, provide screening for privacy, and enhance the aesthetic quality of house lots. Landscaping details for individual lots will be determined during future site plan reviews and comply with applicable requirements of Chapter 144 of the Muttontown Code, titled "Site Plan Review".

The change in visual character is not anticipated to result in a significant adverse impact, as the proposed development and associated landscaping and perimeter and wetland buffers are expected to maintain the forested and rural character of the area and mitigate impacts to the maximum extent practicable while maintaining consistency with Village zoning and providing on-site open space that includes an equestrian trail that will be accessible by the public.

Cultural Resources

The conclusion of the building alternatives analysis (**Appendix G-2**) was that "due to the characteristics of the estate buildings, their condition, zoning requirements that restrict developable area, market conditions in Muttontown, and capital investments to purchase the property, it is not feasible to retain the buildings on the site as part of a subdivision. The applicant, however, has determined that it is feasible to retain the Pond Cottage, its associated gardens, and estate driveway from Muttontown Road as the retention of the building and associated landscape elements are situated in a manner that they may be logically incorporated into the subdivision, and their retention provides a substantive preservation component."

The proposed subdivision plans and information relating to the building alternatives analysis were forwarded to the New York State OPRHP for its review. By letter dated September 7, 2016, Laurie E. Klenkel, Historic Site Restoration Coordinator with the OPRHP Division for Historic Preservation, responded to the submission as follows:

> As you are aware the Easton Estate in its entirety is eligible for listing in the State and National Registers for Historic Places. Based upon this review, the OPRHP concurs with your findings that "there are no prudent and feasible alternatives to the demolition of the former Easton Estate buildings on the property with the exception of the Pond Cottage, its associated flower garden remnant, and estate driveway from Muttontown Road. Subject to Village approval, the Pond Cottage would be used as an accessory dwelling. Otherwise, it would be retained as an accessory structure under the Village Code, which would limit its use to a non-residential purpose, e.g. a pool house."
>
> It is the opinion of the OPRHP that demolition of the remaining historic buildings and landscape features associated with the National Register-eligible Easton Estate will have an Adverse Impact upon historic resources. In accordance with Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law, prior to demolition, a formal Letter of Resolution ("LOR") must be prepared to complete the Section 14.09 review process. This agreement document should identify proper mitigation measures such as:
>
> 1. Continued design consultation with OPRHP for the preservation of the historic landscape feature that is the main entrance drive from Muttontown Road and the reuse of the Pond Cottage and associated landscape features.
> 2. Recordation of the architectural and landscape features prior to removal.
> 3. Salvage and/or relocation of architectural and landscape features.
>
> Please proceed with the development of the LOR with the New York State Department of Environmental Conservation. (See **Appendix G-2** for the full correspondence.)

The retention of the Pond Cottage and its associated gardens and section of the estate driveway was previously evaluated as an alternative plan in the draft 2016 DEIS and is now a

component of the preferred plan, thereby addressing the OPRHP's recommendation, and mitigating cultural impacts to the maximum extent practicable considering, social, economic and other essential considerations from the reasonable alternatives.

With respect to archaeological resources, ORPHP reviewed the Phase IB Archaeological Survey and Phase II Archaeological Testing as provided in Tracker Archaeology and by letter dated June 9, 2016 responded to the submission as follows:

> OPRHP concurs that the Hall Native American site (No. 05956.000121) and the Hall Historic site (No. 05956.000122) are not National Register eligible and that no further archaeological investigation is necessary. OPRHP also concurs that the Percy K Hudson archaeological site (No. 05956.000130) warrants a Phase II archaeological site investigation based on the substantial artifact recovery associated with PK Hudson's brief residence.
>
> OPRHP feels that the issue of potential impacts to the adjacent cemetery has not been resolved. Recommendations were made on August 04, 2015 and again on May 03, 2016 for the placement of a sufficient construction buffer around the cemetery and/or the identification of the cemetery boundary through remote sensing and topsoil stripping. OPRHP continues to recommend these measures. OPRHP feels that avoidance of the cemetery with a buffer of at least 30m/100ft would ensure adequate protection from project impacts.

To address these comments, Tracker Archaeology contacted OPRHP to finalize the scope of additional Phase II investigation work for the PK Hudson site. By letter dated August 4, 2016, OPRHP recommended the installation of additional excavation units for the PK Hudson site to better sample the identified midden (a former ash pile adjacent to the foundation remains of the original house occupied for a time by Percy K. Hudson). The additional excavation units for the PK Hudson site has been completed and requested revised Phase I and II report addressing the PK Hudson site is being prepared (see Tracker Archaeology October 21, 2016 letter, **Appendix G-3**) and will be submitted to OPRHP and the Village upon completion.

As noted above, OPRHP also recommended investigation of the areas near the existing cemetery to determine if past unmarked gravesites may exist in the vicinity of the existing cemetery. OPRHP recommended remote sensing and topsoil striping to investigate the area 75 feet east of the existing cemetery (in the location of the previously proposed disturbance for the proposed subdivision access road which was directly across from Woodhollow Road at that time). A Ground Penetrating Radar ("GPR") study was conducted in this area, which showed inconclusive results. Therefore, further investigation (soil stripping) will be necessary if disturbance is proposed within 100 feet of the cemetery. As an alternative, the applicant evaluated a plan which shifted the proposed roadway access so that it was approximately 160 feet to the east of the cemetery fence and approximately 161 feet from centerline to centerline

from Woodhollow Court). Development in accordance with the currently proposed subdivision map would provide far more than the recommended 100-foot buffer from the cemetery.

Mitigation

- The 50-foot wide naturally vegetated buffer along the property perimeter will substantially obscure views of the development from the perspective of outside observers and most of the proposed passive parkland will be concentrated on the south side of the subdivision along Muttontown Road where the site is most visible.
- Retention of natural vegetation within buffer areas (with the exception of the eight-foot wide bridle trail) will help to maintain the open space character of the area. A trail has been installed along the perimeter of the property on the north, east and west sides of the property, which involved only removal of existing underbrush in certain portions of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long. Supplemental evergreen screening can be provided in the two locations where the trail may be visible to the adjoining properties (northern and northwest portions of the property; see photographs #6 and #11 **Appendix B-2**) to provide additional screening of the proposed perimeter parkland area and trail.
- Homes will be constructed of high quality construction materials and will be designed to complement the appearances of prevailing residential development in the Village and conform to current development standards.
- The development will be consistent with the rural community character by fully complying with Village land use and dimensional zoning requirements, including developing at a very low density, preserving and protecting some of the natural areas on-site, and enhancing site appearances through high quality landscaping and home design.
- Retention and reuse the Pond Cottage as a non-residential accessory use and preserve associated landscape features and the original estate driveway.
- The relocated subdivision access will be located 161± feet east of the intersection of Woodhollow Court and Muttontown Road and farther from the cemetery to ensure the protection of the cemetery during the construction process as shown on the preferred plan.
- A 100-foot wide non-disturbance easement is proposed around the cemetery to increase the protection of this cultural resource.
- In accordance with a Letter of Resolution ("LOR") agreement, the following commitments will be formalized through the final terms and signature of the LOR by the applicant, OPRHP and DEC (see **Appendix G-2**):
    - Record other existing architectural and landscape features prior to removal.
    - Salvage and/or relocate architectural and landscape features where possible.
    - Continue design consultation with OPRHP for the preservation of the historic landscape feature that is the main entrance drive from Muttontown Road.

Alternatives

SEQRA requires all DEISs to contain an evaluation of reasonable project alternatives that are feasible considering the objectives and capabilities of the project sponsor. This phase of environmental review provides the context, framework, and investigative approach for identifying, assessing, and comparing and contrasting project alternatives and helps in

identifying impact prevention and mitigation strategies for informed decision-making or new and improved plans that are feasible considering the Applicant's objectives and capabilities of the project sponsor. Alternatives may include changes to a project or action's location, size, scale, density, intensity, design, technologies, layout, alignment, orientation, implementation, phasing, overall timeframe, or other aspect of an action.

SEQRA specifically requires a comparative evaluation of what it refers to as the "No Action Alternative". The No Action Alternative provides a basis for identifying, characterizing and assessing anticipated site changes and the possible impacts and benefits that are likely to result in the reasonably foreseeable future in the absence of any new site disturbances, construction activities, land use(s), or other reviewable activities. SEQRA requires that assessments of project alternatives be conducted at a level of detail sufficient to facilitate a comparison of the types and magnitudes of potential impacts and the potential effectiveness of various impact avoidance and mitigation techniques by the Lead Agency and other involved agencies.

The alternatives considered by this DEIS are as follows:

1) **Alternative 1: No Action Alternative:** The No Action Alternative for this review is the existing or s*tatus quo* condition as described above.

2) **Alternative 2 (Access Road in the Vicinity of the Existing Driveway):** This alternative as shown on Alternate Plan 2 (**Attachment 4**) assumes access to the subject subdivision will be taken from Muttontown Road at the southeast corner of the property near the location of the existing site driveway. This location also closely parallels a separate driveway to a privately owned outparcel to the west (+/-60 feet along Muttontown Road) known as the Moed property. As with the preferred 2020 Preliminary Map, Alternative 2 consists of 20 new residential lots, retains the Pond Cottage for use as an accessory structure for Lot 18, and provides a 50-foot deep perimeter buffer which includes a 30-foot deep perimeter park with eight-foot wide bridle path, and dedicated parkland and buffers around the vernal pond and other on-site freshwater wetlands. This alternative would comply with zoning in every respect except the possible need for a variance due to the access road's encroachment into the required 50-foot perimeter buffer over a distance of +/-555 feet and parallels part of the Muttontown Preserve's westerly property boundary and approximately 418 feet along the adjoining Moed property to the west. This alternative is also expected to require a wetland permit for some limited clearing, grading and possible construction of part of the access road and its drainage within 100-feet of an off-site pond located on the Moed property; although most of the ROW would be outside the 100-foot upland area. The access road would consist of one lane in and one lane out. The configuration of the proposed roadway would follow the existing site driveway for the one lane exit roadway and would replicate the look of the existing Belgian block gutter to maintain a historic appeal. A vegetated center median would be provided between the lanes and Belgian block gutter would be installed. OPRHP review would be needed for the modification of the existing

estate driveway, as OPRHP had requested the existing driveway remain intact. The two stormwater recharge basins would be the same as those of the **2020 Preliminary Map (Attachment 3)** and **Alternative 3: 2015 Preliminary Map** (**Attachment 5**).

3) **Alternative 3: 2015 Preliminary Map (Access Opposite Woodhollow Court)** Alternative 3 is a zoning compliant alternative and previously proposed subdivision which locates the access road directly across from and aligned with Woodhollow Court creating a four-way stop controlled intersection. The right-of-way for the access road would be immediately adjacent to a small family cemetery located on the site, and the paved portion of the access road would be located between 10 and 19 feet from the existing cemetery perimeter fence,), which does not meet OPRHP's recommendation for a 100 foot buffer around the cemetery. Alternative 3, as with the 2020 Preliminary Map and Alternative 2, includes the 30-foot deep perimeter parkland with eight-foot wide bridle path, parkland/buffers around the vernal pond and existing estate driveway next to the Muttontown Preserve, and a 50-foot perimeter buffer around the entire property.[19] This alternative, like the others, would also retain the Pond Cottage as an historic design feature of the original estate. However, since the 100-foot nondisturbance buffer around the cemetery cannot be maintained with this alternative, there are potential impacts on cultural resources and this alternative has been eliminated from consideration due to this potential impact. The **Alternative 3: 2015 Preliminary Map** (**Attachment 5**) would have the same two recharge basins as those shown on the **2020 Preliminary Plan** (**Attachment 3**) and **Alternate Plan 2** (**Attachment 4**).

It should be noted that prior agency input and analysis of alternatives lead to the previously proposed 2015 subdivision map (now Alternative 3) being replaced by the currently proposed "2020 Preliminary Map." The current map incorporates various additional mitigation including but not limited to relocating the Hall Drive access approximately 161 feet farther to the east, incorporation of a 100-foot cemetery buffer, retention of the Pond Cottage, and dedication of on-site parkland that contains an eight-foot wide bridle path, as well as the vernal pond, freshwater wetlands and wetland adjacent areas.

The alternatives review characterized anticipated impacts and conditions and enabled comparisons of the Proposed Subdivision against the No Action Alternative and Alternatives 2 and 3. It is noted that each subdivision design has its own impacts and benefits and although these differ in type, based on available mitigation and individual subdivision designs, significant impacts have been mitigated to the maximum extent practicable for each. The currently proposed map **(2020 Preliminary Map, see Attachment 3)** is the result of numerous suggestions, recommendations and requirements by the Village, including but not limited to

[19] Please note that whenever the 30-foot wide perimeter parkland is mentioned in Section 5 or any other section of the DEIS, only those areas within the 50-foot buffer that are also shown as parkland will be accessible by the general public. Portions of the 50-foot perimeter buffer that are not shown as also being within parklands are on private property and may not be accessed by the general public. These portions of the 50-foot buffer, as well as parts of the parkland within wetlands or within the cemetery easement may not be disturbed.

dedicating on-site parkland including an eight-foot wide bridle path, a 50-foot deep property perimeter buffer, relocating the site access to avoid the cemetery, protection of wetlands and steep and very steep slopes, retaining the Pond Cottage, the estate driveway and garden to retain parts of this historic and cultural resources of the site intact, protection of the cemetery by including it in a cemetery easement and part of the parkland area, and compliance with numerous code requirements and standard planning, zoning and engineering design practices.

Permits and Approvals Required

The following permits, approvals or authorizations are required:

Applicable Board/Agency	Approval Type
Village Planning Board	Subdivision Approval/Slopelands Use Permit
	Site Plan Approvals for Each House Lot
Village Trustees	Tree Permit
Village Building Department	Demolition Permit
	Building Permits
NCDH	Water Supply System Design Review
	Sanitary System Design Review
NCPC	239-m (adjacent to County park) & Subdivision Review
NCDPW*	Water Supply and Connection
JWD	Water availability and connection
NYSDEC	SPDES Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)
New York OPRHP	Letter of Resolution Pursuant to Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law

*NCDPW - Nassau County Department of Public Works

SECTION 1.0
DESCRIPTION OF THE PROPOSED PROJECT

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Introduction

This document is a Draft Environmental Impact Statement ("DEIS") for the project known as the Silver Path Estates Subdivision. The DEIS has been prepared in accordance with Section 8-0109 of the New York State Environmental Conservation Law (State Environmental Quality Review Act or "SEQRA"); the implementing standards and procedures of "SEQR" set forth at Title 6 NYCRR Part 617; and other applicable regulatory standards and guidelines of environmental review and planning practices. Silver Path Estates is proposed on a former 98.92-acre estate containing several buildings and structures, woodlands, some areas of steep and very steep slopes, freshwater wetlands, and bridle paths within the Incorporated Village of Muttontown, Town of Oyster Bay, Nassau County, New York (see **Topographic Map, Attachment 1**). The subject subdivision involves the creation of 20 single-family residential lots, associated on-site streets, proposed parkland that will contain a bridle trail, and two stormwater recharge basins. A 50-foot deep natural buffer is proposed around the perimeter of the site as required by Village Code Chapter 158-16 F, "Subdivision of Land," and a minimum of 30 feet of this buffer will be dedicated parkland and contain the bridle trail. An existing wetland and adjacent upland areas in the southwest corner of the property will also be contained within the area proposed to be set aside as parkland to ensure their protection and retain valued natural qualities. A small family cemetery located at the south end of the site east of the wetland will be contained within the 50-foot perimeter buffer, and a 100-foot easement around the perimeter of the existing cemetery is proposed to ensure that it is not encroached upon or disturbed in the future. Existing buildings on-site include one currently occupied residence (i.e., the "Gardener's Greenhouse Cottage") and several other unoccupied residential structures, outbuildings and accessory structures. The occupied building is estimated to be inhabited by three (3) persons based on **Rutgers University Demographic Multipliers (2006)** (see **Table 1-1**). All buildings and accessory structures will be removed as part of the proposed action with the exception of the Pond Cottage which would be retained for use by the owner of Lot 18 as an accessory structure for non-residential accessory uses (e.g., pool house, etc.).

The proposed project has been designed to conform to the Village of Muttontown's "Residence E-3" (hereafter, "E-3") zoning district with respect to lot yield and development density; minimum lot size, width, and depth; and building setbacks. Moreover, even though homes have not been designed at this stage and will be custom built for individual lot owners, they must be designed to conform to E-3 standards including building height, coverage, minimum and maximum habitable area, and other applicable dimensional standards, and will be subject to site plan review in the future to ensure conformance (see **Section 1.4**). The subdivision has been designed to minimize impacts on the development pattern in the area and to the natural resources and characteristics of the site including its freshwater wetlands and steep and very steep slopes, and allow for a bridle path connection from the adjacent County-owned lands to

the east (Muttontown Preserve), the Hoffman Center to the west, and south to the vernal pond and freshwater wetlands near the southwest corner of the property. The proposed subdivision prior to development would retain ±17.47 acres or approximately 17.7 percent of the site in its natural state (10.53 acres of parkland and the additional portion of the 50-foot perimeter buffer that is outside of the parkland which is 6.94 acres) with the exception of an eight-foot wide bridle path designed to meander between existing trees. A trail has been installed along the perimeter of the property on the north, east and west sides of the property, which involved only removal of existing underbrush in certain portions of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long.

Access to the lots would be from a proposed subdivision road ("Hall Drive") off Muttontown Road proposed approximately 161 feet east of Woodhollow Court. The proposed roadway would be stop controlled at Muttontown Road and two cul-de-sacs with a "turn-around," at each end ("Fan Court East" and "Fan Court West") would be provided from Hall Drive. Sanitary wastewater from future homes will be discharged to individual onsite septic systems on each lot, and stormwater runoff will be collected, temporarily retained, and recharged on-site via a system of catch basins and two stormwater recharge basins[1]: one located on the west side of the property, adjacent to the Hoffman Center, and the other at the northeast corner of the site, adjacent to the Muttontown Preserve.

1.2 Project Background, Need, Objectives and Benefits

1.2.1 Project Background and Application History

The subdivision application, project plans and a Long Environmental Assessment Form ("EAF") Part 1 were submitted to the Village in May of 2015 (**Appendix A-1**). The Planning Board determined that the proposed action was a Type I action pursuant to Part 617, Title 6 of the New York Code of Rules and Regulations ("6 NYCRR Part 617") as promulgated under the NYS Environmental Quality Review Act ("SEQRA"), and therefore, would be subject to environmental review under SEQRA. The Village Planning Board conducted a coordinated review in accordance with SEQRA and ultimately assumed the role of "lead agency" for this environmental review due to its local jurisdiction over the subdivision approval process and future site plan approvals for each house lot.

The Planning Board reviewed the EAF Part 1 prepared by the applicant; prepared EAF Parts 2 and 3; and adopted a Positive Declaration on the application on September 2, 2015 (**Appendix A-2**). Under SEQRA, adoption of a Positive Declaration indicates that there is the potential for

[1] Runoff on future house lots will be collected and recharged through a series of gutters, leaders and piping and discharged to on-site dry wells on each lot.

one or more moderate or large environmental impacts and requires the preparation of an EIS to further evaluate, and as necessary, avoid or mitigate such moderate or large impacts to the maximum extent practicable.

The environmental review for the subdivision application was then the subject of a public scoping session on October 6, 2015, which culminated in the preparation of a final scoping document ("Final Scope") which was adopted November 23, 2015 and specified the required scope and content of the DEIS. **Appendix A-3** contains a copy of the Final Scope.

A DEIS was prepared based on the November 23, 2015 Final Scope and the content requirements of SEQRA and was submitted to the Planning Board in October of 2016. The Planning Board and its environmental and engineering consultants (VHB and Bowne AE&T Group, respectively) considered the scope and content of the DEIS relative to the accepted Final Scope to determine its suitability for acceptance. Memos were prepared by VHB and Bowne each dated January 20, 2017 containing recommended revisions to the DEIS to be completed prior to further review and DEIS acceptance and these letters were submitted to the Village for review and ultimate acceptance and authorization of the recommended revisions.

On February 8, 2017, a public meeting was held to determine whether parkland or a fee in-lieu of parkland would be required, and if payment was required, the amount of that payment. The following week, on February 13, 2017, the Village determined that the DEIS was incomplete and should be revised in accordance with the January 20, 2017 memos. On May 3, 2017, a meeting was held between representatives of the Silver Path Estates team, the Village Mayor, and the Village Attorney regarding parkland dedication or fees. On February 14, 2018, the Village Board made a final determination that on-site parkland should be provided for the subdivision and that parkland around the perimeter of the property for a bridal path and along the property frontage encompassing the existing wetland areas were appropriate.

In 2019, the Village made updates to the subdivision regulations (Chapter 158-16) regarding calculation of lot area, and no longer requiring the required 50-foot perimeter buffer for residential subdivisions to be subtracted from lot area. This change in the subdivision regulations increased the total gross lot area available for subdivision by 14.16± acres and the number of lots that could legally be created on this site. Despite the potential increase in total lot yield by the 2019 changes to the Village subdivision regulations, the Applicants have chosen to move forward with the 20 lots rather than an increased yield that would be permissible by the current Village subdivision regulations (see **Section 1.4.1**).

The DEIS has been revised based on the January 20, 2017 comment memos, the Village Board's determination that parkland should be provided on site and the 2019 updates to the Village subdivision regulations (Chapter 158-16). The revised DEIS has been prepared in accordance with the content requirements of the Final Scope as approved by the Village and the procedural

requirements of SEQRA and its implementing regulations at 6 NYCRR Part 617 and addresses the comments contained in VHB and Bowne's memos. The purpose of this DEIS is to provide information for the benefit of the public and decision-making agencies with respect to the proposed project, including a detailed project description, an inventory and assessment of existing environmental conditions, identification of potential environmental impacts and proposed mitigation measures, and an examination of alternatives to the proposed action that may reduce potential impacts.

Once the Village accepts the DEIS as adequate in terms of its scope and content, a public review process will begin to provide the public and involved and interested agencies with an opportunity to review the DEIS, provide written and/or verbal comments. These comments will be considered by the Applicant and responses to each substantive comment or question will be provided in a Final EIS ("FEIS").

The EIS record (including the DEIS and FEIS and its responses to agency and public comments) will form the basis for the preparation and adoption of a SEQRA Findings Statements by the lead agency and other involved agencies, to certify compliance to required review procedures, identify potential environmental impacts and mitigations, and provide the foundation for informed decisions with respect to the proposed project or an alternative that meet's the applicant's objectives and avoids or minimizes environmental impacts to the maximum extent practicable.

1.2.2 Project Purpose and Need

The goal of the project sponsor is to subdivide the property and improve private real property in accordance with applicable Village plans and zoning. The purposes, needs and public benefits of the proposed subdivision are as follows:

- Create a residential subdivision that is designed to conform to Village zoning requirements and its land use goals and objectives;
- Provide premium single-family detached homes in a pleasant neighborhood environment;
- Provide required buffers, a trail easement in a portion of the buffer area, and on-site recreational space that will help satisfy public need as identified in the Village and County Comprehensive Plans.
- Protect freshwater wetlands, steep and very steep slopes, wildlife habitat, specimen trees, and historic and cultural resources to the greatest extent possible.
- Generate tax revenues that will exceed the costs of necessary public services, capital improvements and facilities maintenance.

It is the applicant's opinion that the Silver Path Estates Subdivision will help to accommodate anticipated residential growth (as projected in the Village Comprehensive Plan) within an area

of the Village that is zoned and otherwise well-suited for the proposed residential use, without significantly or unnecessarily affecting natural resources and public infrastructure. The project will address this apparent need, based on the zoning of the site, future construction of high-quality custom-built single-family homes in an attractive setting and desirable location; while minimizing potential adverse impacts through low density, perimeter buffers, recreational space, protection of natural resources including wetlands and areas of steep and very steep slopes, and protection of cultural resources, including the Pond Cottage and family cemetery. The project will result in substantial increases in property tax revenue for local taxing jurisdictions, which will off-set impacts from increased demand for community services and public infrastructure. Construction of the project will provide temporary jobs for the local building industry and long-term maintenance and contractor jobs will result from the maintenance needs of future homeowners.

1.2.3 Objectives of the Project Sponsor

The objective of the project sponsor is to subdivide the subject site into a low density fully conforming 20-lot residential subdivision in order to construct 20 new homes, while providing permanent open space and a new bridle trail that connects Muttontown Preserve with the Hoffman Center and other parts of the property for use by the public pursuant to a proposed easement consistent with Chapter 55 of the Village Code. All existing buildings and structures will be removed with the exception of the Pond Cottage and main estate driveway. The applicant has designed the subdivision for future construction of homes consistent with the established low-density rural character of the area and to provide quality homes to future residents. The applicant wishes to exercise its right to develop the subject property in accordance with Village zoning, while preserving open space and significant sensitive natural cultural features of the subject site. The past voluntary sale of 18.3 acres from the original estate to Nassau County has resulted in the preservation of this land and the expansion of the adjacent Muttontown Preserve. The proposed perimeter buffer and parkland overlap one another but together cover an area of 17.47± acres while the residential lots will have a minimum net land area of three acres-plus, each, with plenty of space to locate and properly space homes and residential accessory structures without encroaching into steep slope or wetland adjacent areas.

1.2.4 Benefits of the Project

Residential subdivisions exist throughout the surrounding area, and the proposed low-density/large-lot subdivision is consistent with the current rural woodland character of the area while enhancing the built character of the community through the construction of new high-end homes. Furthermore, the proposed action is consistent with relevant sections of the Village and County Comprehensive Plans, as well as the goals and recommendations of the

Oyster Bay Special Groundwater Protection Area ("SGPA") and will generate significant property tax revenues.

This report presents an analysis of the setting of the subject site and an assessment of the importance of the various impacts with regard to the proposed project. Potential topics and areas of concern are discussed in detail, and the potential impacts identified in the EAF Part 3 and Final Scope issued by the Planning Board of the Village of Muttontown are addressed. Primary conclusions regarding land use, project benefits and mitigation are as follows:

- The proposed project is designed to conform to E-3 Residence zoning and preserves or protects natural areas including woodlands and wetlands. The project will provide quality housing for persons wishing to live or remain in Muttontown.
- Construction of the project will provide temporary jobs for the local building and construction trades and long-term maintenance and contractor jobs will result from the individual needs of new homeowners.
- The project proposes to provide an equestrian trail corridor connection between Muttontown Preserve and the Hoffman Center for use by the public under a proposed easement consistent with Chapter 55 of the Village Code to help to sustain the sense of place and equestrians' enjoyment of the site.
- The project site (i.e., the former Estate) is eligible for listing on the State and National Registers; therefore, based on input from the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP"), the proposed subdivision retains the Pond Cottage, associated gardens, and the main estate driveway for use as a non-residence accessory use. The design of the subdivision also protects the small cemetery located at the south end of the property from future disturbance by relocating the previously proposed access road farther to the east and including the cemetery and adjacent areas within the parkland or a proposed 0.68-acre cemetery easement. The extension of the parkland over the cemetery was achieved by relocating a section of previously proposed parkland that was near the existing driveway and provided little benefit to the area surrounding the cemetery.
- The project will result in increased tax revenues for local taxing jurisdictions, which will assist in offsetting demand for community services.

The applicant has designed the subdivision to provide the following:

- A lot yield that is permitted by the Village's duly adopted Zoning Map and Zoning Code.
- An aesthetically attractive single-family residential development.
- On-site recreational amenities to serve future residents as well as members of the local equestrian community.
- Open space vistas and retention of high-quality natural vegetation.
- Safe access and on-site streets that are consistent with Village road and drainage standards.
- Conformance to all other applicable land use and environmental requirements.

1.3 Project Location, Site History, and Existing Site Conditions

1.3.1 Project Location

The project site is located on the north side of Muttontown Road, west of NYS Route 106 and east of Serenite Lane, in the Incorporated Village of Muttontown, Town of Oyster Bay, Nassau County, New York. The property consists of three commonly owned contiguous parcels identified as Nassau County Tax Lots: Section 16, Block A, Lots 1006, 1012 and 1099. **Figure 1-1** shows the location of the site.

1.3.2 Site History

The Silver Path Estates property (formerly the "Easton Property" and prior to that the "Hall Property") adjoins the Muttontown Preserve, a Nassau County park consisting of 550 acres of fields, woodlands, ponds, trails and former estate grounds. According to archives, the Hall Property was originally owned by a landscape architect from Argentina, named Diego Suarez, but was purchased by the Hall family from Mrs. Marshall Field Suarez around 1952 or 1953. The property was later determined by the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") to be "eligible" for listing on the State and National Registers of Historic Places under Criterion C, in the areas of country estate architecture and landscape design (see **Appendix G-1**). While the Main House was demolished in 1953 and later the exterior shell of a Georgian-inspired structure was built atop the original foundation in 1989, the current 98.92-acre estate retains some of its original buildings, landscaping and the overall character of the original plan, though many of the building interiors have been modified over time. Contributing buildings on the estate include: the "Main Home" and attached "East Cottage" and "West Cottage"; "Gardener's Greenhouse Cottage and Garage"; "Pond Cottage"; "Six-Car Garage with Upstairs Chauffeur's Apartment"; former "Barn/Converted Cottage"; and "Pool House" with associated in-ground swimming pool and tennis court. Significant components of the site's landscape design include the U-shaped lawn/forecourt, specimen trees and other plantings, curving driveways and walkways, stone drainage gutters, and cottage gardens.

The property is located within the Oyster Bay Special Groundwater Protection Area ("SGPA") and documentation of past, present or possible occurrences of rare plants, tiger salamanders, and Northern long-eared bats, and a vernal pond. A report was commissioned to address the potential for the New York State listed endangered Tiger Salamander (*Ambystoma tigrinum*) to be present on the site ("Muttontown Field Research Report," dated July, 6, 2011, prepared by Dru Associates, Inc.) but no evidence was found to support the presence of this species (**Appendix D-3**). This finding was later confirmed by NYSDEC in a New York State Endangered Species Act Jurisdictional Determination letter dated July 20, 2015 (**Appendix D-4**).

The "2009 New York State Open Space Plan" contains comprehensive policy and program recommendations that identified conservation projects, including the acquisition of parcels along trail corridors and greenways (i.e. Long Island Trail and Greenway System, Muttontown Preserve Trail System or Muttontown Preserve Enhancement Area). The "Hall Property" is listed on the 2009 New York State Open Space Plan as part of this Enhancement Area (**NYSDEC OPRHP & NYSDOS, 2009**). The "2016 New York State Open Space Plan" also discusses Muttontown Preserve's trail system and identified land adjoining the Preserve as possible acquisition sites to prevent fragmentation of a heavily used horse and foot trail system in the Oyster Bay SGPA, and an area containing rare plants, tiger salamanders, and glacial kettle-hole ponds (**NYSDEC OPRHP & NYSDOS, 2009**). In 2008, 18.3 acres of the Hall Property along the east side of the property was transferred to Nassau County to help preserve important wildlife habit and groundwater resources within the Oyster Bay SGPA and expand the County's recreational trail system (**LIRPB, 1992** and **Fors Karppi, 2008**). The subject subdivision provides numerous impact mitigation strategies which enhance the local trail system and protect slopes, wetlands, cultural resources and habitat while allowing the private landowner to create a low density subdivision that fully complies with Village zoning.

1.3.3 Existing Site Conditions

The subject property is 98.92 acres in size and is zoned E-3. As noted above, the property is a former estate containing: +/-89.78 acres of native uplands, two (2) small areas of NYSDEC regulated freshwater wetlands totaling 0.61 acres, a small private cemetery ("Weekes" family cemetery) covering 0.12-acres, and existing man-made structures and landscaping. Several short and widely dispersed bridle trails also exist on the site. Some of the trails or former trail segments have become overgrown and appear to have been abandoned (see **Topographic Map**, **Attachment 1**). Bands of steep slopes[2] and very steep slopes[3] are also scattered throughout the site but are mostly concentrated in the southwest corner of the property. Topography is discussed in detail in **Section 2.1** and topographic contours are shown on **Figure 2-1** and on the **Yield Study** map (see **Attachment 2**) and **2020 Preliminary Map** (see **Attachment 3**).

Wetlands are also located on and adjacent to the property, including a wetland situated in a topographic depression in the southwest corner of the property; a small red maple hardwood swamp located along the southerly property boundary (including areas off-site), east of the

[2] Steep Slopes are defined by §190-2 of the Village Zoning Code as: "All areas of land with a topographical gradient of or greater than 15% but less than 25% as measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."

[3] Very Slopes are defined by §190-2 of the Village Zoning Code as: "All areas of land with a topographical gradient of or greater than 25% measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."

cemetery, and west of and associated with a small pond on adjacent property (now or formerly of Patricia Moed); and a small swamp located off-site near the easterly boundary of the property within the Muttontown Preserve.

Most of the site contains successional woodland, with some limited successional old field vegetation, located in a narrow band on the north side of the oval driveway that serves the Main House. The property has been previously disturbed by past residential and equestrian uses. Six (6) residential structures currently exist on the property, and all but the Pond Cottage will be removed under the Proposed Subdivision (see **Demolition and Removals Plan, Attachment 3**, Sheet 8 of 8).

Adjacent to the east of the subject property is the northern portion of the Nassau County Muttontown Preserve (north of Muttontown Road). To the west are the Hoffman Center, a former estate and current nature sanctuary, and residential properties identified as the "Map of Versailles Estates," Filed April 7, 1961. To the north of the site is "Land Now or Formerly of Kamimian 03 Irrev. Trust" and to the northwest is "Land Now or Formerly of Carnelian Farms, LLC." Adjacent to the south of the subject property is land that is "Now or Formerly of Patricia Moed." **Figure 1-2** provides an illustration of the existing site conditions on a 2016 aerial photograph which is consistent with current development conditions.
The site is located in the following service and/or planning districts:

- Oyster Bay-East Norwich Central School District
- Jericho Water District
- Muttontown Police District
- East Norwich Fire District
- PSEG Long Island Service Area
- Oyster Bay Special Groundwater Protection Area ("SGPA")
- Muttontown Preserve Enhancement Area
- Residence E-3 Zoning District

1.4 Project Design and Layout

1.4.1 Overall Site Layout

The project has been designed to maximize retention of contiguous vegetation and open space, maintain viewsheds and community character, reduce use of fertilizer dependent vegetation, preserve steep slopes, provide an equestrian trail connection for locals, and protect wetland and groundwater resources, while providing an attractive residential environment for the benefit of future residents and the surrounding community.

The proposed project is designed in a way that maintains the maximum amount of natural vegetation on-site while providing a land use pattern that is consonant with the lot sizes and pattern of the Village Zoning Code and development in the vicinity of the site. A subdivision plan must not exceed the allowable yield permitted on a property, and therefore, the density must be based on a yield plan that fully complies with Village zoning and subdivision requirements (see **Attachment 2, Yield Plan**). The development must be properly designed and provide essential infrastructure including streets and stormwater recharge areas. It is noted that the Yield Study Plan for the subject property was completed in 2013, prior to the 2019 changes to the subdivision regulations. This Yield Plan established a maximum density of 20 single-family house lots based on the requirements of the E-3 zoning district, including its minimum lot area requirement of 3 acres (130,680 square foot (SF), minimum lot width requirement of 200 feet, minimum lot depth requirement of 250 feet, requirements to remove certain natural features and perimeter buffer areas from yield, and required site infrastructure to serve the site including streets and stormwater recharge basins. At the time the original 2013 Yield Study Plan was prepared, the Village required that all perimeter buffer areas be removed from total gross property area prior to determining maximum yield which had the effect of reducing the total number of lots by 14.16± acres. However, in September 2019, the Village modified this requirement (no longer requiring this deduction), thereby increasing the total gross lot area available for subdivision by 14.16± acres and the number of lots that could legally be created on this site. Despite the potential increase in total lot yield by the 2019 changes to the Village subdivision regulations, the Applicants have chosen to move forward with the 20 lots rather than an increased yield that would be permissible by the current Village subdivision regulations.

The 20 residential lots have gross lot areas ranging between 3.05 and 6.21 acres and an average gross lot size of 3.8 acres. *Net* lot areas (i.e., areas remaining after subtracting on-site freshwater wetlands, adjacent wetland areas, and slopes of 15% or more), range between 3.0 acres (the standard for E3-zoned parcels) and 5.38 acres, with an average *net* lot size of 3.39 acres.

In regard to essential site infrastructure, the proposed subdivision will require the construction of two (2) new roads (Hall Drive and Fan Court East and West), a stormwater collection system including catch basins/drainage piping and two (2) stormwater recharge areas one on the west side of the site adjacent to the Hoffman Center property and one on the northeast side of the property, individual on-site septic systems, and various utility connections. The roads and stormwater system including the collection system in the street and two recharge basins will be maintained by a Homeowners Association (“HOA”). The total land area required for street rights-of-way is 6.59 acres and the total land area for stormwater recharge basins is 5.77 acres (two areas totaling 3.49 and 2.27 acres). Based on the above, the total land needed for streets and recharge basins is 12.36 acres.

The difference between total property area (98.92 acres) and total gross lot area (76.03 acres) is 22.89 acres or 23.1% of the property, which consists of parkland/bridle paths and wetlands (0.61 acres, which is located within lot areas), parkland (10.53 acres), streets (6.59 acres), and recharge basins (5.77 acres). The cemetery (0.12 acres) is located within the parkland area. Covenants, and/or easements meeting the approval of the Village attorney will be filed so that areas containing the wetlands, adjacent wetland areas, steep slopes, and parklands and perimeter buffers will remain undisturbed and naturally-vegetated with the exception of equestrian trail and any other permissible activities that the Village may determine is appropriate. The large lot/low density residential subdivision design along with limitations on building envelopes, required perimeter buffers, and measures to protect wetlands, adjacent wetland areas, and steep and very steep slopes will help to preserve essential wildlife habitat and provide an important connection between the Hoffman Center Wildlife Sanctuary and Muttontown Preserve that will allow animal movement and migration, foster natural stormwater recharge, help to minimize potential impacts to groundwater resources, and maintain some of the rural wooded character of the site.

The applicant has designed the Preliminary Map to achieve the following:

- Provide a lot yield that complies to the maximum permissible density and all other zoning standards and a subdivision layout that is consistent with Village requirements.
- Provide an aesthetically attractive development.
- Avoid significant impacts to the two existing freshwater wetlands on the site.
- Protect steep slopes and avoid unnecessary cut and fill to the maximum extent possible.
- Protect and formalize a bridle path within a proposed 30-foot deep perimeter parkland that will connect Muttontown Preserve which is located on the east to the Hoffman Center which is located to the West and allow access to the vernal pond area and nearly the entire perimeter of the property. Many of the bridle paths developed over time by horseback riders extending from the adjacent parklands were preserved with the previous transfer of tax lot 1098 from the subject site to Nassau County. The existing trails within the interior of site will require realignment.
- Protect the existing cemetery by retaining its fencing, including it within the proposed 50-foot deep non-disturbance perimeter buffer, and ensuring that the proposed Hall Drive right-of-way does not cross over any part of it.
- Retain the Pond Cottage as a representation of the former estate which is classified as eligible for listing on the State and National Registers.
- Remove the remaining existing structures.
- Maintain open space vistas and maximize retention of natural vegetation throughout the site.
- Provide safe access that conforms to Village standards and requirements.
- Conform to all other applicable Village land use, zoning requirements.

Several points were raised by the Village during initial project review and are now incorporated into the Silver Path Estates subdivision design. The subject site lies along the north side of

Muttontown Road and abuts substantial public (Muttontown Preserve) and privately-developed lands, so that only one primary vehicle access road is practicable. The 2020 Preliminary Map provides a single vehicle access from Muttontown Road, approximately ±135 feet east of the intersection of Muttontown Road and Woodhollow Court from center line to center line. Locating the site access at this location will provide a greater setback between the access road and the cemetery and will address concerns of some area residents.

Lots will be sold for individual site development and the roads and recharge areas will be maintained by an HOA. The HOA will be responsible for all on-site maintenance and repair of these improvements once accepted, including recharge basin maintenance, maintenance of roads, and snow removal.

The project includes 20 single-family residential lots all of which are three acres (net) or larger in size. A total of 12.36 acres of buffer some of which overlaps with parkland and wetlands setback areas, ±0.61 acres of wetlands, and a combined ±9.38 acres of wetland adjacent areas (upland areas within 100 feet of delineated wetland boundaries) and steep slope areas (areas with slopes of 15% or more) will be protected by covenant, easement, existing regulations, or other means. The proposed lots as shown on the **2020 Preliminary Map** provide ample space for driveway and garage parking for each individual lot, as demonstrated by the **Lot Development Plan** (see **Attachment 3**). Existing and future site coverage totals and other general existing and proposed conditions are summarized in **Table 1-1**.

TABLE 1-1
SITE AND PROJECT CHARACTERISTICS

Parameter	Existing Conditions	Proposed Project
Use	1 single-family residential unit	20 single-family residential units
Coverages (acres)	---	---
Impervious (Buildings & Paved)	2.67	17.48
Landscaped	5.86	14.7
Natural Upland Areas	89.78(1)	60.36(1)
Wetlands	0.61	0.61
Recharge Basins	0	5.77
Coverage Total	***98.92***	***98.92***
Habitats (acres)	---	---
Coastal Oak-Heath Forest	89.41	60.24
Successional Old Field	0.37	0.12
Red Maple Hardwood Swamp	0.22	0.22
Vernal pond	0.39	0.39
Terrestrial Cultural (landscaping, lawn & Garden, street medians)	5.86	14.7
Terrestrial Cultural (impervious)	2.67	17.48
Recharge Basins	0	5.77
Habitat Total	***98.92***	***98.92***
Water	---	---
Domestic Use (gpd)	750(2)	18,000(2)
Irrigation (gpd)	6,969(3)	26,229(3)
Total Water Use (gpd)	***7,719***	***44,229***
Recharge Volume (MGY)	67.3(3,4)	74.09(3,5)
Nitrogen Concentration (mg/l)	0.22(3,4)	0.98(3,5)
Trip Generation (vph) (6)	---	---
Weekday AM Peak Hour	2	19
Weekday PM Peak Hour	2	22
Saturday Peak Hour	2	35
Miscellaneous	---	---
School-Age Children Attending Public School (capita)	1(7)	22(8)
Total Residents (capita)	3(9)	84(10)
Solid Waste (lbs/day)	13.2(11)	374(11)
Taxes ($/year)	$433,061(12)	$1,667,829(13)

(1) Includes a 0.12-acre overgrown cemetery, cemetery easement area, buffer/parkland areas including 1.75 acres of natural surfaced bridle path in buffer/parkland, upland wetland adjacent areas, woodland and successional old field environments.

(2) NCDH requires that development on any lot larger than one acre must be based on the 6-bedroom multiplier (900 gpd), except by waiver after demonstrating that a 5-bedroom multiplier (750 gpd) is

appropriate. To provide a conservative estimate of the differences between the existing and proposed, this analysis uses the 750 gpd for the smaller existing occupied units and 900 gpd for the proposed dwellings.

(3) Assumes all landscaped areas are irrigated at 24.0 inches/year (one inch per week over irrigation season averaged over a year) and fertilized at 2.3 lbs/1,000 SF plus projected domestic use (**Appendix C-1**).

(4) Based on SONIR model estimate of existing conditions provided in (**Appendix C-2**).

(5) Based on SONIR model estimate under proposed conditions provided in (**Appendix C-3**).

(6) Vehicles per hour (vph) based on Institute of Transportation Engineers, *Trip Generation*, 10th Edition, Land Use Code 210 – Single Family Detached Housing, published by (ITE)

(7) Based on Rutgers University Residential Demographic Multipliers (2006) for "All School Children" living in 3-bedroom single-family detached residence valued at greater than $194,500 in the State of New York (0.58 per dwelling) (Burchell *et al*, 2006) and US Census Bureau public vs. private school enrollment data (76.5% vs. 23.5%) (Table B14003), Oyster Bay-East Norwich Central School District (2014-2018), ages 5 through 17.

(8) Based on Rutgers University Residential Demographic Multipliers (2006) "All School Children," 5-bedroom single-family detached residence valued at greater than $748,500 in the State of New York (1.47 per dwelling) (Burchell *et al*, 2006) and US Census Bureau public vs. private school enrollment data (76.5% vs. 23.5%) (Table B14003), Oyster Bay-Oyster Bay-East Norwich Central School District (2014-2018), ages 5 through 17.

(9) Based on projected 2.95 persons per 3-bedroom single-family detached residence valued at greater than $194,500 (Greenhouse Cottage) per Rutgers University Residential Demographic Multipliers (2006)

(10) Based on 4.23 persons per 5-bedroom single-family detached residence valued at greater than $748,500 in the State of New York (Burchell *et al*, 2006).

(11) Assumes 4.4 lbs/day/capita (USEPA, 2015) http://www.epa.gov/epawaste/nonhaz/municipal/index.htm)

(12) Based on 2020 School/County tax bills and 2019-20 Village tax bills.

(13) Based on 2020 School/County tax bills and 2019-20 Village tax bills for nearby comparably valued single-family homes. For more information, see **Section 3.2** of this DEIS.

The 98.92 acre site is located on the north side of Muttontown Road across from Woodhollow Court in the Village of Muttontown. Muttontown Road is an east-west rural collector street under the jurisdiction of the Village which connects to Brookville Road to the west and NYS Route 106 to the east. Within the vicinity of the site, Muttontown Road has one travel lane in each direction. The posted speed limit along this roadway is 35 mph, and on-street parking is prohibited.

Woodhollow Court, located opposite the subject property, provides access to residential properties on the south side of Muttontown Road. Its intersection with Muttontown Road is an all-way stop controlled intersection with stops signs at all three approaches. The nearest traffic signal to the site is at the intersection of Muttontown Road and NYS Route 106, approximately three-quarters of a mile east of Woodhollow Road. NYS Route 106 is a major arterial road that provides connections to the Northern State Parkway and Long Island Expressway (I-495).

Lots will be located to either side of the proposed ROW and are generally configured to be deeper than they are wide. The 20 lots, which range in gross land area from 3.05 acres to 6.21 acres (all lots have a net lot area of at least 3.0 acres), will occupy 76.03 acres, with the remaining land occupied by parkland (10.53± acres), internal road right-of-way (6.59± acres), two recharge areas and their access strips (5.77± acres), an existing cemetery (0.12± acres), and

wetlands (0.61 acres). The cemetery, wetlands, and wetlands adjacent area are located within the parkland. A 100-foot cemetery easement consisting of 0.68-acres overlaps the parkland, but a small portion of the easement extends beyond the parkland on to Lot 1. All lots will fully conform to Village lot area and setback requirements as detailed in **Table 3-2**, "E-3 Zoning Requirements and Project Conformance"). A 50-foot wide buffer will also be provided around the entire perimeter of the site totaling 12.36 acres some of which is overlapped by parklands and wetland and cemetery easements. The approximate placement of typical houses, driveways, walkways, sanitary systems, drainage, and associated amenities and accessory features is provided in the **Preliminary Subdivision Plan (see Attachment 3**) to demonstrate that lots have suitable building envelopes that can accommodate large homes and customary residential accessory structures that are often associated with high-end homes on large lots (e.g., swimming pools, patios, tennis courts, etc.). The subdivision plans also show the wetlands, wetland adjacent areas and steep slopes that were deducted from the gross land area of the lots, based upon Village Code requirements. Any disturbance to "slopelands" is prohibited without approval from the appropriate Village board.

Water service for the subdivision will be supplied and maintained by the Jericho Water District. Existing water lines on-site will be removed, and a new eight-inch water main will be installed within the paved area of the proposed ROW with lateral service connections to each of the new homes. Connection to the existing water main along Muttontown Road will occur at the entrance to the proposed subdivision access road (i.e., the "Hall Drive" to "Fan Court East" and Fan Court West" ROWs).

Stormwater will be directed to catch basins and piped to one of the subdivision's two (2) stormwater recharge basins. The recharge basins are proposed in lower elevation areas on the property in order to facilitate stormwater collection and recharge and have suitable storage volume to capture the runoff from an 8.5-inch rainfall event. Designated Stormwater Recharge Areas 1 and 2 (See **2020 Preliminary Map**, **Attachment 3**) will provide a total storage capacity of 683,000 cubic feet (CF) and 325,000 CF, respectively, for a combined total of 1,008,000 CF. As with the residential lots, the areas to be used for stormwater recharge will include 50-foot deep non-disturbance buffers (except for an 8-foot wide bridle trail within the parkland portion of the buffer) along their common boundaries with the Hoffman Center and Muttontown Preserve to provide adequate separation, as well as natural screening.

Wastewater from each home will be discharged to their own on-site septic system. All new sanitary systems will be designed, sized, sited and installed in accordance with Nassau County Health Department ("NCHD") standards and regulations. Existing systems serving buildings to be demolished will be removed or properly abandoned in accordance with NCDH standards and procedures.

The subject property was inspected by Nelson, Pope & Voorhis, LLC (NPV) in order to determine potential environmental and public health concerns and a Phase I Environmental Site Assessment ("ESA") was prepared in May of 2015 and updated in July of 2020 (see **Appendix H**). The Phase I ESA sought to identify "Recognized Environmental Conditions" ("RECs") as defined in ASTM Standards on Environmental Site Assessments for Commercial Real Estate on the subject property, based on the four components of Phase I ESAs: records/database review, site reconnaissance, interviews with persons knowledgeable about the history of the property, and evaluation and reporting. The report prepared for the inspection indicated evidence of four (4) recognized environmental conditions and one (1) de minimus condition in connection with the subject property for follow-up. There is also one minor historic environmental condition associated with two spills that have been investigated, satisfactorily addressed, and closed by the NYSDEC. The updated report will be submitted to the Nassau County Department of Health ("NCDH") for review prior to final subdivision approval.

The subdivision layout has been designed to minimize impacts to the natural area of the site due to its ecological and cultural significance (i.e. freshwater wetlands, adjacent wetland area, sloping topography, a small family cemetery plot) and for proper siting of improvements (i.e. safe vehicle access and optimal stormwater recharge basin locations). A 50-foot wide buffer will be provided per Village requirements along the periphery of the site, which will further insulate the project from adjoining properties.

Based on Village Zoning Code requirements, the proposed 20 single-family lots and their building envelopes were laid out after consideration of existing topography, in order to minimize grading, cut, fill, and the removal of soil resources; reduce impacts from stormwater runoff; and maintain natural land cover to the extent possible. Lots are generally rectangular in shape which helps to ensure suitable lot configurations, widths, and depths; yard setbacks; and appropriate areas for development that foster orderly growth and promote the health, safety and general welfare of the community. Subdivision's water supply and onsite sewage disposal plans, and applications will be submitted to NCDH for review and approval.

1.4.2 Clearing, Grading and Drainage System

The 20 new homes will be similar to large single-family homes constructed in the surrounding area. It is expected that each of the homes will contain 6 bedrooms and will be designed to conform to minimum setback, maximum building height, maximum building area, maximum and minimum habitable floor area, and maximum principal building length guidelines established by the Village for the E-3 zoning district (**Section 3.1**). Building permits and site plan approvals will be secured for each home following final subdivision approval.

Portions of the site were previously disturbed by past residential and equestrian activities. Five principal and accessory residential buildings are present on-site, including a mansion (Main

House) with two attached cottages, gardener's greenhouse cottage and attached garage, pond cottage, six-car residential garage with upstairs apartment for the chauffer, a small barn which had been converted to a cottage, and pool house, as well as an abandoned in-ground swimming pool and tennis court. All of structures, with the exception of the pond Cottage, are proposed for removal under the Proposed Plan. Disturbance to vegetated areas will be minimized to the maximum extent possible by clearing only the immediate areas surrounding structures to be demolished and clearing and grading in connection with the proposed subdivision and development. The following Chapters of the Village Code are instrumental in ensuring a quality subdivision design and protection of environmental resources:

- Chapter 57 ("Stormwater Management and Erosion and Sediment Control")
- Chapter 74 ("Freshwater Wetlands")
- Chapter 158 ("Subdivision of Land") to protect slope lands, freshwater wetlands, natural buffers between subdivisions and provide minimum storm water management requirements and controls
- Chapter 172 ("Trees") to regulate the removal, substantial alteration or destruction of trees and other protected vegetation
- Chapter 190 (Zoning), Article XII, "Slopelands."

Pursuant to Village Code, Chapter 172-4 (B), "Trees," "Issuance of permits; rules and regulations," "Construction," a plan shall be prepared showing the location of trees that will be removed during approved construction to be submitted to the Tree Warden simultaneously with the building permit application. No cutting or removal in connection with construction will be permitted until the tree removal plan is approved by the Tree Warden. The existing indigenous and naturalized tree canopy of the property, to the extent reasonably possible, shall remain in its natural state, consistent with the goals and purposes of this chapter and the use of the proposed construction.

Freshwater wetlands and adjacent upland areas within 100 feet of wetlands are important for open space and wildlife habitat and flood and water resource protection, and as such will be protected in a natural undisturbed condition. Wetlands on-site encompass a total of 0.61 acres. Upland wetlands buffer areas (i.e., upland areas within 100 feet of wetlands) on the site cover ±3.6 acres or approximately 3.7 percent of the site. Although the site contains steep slopes and most of the property is more gently sloping with slopes of less than 10 percent, grading will be necessary to ensure proper drainage.

A maximum cut of ±20-21 feet in the two recharge basins and ±13 feet at the intersection of Hall Drive and Fan Court and a maximum fill of ±16.5 feet along the Hall Drive ROW between Stations 4+00 and 5+00 are proposed. Total estimated cut for roadways and recharge basins under the proposed 2020 Preliminary Map design is 107,564 CY and the total estimated fill is 29,276 CY of fill for a total net cut of 78,288 CY. It is not possible to incorporate all of the

projected cut back into the site; however, all effort will be made to balance cut and fill as much as possible using on-site materials excavated for drainage structures and regrading to limit the need for soil import or export. Similarly, all efforts will be made to retain soil on individual house lots so that excess soil doesn't have to be shipped off-site. The **2020 Preliminary Map** depicts existing and proposed surface contours and elevations. **Street Profiles for Hall Drive and Fan Court West** are provided on Sheet C-102 and **Profile for Fan Court East** is shown on Sheet C-103 (A**ttachment 3**). Existing topography can be viewed on the **Topographic Map (see Attachment 1)**.

The project has been designed to conform to applicable engineering standards; however, grading, site elevations and overall subdivision and lot development plans will be subject to detailed Village engineering and site plan reviews. All cut and fill areas will be graded consistent with standard engineering practices and will be stabilized using groundcovers. Any undisturbed slopes that are outside the grading limit lines and are stable will remain undisturbed. No additional runoff is to be directed into this area from the development sites.

The demolition, clearing and grading process for the subdivision roads and drainage system are expected to take approximately two months to complete. Grading activity will be conducted internally within the site and will not impact adjacent properties. In addition, construction management techniques outlined in **Section 4.6** will ensure that erosion and sedimentation control measures are implemented.

A detailed Grading Plan will be prepared for each lot after the subdivision's road and drainage work is completed and review will be conducted during individual site plan review processes. However, the project engineer has estimated that a total of 107,564 CY of cut is necessary to construct the proposed subdivision roads and recharge basins, 29,276 CY of this volume will be reused on-site as fill, and the rest (78,288 CY) would be shipped off site. Some of the gross cut can be used in areas that need fill or will otherwise be reincorporated back into the site to meet engineering requirements and reduce the export of materials and related impacts as much as possible. The level of cut and ultimate off-site shipment is necessary because of the unique nature of the site's steep and rolling topography, even without significantly disturbing delineated "steep" and "very steep" slopes. Excess excavated material over the required fill, will be exported for use as fill elsewhere. In cases where topsoil must be exported from the site, as per Chapter 158-16 (E), "Preservation of Natural Cover," no topsoil will be removed outside Village boundaries without first receiving the consent of the Board of Trustees. If soils are determined to have unacceptable characteristics for the work being performed, they will be disposed at an approved construction and demolition debris landfill. Excess material can be removed from the site using trucks having a load capacity of +/-20 cubic yards (CY) but this is not expected to be necessary.

The **2020 Preliminary Map (Attachment 3)** illustrates that steeply sloping areas will be primarily within the deed restricted areas controlled by covenants and restrictions filed with the County and Village that limit how the identified area may and may not be used in order to protect wetland buffers, perimeter buffers, slopes, the stormwater recharge area on the west side of the property, and in the yard setbacks of lots. The steepest slopes on the property will remain largely undisturbed during site grading and construction of the proposed subdivision streets and stormwater recharge basins. Exceptions include the western recharge basin, two small areas located along the proposed Hall Drive ROW, the intersection of Hall Drive and Fan Court, and a few small areas along the Fan Court ROW where moderate-to-steep and very steep slopes exist (shown on the 2020 Preliminary Map in light grey and dark grey shading, respectively). In total, 70,168 SF or 1.61 acres of steep slopes and 8,991 SF or 0.21 acres of very steep slope will have to be disturbed. An additional 7,178 SF or 0.16 acres of steep slopes and 991 SF or 0.02 acres of very steep slopes will have to be disturbed as part of lot development. Total slope disturbance, therefore, is 77,346 SF or 1.78 acres of steep slopes and 9,982 SF or 0.23 acres of very steep slopes. These areas will be protected by project limiting silt fences during construction and areas of steep and very steep slopes can be largely addressed by site grading and cut and/or fill as necessary, slope stabilization and erosion and sedimentation controls. Disturbances to steep and very steep slopes ("slopelands") as part of road and drainage facilities construction and lot developments will require approvals from the Village Planning Board.

All stormwater runoff generated by impervious surfaces from an 8.5-inch rainfall event will be captured within the proposed drainage system and be discharged into the ground in accordance with Village drainage requirements. The drainage system for the subdivision has been designed to accommodate the volume of runoff that would be generated from an 8.5-inch rainfall event, and consists of a series of interconnected catch basins and storm drains leading to two stormwater recharge basins, one in the northeast corner of the property ("Recharge Area #2") and the other on the west side near the Hoffman Center ("Recharge Area #1") (see **Attachment 3**). The site will be graded to direct stormwater to the stormwater collection system to ensure that it is recharged on site. A total of 700,400 cubic feet (CF) of storage is required to accommodate runoff from an 8.5-inch rainstorm which is only 70 percent of the total 1,008,000 CF of storage to be provided (683,000 cubic feet of storage in Stormwater Recharge Area #1 and a minimum of 325,000 cubic feet of water in Stormwater Recharge Area #2. The two recharge basins will have a depth from base to the high water mark of between 10 and 12 feet. Drainage calculations are provided on the **2020 Preliminary Map**.

Erosion and sedimentation control measures for road and drainage improvements and individual house lot development include: silt fencing, slope matting, curb and grate inlet protection, stabilized construction entrances, dust control measures, and compliance with a New York State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001) and an Erosion Control Plan

(see **Attachment 3**). As discussed in **Section 1.5**, the project will include a Stormwater Pollution Prevention Plan ("SWPPP"), which will include measures to address potential runoff and/or erosion impacts during construction, as well as post-construction. The SWPPP will be subject to Village and NYSDEC reviews and approvals and will be part of the required SPDES permit. An erosion control detail plan is attached (see **Attachment 3**). The SWPPP will be based on the standards and guidelines of the "New York State Stormwater Design Manual" and "New York State Standards and Specifications for Erosion and Sediment Control."

1.4.3 Vehicle Access and Internal Road System

Access to the proposed development will be from Muttontown Road, approximately 161 feet east of Woodhollow Court when measured from centerline to centerline. Proposed rights-of-way will be 70 feet wide with 22 feet of paved width in each travel lane and a 6-foot pervious median in between. The ROW will extend an additional 10 feet beyond its curbing to provide clear space and areas for utilities and road maintenance. Internal traffic will be controlled by signage (e.g., speed limit and stop signs) and street markings. A Typical Pavement Section is shown on the **2020 Preliminary Map**. The new development will be provided with only one access point, via a proposed street, near the mid-point of the property's frontage on Muttontown Road. The internal road system for the new lots is estimated to have a total combined length of +/-0.75 of a mile.

The Fire code requires a turnaround if the cul-de-sac is more than 150', which are provided. The street is designed as a dead-end road or "cul-de-sac" with one "turn-around" area on the west side of the property (Fan Court West) and one at the northeast end (Fan Court East). The Fire code also require a second access if there are more than 30 lots. The Applicant proposes only 20 lots. The turnaround areas are not closer than 100 feet from the property line and not less than the minimum lot depth prescribed by Chapter 190, Zoning. The turnaround diameter also complies with the minimum 80-foot outside diameter and 100-foot street property line diameter. The dead-end street is longer than 900 feet, but the road has been designed as a divided roadway with center mall. The ROW width is 70 feet as shown by the Typical Road Profile (see Preliminary Map Sheet 1 of 8) and is designed in such a manner that either side of the roadway could be used, in emergencies, for two-way traffic. Based on the above considerations, the dead streets have been properly designed.

On-street parking spaces will not be provided. Instead, all parking will be provided within garages and on driveways within the proposed lots. The roads will be curbed and a drainage system consisting of catch basins that will convey road runoff via subsurface pipes to one of two proposed recharge basins is proposed (see **Section 1.4.2**). A subdivision HOA will be responsible for maintaining the on-site street system and drainage facilities.

1.4.4 Sanitary Wastewater Disposal and Water Supply Systems

The project is designed to conform to NCDH's Manual of On-Site Sewage Disposal requirements. The Manual allows discharge of not more than 900 gallons per day (gpd) per residence or a maximum total of 18,000 gpd for the 20 lots, unless advanced sewage treatment is provided. The proposed project will not exceed the allowable flow for the site; therefore, lots will be served by individual on-site septic systems. The subdivision will be reviewed by the NCDH for conformity to its subdivision wastewater requirements, water supply connections and drainage design. Anticipated irrigation demand is calculated at an average of +/-26,229 gallons per day over the course of a year based upon an estimated +/-14.7 acres of landscaped area within the 98.92-acre subdivision (See **Table 1-1** for the complete calculation). Total maximum anticipated water consumption on average per day over the course of a year is 44,229 gpd (18,000 gpd domestic use, plus 26,229 gpd for irrigation).

Potable drinking water will be provided from the Jericho Water District distribution system. The project will tap into an existing water main that exists within the Muttontown ROW and an eight-inch diameter water main will be extended on to the site along the proposed subdivision streets. Service lines will be extended from the subdivision streets to each of the lots and connect to the future residences. All necessary connections, meters, easements and installations will be provided to an ensure adequate water supply.

1.4.5 Site Landscaping

An estimated +/-29.5 acres or 38.8 percent of the 76.03 acres would be cleared for principal and accessory structures, driveways, patios, lawns and landscaping (not including clearing needed for the proposed streets, recharge basins and the bridle trail) and a tree removal permit will be required from the Village Trustees pursuant to Chapter 172, "Trees," of the Village Code.[4] As required by Village Code §158-16 (F) ("Subdivision of Land"), Article IV ("Design Standards"), the project will include a 50-foot deep naturally-vegetated buffer along the perimeter of the project site to remain undisturbed except for an eight-foot wide bridle trail that will meander between trees through the park portion of the buffer and require only brush removal and trimming of branches within the trail easement.

A mix of evergreen tree species will be planted along the subdivision-facing edges of the proposed stormwater recharge basins to enhance vegetative screening, and native grasses will be planted within the center island of the proposed streets to improve the visual character of

[4] This is an estimate based on the approximate size of homes anticipated, sufficient space for a full complement of accessory structures on each lot (swimming pool, decking, tennis court) as is permitted under existing zoning, and lawn area. Actual clearing on lots could differ depending on specific site plans and developer and owner preferences.

these internal roadways. The evergreen species will include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*). The trees will be planted at heights of 10 to 12 feet and will be arranged in a staggered double row as depicted on the "**Planting and Tree Removal Plan**" (Sheet C-105). Street trees are not required and are not proposed. The center median grasses will consist of indigenous little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*). Disturbed areas such as street shoulders will be seeded with an ecology mix. The amounts, types, and locations of landscaping on individual lots will be determined through the site plan design and review process.

Landscaping and plantings associated with streets and drainage areas including any screening will be maintained by the subdivision's HOA, while individual lawns and lot landscaping will be the responsibility of private property owners. As with roads and drainage, landscaping in common areas associated with ROWs and recharge basins is expected to be subject to performance bonding requirements, to ensure plant survival. Areas that may be landscaped are shown on the **Lot Development Plan** (Sheet C-104). Irrigation demand for future lawns and other landscaping is estimated to be ±26,229 gpd/year. Landscaped areas may be temporarily fertilized and based on an estimated 14.7 acres of landscaped area and considering that each lot will have its own on-site septic system, nitrogen concentration in site recharge may increase from an estimated 0.22 mg/l to 0.98 mg/l which is well below the 10 mg/l standard for drinking water and protective of surface waters and freshwater wetlands. See NPV's "Simulation of Nitrogen in Recharge" ("SONIR") Microcomputer Model in **Appendices C-1, C-2 and C-3** which projects existing and future nitrogen loading.

Construction plans shall be prepared for all required subdivision improvements including but not limited to street signs, street lighting at proposed road intersections, only, and the installation of street trees, as part of the subdivision application. In general, outdoor lighting will be provided to establish a safe and secure environment with illumination only in those areas where it is necessary. Illumination will not extend beyond the property boundaries and diffuse lighting is not expected due to the sizes of the lots, setbacks, and naturally vegetated buffers.

Village Code Chapter 94 ("Lighting, Exterior") was amended in 2009, that included Sections 94-1, 94-2, 94-3, 94-4, and 94-5 of the code of Muttontown to promote and protect the public welfare by regulating the appearance of lighting and prevention of light trespass from exterior lighting located on private property within the Village in order to ensure a nighttime appearance within the Village which is consistent with the Village's character and overall architectural quality.

Lighting on the proposed lots is expected to be consistent with typical residential needs to ensure home safety and security and may include porch and patio lights, swimming pool and

tennis lights, and flood lights as needed. Illumination of home sites is not expected to extend beyond the property boundaries due to the large size of the lots, large setbacks and the perimeter buffer which will remain wooded/natural except for the equestrian trail. The Planning Board will have the opportunity to review detailed site plans in the future and place additional restrictions or require additional mitigations if warranted.

1.5 Construction Schedule and Operations

A Limited Phase II Investigation should be conducted prior to demolition to determine the precise locations of all of the underground storage tanks situated on the property using Ground Penetrating Radar technology, and to collect soil samples in the vicinity of the storage tanks in order to ensure that a prior release has not occurred. In addition, the discharge points of the floor drains should be located and sampled in order to ensure that the discharge points have not been adversely impacted by prior uses of the subject property.

The Nassau County Public Health Ordinance also requires that the owner or applicant/ developer obtain a certificate from the Health Department stating that the premises and its buildings/structures are free of rodent infestation. Therefore, prior to demolition activities, NCDH will be contacted to schedule a site inspection and rodent survey. If rodents are not present on the subject property, the NCDH will issue a "Rodent Free" Certificate which must be obtained in conjunction with the permit for building demolition. If rodents are present, a private exterminator must be hired to remove the rodent population from the site. The NCDH inspector will then issue a "Rodent Free" Certificate once the rodents have been removed to the satisfaction of the inspector. All necessary permits required for demolition of the existing structures and future development will be obtained prior to the initiation of site construction activities.

Existing underground and basement fuel storage tanks must be examined, cleaned, and removed, and the empty tanks and any recovered hazardous material must be disposed in accordance with applicable regulations. Floor drains and mechanic's pits in the garages must also be remediated if contamination is determined to be present by the Limited Phase II Investigation and the drains and any recovered hazardous materials must be removed and properly disposed. Existing drums located on the subject property will be removed and properly disposed. If the groundwater well on the subject property is no longer in use, it should be abandoned in accordance with all applicable regulatory agency requirements. In addition, the electrical transformer in the basement of the mansion must be removed and properly disposed prior to demolition in accordance with applicable regulatory agency requirements. Finally, if the buildings are to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56. ACM must be removed prior to demolition and properly disposed.

All work will be performed in accordance with applicable regulations outlined under Article XI, "Toxic and Hazardous Materials Storage, Handling and Control," of the Nassau County Public Health Ordinance and the findings and recommendations of a Phase II ESA. The results and recommendations of the July 9, 2020 Updated Phase I ESA are summarized in **Sections 2.2.1** and **2.2.2**. The full ESA Updated Phase I report is available for review in **Appendix H**.

Clearing necessary for road and drainage improvements will be conducted in accordance with the **Planting and Tree Removal Plan** (see **Attachment 3**, Sheet C-105) and all buildings and accessory structures, with the exception of the Pond Cottage, will be removed in accordance with the proposed "**Demolition and Removals Plan**" (see **Attachment 3**, Sheet C-108) provided with the DEIS. Additional clearing will occur on individual lots after individual site plan approvals.

Next a survey of road alignment and vertical control will be completed to establish proper grades for road construction and the recharge basins will be dug. Grading for future lot development will occur after individual site plan approvals. Areas requiring erosion and sediment control will be addressed by erecting silt fencing downslope of material stockpiles and areas to be disturbed. Inlet protection will be provided to prevent eroded debris from entering nearby catch basins, including on-site and any off-site basins that are downslope and in close proximity to disturbed areas. As construction begins, construction equipment, worker vehicles, and materials will be staged, parked and loaded/unloaded within the confines of the site. All construction access will be from the proposed subdivision road off Muttontown Road. Muttontown Road will be accessed from NYS Route 106 only, with no unnecessary access or egress through residential areas. Once construction of the individual dwellings is completed, landscaping will be planted, soils will be stabilized. Road surface asphalt lifts will be completed once construction vehicle use of roads is completed.

"Rumble strips" will be placed at the construction entrance to remove soil from truck tires and reduce the amount of sediment being tracked onto Muttontown Road. A water truck will be available if needed to wet excessively dry soils. It is anticipated that excavation of recharge basins, grading, and road and utility installation will take approximately 8 months to complete, with individual home construction completed based on sales. Construction-related impacts will be minimized by limiting access to just one street and controlling traffic flow by stop sign. Development will be concentrated toward the interior of the property and a substantial combined 17.47 acres of open space/parkland and 50+-foot deep buffers will be provided around the perimeter of the property. Construction activity will be restricted to typical work hours (Monday through Friday between 8 AM and 6 PM, except on State holidays, when most are either awake or at work, thereby reducing potential noise-related impacts. The grading concept attempts to incorporate cut from the proposed recharge basins, drainage and utility installations, and road construction into the site along the road and in other areas where it will be needed or can be accommodated. Soil excavated from basements or individual lots will be

assessed further during detailed site plan reviews and should be reused on-site as much as possible to reduce the total number of truck trips during the development process.

Coverage under NYSDEC's Phase II SPDES General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP 0-20-001, General Permit) will be obtained prior to the initiation of construction activities. Prior to filing for coverage, the NYSDEC requires that a SWPPP be prepared for the parcel for post-construction stormwater management. The SWPPP will help to ensure compliance with water quality and quantity requirements pursuant to Technical Guidance and GP 0-20-001, requirements and an Erosion and Sediment Control Plan incorporating the recommendations of the NYSDEC Technical Guidance manual, and use of measures including the following to minimize impacts:

- Silt fencing and staked hay or straw bales, storm drain inlet protection, and good housekeeping procedures.
- Construction trucks, equipment and employee vehicles will be parked and loaded/unloaded on-site.
- "Rumble strips" will be placed at the site construction entrance to prevent soil on truck tires from being tracked onto the public road system.
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures.
- Construction of the buildings and structures can then begin concurrent with the utility installations. Once heavy construction is complete, finish grading will occur followed by soil preparation using topsoil mix, turf and installation of the landscaping, which will be performed while the structures are being completed.
- The drainage system and revegetation plan will provide permanent stormwater management and control once construction is completed.

Development of the property is not anticipated to significantly increase erosion/sedimentation or stormwater impacts, due to proper site grading procedures, erosion controls, soil stabilization, and drainage system design. The Notice of Intent (NOI) requesting coverage under the General Permit will be filed in accordance NYSDEC requirements, prior to the initiation of construction activities at the subject property. Full development of the property is expected to take 36 months.

1.6 Permits and Approvals Required

The Proposed Project will require agency reviews, mitigative actions to be undertaken, and established procedures to be followed before construction can be initiated. Most of the regulatory permits required on the State level are provided by the NYSDEC. Such permits include those related to wetlands and stormwater, erosion and sediment control. Nassau County approvals generally involve water supply, sanitary system, drainage compliance, and subdivision review. All site development plans are subject to review under SEQRA. The Village

Planning Board (as lead agency under SEQRA) will evaluate the project to determine if a significant impact to the environment may occur. In addition, Village approvals are governed by the regulatory policies and restrictions of the Village Code as amended. A list of anticipated approvals is provided in **Table 1-2**.

TABLE 1-2
PERMITS AND APPROVALS REQUIRED

Applicable Board/Agency	Approval Type
Village Planning Board	Subdivision Approval/Slopelands Use Permit
	Site Plan Approvals for Each House Lot
Village Trustees	Tree Permit
Village Building Department	Demolition Permit
	Building Permits
NCDH	Water Supply System Design Review
	Sanitary System Design Review
NCPC	239-m (adjacent to County park) & Subdivision Review
NCDPW*	Water Supply and Connection
JWD	Water availability and connection
NYSDEC	SPDES Permit for Stormwater Discharges from Construction Activity (GP-0-20-001)
New York OPRHP	Letter of Resolution Pursuant to Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law

*NCDPW - Nassau County Department of Public Works

SECTION 2.0
NATURAL ENVIRONMENTAL RESOURCES

2.0 NATURAL ENVIRONMENTAL RESOURCES

This section of the DEIS characterizes the natural resources on the subject property, identifies potential environmental impacts based on project plans, and provides impact mitigation strategies to prevent or minimize identified impacts to the maximum extent practicable.

2.1 Topography

2.1.1 Existing Conditions

The subject property exhibits a rolling topography characterized by a series of naturally occurring low-lying hills, knolls, shallow depressions, swales and flat or gently sloping areas. The highest elevation on the subject site is ±288 feet above mean sea level (msl) at the southwestern corner of the property; while the lowest elevation (±199 above msl) is found near the northern property boundary, approximately 300 feet east of the northwest corner of the site. Based on these minimum and maximum elevations, the total change in relief over the 98.92 acre site is ±89 vertical feet.

A slope analysis prepared for the environmental review indicates that most of the property (+/-86 percent) has slopes that range between 0 and <15 percent; +/-11 percent of the property has slopes ranging from ≥15 to <25 percent (i.e., "steep slopes" per § 190-2 of the Village Code); and +/-3 percent of the property has slopes that are ≥25 percent ("very steep slopes" per § 190-2 of the Village Code).[1] The attached **Topographic Map** and **Figure 2-1**, provided at the end of the text portion of the DEIS, depict site and area topography. **Figure 2-2** is a color coded map which depicts areas of the site that exhibit gentle-to-moderately steep slopes, steep slopes, or very steep slopes. The **2020 Preliminary Map (see Attachment 3)** contains a slopes analysis which presents a more detailed portrayal of site topography. Steep slopes are most prevalent in the southwest corner of the property and along the easterly property boundary. The northern portion of the site contains very little in the way of steep slopes, the largest area of which is located along the north side of the westernmost stormwater recharge basin. The lawn on the north side of the Main House is generally flat.

[1] "Steep Slope" is defined by § 190-2 of the Village Code as: "[a]ll areas of land with a topographical gradient of or greater than 15% but less than 25% as measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."
"Very Steep Slope" is defined by § 190-2 of the Village Code as: "[a]ll areas of land with a topographical gradient of or greater than 25% measured over a horizontal length of at least 25 feet and a horizontal width of at least 25 feet."

2.1.2 Anticipated Impacts

The **2020 Preliminary Map (Attachment 3)** illustrates that steeply sloping areas will be primarily within the deed restricted areas controlled by covenants and restrictions filed with the County and Village that limit how the identified area may and may not be used in order to protect wetland buffers, perimeter buffers, slopes, the stormwater recharge area on the west side of the property, and in the yard setbacks of lots. The steepest slopes on the property will remain largely undisturbed during site grading and construction of the proposed subdivision streets and stormwater recharge basins. Exceptions include the western recharge basin, two small areas located along the proposed Hall Drive ROW, the intersection of Hall Drive and Fan Court, and a few small areas along the Fan Court ROW where moderate-to-steep and very steep slopes exist (shown on the 2020 Preliminary Map in light grey and dark grey shading, respectively). In total, 70,168 SF or 1.61 acres of steep slopes and 8,991 SF or 0.21 acres of very steep slope will have to be disturbed. An additional 7,178 SF or 0.16 acres of steep slopes and 991 SF or 0.02 acres of very steep slopes will have to be disturbed as part of lot development. Total slope disturbance, therefore, is 77,346 SF or 1.78 acres of steep slopes and 9,982 SF or 0.23 acres of very steep slopes. These areas will be protected by project limiting silt fences during construction and areas of steep and very steep slopes can be largely addressed by site grading and cut and/or fill as necessary, slope stabilization and erosion and sedimentation controls. Disturbances to steep and very steep slopes ("slopelands") as part of road and drainage facilities construction and lot developments will require approvals from the Village Planning Board.

Road profiles showing existing and proposed grades for the proposed subdivision roads and areas requiring cut and fill are provided on attached Sheets C-102 **(Profiles for Fan Court West and Hall Drive)** and C-102 **(Profile for Fan Court East)**. The steepest stretch of roadway will be along Hall Drive where the slopes reach gradients of ±7.7 to ±7.8 percent. Areas of net cut will be primarily at the north end of Hall Drive at its intersection with Fan Court West and to a lesser extent at the south end of Hall Drive at its intersection with Muttontown Road. Areas of cut along Fan Court West are primarily at the west end of the street at the turn-around and areas of cut along Fan Court East exists along most of the length of the road. Areas of fill are present midway along the Hall Drive between stations 2+00 and 8+00). Fan Court West will be finished at a grade of ±1.5 percent and Fan Court East will vary between approximately one (1) percent and its maximum proposed grade of ±6 percent near lots 9 and 15. The total net cut for roads and drainage under the 2020 Preliminary Map is 107,564 CY, the total fill is 29,276 CY, and the net cut is estimated to be 78,288 CY. The **2020 Preliminary Map** shows existing and proposed topographic contours along the streets, as well as in the recharge basins.

The current location and alignment of Hall Drive is preferred by the Village over its previous location, as it is farther from the cemetery and is the preferred location of nearby residents. Moreover, building envelopes depicted on the proposed subdivision map are sufficiently large to allow flexibility for locating future principal and accessory residential structures. As a

practical matter, therefore, it is expected that during home construction, areas containing steep slopes will be avoided to the maximum extent possible in order to reduce unnecessary and costly cutting, filling and grading and to provide harmony between the natural and human-built environments. As with the subdivision, any steep or very steep slopes covering an area of least 25 feet in horizontal length by 25 feet in horizontal width that may be disturbed on the proposed lots will be considered further during individual site plan reviews and may be subject to conditions set forth in a Village slopes permit. Soil cut from areas such as recharge basins, and in the future, basement areas, will be incorporated back into the site to the extent possible to eliminate the need for importing and exporting soil to and from the property.

2.1.3 Proposed Mitigation

- An Overall Earthwork plan has been prepared and drainage calculations and erosion control details are provided and a Stormwater Pollution Prevention Plan (SWPPP) and Erosion Control Plan will be submitted to address impacts associated with slope disturbance and the modification of existing surficial landforms and drainage patterns (see **2020 Preliminary Map, Attachment 3**). Techniques identified by the above referenced plans to stabilize slopes, prevent or mitigate erosion and sedimentation, ensure proper drainage, and prevent other topography-related impacts include but are not necessarily limited to: delineation of site clearing limits (e.g., along natural buffer areas and proposed open space), silt fencing downslope of work area perimeters and soil stockpile areas, use of stockpile stabilization methods such as seeding or mulching for periods of non-disturbance lasting longer than 7 days, drainage inlet protection, check dams and temporary diversion swales, perimeter berms, development and/or reseeding/ revegetation of bare soils as soon as possible after disturbance, use of retaining walls in areas with abrupt grade changes, curbing and street crowns to ensure the collection of stormwater along proposed streets, and the capture and recharge of stormwater flows from impervious surfaces on-site through a system of catch basins, leaching pools, and new and expanded recharge basins that are designed in conform with professional engineering standards and specifications.
- The existing topographic landforms on the property are not considered unique or otherwise exceptional natural features. Most of the steeply sloping areas will be avoided as most are located outside the limits of the proposed building envelopes and road rights-of-way or are in areas that will remain natural, and Village requirements for excluding areas of steep slopes from yield help to create larger lots to facilitate the proper siting of improvements. However, some disturbances to steep and very steep slopes will be necessary as discussed above. Grading will be limited to what is necessary to provide suitable street beds, home sites, and stormwater recharge areas. Placement of structures will be such to avoid areas of steep and very steep slopes to the maximum extent practicable.
- Coverage under the General Permit for Stormwater Discharges from Construction Activities (NYSDEC Permit No. GP-0-20-001, General Permit) will be sought and a SWPPP and erosion and sedimentation plan will be prepared.

- Areas containing steep and very steep slopes will be reviewed by the appropriate Village Board during subdivision review and subsequent site plan reviews for individual house lots.
- Clearing, excavation, movement and placement of soil, finish grading, demolition and other construction activities will take place Monday through Friday, between the hours of 8:00 AM and 6:00 PM, except on designated New York State holidays as specified by § 104-3 G of the Village of Muttontown Code. Construction vehicles will be staged on-site and will under no circumstances be parked within the rights-of-way of any public or off-site privately owned street.

2.2 Soils

2.2.1 Existing Conditions

The USDA Soil Survey of Nassau County, New York **(Wulforst et al., 1987)** provides a soil classification system including descriptions of soil types and mapping of soil units present in Nassau County. Soils are classified by similar characteristics (e.g., depth, texture, slope, drainage potential, development constraints, etc.) and depositional histories (e.g., glacial outwash, glacial moraine deposits, etc.) into soil series, which are in turn grouped into soil associations. These classifications are based on the properties of the surface soils down to the parent material, which is unaffected by weathering, leaching, plant root and microbial activity, and other soil forming processes. An understanding of soil characteristics is important in environmental planning as it aids in determining vegetation type, slope, soil permeability, engineering properties and land use and design limitations. These descriptions are general, however, and soils can vary greatly within an area; particularly soils of glacial origin, including those that may have been compacted during past glaciations, soil that has been previously disturbed and soil deposited as fill. The slope identifiers indicated in this subsection are generalized based upon regional soil types. The more detailed subsection on topography should be consulted for analysis of slope constraints.

The Soil Survey identifies the subject site as lying within an area characterized by “Montauk-Enfield Soil Association” which is described as nearly level to strongly sloping, well-drained, medium-textured and moderately coarse textured soils and “Urban land” consisting of developed land that is generally located on knolls and hills.

A total of four (4) soil types have been identified on-site within this Soil Association: Montauk fine sandy loam, 3 to 8 percent slopes (“MfB”); Montauk fine sandy loam, 8 to 15 percent slopes (“MfC”); Montauk silt loam, 3 to 8 percent slopes (“MkA”); and Riverhead sandy loam, 8 to 15 percent slopes (“RdC”). The mapped locations of these soils are depicted in **Figure 2-3**.

Specific descriptions of the soils found on-site follow **(Wulforst et. al., 1987)**:

Montauk fine sandy loam, 3 to 8 percent slopes (MfB) – This soil is very deep, gently sloping, and well drained. It is found on beaches, side slopes of hills and tops of small knolls and ridges. Most areas containing these soils are round, oval, or irregular in shape. The soil exhibits a moderate water capacity and a moderate to moderately rapid permeability in the surface layer and subsoil with moderately slow permeability in the substratum. This may result in a perched water table at depths of 2 to 2.5 feet during seasonally wet periods and is the primary limitation of this soil. The hazard of erosion is slight to moderate and the soil exhibits a medium surface runoff potential.

Montauk fine sandy loam, 8 to 15 percent slopes (MfC) – This soil is very deep, strongly sloping and well drained. It is generally found on the sides of small hills and ridges. A few areas of this soil are rolling, or slopes in different directions over short distances. Most areas are irregular in shape or long and narrow. This soil exhibits a moderate water capacity and a moderate to moderately rapid permeability in the surface layer and subsoil with slow or moderately slow permeability in the substratum. This may result in a perched water table at depths of 2 to 2.5 feet during seasonally wet periods and is the primary development-related limitation of this soil. The hazard of erosion is moderate, and the soil has a medium surface runoff potential.

Montauk silt loam, 3 to 8 percent slopes (MkA) – This soil is very deep, gently sloping and well drained. It is found on the sides of "benches," on low ridges and knolls and on the foot slopes of steep hillsides. A few areas are undulating, are mainly rectangular or round and mostly range from 3 to 100 acres in size. These soils exhibit a moderate permeability in the surface layer and subsoil which becomes moderately slow in the substratum. This soil type also tends to have a moderate to high available water capacity, medium potential for runoff and a moderate erosion hazard.

Riverhead sandy loam, 8 to 15 percent slopes (RdC) – This soil is very deep, strongly sloping and well drained. It is found in bands along the sides of benches and plains and is along the sides of drainageways. In some areas near the north shore this soil is more rolling or irregular in slope configuration. The areas of these soils are irregularly shaped and range in size from a few acres to as much as 200 acres. These soils exhibit a moderately rapid permeability in the surface layer and subsoil which becomes very rapid in the substratum. They also possess a moderate available water capacity, medium surface runoff and a moderate hazard for erosion.

It should be noted that a small wetland or surface water feature identified as "*w*" on the Soil Survey is present in the vicinity of the southern end of the subject property (**Figure 2-3**). Based on observations during field surveys of the site, it was discovered that this feature is a small pond. Also, two additional features are noted on the soil survey and are identified as "drainage

ends"[2] which are consist of natural drainage swales located in the south-central portion of the property as well as two wet areas located in the northeast corner and along the southern boundary of the property.

The Soil Survey was also consulted for information about the potential limitations or constraints to development that these soils may present. The limitations noted by the Soil Survey for the four (4) soil types are summarized in **Table 2-1**. As noted in the table, all of the soils, which are found on the site, pose "severe" limitations for development due to slow rates of percolation, wetness, and slopes. Specifically, these limitations affect sewage disposal and play areas. In addition, these soils can also affect drainage due primarily to slow percolation, slope, and depth to potential perched water.

[2] The "drainage ends" are shown on the soil map and are referenced in the map legend of the hard copy of the 1987 Nassau County Soil Survey. The Soil Survey does not define this term, but its symbol suggests an intermittent drainage pattern associated with the vernal pool and the topographic depression within. Field investigations did not reveal any evidence of drainage channels, soil scour, or wetland vegetation in the area of the "drainage ends" or any man-made stormwater conveyances or impervious surfaces. The area was naturally vegetated with upland plant species. Further investigation of topographic depressions on-site also did not indicate the presence of wetlands other than the two features that are identified by the NYSDEC, the National Wetland Inventory and are delineated on the proposed map. Moreover, more recent soil maps, as shown in **Figure 2-3** which are also available at the United States Department of Agriculture Natural Resources Conservation Service's "Web Soil Survey" do not depict these "drainage ends," perhaps due to updated or more reliable information in the more recent version.

TABLE 2-1
SOIL LIMITATIONS

SOIL FEATURE AFFECTING:	Montauk fine sandy loam, 3 to 8% slopes (MfB)	Montauk fine sandy loam, 8 to 15% slopes (MfC)	Montauk silt loam, 3 to 8% slopes (MkA)	Riverhead sandy loam 8 to 15% slopes (RdC)
Irrigation	Slow percolation, rooting depth & slope	Slow percolation, rooting depth & slope	Slow percolation & rooting depth	Slope
Drainage	Slow percolation & slope	Slow percolation & slope	Depth to water	Depth to water
LIMITATION FOR:				
Dwellings without basements	Moderate: wetness	Moderate: wetness & slopes	Moderate: wetness	Moderate: slopes
Dwellings with basements	Moderate: wetness	Moderate: wetness & slopes	Moderate: wetness	Moderate: slopes
Sewage disposal fields	Severe: slow percolation & wetness	Severe: slow percolation & wetness	Severe: slow percolation & wetness	Severe: Poor filter slope
Streets and parking lots	Moderate: wetness & frost action	Moderate: wetness, slopes & frost action	Moderate: wetness, slopes & frost action	Moderate: wetness, slopes & frost action
Lawns and landscaping	Slight	Slight	Slight	Moderate: slope
Paths and trails	Slight	Slight	Slight	Slight
Picnic areas	Moderate: slow percolation	Moderate: slow percolation	Moderate: slow percolation	Moderate: slope
Playgrounds	Moderate: small & slopes	Severe: slopes	Moderate: small stones	Severe: slope

*Per Soil Survey, not included because characteristics are too variable to estimate

Three soil test holes were dug on the subject property to determine actual on-site conditions, and a fourth was dug on an adjacent parcel to the east in 1986 (Test Holes (TH) 1 through 4) and two additional test holes were dug in 2016 (Test Holes B-1 and B-2) (See the attached **2020 Preliminary Map**). Brief descriptions of the test holes are provided below:

Test Hole 1: Test Hole 1 is located along the east side of the proposed recharge basin in the northeastern corner of the property. The test hole data indicate topsoil from the surface to one-foot below ground surface (bgs), loam and hardpan from one-foot bgs to 27-feet bgs, and medium sand with trace gravel from 27 feet bgs to at least 31 feet bgs (the bottom of the test hole). Groundwater was encountered in this test hole.

Test Hole 2: Test Hole 2 is located along the east side of the proposed recharge basin located in the northeastern corner of the site. Topsoil is present from the ground surface to a depth of one-half (0.5) foot, hardpan is present from 0.5 feet bgs to 19 feet bgs, and coarse sand is present below 19 feet bgs to at least 25 feet bgs (the bottom of the test hole). Groundwater was not encountered.

Test Hole 3: Test Hole 3 is located off-site and to the east of the subject property on 18.3 acres of land that was formerly part of the subject property but was transferred to Nassau County for incorporation into the Muttontown Preserve to protect wildlife habitat, expand the County's recreational trails system, and protect groundwater resources within the Oyster Bay Special Groundwater Protection Area (SGPA). Specifically, the test hole is located east of proposed Lot 17 and northeast of a small wetland on this site. Test Hole 3 contains topsoil from the ground surface to a depth of one foot, hardpan between one foot and 13 feet bgs, a mix of loam and sand below that to a depth of 27 feet bgs, and fine to medium sand below that at least 36 feet below grade (the depth of the test hole). Groundwater water was not encountered in this test hole.

Test Hole 4: Test Hole 4 is located near the southerly lot line of proposed Lot 15. This test hole contains topsoil from the ground surface to one (1) foot below grade, a mix of loam and clay from one (1) foot to 42 feet bgs, and coarse sand and gravel down to 48 bgs. Groundwater was not encountered in this test hole.

Test Hole B-1: Test Hole B-1 is located near the center of the proposed stormwater recharge basin west of Lots 9-11 on the west side of the property. The test hole was dug to a depth of 45 feet bgs and groundwater was not encountered. The first five feet bgs consists of a brown silt with trace gravel; silty sand and trace gravel at 5-10 feet bgs; silt with trace gravel from 10-40 feet bgs with the exception of a 0.8-foot layer of brown clayey silt at 18.2 feet bgs to 20 feet bgs. Soil at a depth of between 40 feet bgs and 45 feet bgs consisted of fine sand with trace gravel.

Test Hole B-2: Test Hole B-2 is located near the easterly property boundary of proposed Lot 19 on the **2020 Preliminary Map** (**Attachment 3**) and within the access road on the **Alternate Plan 2 (Attachment 4)**. This test hole was dug to a depth of 30 feet bgs and no groundwater was encountered. Soils at this location include silty sand with trace gravel at a depth of 0 to 5 feet bgs; there was no recovery from 5 feet to 10 feet bgs; a layer of silty clay with trace gravel from 10 to 15 feet bgs; there was no recovery from 15 feet to 20 feet bgs; silty sand with trace gravel from 20 feet bgs to 23.5 feet bgs; sand and trace gravel from 23.5 feet bgs to 25 feet bgs; and fine sand with trace gravel from 25 feet bgs to 30 feet bgs.

Based on the test hole data from these borings it was determined that compacted and or "cemented" loam and/or clay ("hardpan") and clayey silt was present below the topsoil to variable but considerable depths or in a narrower layer in Test Hole B-1. Hardpan typically poses the types of limitations on development as those listed above in **Table 2-1**, including low permeability, wetness, and its effect on rooting due to the tightly compressed or compacted and/or cemented nature of the soils. Although the natural groundwater table is deep beneath the site, perched water tables are often associated with the hardpan due to their limited permeability; however, areas of perching were not found any of the six test holes. Loams, which contain a mix of soil textures (e.g., sand, silt, and clay), are often susceptible to frost action, especially when a large proportion of fine texture materials, specifically silt, is present.

Phase I Environmental Site Assessment

NPV performed a Phase I Environmental Site Assessment ("ESA") of the site in May of 2015 and updated the Phase I ESA in July of 2020 to determine potential environmental or public health concerns such as soil contamination from any past use, handling, storage, or disposal of hazardous materials (see full July 2020 Updated Phase I ESA report in **Appendix H**). The intent of the ESA was to identify Recognized Environmental Conditions or "RECs" as defined in "ASTM Standards on Environmental Site Assessments for Commercial Real Estate," on the subject property based on four (4) components of a Phase I ESA: 1) records review; 2) site reconnaissance; 3) interviews; and 4) evaluation and reporting. The Updated Phase I ESA identified the following with respect to recognized environmental conditions, "*de minimus*"[3] conditions and historic environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

The assessment identified the following with respect to recognized environmental conditions ("RECs"), *de minimus* conditions and historic environmental conditions in connection with the subject property, subject to the methodology and limitations of this report.

[3] A de minimis condition is "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies." (ASTM, 2013)

Four (4) recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews, and regulatory agency records review.

1. There are four (4) existing underground fuel oil storage tanks associated with Buildings #1, 4, 5 and 8. In addition an abandoned tank is associated with Building #4 and suspected abandoned tanks are associated with Buildings #2 and #7. The exact locations of these storage tanks should be located, and samples should be collected from the vicinities of these storage tanks in order to ensure that they are not leaking.

2. Several floor drains were observed in garage areas and mechanic's pits. The discharge points of the floor drains should be sampled to ensure that a discharge has not occurred. In addition, the mechanic's pits should be investigated in order to determine if there are dirt floors or major staining is present.

3. A former groundwater well was observed to be present in a well house affixed to the former greenhouse.

4. An electrical transformer was observed in the basement of the former mansion.

No controlled recognized environmental conditions were noted on the subject property based on the site reconnaissance, interviews, and regulatory agency records review

2.2.2 Anticipated Impacts

Limitations to development noted in the Soil Survey are not expected to significantly impact the proposed development of the subject property for residential purposes and can be mitigated through engineering, project design, and removal and replacement if necessary. The most significant limitations to development resulting from the soils present on the subject property based on the Soil Survey and test hole data are expected to be related to drainage and leaching capabilities due to the presence of hardpan and associated slow percolation, wetness, slope and possible shallow depth to perched water due to this condition. Excavation and replacement of poorly drained and compacted soils with clean sand where drainage recharge and sanitary leaching will occur, installation of foundation drains, suitable grading, and other engineering practices can help to overcome these limitations. In addition, limitations were also noted with regard to recreational areas due to small stones and slopes. Most of the site contains gently sloping topography. Areas containing steep slopes will be avoided to the extent possible, while cut, fill, grading, slope stabilization, and erosion and sedimentation controls will help to address other slope issues where disturbance is unavoidable.

Stormwater runoff will be captured by stormwater catch basins along the proposed streets, conveyed via storm drains, and temporarily stored and recharged into the ground at one of the

two proposed stormwater recharge basins. The recharge basins are designed to hold a combined total of 1,008,000 CF of stormwater which is 222,177 CF more than the projected 785,823 CF of storage space required to serve the proposed subdivision, based on an 8.5-inch rainstorm. The proposed drainage and stormwater recharge system is designed to address runoff from individual house lots but in some instances supplemental drainage improvements such as on-site leaders, gutters and drywells or leaching pools will be needed to manage some of the runoff from driveways, buildings and accessory structures on individual lots. The need for such minor supplemental improvements will be determined during individual site plan preparation and Village engineering reviews.

Public sanitary sewers are not available in the area but due to the large sizes of the proposed lots and level of wastewater loading anticipated, each lot will have its own on-site sanitary disposal system (i.e., septic system). Septic systems must comply with NCDH standards, including any and all requirements for system siting (setbacks), design, and installation, including that systems discharge to suitable soils to ensure adequate wastewater disposal and leaching and that adequate separation distance between the discharge points of leaching pools and the water table. Suitable soils for septic system functioning are typically clean sand of a texture, depth and sorting that allows filtration of wastes without systems backing up or wastewater being discharged too quickly which can affect wastewater treatment and impact groundwater; particularly, if there was a shallow depth to groundwater which is not the case. Based on information from the Nassau County Soil Survey and data collected on- and adjacent to the site from several test holes, soil on the property consists primarily of a mix of sand, loam and "hardpan[4]." Clay is also prevalent in Test Hole 4. Loams consist of a mix of soil textures (e.g., sand, silt, and clay), which together, can reduce soil pore space (depending on the mix), thereby restricting the rate of wastewater recharge. Clay can be generally defined as very fine weathered soil particles that are arranged in a pattern (i.e. its soil structure) that greatly restricts if not prevents wastewater percolation through the soil. Hardpan can consist of various soil textures; however, the particles composing hardpan have been compacted and/or are cemented together by natural substances, creating an impervious or near impervious boundary that restricts recharge.

Removing and replacing "restrictive" soils with well drained coarser textured sand helps to prevent wastewater from backing up within system leaching pools. Caution must be exercised, however, to ensure that very coarse excessively drained soils or gravels are avoided; particularly, if depth to groundwater is shallow, as they can greatly reduce wastewater "residence time" in the soil and reduce effluent treatment. Depth to the regional groundwater table is expected to be between 120 and 215 feet below ground surface at the site depending on the exact location and surface elevation. This depth to groundwater is substantial and is beneficial for filtering wastewater, regardless of the rapidity of recharge. Again, the large sizes

[4] "Hardpan" is defined as: A hardened or cemented soil horizon, or layer, often composed of clay at or below the surface, produced by cementation of soil particles by relatively insoluble materials such as silica, iron oxide, calcium carbonate or organic matter.

of the lots will help to ensure that a suitable number of leaching pools can be sited on lots and ensure compliance with NCDH requirements.

Phase I Environmental Site Assessment

It was the opinion of the environmental professional that prepared the Phase I ESA that there is evidence of four (4) recognized environmental conditions, no (0) controlled recognized environmental conditions, one (1) *de minimus* condition, and one (1) historic environmental condition in connection with the subject property, based on the reconnaissance, interviews or regulatory agency records review conducted as part of this Phase I ESA, subject to the methodology and limitations of the Phase I ESA report. The following recommendations were offered (see also **Appendix H** for the full July 2020 Updated Phase I ESA report):

It is the opinion of the environmental professional that this assessment has revealed evidence of four (4) recognized environmental conditions one (1) de minimus condition and one (1) historical environment condition in connection with the subject property, based on the reconnaissance, interviews or regulatory agency records review conducted as part of this Updated Phase I ESA, subject to the methodology and limitations of this report. The following recommendations are offered:

1. A Limited Phase II Investigation should be conducted to determine the precise locations of all of the underground storage tanks situated on the property using Ground Penetrating Radar technology, and to collect soil samples in the vicinity of the storage tanks in order to ensure that a prior release has not occurred. In addition, the discharge points of the floor drains should be located and sampled in order to ensure that the discharge points have not been adversely impacted by prior uses of the subject property

2. The drums located on the subject property should be removed and properly disposed of.

3. If the groundwater well on the subject property is no longer in use, it should be abandoned in accordance with all applicable regulatory agency requirements.

4. If no longer necessary, the electrical transformer should be removed and properly disposed of in accordance with all applicable regulatory agency requirements.

5. If the buildings are to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56. ACM must be removed prior to demolition.

Performing the above listed actions will help to further identify any possible soil contamination and other potential issues relating to past activities involving the use, storage or handling of

hazardous materials and will help to ensure that any identified issues are addressed in accordance with applicable requirements.

2.2.3 Proposed Mitigation

- Soil conditions were carefully considered as part of project engineering in order to ensure that soil limitations are properly addressed, and potential impacts are mitigated. This included an initial review of the Nassau County Soil Survey data as well as the drilling of several test holes on-site to analyze actual on-site soil conditions.
- Erosion-prevention measures during the construction process include: 1) minimizing the time that bare soil is exposed to the elements; 2) use of groundcovers (seeding if prolonged exposure is necessary and paving/construction); 3) erection of project limiting fencing to prevent unnecessary clearing and ground disturbance; 4) installation of silt fencing to capture sediment transported by runoff from being carried off-site, 5) wetting of dusty areas to limit windblown sediment from being transported off-site; 6) incorporation of cut back into the site to the extent possible; 7) use of rumble strips to prevent the tracking of dirt onto Muttontown Road; and 8) use of inlet protection and drainage diversions to prevent siltation of drainage infrastructure to preserve system capacity.
- Foundation drains and waterproofing can help to address concerns associated with restrictive drainage around building foundations.
- The majority of deeper subsurface soils identified by the test hole locations indicate the presence of hardpan that could affect proper functioning of drainage and sanitary systems. If necessary, the area around the base of proposed leaching pools will be excavated and backfilled with clean coarse grained backfill to ensure that drainage systems function properly.
- Stormwater infrastructure is designed to conform to the requirements of the Village Code and Village Engineer and all future onsite sanitary systems will be designed, sited, and installed in accordance with NCDH requirements. Existing sanitary systems serving buildings to be removed will be abandoned in accordance with and under the supervision of the NCDH and the NCDH will oversee the installation of new systems.
- Site grading, reseeding, and revegetation/landscaping will help to address slope constraints and stabilize soils during the construction process. Areas of steep slopes will be avoided to the maximum extent practicable.
- Preservation of natural areas including perimeter buffers will limit disturbance and related impacts, while avoidance of wetlands and adjacent wetland areas will prevent impacts and reduce development constraints associated with saturated surface soils.
- A Limited Phase II Investigation should be conducted to determine the precise locations of all of the underground storage tanks located on the property using Ground Penetrating Radar technology, and to collect soil samples from the vicinity of the storage tanks in order to ensure that a prior release has not occurred. If tanks are identified on-site, the tanks and surrounding soils should be inspected to determine the presence of any contamination and the tank and any contaminated soil above established thresholds should be addressed in accordance with applicable standards and specifications.
- Remove any residual contents of the underground and basement fuel storage tanks and any associated contamination based on the recommended Limited Phase II Investigation and dispose of the tanks and any associated residual materials in accordance with applicable standards and requirements.

- After discharge points of floor drains are located and sampled remove any adversely drains in accordance with applicable regulations. If contamination is present above regulatory levels, soil will be removed and disposed in accordance with applicable standards and regulations.
- The empty drum identified on-site will be removed and properly disposed to protect soil and groundwater from being contaminated by leaks, spills or dumping, if any residual material is still contained in the drum.
- Remove and properly dispose of the electrical transformer associated with the Main House and dispose of it in accordance with applicable regulatory agency requirements.
- If the buildings are to undergo major renovation or demolition, an Asbestos Survey should be completed in accordance with the New York State Department of Labor Industrial Code 56. ACM must be removed prior to demolition. Proper removal and disposal of ACM will help to prevent soil from becoming contaminated or fine asbestos material from becoming airborne.
- Abandon the existing groundwater well in accordance with all applicable regulatory agency requirements.

2.3 Geology

2.3.1 Existing Conditions

Long Island is located within the Atlantic Coastal Plain, a physiographic province in which substantial sediment deposits overlie bedrock **(Fuller, 1914)**. The surface topography primarily reflects the glacial history of the Island and subsequent human activity. Understanding the geologic history and stratigraphy of Long Island is important in understanding subsurface conditions and identifying potential impacts of the project on hydrogeologic resources and protecting these resources in support of their sustainability for future generations.

The bedrock which underlies Long Island slopes to the south and east at an average gradient of approximately 1.3 percent or 70 feet per mile, and sediments overlying the bedrock increase in thickness toward the south **(Jensen and Soren, 1974; Smolensky, et al., 1989)**. The elevation of the top of bedrock is approximately 700 feet below sea level in the area of the site **(Smolensky, et al., 1989)**. Bedrock is believed to be of Precambrian age and is overlain by unconsolidated sediments of Cretaceous and Quaternary age. These Cretaceous sediments contain three major groundwater aquifers that overlie one another: the Lloyd, Magothy and Upper Glacial Aquifers.

The primary Cretaceous sediments on Long Island are the Raritan and Magothy Formations, which were deposited on top of bedrock during the mid-to-late Cretaceous period (138 to 65 million years ago) as a result of sediment transport from highlands to the north of the Island **(Koszalka, 1984)**. The Raritan Formation consists of two members: the Lloyd Sand and the Raritan Clay. The Lloyd Sand contains the Lloyd Aquifer, which is separated from the overlying Magothy Aquifer by the low permeability Raritan Clay **(Sutter et al., 1949; Jensen and Soren, 1974)**. The upper altitude of the Lloyd sand member is approximately 450 feet below sea level in the vicinity of the site, indicating a thickness of approximately 250 feet. The top of the Raritan Clay is approximately 300 feet below sea level, indicating a thickness of about 150 feet.

The Magothy Formation and Matawan Group, which form the Magothy Aquifer, were deposited in the late Cretaceous (approximately 75 million years ago) following a period of erosion of the Raritan Clay. The base of the Magothy is composed of coarse sand, gravel, and pebbles as large as two inches in diameter. These coarse sediments are interbedded with fine to clayey sands and solid clays. Locally thick clay beds have been found to span up to one mile. At the site, the upper altitude of the Magothy Formation is approximately 125 feet above sea level, indicating a thickness of about 425 feet **(Smolensky et al., 1989)**.

During the Tertiary Period (65 million years ago to 2 million years ago) there was erosion of Cretaceous deposits over much of Long Island due to hydrologic processes such as stream formation. Sea level was low, and a large valley formed north of Long Island in what is now Long Island Sound. Most of the surface sediments evident on Long Island were deposited during the glacial advances of the Pleistocene epoch, Quaternary period (between 2 million and 10,000 years ago). The Pleistocene was marked by cycles of glacial advance and retreat which deposited morainal and glaciofluvial (outwash) sediments on top of the Magothy Formation and Matawan Group. These Quaternary sediments, which consist of clay, silt, sand, gravel, and boulders, include both the Gardiners Clay and the Upper Glacial Aquifer.

The Ronkonkoma and Harbor Hills Terminal Moraines were deposited along the spine and North Shore of Long Island as glaciers retreated during the Wisconsin stage of the Late Pleistocene (approximately 25,000 to 10,000 years ago) (**Isbister, 1966**). Low, flat outwash plains formed southward as erosional processes carried sediments away from the moraines. Coastal processes occurring during the Holocene Epoch (+/-11,500 years ago to present) reworked the surface of the Upper Glacial deposits along the shorelines forming inland migrating barrier beaches along the south shore and eroding bluffs on the north side as sea level rose.

The project site is situated on the Harbor Hill Ground Moraine **(Jensen and Soren, 1974)**. The sediments of the moraine typically consist of unsorted and unstratified clay, silt, sand, gravel, and boulders but can also include crudely to well-sorted, stratified glacial drift. In contrast, the glaciofluvial sediments of the outwash plains to the south consist of fine to coarse sand and gravel. The surface elevation of the project site ranges from approximately 200 to 290 feet above mean sea level (msl), and thus the thickness of the Upper Glacial Aquifer ranges between approximately 75 to 165 feet beneath the site.

Section 2.2.1, “Soils,” provides a detailed description of soil and parent material characteristics within six separate test holes, five of which are located on the subject property and one of which is located on adjacent property to the east which is now part of the Muttontown Preserve. The test holes were dug at various locations across the site (one on the adjacent property to the east) and were dug to depths ranging between 25 and 48 feet bgs. As such they provide a good description of soil and surficial geologic conditions in the Upper Glacial deposits.

The locations of test holes and soil data for each test hole are provided on the proposed Subdivision Map.

2.3.2 Anticipated Impacts

Excavations will be required for catch basins and subsurface piping, two stormwater recharge basins, individual on-site sanitary waste disposal systems, future construction of foundations, and installation of energy and water utilities. Grading will be required to provide suitable surfaces for streets, driveways, home construction, and drainage control (see **Overall Earthwork Plan** (Sheet C-106) for information relating to road and drainage construction). There are no unique landforms or geologic features on the subject property and essential earthwork is not expected to have a significant long-term adverse effect since erosion controls and more than adequate drainage systems will be installed (see also Section 4.6, Construction-Related Impacts). The required work would in fact be expected to improve surficial geologic conditions in some places as compacted and/or cemented soil (hardpan) would be removed and replaced with clean sand as necessary to facilitate drainage and wastewater disposal and eliminate potential dampness in the subsoil around foundations.

Depth to the regional/primary groundwater table is estimated to be between 120 and 215 feet bgs at the site, depending on ground surface elevation at the point of measurement. Excavations would not be completed to depths that would come anywhere near the natural groundwater table or be expected to so significantly alter soil permeability as to affect hydrogeologic conditions in the Sole Source Aquifer. It is expected that the most extensive excavation of the site will be in the sections of the site that will accommodate the proposed project's two (2) recharge basins. Both recharge basins will be within areas with a generally lower surface elevation to promote positive drainage. Overall, cuts in recharge areas will range from +/- existing grade to a base depth of +/-21-22 feet below ground surface (bgs). Total cut is estimated to be 76,510 CY. In addition, grading will be required for stormwater collection and distribution facilities as well as roadways, utility installations and eventually building foundations.

Future foundation excavations will be open temporarily and will backfilled after foundations are poured. The only geological resource that may be impacted by site grading and excavations are surface soils which were discussed in the previous section.

In order to provide for a site-wide drainage system that will operate efficiently and effectively, a grading program will be undertaken including following a detailed Grading Plan to be prepared as part of detailed site plans for individual lot development. In general, it is expected that the maximum amount of excavated soil possible will be retained for reuse elsewhere on the site, thereby minimizing the cost and impacts of importing new material to the site, but since 76,510 CY of soil will have to be cut during site development. Excess excavated material will be shipped off site and disposed at a facility licensed or registered to receive the material and/or

possibly sold to contractors if the soil is clean and suitable for reuse at other development sites on Long Island. If unacceptable soil characteristics are encountered (compact soil/hardpan, clay rich soils, etc. which may impede stormwater or wastewater percolation), this material will be transported off-site and deposited at an approved construction and demolition debris facility.

Section 2.2.2 "Soils": "Anticipated Impacts" discusses subsurface conditions and possible impacts and constraints to development. Section 2.2.3 provides soil "Mitigations" to address any soil and surficial geologic conditions that may affect future road and basement construction and the suitability of the soils for absorbing and filtering wastewater and stormwater.

2.3.3 Proposed Mitigation

- The proposed lots are very large and will fully accommodate anticipated sanitary sewage flow without the need for NCDH variances or advanced sewage treatment facilities; however, some soil may have to be removed and replaced with clean sand to enhance leaching.
- A Phase Environmental Site Assessment (ESA) indicated that a Limited Phase II ESA should be prepared to determine if there is any contamination of soils on-site from underground structures such as underground storage tanks and floor drains. If contamination is identified above maximum standards, the soil will be removed and replaced with suitable soils.

2.4 Water Resources

2.4.1 Existing Conditions

<u>Surface Water and Wetlands</u>

The NYSDEC Freshwater Wetlands Map identifies small freshwater wetlands on and in close proximity to the subject property (see **Figure 2-4**). The one wetland that is located entirely on the site appears to be a small vernal pool located in the southwestern corner of the property within a topographic depression on proposed Lot 1 (see **2020 Preliminary Map**). A small freshwater pond is also present off-site but nearby on the out-parcel at the south-central end of the property identified on the land survey as land "now or formerly of Patricia Moed" (Section 16, Block A, Lot 1044). Wetlands associated with this pond, however, extend in a westerly direction a short distance onto the southeast corner of proposed Lot 20. A third freshwater wetland shown on the NYSDEC's freshwater wetlands map is located on adjacent property to the east which is part of the 18.3-acre parcel that was previously conveyed to the County and is now part of the Muttontown Preserve. This wetland is located entirely off-site but is mentioned here as a portion of its 100-foot "adjacent area" extends on to the subject property. The ecological characteristics of the on-site wetlands are discussed in detail in Section 2.5 ("Ecological Resources").

The Soil Survey also indicates the presence of the above referenced wetlands and a small perennial pond located off-site on an adjacent parcel fronting on Muttontown Road (now or formerly the property of "Patricia Moed"; although, hydric soils are identified by the soil survey on the site. The Soil Survey map provided in the 1987 hard copy of the survey does show what it refers to as a "wet spot" in the northeastern portion of the property in a topographically low-lying area; however, no wetland vegetation was observed in this area during field investigations. Moreover, current soil mapping of the site, including that depicted in Figure 2-3 as referenced, and maps available from the USDA NRCS "Web Soil Survey" have removed the "wet spot" designation for this location. Furthermore, according to the Nassau County Soil Survey, the area containing the former "wet spot" consists of Montauk silt loam, 0 to 3 percent slopes ("MkA" soils which are not associated with wetlands as they are "well drained" with moderate permeability in the surface layer and subsoil and slow to moderately slow permeability in the substratum as opposed to the mucks and poorly and very poorly drained soils commonly associated with wetlands. Soil data retrieved from Test Hole Nos. 1 and 2 at the proposed northeast recharge basin site does indicate the presence of hardpan; however, the test hole data also indicate that groundwater was not present within the 25-to-31-foot deep test holes.

A total of 21 topographic depressions exist on the subject site. Each of these features were inspected to determine whether any met Federal, State and/or local criteria for classification as wetlands based on in-field assessments of soil, vegetation and hydrologic conditions by an ecologist, geologist, and environmental scientist. The investigations found that the only wetlands on the project site are the two wetlands previously described above which have been delineated by environmental professionals trained in wetland delineations and are shown on the subdivision plans and the NYSDEC and National Wetlands Inventory Freshwater Wetlands Map (**Figure 2-4**) which is included after **Section 6.0** of this DEIS. The details and results of the wetlands inventory and investigation are presented in the "Wetland Investigation Report" provided in **Appendix D-6** of this DEIS.

The only evidence of a possible "wet spot" based on the field investigation was in a very small depression located off-site along a Muttontown Preserve hiking trail that runs adjacent to the site's northern property boundary. This area is very small, is limited to the boundaries of the trail, is likely to have only developed due to the creation of the trail/temporary puddling on compacted trail), is not mapped as a wetland soil or water feature and does not provide any valuable wetland functions based on its size and intermittent nature, and certainly does not affect or impede the subdivision of the property.

The property is also located within a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map X zone or upland area and is therefore outside of any FEMA-designated 100-Year Special Flood Hazard Areas **(Esri, FEMA, USGS & USDA, 2017)**.

Groundwater Hydrology and Hydrogeology

Groundwater on Long Island is derived from precipitation. Precipitation that naturally filters into the soils in the form of recharge passes through the unsaturated zone to a level below which all strata are saturated. This level is referred to as the water table. In general, the groundwater table coincides with sea level on the north and south shores of Long Island and rises in elevation toward the center of the Island. The imaginary line connecting the highest elevation points of the water table is referred to as the groundwater divide. Differences in groundwater elevation create a hydraulic gradient which causes groundwater to flow perpendicularly to contours of equal water table elevation, or generally toward the north and south shores from the middle of the Island **(Freeze and Cherry, 1979)**. Near shoreline areas, water entering the system tends to flow horizontally in a shallow flow system through the Upper Glacial Aquifer and is discharged from subsurface systems into streams or marine surface waters as subsurface outflow. Water that enters the system farther inland, as would be the case with the subject property, generally flows vertically to deeper aquifers before flowing toward one of the Island's shores (**Krulikas, 1986**).

The major water-bearing units beneath the subject site include the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer in descending order **(Jensen and Soren, 1974; Koszalka, 1984)**. The top altitude of the Upper Glacial Aquifer is equal to the topographic elevation of the property which ranges from approximately 200 to 290 feet above msl and ranges in thickness from approximately 75 to 165 feet. The top of the Magothy Aquifer is approximately 125 feet above msl and exhibits an approximate thickness of 425 feet **(Koszalka, 1984)**. The Raritan clay, a confining unit, separates the Magothy and Lloyd aquifers. The Lloyd Aquifer lies approximately 450 feet below msl and exhibits a thickness of 250 feet **(Jensen and Soren, 1974; Isbister, 1966)**. Bedrock is present at a depth of about 700 feet below msl. Groundwater on-site is encountered at an elevation of approximately 75 feet above msl.

The topographic elevations at the site range from 200 feet above msl along the site's northern property line to 290 feet above msl at its southwestern corner. Based on these elevations and available water table contour information, the groundwater table is at approximately 75 feet above msl at the site; therefore, the depth to the natural water table is expected to range between approximately 120 feet and 215 feet below ground surface (bgs), except for any areas that may contain perched water due to restricted permeability of a hardpan layer. Perched water was not encountered in any of the 6 test holes drilled for the project, which were dug to depths of 25, 30, 31, 36, 45 and 48 feet bgs.

The subject property is located slightly north of the regional groundwater divide on the Harbor Hill Moraine as shown in **Figure 2-5, Water Table Map**. Regional groundwater is expected to flow towards the north with a significant vertical recharge component due to the site's location near the groundwater divide; however, the presence of hardpan at some locations may reduce the rate of vertical flow. In an isotropic aquifer (an aquifer having consistent hydrogeologic characteristics throughout), groundwater flows perpendicular to lines of equal water table

elevation known as water table contour lines (**Busciolano, et al., 1998**). The regional groundwater flow direction beneath the subject site therefore is generally toward the north to north-northeast and perpendicular to the contour lines depicted in **Figure 2-5**.

In 1978, the Long Island Regional Planning Board, in conjunction with other agencies, prepared a management plan for Long Island groundwater resources that was funded by Section 208 of the 1972 Federal Water Pollution Control Act Amendments. The purpose of the 208 Study was to investigate waste disposal options and best practices for ground and surface water resource protection. The study delineated Hydrogeologic Zones, based on groundwater quality and flow patterns, and used these zones as the foundation for developing groundwater resource management plans **(Koppleman, 1978)**. The subject site is located in Long Island Groundwater Management Zone I, which is characterized as a deep flow system which generally recharges water to the mid and lower sections of the Magothy Aquifer. This zone is more protected from the ground surface and human activities than the Upper Glacial Aquifer, is considered to have relatively good water quality and is a vital long-range local drinking water resource of Long Island's Sole Source Aquifer.

Currently, the project site consists of mostly vacant woodlands with some landscaped areas (mostly lawn) associated with a large estate containing a main dwelling, two cottages, an apartment over a six-bay residential garage, barn and poolhouse. Groundwater withdrawn from the underlying aquifer to serve the currently occupied structures is estimated to be in the range of 750 gpd for domestic use plus 6,969 gpd when averaged over the course of a year for irrigating lawns and other landscaping.

Recharge that occurs on the site is derived from regional precipitation. The groundwater budget for an area is expressed in the hydrologic budget equation, which states that recharge equals precipitation minus evapotranspiration plus overland runoff. This indicates that not all rain falling on the land is recharged into the ground. Loss in recharge is represented by the sum of evapotranspiration and overland runoff. The equation for this concept is expressed as follows:

$$R = P - (E + Q)$$

where: **R** = recharge
P = precipitation
E = evapotranspiration
Q = overland runoff

Nelson, Pope & Voorhis, LLC ("NPV") utilizes a microcomputer model developed for its exclusive use in predicting both the water budget of a site and the concentration of nitrogen in recharge. The model, named **SONIR** (**S**imulation **O**f **N**itrogen **I**n **R**echarge), utilizes a mass-balance concept to determine the nitrogen concentration in recharge. Critical to determining nitrogen

concentration is a detailed analysis of the various components of the hydrologic water budget, including recharge, precipitation, evapotranspiration, and overland runoff.
The **SONIR** model includes four sheets of computations: 1) Data Input Field; 2) Site Recharge Computations; 3) Site Nitrogen Budget; and 4) Final Computations. All information required by the model is input in Sheet 1. Sheets 2 and 3 utilize data from Sheet 1 to compute the Site Recharge and the Site Nitrogen Budget. Sheet 4 utilizes the total values from Sheets 2 and 3 to perform the final Nitrogen in Recharge computations. Sheet 4 also includes tabulations of all conversion factors utilized in the model.

It should be noted that the simulation is only as accurate as the data which is input into the model. An understanding of hydrologic principles is necessary to determine and justify much of the data inputs used for water budget parameters. Further principles of environmental science and engineering are applied in determining nitrogen sources, application and discharge rates, degradation and losses, and final recharge. Users must exercise caution in arriving at assumptions in order to ensure justifiable results. There are a number of variables, values and assumptions concerning hydrologic principles, which are discussed in detail in a user manual developed for the SONIR Model. This user manual is provided in **Appendix C-1**.

The model was run to obtain the existing water budget and nitrogen concentration in recharge. The run was based on current site conditions and land use coverages which include: 89.78 acres of natural area, 5.86 acres of lawn or landscaping, 2.67 acres of impervious surfaces, and 0.61 acres of wetlands, which is assessed under the classification “other” in the SONIR model). The 98.92 acre site currently has a total site recharge of +/-67.73 million gallons per year (MG/Y), with a total nitrogen concentration of 0.22 milligrams per liter (mg/l). The results of this analysis are presented in **Appendix C-2** and **C-3**.

Oyster Bay Special Groundwater Protection Area

The proposed subdivision is located within the Oyster Bay Special Groundwater Protection Area. The 1983 NYSDEC plan, “NYS Groundwater Management Program,” delineated areas of special concern referred to as “Special Groundwater Protection Areas” or “SGPAs” for the primary purpose of protecting Long Island’s groundwater resources. SGPAs are deep groundwater recharge areas that supply and replenish Long Island’s sole source aquifer and provide Nassau and Suffolk county residents with potable drinking water. In order to continue to provide Long Island’s current and future populations with a potable supply of drinking water, it is imperative that these critical resource areas be protected. The purpose of the SGPA study and program, therefore, was to develop groundwater management recommendations for SGPAs, in order to assist public officials, developers, scientists, environmentalists and other Long Island residents concerned with the protection of ground and surface waters, in maintaining the integrity of these critical resources. The major objectives of the program are to:

- maximize the recharge of high quality groundwater to Long Island's aquifers; and
- minimize the pollutant loads from existing and future land use activities within the defined areas.

Initially, eight SGPAs were delineated, though no formal study or plan existed to outline viable strategies for protecting ground and surface waters as envisioned by the NYS Groundwater Management Program. In 1987, the NYS Legislature enacted Article 55 of the NYS Environmental Conservation Law (ECL), known as the "Sole Source Aquifer Protection Act," which required and funded in depth study of these SGPAs.

In 1992, the Long Island Regional Planning Board (LIRPB) released, "The Long Island Comprehensive Special Groundwater Protection Area Plan" which contained recommendations for each of the SGPAs including the Oyster Bay SGPA. The proposed subdivision's consistency with the Long Island Comprehensive Special Groundwater Protection Area Plan is discussed in detail in **Section 2.4.2**.

Article 55, Section 55-0117(6) of the NYS ECL (under which the SGPA Plan was authorized), indicates that all SGPA's would be designated "Critical Environmental Areas" ("CEA's"), so that any project proposed within such an area receives added scrutiny in terms of the potential for impacts on these resources. Moreover, DEISs prepared for such projects are to include a discussion of project conformance to the SGPA Plan pursuant to § 617.9 (b)(5)(h) of SEQRA.

<u>Groundwater Quality</u>
The Jericho Water District (JWD) provides public water service to the area. The main supply of water to the subdivision will come from one of two wellfields which have a combined total of three (3) wells. Both wellfields are located approximately 1.5 miles from the subject property but are all connected to the same drinking water distribution system. The Water District is required to frequently monitor the quality of the drinking water it provides, ensure that the water it delivers to its customers is potable, and take appropriate action to protect, treat or find new potable sources of water if water becomes compromised.

Surrounding land uses consist mostly of single family homes and preserved land. Water quality in the Upper Glacial aquifer is the most vulnerable and susceptible to contamination due to its relative closeness to human activities occurring at and near the ground surface. The site lies within the Jericho Water District and will obtain its potable drinking water supply from the water district's resources and facilities.

Stormwater, as runoff, provides the primary means by which pollutants are transported across land to surface waters or infiltrates through the soil to groundwater. Common stormwater contaminants include:

- animal wastes, including both domesticated animals and wildlife

- fertilizers
- pesticides
- automotive fluids
- chemical by-products of industry and urban development including improper storage and disposal of toxic and hazardous material
- highway deicing materials
- air-borne contaminants deposited by gravity, wind, or rainfall
- by-products of decaying vegetation and animal matter
- general urban refuse (litter)

In 1982, the Long Island Regional Planning Board (LIRPB) prepared the L.I. Segment of the Nationwide Urban Runoff Program ("NURP Study"). This program attempted to address, among other things:

- the actual proportion of the total pollutant loading that can be attributed to stormwater runoff, given the presence of other point and non-point sources and conditions within receiving waters.

The purpose of the NURP Study, carried out by the United States Geological Society ("USGS") was to determine:

- the source, type, quantity, and fate of pollutants in stormwater runoff routed to recharge basins, and
- the extent to which these pollutants are or are not attenuated as they percolate through the unsaturated zone.

In order to accomplish this, five recharge basins, located in areas with distinct land use types, were selected for intensive monitoring during and immediately following storm events. Five (5) recharge basins, three (3) in Nassau and two (2) in Suffolk, were chosen for the study based on the type of land uses within the drainage contributing area of the basin. The following is a list of the general locations and type of land use within each drainage area:

Site Location	Land Use
Centereach	Strip Commercial
Huntington	Shopping Mall, Parking Lot
Laurel Hollow	Low Density Residential (1 acre zoning)
Plainview	Major Highway
Syosset	Medium Density Residential (1/4 acre zoning)

Based on the sampling program, the NURP Study reached the following relevant findings and conclusions:

Finding: Stormwater runoff concentrations of most of the inorganic chemical constituents for which analyses were performed were generally low. In most cases, they fell within the permissible ranges for potable water; however, there were two notable exceptions*:*

- median lead concentrations in stormwater runoff samples collected at the recharge basin draining a major highway (Plainview) consistently exceeded the drinking water standards;
- chloride concentrations in stormwater runoff samples generally increase two orders of magnitude during the winter months.

Conclusion: In general, with the exception of lead and chloride, the concentrations of inorganic chemicals measured in stormwater runoff do not have the potential to adversely affect groundwater quality.

Finding: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^0 MPN to 10^{10} MPN per acre per inch of precipitation.

Conclusion: Coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through the soil.

There are no known drainage structures on the site other than indoor floor drains and basement sumps. Due to the large size of the property and proportionately low impervious coverage of the heavily wooded 98.92-acre site, precipitation that falls on the site is expected to runoff and recharge naturally, be absorbed and be transpired from site vegetation, and evaporate from leaves and other natural and man-made surfaces. The handling of stormwater for the proposed use and potential impacts on groundwater will be considered in **Section 2.4.2**.

As mentioned in **Section 2.4.1**, the subject site is located in Groundwater Management Zone I. In this zone, much of the land is developed at low density, primarily non-agricultural, land use. Land use restrictions and strict pollution source controls have been recommended. The "208 Study" also recommends that development in this zone utilize public sewers if available or provide for wastewater collection/treatment where the wastewater generation rate is 300 gpd/acre or more. Therefore, for this 98.92 acre site, a septic tank/leaching pool system may be used to treat wastewater if, the total volume of wastewater generated on-site is kept to 29,676 gpd or less. In addition, the 208 Study recommends: 1) that stormwater runoff be controlled on-site by preventing sediments, nutrients, metals, organic chemicals and bacteria from reaching surface and, eventually, ground waters; 2) that on-site disposal systems should be maintained properly; and 3) fertilizer use should be minimized on lawn areas.

2.4.2 Anticipated Impacts

Surface Water and Wetlands

As discussed in **Section 2.4.1**, a total of 21 topographic depressions were examined on the site based on their soil, vegetation, and hydrologic characteristics to determine if any of these features may be classified as wetlands under Federal, State and/or local regulations. Based on these investigations, it was verified there are only two wetlands on-site as previously determined from several field investigations, and these wetlands are shown on the attached Subdivision Maps and on the Freshwater Wetlands Map provided in **Figure 2-4. Appendix D-6** contains the full Wetlands Investigation Study report.

The proposed plans also include a minimum 100-foot setback and buffer around both wetlands on the site. One-hundred foot setbacks and buffers are also provided from off-site ponds (Moed property) or wetlands where the 100-foot "adjacent areas" extend on to the subdivision property (Muttontown Preserve wetland). These setbacks will help to provide protection to these wetlands and surface waters by restricting clearing, ground disturbance, construction and other activities and encroachments near these environmentally sensitive and ecologically important features.

The subject property, as indicated by FEMA FIRM Panel No. 36059C0133G, is located entirely within a FEMA "X" zone, and is therefore, outside of any FEMA designated "100-Year Special Flood Hazard Area." Wetlands, vernal and perennial ponds on-site and near the subject property are enclosed features which are located in topographic depressions over impermeable, semi-impermeable, restrictive soils, compacted fine grained soils or hardpan. A 100-foot wetlands setback/non-disturbance buffer will be provided around each of the identified wetlands, the on-site vernal pool and perennial pond located adjacent to the site to ensure that future development does not encroach into areas that may be affected by an extreme or catastrophic event and that emergency flood storage is available, while also providing protection to the natural functions and the environmental integrity of these features. Based on the proposed plans, future homes will actually be located much farther from the wetlands than the 100-foot wetland setback and will be constructed no less than 6 or 7 feet higher than wetlands and surface water features. In comparison, the home on adjacent property (formerly of Patricia Moed) is just +/-2 feet above the perennial pond.

The quality and water level in surface waters and wetlands can sometimes be affected by stormwater runoff if it contains pollutants and/or is discharged directly to these features such as would be the case with a point/pipe discharge. Most stormwater on the property will be collected in catch basins and routed by gravity through interconnected storm drains to one of two proposed recharge basins. These recharge basins will be far from any wetlands or surface waters and roof gutters, leaders and drywells will be used as needed on individual lots. The recharge basins will be excavated and graded so that the 548,856 cubic feet (CF) of stormwater

anticipated from an 8.5-inch rainstorm in Stormwater Recharge Area 1 and the projected 236,967 CF of stormwater in Stormwater Recharge Area 2 (total of 785,823 CF) can be fully accommodated on-site by 683,000 CF of storage in Stormwater Recharge Area 1 and 325,000 CF in Stormwater Recharge Area 2 (total of 1,008,000 CF). Drainage for the subdivision is based on 100 percent capture of an 8.5" rainfall event from impervious surfaces and a factor of 0.3 for vegetated areas across several stormwater drainage areas. The drainage capacity of the recharge basins has therefore been designed and will be constructed in accordance with requisite standards. Rainfall falling on the proposed streets will be directed to various catch basins and piped to one of the two recharge basins. In addition, the large oversized lots due to the large-lot zoning (minimum three acres), required perimeter buffers, wetlands setbacks, and restrictions on disturbances to steep and very steep slopes, the elimination of wetland areas and steep slopes from lot yield, as well as strict limitations on lot coverage by the Village Zoning Code, will ensure that much of the property remains naturally vegetated or is landscaped and can absorb and infiltrate much of the precipitation falling on-site. Stormwater from the current site primarily runs off to lowing-lying areas such as topographic depressions and surface water and wetlands, infiltrates the ground, is absorbed by site vegetation, or evaporates.

Wastewater discharge can also sometimes affect surface waters and wetlands if septic systems are not properly sited, installed and designed. Another issue that can arise is the presence of impervious or semi-impervious soil media such as hardpan or clay lenses which restrict infiltration and may cause effluent to flow laterally along the restrictive unit's surface or result in sanitary effluent backup that could potentially affect surface waters and wetlands. Septic systems must comply with NCDH's minimum required 100-foot setback from surface waters and provide the required system capacity to meet NCDH requirements. Also, the low-density/large lot subdivision design, with lots ranging between 3.05 acres and 6.21 acres of gross lot area, and compliance to NCHD standards will help to ensure that on-site wastewater can be accommodated without significant impacts to surface waters and wetlands or groundwater resources.

Depth to groundwater is estimated to range between 120 and 215 feet bgs at the site, depending on ground surface elevation at the point of measurement. This significant depth to the regional water table can provide considerable stormwater and wastewater filtration, diffusion, chemical transformation, biological breakdown, and attenuation of certain pollutants as well as temporary effluent storage when properly designed. Infiltration into suitably drained soils, whether native or replaced in the case of poorly drained soils, also helps to prevent potential lateral/horizontal flow and direct seepage into surface waters or wetlands.

Erosion and sediment controls are discussed in detail in **Sections 1.4.2 "Clearing, Grading and Drainage Systems," 1.5, "Construction Schedule," 2.1, "Topography," 2.2, "Soils,",** and **4.6, "Construction Related Impacts,"** to among other things, protect surface waters and wetlands.

Groundwater Volume

The property overlies Groundwater Management Zone I which is a deep flow system containing the Upper Glacial and Magothy Aquifers. Current water use at the subject site, including domestic (+/-750 gpd) and irrigation water (+/-6,969 gpd) is estimated to be +/-7,719 gpd while projected total water withdrawal once the subdivision is fully occupied is expected to be +/-18,000 gpd for domestic water use (20 new homes) and +/-26,229 gpd for irrigation purposes for a total of +/-44,229 gpd.[5] It is expected that all domestic water that is withdrawn will be recharged back into the ground while approximately half of the irrigation water used will make its way back into the ground.[6] New impervious surfaces including proposed subdivision roads, future houses, private driveways and accessory structures will generate stormwater runoff that will either be directly recharged into the ground on lawns, landscaping and naturally wooded areas) or will be captured by the proposed drainage system and discharged to one of two on-site stormwater recharge basins, in order to maximize onsite recharge associated with impervious man-made features. Based on NPV's SONIR model, total existing on-site recharge is estimated to be 63.92 million gallons per year ("mgy") and future recharge is projected to be 78.91 mgy.

Groundwater Quality

The large-lot low-density design of the proposed 20-lot subdivision[7] ensures that the proposed parcels comply with Village dimensional requirements for the E-3 zoning district, that the number of lots is within the maximum yield for the property, and there is sufficient space to safely accommodate required individual on-site sanitary systems and stormwater recharge basins.[8] A total of +/-17.47 acres or +/-17.7 percent of the site, including +/-10.53 acres of parkland containing +/-0.61 of an acre of wetlands, +/-3.04 acres of wetland buffer area,[9] the

[5] The irrigation demand figure is based on the average daily use over the course of one year.

[6] This is a conservative estimate based on typical recharge under natural conditions. Use of modern and efficient water conserving irrigation systems that provide water directly to roots rather than by spray, are controlled by timers and/or weather forecasts, and operate at night can reduce the amount of irrigation water that is lost by evaporation and infiltration.

[7] Gross lot areas range between +/-3.05 and +/-6.21 acres and the average gross lot area is 3.8 acres.

[8] The yield of a property proposed for subdivision in the Village of Muttontown is determined by first calculating the raw land area of the site. The raw land area is that portion of the property that is available for development after elimination of wetlands, wetland adjacent areas (i.e. 100-foot buffers around the wetland), areas containing steep and very steep slopes as defined by Village Code, and 50-foot deep perimeter buffers around the property. Once the above features are delineated and the raw land area has been determined, a subdivision map showing the property divided into lots having the minimum lot area, lot width and street frontage requirements of the respective zoning district can be drawn. The ultimate lot yield also takes into consideration the need for adequate space for roads and drainage infrastructure designed in compliance with Village requirements to serve the subdivision. The reference to accommodating stormwater recharge basins simply means that adequate space has been set aside to capture, hold, filter and recharge stormwater from the street system based on the required design storm. Providing suitable stormwater recharge facilities helps to prevent flooding and attenuate some pollutants that may be in runoff.

[9] The wetlands buffer area actually encompasses a total of +/-3.64 acres; however, +/-0.60 of an acre extends over a portion of the perimeter buffer area. In order to prevent double counting and protected areas, the +/-0.60 of an

+/-0.12-acre cemetery, and an additional +/-6.94 acres of perimeter buffer that extends beyond the parkland will be protected.[10] The only part of this area that will be disturbed is an eight-foot wide bridle trail meandering within the 30-foot parkland area, constructed only by the removal of underbrush. The protection of these areas will help to maintain natural conditions on-site and limit clearing and the establishment of fertilizer-dependent landscaping.[11] As previously mentioned, a total of 18.3 acres of the subject property was acquired by the County and incorporated into the Muttontown Preserve several years ago, which has helped to maintain the low density rural wooded nature of the area. Moreover, the Jericho Water District is required to frequently and periodically monitor the drinking water it provides, ensure that the water it delivers to its customers is potable, and take appropriate action to protect, treat or find new potable sources of water if the quality of the water becomes compromised.

Drainage plans indicate the subdivision will contain two stormwater recharge areas, each with its own recharge basin (see **attached** plans and drainage calculations). Stormwater Recharge Area 1 is expected to generate an estimated 548,856 cubic feet (CF) of runoff based on an 8.5-inch rainstorm and its ±3.49-acre recharge basin area located on the west side of the property near the Hoffman Center, will provide a total of 683,000 CF of storage. Stormwater Recharge Area 2 would generate an estimated 236,967 CF of runoff and its ±2.27-acre recharge basin located in the northeast corner of the property will provide 325,000 CF of storage. Based on these calculations, it is clear that the proposed drainage design will provide more than ample stormwater storage and recharge area to accommodate the largest of rainfalls with an overall combined surplus of 222,177 CF of storage in the two recharge basins (total storage is 1,008,000 CF; total storage required is 785,823 CF).

Stormwater generated within the proposed subdivision streets will be captured using a system of street catch basins which will pipe the runoff to one of two drainage recharge basins to be constructed on-site, one in the northeast corner of the site and the other on the west side of the property near the Hoffman Center site. Individual home sites will also have drainage infrastructure which would likely include roof gutters, leaders, and drywells for roofs, driveways, and other impervious structures. Subdivision buffer areas and large portions of each of the proposed large lots is expected to remain pervious and vegetated thereby promoting natural stormwater discharge. The drainage design will be constructed and installed in accordance with the standards and requirements of a Stormwater General Permit and Stormwater Pollution Prevention Plan ("SWPPP") and must comply with Village Engineer specifications to receive final Engineering approval.

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acre of the wetlands buffer has been taken out of this calculation. Another way of looking at the total estimate is +/-13.83 acres of perimeter buffer and 3.64 acres of wetland buffer.

[10] The perimeter buffer will remain in its natural condition except for an 8-foot wide bridle path in the park portion of the buffer which will be available for the public to use. The 8-foot wide bridle path by itself will cover an estimated 1.75 acres (8 feet x 1.81 miles). See proposed 50-foot buffer and parkland depicted on the 2020 Preliminary Map.

Septic systems will be designed, sited and installed to fully comply with NCHD standards based on a minimum 6-bedroom multiplier (900 gpd) for lots larger than one acre, except by waiver after demonstrating that a 5-bedroom multiplier (750 gpd) is appropriate.

Depth to groundwater ranges between 120 and 215 feet below ground surface beneath the site depending on surface elevation at the point of measurement, thereby providing more than sufficient separation distance between septic system discharge points and natural groundwater. If soils with restricted permeability are encountered during sanitary (or drainage system) installation, soil around the systems will be removed and replaced with a collar of clean permeable sand to ensure proper effluent leaching and prevent effluent perching.

Finally, the SONIR model discussed previously in this DEIS indicates that overall nitrate loading will increase from an existing estimated value of 0.22 mg/l to 0.98 mg/l which is far below the potable drinking water standard of 10 mg/l used by federal, state and county agencies to regulate drinking water quality.

Oyster Bay Special Groundwater Protection Area

In 1992, the Long Island Regional Planning Board ("LIRPB") released, "The Long Island Comprehensive Special Groundwater Protection Area Plan" which contained recommendations for the Oyster Bay SGPA. As previously noted, SGPAs are classified as critical environmental areas ("CEAs") and SEQRA requires an evaluation of potential impacts on SGPAs in Suffolk and Nassau County and determination of consistency with the comprehensive management plan for SGPAs.

The Plan's overall recommendations are quite general in scope but include policies for promoting the conservation and sustainability of potable groundwater supplies where groundwater quality is good and remediation where groundwater quality has been compromised. The Plan indicates that in order to reduce contaminant loads, the density of future development must be reduced below that "currently" permitted density through changes in zoning (for both sewered and unsewered areas), more effective site plan review is needed, and the acquisition or other means of preservation of critical lands should be pursued. Existing point or non-point sources should be minimized or eliminated, and the establishment of new activities already associated with groundwater problems should be prevented. In addition, extensions of public sanitary sewers into previously unsewered areas is to be discouraged, as such facilities would tend to increase density, and result in consequential impacts on groundwater quality and quantity.

The following is an assessment of impacts and an evaluation of project consistency with The Long Island Comprehensive Special Groundwater Protection Area Plan's specific recommendations for the Oyster Bay SGPA:

Recommendation: New York State, Nassau County and the municipalities should make every effort to preserve the existing open space character and recharge potential of the SGPA.

Analysis: Approximately 18.3 acres of the subject property was conveyed to Nassau County and incorporated into the Muttontown Preserve years ago. The subject 98.92-acre property yields just 20 lots with an average gross lot area of 3.77 acres. On-site wetlands will not be directly impacted and will be protected by 100-foot deep wetland setback buffers. A total of +/-17.47 acres of the perimeter of the site consisting of a combination of parkland and a 50-foot deep buffer around the entire site) a portion of which will include an equestrian trail leading from the Muttontown Preserve along the northern perimeter to the west side of the property. The project will fully comply with the Village's zoning code. Proposed uses are not considered to be especially noxious uses and the density of the development is very low. Stormwater runoff will be collected in catch basins and captured and recharged on-site in the two recharge basins and on-site sanitary systems will comply with NCHD requirements. Individual lots will also have their own on-site drainage as needed (e.g., roof gutters and leaders discharging to drywells, catch basins and drywells for driveways, etc.) pursuant to future Planning Board and Village Engineer approvals during site plan reviews. Soils will be removed and replaced where drainage and sanitary systems are installed if the soils are found to be unsuitable. Based on the above, it is believed that the rural and open space character of the area and recharge potential of the site will be retained to the extent practicable and groundwater resources will be protected.

Recommendation: The State University of New York at Old Westbury should set aside between 275 and 300 acres as a permanent preserve and recharge area.

Analysis: This recommendation does not apply to the subject property.

Recommendation: New York State should either dedicate and manage the unused northern part of the Bethpage State Parkway right of way as a permanent greenbelt or should transfer the land to the County for that purpose.

Analysis: This recommendation does not apply to the subject property.

Recommendation: Nassau County should continue to acquire key watershed parcels as indicated in the preceding section and should provide assistance to municipalities in the purchase of lands identified as major components of greenbelts or other significant open space watershed or conservation areas.

Analysis: As previously mentioned, several years ago a large portion of the subject property (18.3 acres) adjacent to Muttontown Preserve was acquired by the County and incorporated into the Preserve and an equestrian greenbelt has been provided over the property. Onsite and adjacent

wetlands and surface waters are protected by 100-foot buffers and a 50-foot deep perimeter buffer will be provided. Subdivision density is very low with an average gross lot area of 3.77 acres.

Recommendation: The County and the municipalities should consider measures necessary to ensure the preservation of the golf courses. Such measures should include but not be limited to the acquisition of development rights, tax abatement and rezoning.

Analysis: This recommendation does not apply to the subject property.

Recommendation: The municipalities should amend their zoning ordinances as necessary to limit the expansion of non-residential uses beyond the boundaries of already committed areas, such as those at the periphery of the SGPA in Glen Head, Oyster Bay and Muttontown and along the Long Island Expressway (LIE) in Woodbury. The small concentrations of commercial activity in Old Brookville, Glen Head, Old Westbury, and the large concentration in Jericho should be confined to their existing area. The same is true of the three commercial locations in Woodbury, which comprise the community's main business center. No intensification of commercial activity should be permitted along Route 25A east of the existing business area in Greenvale and, wherever possible, existing non-conforming uses should be phased out.
Analysis: This recommendation does not apply to the subject action as it is a residential subdivision in a residential zone and not a commercial development or property in a commercial zone.

Recommendation: The Town of Oyster Bay should dedicate the Town owned former sand mine adjacent to the L.I.E. as permanent open space. However, if that is not feasible, the Town should sell the property for commercial development that would have minimal impact on groundwater quantity or quality and should utilize the proceeds of that sale for the acquisition of open space of comparable economic and environmental value elsewhere in the SGPA.

Analysis: This recommendation does not apply to the subject property or action.

Recommendation: The water purveyors, in cooperation with the Nassau County Department of Health and the Nassau County Department of Public Works, should identify areas where well sites may be needed in the future and should notify the municipalities in which these areas are located. Prior notice of purveyor interest will help to ensure the availability of suitable well sites at such time as they are needed.

Analysis: This recommendation applies to local water purveyors, Nassau County Department of Health, and the Nassau County Department of Public Works and not a private property owner.

SGPA Land Use Map: The SGPA future land use map shows the site as preserved farmland.[12]

[12] Despite the subject property being recommended as "preserved future farmland" in the 1992 SGPA Plan, this recommendation never came to fruition. It is noted, however, that 18.3 acres of the site recommended for

Analysis: The only uses that are allowed in the Village's E-3 zoning district are detached single-family residences and uses or buildings that are customarily incidental or accessory to uses including but not limited to farming. According to the Village Code, customary incidental or accessory uses in the E-3 zoning district include but are not limited to farming, dairying and horticulture, as well as noncommercial greenhouses and the noncommercial keeping of dogs, poultry, game, birds, bees, horses and livestock, subject to various conditions. It can be argued that farming could have as much if not more impact on the property and area resources, especially in light of possible need to clear the land, apply fertilizers and pesticides, irrigate most of the site, operate noisy farm equipment, plow the land, raise dust, potentially cause soil erosion and sedimentation, and/or manage manure. Applicants currently are not interested in seeking to farm the property but instead would like to develop the site in an environmentally responsible way in accordance with the Village's zoning of the land, and other state and county standards and regulations.

The Nassau County Public Health Ordinance ("NCPHO") (June 2014) provides the overarching policy guidelines to protect the health and safety of the public. The NCPHO addresses various public health and safety topics. One particularly relevant section of the Ordinance, relative to the subject project, is Article X, "Groundwater Protection; Regulation of Sewage and Wastewater" which places considerable focus on septic systems in SGPAs. The policies, standards and regulations contained within the NCPHO provide the regulatory framework for the NCDH to ensure that the standards of the NCPHO are implemented and enforced. The NCDH does this by establishing standards and specifications and working with, overseeing, reviewing, inspecting, and ultimately permitting and approving various actions including those associated with the siting, design, and installation of septic systems. The primary applicable issues relating to the subject subdivision are assuring that sewage treatment practices are sufficient to safeguard public health and mitigate impacts on the environment.

Relevant standards of the NCPHO relating to septic systems are as follows:

NCPHO Section 4. Requirements for Approval of Plans

Requirement: Plans for new residential subdivisions and new non-residential developments shall be consistent with the provisions of this Article and shall be subject to approval by the Department in terms of these provisions.

Analysis: Plans for the new residential subdivision will be submitted to the NCDH for review and approval and will not be implemented without NCDH's express approval.

preservation as farmland in 1992 is now part of the Muttontown Preserve and is used for natural resource protection and passive public recreation.

Requirement: Plans for all new residential developments shall be consistent with the provisions of this Article and shall be subject to approval, in terms of these provisions, by the various jurisdictions in Nassau County having such authority.

Analysis: The plans are and will be designed to conform with NCDH and NCDHO requirements and will be submitted to the NCDH and various other agencies as identified in **Section 1.6** of this DEIS ("Permits and Approvals Required").

Requirement: The approval of plans by the Department and/or a local municipality having such authority for any building or structure where all or part of such building or structure is proposed for a change of usage, as determined by the Department and/or the local municipality, or where such building or structure would result from the alteration of and/or addition to an existing building or structure where such alteration and/or addition is of a type which requires prior approval by the local municipality and/or issuance of a new or modification of an existing SPDES permit shall be consistent with the provisions of this Article. Such buildings or structures shall, except where otherwise excluded by this Article, be considered to be new and are to satisfy the requirements for individual sewerage systems contained in Sections 5, 6 or 7 of this Article according to the category into which such buildings or structures would fall.

Analysis: The proposed plans must and will be designed in accordance with applicable NCDH and NCPHO requirements in order to receive the necessary approvals for development. The NCDH will have the ultimate authority over approving or denying the proposed systems and the proposed plans cannot be executed without the express approval of the NCDH.

Requirement: Plans shall provide for individual sewerage systems except where a public sewer system is available, as determined by the Department.

Analysis: There are no public sewers available in the area; therefore, an individual on-site sewerage system (septic system) will be provided on each of the lots.

NCPHO Section 5. Individual Sewerage System Requirements for New Single Family Residential Subdivisions and New Single Family Residential Developments located wholly or partially within a Special Groundwater Protection Area.

Requirement: The number of dwelling units may not exceed one (1) per 40,000 square feet of net area.

Analysis: The proposed subdivision contains lots that have a *minimum* net lot area of three acres or 130,680 SF or 3.26 times the 40,000 SF minimum requirement.

Requirement: The subdivision or development, or any portion thereof, is not located within the service area of an existing public sewer system.

Analysis: The subject property is not located within the service area of an existing public sewer system.

Requirement: The subdivision or development is located in an area where subsoil and/or groundwater conditions are conducive to the proper functioning of individual sewerage systems, as determined by the approving authority.

Analysis: Based on the evaluation of soil properties in **Section 2.2** of this DEIS, it was determined that soils on-site could have somewhat limited permeability with moderate or slow recharge rates due to hardpan, and for this reason may exhibit wetness. However, groundwater was not detected in any of the six test holes examined (5 on-site and one on adjacent property that was formerly part of the subject property), even though the test holes were dug to depths ranging between 25 feet bgs to 48 feet bgs. The applicant and project engineers will work closely with the NCDH to ensure that any low permeability soils encountered are replaced with clean sand of suitable texture to suitable depths to ensure that systems are fully functional. Also, the greatly oversized nature of the lots will provide significant flexibility in siting septic systems and this large lot size along with the considerable depth to groundwater beneath the site will provide more than sufficient soil media to absorb and filter discharged effluent. The applicant and engineers are confident that they can meet the design requirements of the NCDH and NCPHO.

Based on the preceding, it can be reasonably concluded that the project does not conflict with the recommendations of the Oyster Bay SGPA or Article X of the NCPHO.

Depth to groundwater, excluding any perched water at the site (perched water was not encountered in any of the six test holes) ranges between approximately 120 feet and 215 feet below the ground surface (bgs) based on site topography and water table information (**Figures 2-1** and **2-5**). Cutting and filling will be required for grading in some areas and excavations will be required for the construction of stormwater recharge basins, residential foundations and installation of site infrastructure and utilities; however, the depths will not even be close to deep enough to intersect the natural groundwater table. The depth to groundwater from the regraded land surface will be sufficient to allow proper filtration of stormwater that is recharged from leaching pools and the recharge basins proposed on the property. If unsuitable soils are encountered during infrastructure installation, they will be removed and replaced with clean sand to ensure a suitable rate of subsurface drainage to prevent subsurface systems from backing up. The low density of the subdivision, preservation or protection of a total of +/-17.47 acres of land on-site in its native natural condition, compliance with NCDH wastewater disposal standards, and temporary retention and recharge of stormwater on-site, will help to minimize potential impacts to local groundwater quality and hydrogeologic conditions. Drainage system

designs will be reviewed in detail by the Village Planning Board and Village Engineer as part of the subdivision review process. The area is served by a public water purveyor (JWD) which will supply drinking water that is routinely monitored for contaminants and treated as necessary to ensure the delivery of potable water to JWD customers.

2.4.3 Proposed Mitigation

- There are wetlands on or adjacent to the project site. Delineation, preservation, and protection by establishing a 100-foot wetlands buffer as passive parkland, as well the instituting erosion and sediment controls and best management practices during construction will mitigate potential groundwater and surface water impacts.
- The increase in recharge volume resulting from the proportionately low additional impermeable surfaces is not expected to cause a significant adverse impact on the water table (e.g., water table mounding), flooding or backup of sewage or stormwater due to the significant unsaturated depth underlying the site. As a result, no mitigation is required or proposed.
- Prior to development, existing sanitary systems will be located, inspected, cleaned if necessary, and removed or abandoned in accordance with NCDH and EPA standards.
- Individual on-site sanitary wastewater systems will be designed, sited, and installed in accordance with NCDH requirements. Potential impacts from wastewater are further reduced by controlling lot density with no lot being less than 3.12 acres of gross land area or 3.0 acres of net land area, replacing any restrictive soils such as clay or compacted fine grained material that are encountered with clean sand to promote infiltration, and providing buffers around wetlands to protect these features from clearing, building encroachment, and sanitary effluent.
- Stormwater will be captured, retained, and recharged on-site through two stormwater recharge basins that can contain the runoff from an 8.5-inch rainstorm and still have as much as 222,177 CF of surplus storage. Individual lots will be required to provide on-site drainage also in accordance with applicable Village requirements.
- Stormwater generated from the proposed subdivision streets, driveways, and roofs of homes will be captured and recharged on-site through a system of catch basins which will be piped to one of two separate stormwater recharge basins on-site. Gutters, leaders, and drywells will be provided on individual lots to address roof and accessory structure runoff. Stormwater systems will be designed in accordance with state and local specifications.
- The drainage system for the project will be designed, sited, and installed in accordance with state and local requirements and will be subject to review and approval by the Village Engineer. An Erosion and Sediment Control Plan and SWPPP will also be prepared, and a SPDES General Permit will be sought. As a result, no further mitigation is required or proposed.
- The SONIR computer model results for the proposed project indicate that the concentration of nitrogen in recharge is anticipated to increase from 0.22 mg/l at the currently undeveloped site to 0.98 mg/l which is far below the maximum 10 mg/l standard for

drinking water. The discharge of wastewater via individual on-site septic systems on over-sized lots is an integral factor in this project achieving such a low nitrate recharge concentration.

- Based upon information presented in the NURP Study, the stormwater recharge anticipated to be generated by the proposed project is not anticipated to contain significantly high concentrations of pollutants. Stormwater facilities will be constructed in accordance with state and local regulations and will be required to meet the satisfaction of NCDPW and the Village. A SWPPP will be prepared and a SPDES General Permit will be sought.
- Under the proposed plan, wetlands will be avoided, and no construction or other disturbance will take place within 100 feet upland of flagged wetland boundaries. Clearing limits will be established and silt fencing will be installed to prevent the siltation of on-site and adjacent wetlands and surface waters.

2.5 Ecological Resources

2.5.1 Existing Conditions

Vegetation

The 98.92-acre property is a former private estate containing several vacant residential buildings and accessory structures; a cottage that is currently occupied; lawns, gardens, and other landscaped areas; driveways; a small successional field; vernal pool; freshwater wetlands; and extensive deciduous woodlands. The site is located adjacent to Muttontown Preserve County Park which is located east and south of the property and the Hoffman Center Nature Preserve and Wildlife Sanctuary which is located on the west side of the property. NPV staff conducted site inspections in July 2006, October 2007, April 2012, October 2013, June 2015, October 2015, November 2015, and June 2020 to inventory flora, fauna, habitat types, and to gather other relevant environmental and ecological information. A small freshwater wetland and vernal pool were identified on the south side of the property and a small wetland is located off-site near the easterly property boundary on the Muttontown Preserve property. **Figure 2-6** depicts the types, locations and relative sizes of the habitats identified during the field inspections.

Habitat types were defined according to a classification system developed by the NYSDEC and the New York Natural Heritage Program ("NHP") as described by **Edinger, et al., (2014)**. Natural habitats present on the site include coastal oak-heath forest, successional old field, red maple hardwood swamp, and vernal pool. **Table 2-2** identifies the acreage of each habitat. Other habit types associated with past development referred to as "terrestrial cultural areas" include landscaped areas consisting of lawns, gardens, and planted trees and shrubs, as well as areas containing impervious surfaces such as driveways and buildings within a rural setting. The limits of each habitat type were determined by a combination of aerial photography, field inspections by NPV, and flagged wetland boundaries which are shown on the property survey and project plans. Wetlands were flagged and are depicted on the **2020 Preliminary Map**, and

a **Wetland Investigation Report** was prepared in 2016 pursuant to Chapter 74 of the Village Code which is provided in **Appendix D-6**.

TABLE 2-2
EXISTING SITE HABITATS

Habitat Type	Area (acres)
Coastal Oak-Heath Forest	±89.41
Successional Old Field	±0.37
Red Maple Hardwood Swamp	±0.22
Vernal Pool	±0.39
Landscaped Areas, Lawns and Gardens	±5.86
Impervious & Rural Structure Exterior	±2.67
TOTAL	**98.92**

Most of the site contains coastal oak-heath forest, with successional old field vegetation occurring in a narrow band north of the main house, and a red maple hardwood swamp and a vernal pool are located on the south side of the property. Extensive landscaping mainly consisting of lawns and gardens is present around existing buildings. A summary of the typical characteristics of each identified habitat or ecological community are as follows:

Coastal oak-heath forest is defined by **Edinger** (**2014**) as: "a large patch to matrix hardwood forest of low diversity that typically occurs on dry, well-drained, sandy soils of glacial outwash plains or moraines of the coastal plain. The forest is usually codominated by two or more species of oaks: scarlet oak (*Quercus coccinea*), white oak (*Q. alba*) and black oak (*Q. velutina*). Chestnut oak (*Quercus montana*) is also a common associate. Pitch pine (*Pinus rigida*), sassafras (*Sassafras albidum*), and other tree species typically have very low cover in the canopy. American chestnut (*Castanea dentata*) may have been a common associate in these forests prior to the chestnut blight [but] chestnut sprouts are still found in some stands. The shrub layer is well-developed typically with a low nearly continuous cover of dwarf heaths such as lowbush blueberries (*Vaccinium pallidum, V. angustifolium*) and black huckleberry (*Gaylussacia baccata*). The herbaceous layer is very sparse; characteristic species are bracken fern (*Pteridium aquilinum var. latiusculum*), wintergreen (*Gaultheria procumbens*), and Pennsylvania sedge (*Carex pensylvanica*). Herb diversity is greatest in natural and artificial openings with species such as frostweed (*Helianthemum canadense*), false-foxglove (*Aureolaria spp.*), bearberry (*Arctostaphylos uvaursi*), goat's-rue (*Tephrosia virginiana*), bush-clovers (*Lespedeza spp.*), and pinweeds (*Lechea spp*.)."
This ecological community occupies most of the site (±89.41 acres) and varies in quality. Disturbances to this community increase near the property lines, therefore, decreasing habitat quality in these areas. Scarlet oak is the predominant canopy species encountered within this

habitat, while low bush blueberry dominates the understory. Areas of Remnants of American chestnut are encountered throughout the wooded area. In some areas, laurel is the dominant species in the understory, similar to a coastal oak-laurel forest community, while other areas contain hickory similar to a coastal oak-hickory forest. Nevertheless, the overall site is best described as a coastal oak-heath forest.

Successional old field habitats represent a stage in the process of secondary succession. Secondary succession is the process by which an area that was previously cleared, recolonizes and transitions to a climax community. The first species to colonize a cleared area are generally herbaceous weeds, grasses, and other plants with wide seed dispersal (current stage). These early successional species are later replaced first by woody shrubs, then by saplings of tree species which seed in from adjacent wooded habitat or landscaped areas. As time progresses, the trees dominate in both abundance and height, and light penetration is reduced. The tree and shrub species that first colonized the area are then replaced by more shade tolerant species. The resulting forest generally resembles the original native forest, although there may be significant differences in species composition, particularly if non-native species have been introduced in the surrounding area.

Successional old field habitats are described by **Edinger (2014)** as: "a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development), and then abandoned. Fields that are mowed at an interval (*e.g.,* less than once per year) that favors the reproduction of characteristic successional old field species are included here. Characteristic herbs include goldenrods (*Solidago altissima, S. nemoralis, S. rugosa, S. juncea, S. canadensis,* and *Euthamia graminifolia*), bluegrasses (*Poa pratensis, P. compressa*), timothy (*Phleum pratense*), quackgrass (*Elymus repens*), smooth brome (*Bromus inermis*), sweet vernal grass (*Anthoxanthum odoratum*), orchard grass (*Dactylis glomerata*), common chickweed (*Cerastium arvense*), common evening primrose (*Oenothera biennis*), old-field cinquefoil (*Potentilla simplex*), calico aster (*Sympyotrichum lateriflorum* var. *lateriflorum*), New England aster (*Sympyotrichum novae-angliae*), wild strawberry (*Fragaria virginiana*), Queen-Anne's-lace (*Daucus carota*), ragweed (*Ambrosia artemisiifolia*), hawkweeds (*Hieracium* spp.), dandelion (*Taraxacum officinale*), and ox-tongue (*Picris hieracioides*). Little bluestem (*Schizachyrium scoparium*) may be present in some examples but is more characteristic of successional northern sandplain grassland.

Shrubs may be present, but collectively they have less than 50% cover in the community. Characteristic shrubs include gray dogwood (*Cornus racemosa*), silky dogwood (*C. amomum*), arrowwood (*Viburnum dentatum* var. *lucidum*), raspberries (*Rubus* spp.), sumac (*Rhus typhina, R. glabra*), and eastern red cedar (*Juniperus virginiana*).

Characteristic butterflies include black swallowtail (*Papilio polyxenes*), orange Sulphur (*Colias eurytheme*), eastern tailed blue (*Everes comyntas*), and copper (*Lycaena phlaeas*). Charactertistic birds include field sparrow (*Spizella pusilla*), savannah sparrow (*Passerculus*

sandwichensis), and American goldfinch (*Carduelis tristis*). Characteristic animals include meadow vole (*Microtus pennsylvanicus*) and woodchuck (*Marmota monax*) (D. Küntsler *pers. comm.*)."

There is an estimated 0.37 acres of successional old field habitat on the property.

Red Maple Hardwood Swamp: On-site field investigations and review of NYSDEC Freshwater Wetland maps revealed that there are two NYSDEC-regulated freshwater wetlands at the south end of the property, including a red maple hardwood swamp and a vernal pool (**Figure 2-4** and **Figure 2-6**). These wetlands were formed in two distinct low-lying depressions which contain water at or near the surface part or all of the year and are vegetated with species that are adapted to saturated soil conditions. Wetland HV-5 (the easternmost wetland) is a red maple hardwood swamp which is associated with a shallow pond located off-site adjacent to Muttontown Road on a neighboring property that is developed with a single-family home (Moed property). Wetlands on the subject property and a small wetland adjacent to the east on the Muttontown Preserve site were flagged by NPV staff and are depicted on the attached subdivision maps.

Edinger (2014) describes red maple hardwood swamps as: "a hardwood swamp that occurs in poorly drained depressions or basins, usually on inorganic soil, but occasionally on muck or shallow peat, that is typically acidic to circumneutral. This is a broadly defined community with several regional and edaphic [soil] variants. The hydrology varies from permanently saturated to the surface to seasonally flooded/wet with hummocks and hollows. In any one stand red maple (*Acer rubrum*) is either the only canopy dominant, or it is codominant with one or more hardwoods including ashes (*Fraxinus pennsylvanica*, *F. nigra,* and *F. americana*), elms (*Ulmus americana* and *U. rubra*), and yellow birch (*Betula alleghaniensis*). Other trees with low percent cover include butternut (*Juglans cinerea*), bitternut hickory (*Carya cordiformis*), blackgum (*Nyssa sylvatica*), American hornbeam (*Carpinus caroliniana*), swamp white oak (*Quercus bicolor*), and white pine (*Pinus strobus*).

The shrub layer is usually well-developed and may be quite dense. Characteristic shrubs are winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), alders (*Alnus incana* ssp. *rugosa* and *A. serrulata*), viburnums (*Viburnum dentatum* var. *lucidum*, *V. nudum* var. *cassinoides*), highbush blueberry (*Vaccinium corymbosum*), common elderberry (*Sambucus nigra* ssp. *canadensis*), and various shrubby dogwoods (*Cornus sericea, C. racemosa,* and *C. amomum*). Swamp azalea (*Rhododendron viscosum*) is more common in southern examples, and poison sumac (*Toxicodendron vernix*) and black ash are more common in mineral-rich examples with slightly higher pH.

The herbaceous layer may be quite diverse and is often dominated by ferns, including sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), royal fern (*O. regalis*), and marsh fern (*Thelypteris palustris*), with much lesser amounts of crested wood fern (*Dryopteris*

cristata), and spinulose wood fern (*Dryopteris carthusiana*). Characteristic herbs include skunk cabbage (*Symplocarpus foetidus*), white hellebore (*Veratrum viride*), sedges (*Carex stricta, C. lacustris*, and *C. intumescens*), jewelweed (*Impatiens capensis*), false nettle (*Boehmeria cylindrica*), arrow arum (*Peltandra virginica*), tall meadow rue (*Thalictrum pubescens*), and marsh marigold (*Caltha palustris*). Open patches within the swamp may contain other herbs characteristic of shallow emergent marsh."

Common species at the site include red maple, black gum, sweet gum, highbush blueberry, sweet pepperbush (*Clethra alnifolia*) swamp azalea and willow. No peatland vegetation or conditions suitable for the establishment of peatland vegetation (e.g. sundews, cranberry, and cottongrass) were encountered on the property. The open water area of wetland HV-5, which is on an adjacent outparcel (now or formerly owned by Moed) contains stands of swamp loosestrife (*Decodon verticillata*) and cattail (*Typha sp.*) but a small portion of this wetland extends west on to the subject property creating saturated soil conditions long enough during the year to become a red maple hardwood swamp. This red maple hardwood swamp encompasses ±0.22 acres of the site.

Vernal Pool: Wetland HV-15 which is located within the southwest corner of site is best described as a vernal pool (**Figure 2-4** and **Figure 2-6**). Vernal pools contain standing water after significant rainfall and/or when groundwater elevations are high. According to **Edinger (2014)**, a vernal pool is "an aquatic community of small, shallow depressions that are intermittently to ephemerally flooded. These small depressions typically occur within an upland forest but may be surrounded by a narrow fringe of red maple hardwood swamp that quickly transitions to upland forest. The pools generally lack trees but are classified here as forested wetlands because of their position in the forested landscape. Vernal pools are typically flooded in spring or after a heavy rainfall but are usually dry during summer. Many vernal pools are filled again in autumn. The uppermost substrate is typically dense leaf litter over hydric soils. The leaf litter is the predominant source of food energy and organic matter in the pool, and derived from the surrounding forest (i.e., these are allochthonous pools). The substrate under the leaf litter is known to vary from deep sands to loam to sandstone pavement. Vernal pools typically occupy a confined basin (i.e., a standing waterbody without a flowing outlet), but may have an intermittent stream flowing out of it during high water. Several hydrologic types of vernal pools have been identified including marsh pools, floodplain basins, in-stream basins, and swamp pools (Barbour 1999). In this classification, these types are treated as embedded microhabitats within related communities (e.g., shallow emergent marsh, floodplain forest, intermittent stream, and various swamp communities).

This community includes a diverse group of invertebrates and amphibians that depend upon temporary pools as breeding habitat. Since vernal pools cannot support fish populations, there is no threat of fish predation on amphibian eggs or invertebrate larvae. Characteristic vernal pool fauna includes amphibians, reptiles, crustaceans, mollusks, annelids, and insects. Vernal pool species can be categorized as either *obligate* (species that depend upon vernal pool habitat for

reproduction), or *facultative* (species that are often found in vernal pools, but are not dependent on them and can successfully reproduce elsewhere) (Commonwealth of Massachusetts, Division of Fisheries & Wildlife 2001, Colburn 1997, 2004).

Obligate vernal pool amphibians include spotted salamander (*Ambystoma maculatum*), blue-spotted salamander (*Ambystoma laterale*), Jefferson's salamander (*Ambystoma jeffersonianum*), marbled salamander (*Ambystoma opacum*) and wood frog (*Rana sylvatica*). Vernal pools on Long Island are important breeding habitat for tiger salamander (*Ambystoma tigrinum*). Fairy shrimp (Anostraca) are obligate vernal pool crustaceans, with *Eubranchipus* spp. being the most common.

Facultative vernal pool amphibians include fourtoed salamander (*Hemidactylium scutatum*), redspotted newt (*Notophthalmus viridescens*), northern spring peeper (*Pseudacris crucifer*), gray tree frog (*Hyla versicolor*), green frog (*Rana clamitans*), American toad (*Bufo americanus americanus*), and Fowler's toad (*Bufo woodhousii fowleri*). Facultative vernal pool reptiles include painted turtle (*Chrysemys picta*), spotted turtle (*Clemmys guttata*), and snapping turtle (*Chelydra serpentina*). Facultative vernal pool mollusks include freshwater fingernail clams (*Sphaerium* spp., *Musculium* spp.), pea clams (*Pisidium* spp.), and amphibious snails (*Physa* spp., *Lymnaea* spp., and *Helisoma* spp.). Facultative vernal pool insects include water scorpions (Nepidae, *Nepa* sp.), predacious diving beetles (Dytiscidae), whirligig beetles (Gyrinidae), dobsonflies (Corydalidae), caddisflies (Trichoptera), dragonflies (Anisoptera), damselflies (Zygoptera), mosquitoes (Culicidae), springtails (Collembola) and water striders (*Gerris* spp.). Leeches (Hirudinea) are a facultative vernal pool annelid.

Plants are predominantly hydrophytic (water loving), typically with a combination of obligate and facultative wetland species. Floating and submergent plants may be common, but emergent plants should be sparse or lacking. Characteristic vascular plants may include mannagrasses (*Glyceria* spp.), spikerush (*Eleocharis acicularis*), water purslane (*Ludwigia palustris*),naiad (*Najas* spp.), duckweed (*Lemna minor*), and water-hemlock (*Cicuta maculata*). Characteristic bryophytes may include *Brachythecium rivulare, Calliergon* spp., and peat mosses (*Sphagnum* spp.). Rare plants of some examples on the coastal plain and Hudson Highlands include featherfoil (*Hottonia inflata*). A few trees, such as red maple (*Acer rubrum*), blackgum (*Nyssa sylvatica*), and swamp white oak (*Quercus bicolor*) may occur along the margin of some pools before transitioning to one of the upland forest communities."

Terrestrial Cultural Areas: These habitat types are either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformation of the substrate, or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence. These areas are very common and may support human tolerant species.

Table 2-3 presents a list of vegetation observed or expected on site given the habitats present based on field investigations conducted during the spring, summer, and autumn seasons by trained NPV staff. This list is not meant to be all-inclusive but was prepared as part of many field inspections to provide a detailed representation of ecological conditions on the site. Care was taken to identify any species that is unusual for the area. Species that are identified by NPV staff during field inspections are identified by an asterisk "(*)," invasive plants are identified by an "[i]", and exploitably vulnerable plants are identified by a "[p]".

TABLE 2-3
PLANT SPECIES LIST

Trees	
* Balsam fir	*Abies balsoma*
* Norway maple	*Acer platanoides [i]*
* red maple	*Acer rubrum*
* silver maple	*Acer saccharinum [i]*
* horse chestnut	*Aesculus hippocastanum*
* tree-of-heaven	*Ailanthus altissima[i]*
* black birch	*Betula lenta*
* white birch	*Betula papyifera*
gray birch	*Betula populifolia*
* shagbark hickory	*Carya ovata*
* sand hickory	*Carya pallida*
* mockernut hickory	*Carya tomentosa*
hickories	*Carya sp.*
* American chestnut	*Castanea dentata*
* dogwood	*Cornus sp.*
* flowering dogwood	*Cornus florida [p]*
* kousa dogwood	*Cornus kousa*
silky dogwood	*Cornus amomum*
* hawthorn	*Crataegus sp.*
* American beech	*Fagus grandifolia*
* black ash	*Fraxinus nigra*
* American holly	*Ilex opaca [p]*
* butternut	*Juglans cinerea [p]*
* black walnut	*Juglans nigra*
* eastern red cedar	*Juniperus virginiana*
* tulip tree	*Liriodendron tulipifera*
* big leaf magnolia	*Magnolia macrophylla*
mulberry	*Morus alba [i]*
* black gum	*Nyssa sylvatica*

* Norway spruce	*Picea abies*
* white pine	*Pinus strobes*
* aspen	*Populus sp.*
* eastern cottonwood	*Populus deltoides*
* aspen	*Populus grandidentata.*
* black cherry	*Prunus serotina*
choke cherry	*Prunus virginiana*
* white oak	*Quercus alba*
* scarlet oak	*Quercus coccinea*
* pin oak	*Quercus palustris*
* chestnut oak	*Quercus prinus*
* red oak	*Quercus rubra*
* black oak	*Quercus velutina*
* black locust	*Robinia psuedo-acacia [i]*
buckthorn	*Rhamnus sp. [i]*
* sassafras	*Sassafras albidum*
* eastern hemlock	*Tsuga canadensis*
Shrubs and Vines	
* porcelain berry	*Ampelopsis glandulosa var.brevipedunculata [i]*
* red chokeberry	*Aronia arbutifolia]*
* chokeberry	*Aronia melanocarpa*
* Japanese barberry	*Berberis thunbergii [i]*
American bittersweet	*Celastrus scandens [p]*
* Asiatic bittersweet	*Celastrus orbiculata [i]*
buttonbush	*Cephalanthus occidentialis*
sweet pepperbush	*Clethra alnifolia*
* slender pride of Rochester	*Deutzia gracilis siebold jasmine*
* autumn olive	*Eleagnus umbellate [i]*
* winged euonymous	*Euonymus alatus [i]*
* forsythia	*Forsythia sp.*
* English ivy	*Hedera helix [i]*
* common hibiscus	*Hibiscus syriacus*
* Asiatic hydrangea	*Hydrangea paniculata*
* wild hydrangea	*Hydrangea arborescens* L.
* winterberry	*Ilex verticillata*
* mountain laurel	*Kalmia latifolia [p]*
* spicebush	*Lindera benzoin*
* privet hedge	*Ligustrum sp.*
* Japanese honeysuckle	*Lonicera japnica. [i]*
* Morrow's honeysuckle	*Lonicera morowii [i]*
* mountain fly honeysuckle	*Lonicera villosa [i]*

* partridge berry	*Mitchella repens*
* bayberry	*Myrica pennsylvanica [p]*
* Virginia creeper	*Parthenocissus quinquefolia*
* Boston ivy	*Parthenocissus tricuspidata*
* Japanese andromeda	*Pieris japonica*
* great laurel	*Rhododendron maximum [p]*
* multiflora rose	*Rosa multiflora [i]*
pasture rose	*Rosa sp.*
sumacs	*Rhus sp.*
* blackberry	*Rubus allegheniensis*
* Sawtooth blackberry	*Rubus argutus*
* northern dewberry	*Rubus flagellaris*
* black raspberry	*Rubus occidentalis*
* wineberry	*Rubus phoenicolasius [i]*
common elderberry	*Sambucus canadensis*
* glaucous greenbrier	*Smilax glauca*
* greenbriar	*Smilax rotundifolia*
* bittersweet nightshade	*Solanum dulcamara*
* Canada yew	*Taxus canadensis*
* poison ivy	*Toxicodendron radicans*
* wisteria	*Wisteria sp. [i]*
* low bush blueberry	*Vaccinium angustifolium*
* high bush blueberry	*Vaccinium corymbosum*
* early low bush blueberry	*Vaccinium palidum*
* maple leaf viburnum	*Viburnum acerifolium*
* northern arrowwood	*Viburnum dentatum*
* grape	*Vitis sp.*
* American wisteria	*Wisteria frutescens*
* Chinese wisteria	*Wisteria sinensis [i]*

Herbs and Groundcovers

* common three-seed mercury	*Acalypha rhomboidea*
yarrow	*Achillia millefolium*
redtop	*Agrostis gigantea*
* garlic mustard	*Alliaria petiolate [i]*
wild onion	*Allium stellatum*
* wild onion	*Allium validum*
ragweed	*Ambrosia artemisiifolia*
big bluestem grass	*Andropogon gerardii*
* wild sarsaparilla	*Aralia nudicaulis*
* Devil's walkingstick	*Aralia spinosa*
common milkweed	*Asclepias syrica*

* common mugwort	*Artemisia vulgaris [i]*
jack-in-the-pulpit	*Arisaema triphyllum*
aster	*Aster sp.*
* white wood aster	*Aster divaricatus*
* lady fern	*Athyrium filix-femina [p]*
yellow rocket	*Barbarea vulgaris*
* smallspike false nettle	*Boehmerica cylindrica*
tussock sedge	*Carex stricta*
sedges	*Carex sp.*
* hanging sedge	*Carex pendula*
* Pennsylvania sedge	*Carex pensylvanica*
spotted knapweed	*Centurea maculosa [i]*
* field chickweed	*Cerastium arvense*
common lamb's quarters	*Chenopodium album*
* celandine	*Chelidonium majus*
* striped wintergreen	*Chimaphila maculate [p]*
chicory	*Cichorium intybus*
enchanter's nightshade	*Circaea quadrisulcata*
thistle	*Cirsium sp.*
* lily of the valley	*Convallaria majalis*
crown vetch	*Coronilla varia*
* pink ladyslipper	*Cypripedium acaule [p]*
orchard grass	*Dactylis glomerata*
poverty grass	*Danthonia spicata*
* Queen Anne's lace	*Daucus carota*
hay-scented fern	*Dennstaedtia punctilobula*
* deer tongue grass	*Dichanthelium clandestinum*
* white wood aster	*Eurybia divaricate*
* marsh bedstraw	*Galium palustre*
* wintergreen	*Gaultheria procumbens*
ground ivy	*Glechoma hederaceae*
* daylily	*Hemerocallis fulva*
common St. Johnswort	*Hypericum perforatum*
* jewelweed	*Impatiens capensis*
* Greene's rush	*Juncus greenei*
* Common nipplewort	*Lapsana communis*
butter-n-eggs	*Linaria vulgaris*
* one-cone club moss	*Lycopoduim lagopus [p]*
* whorled loosestrife	*Lysimachia quadrifolia*
* Canada mayflower	*Mainthemum canadense*
* false Solomon's-seal	*Mainthemum racemosum*
* ostrich fern	*Matteuccia struthiopteris*

* Japanese stiltgrass	*Microstegium vimineum [i]*
sensitive fern	*Onoclea sensibilis*
cinnamon fern	*Osmunda cinnamomea [p]*
* royal fern	*Osmunca regalis [p]*
* pachysandra	*Pachysandra terminalis*
panic grass	*Panicum sp.*
timothy	*Phleum pretense*
* pokeweed	*Phytolacca americana*
* Canadian clearweed	Pilea pumila
* English plantain	*Plantago lanceolate*
* common plantain	*Plantago major*
* bluegrass	*Poa sp.*
* smooth Solomon's-seal	*Polygonatum biflorum*
* smartweed sp.	*Polygonum sp.*
* Christmas fern	*Polystichum acrostichoides [p]*
* cinquefoils	*Potentilla spp.*
* white-veined wintergreen	*Pyrola picata*
* round leaved wintergreen	*Pyrola rotundifolia*
buttercup	*Ranunculus sp.*
dock	*Rumex crispus*
sheep sorrel	*Rumex acetosella*
* Narrowleaf blue-eyed grass	*Sisyrinchium angustifolium*
* goldenrods	*Solidago sp.*
* blue stemmed goldenrod	*Solidago caesia*
* common dandelion	*Taraxacum officinale*
* New York fern	*Thelypteris noveboracensis [p]*
* white clover	*Trifolium repens*
* trillium	*Trillium sp. [p]*
* cattail	*Typha latifolia*
mullein	*Verbascum sp.*
* common mullein	*Verbascum Thapsus*
* maple leaf viburnum	*Viburnum acerifolium*
* northern prickly ash	*Zanthoxylum americanum*
* Hercules club	*Zanthoxylum clava-herculis*

Wildlife

Several wildlife species were observed during site inspections, species common to suburban and forested habitats, including those that are more tolerant of human activity. Avian species which might be expected on the property include a variety of woodpeckers, wrens, titmice, nuthatches, kinglets, thrushes, creepers, flycatchers, swallows, corvids, thrashers, orioles, blackbirds, doves, starling, grosbeaks, finches, towhees, juncos, sparrows and others. During the warmer months, a variety of warblers may also migrate into the area. A limited number of game birds such as the ring-necked pheasant, ruffed grouse and bobwhite may also be present,

and owls and raptors may use the site for hunting, and some may breed in the surrounding areas.

Data from the 2005 Breeding Bird Survey for the census block containing the site was obtained from the NYSDEC (**Appendix D-1)**. This study involved a survey of the entire State using 25 km² census blocks over a five-year period (2000 to 2004) to determine the bird species that breed within the State. Most of the species listed by the breeding bird survey are likely to be found on site, with the exception of species common to habitats not found on site. No unique species are expected given the site development, and level of disturbance associated with the equestrian trails, as well as the forest covered wetlands and intermittent standing water which would restrict hunting by raptors. **Table 2-4** is a list of the species observed or expected on site given the habitats present as well as those observed by NPV during field investigations which are signified with an asterisk (*). Special concern species are signified by an "[s]".

TABLE 2-4
BIRD SPECIES LIST

* gray catbird	*Dumetella carolinensis*
* great blue heron	*Ardea herodias*
red-winged blackbird	*Agelaius phoeniceus*
* black-capped chickadee	*Parus atricapillus*
common bobwhite	*Colinus irginainuse*
indigo bunting	*Passerina cyanea*
* Northern cardinal	*Cardinalis*
brown-headed cowbird	*Molothrus ater*
brown creeper	*Certhia familiaris*
* American crow	*Corvus brachyrhynchos*
yellow-billed cuckoo	*Coccyzus americanus*
black-billed cuckoo	*Coccyzus americanus*
* mourning dove	*Zenaida macroura*
American goldfinch	*Carduelis tristis*
* house finch	*Carpodacus mexicanus*
purple finch	*Carpodacus purpureus*
* Northern flicker	*Colaptus auratus*
* least flycatcher	*Empidonax minimus*
willow flycatcher	*Empidonax trailii*
great-crested flycatcher	*Myiarchus crinitus*
blue-grey gnatcatcher	*Polioptila caerulea*
common grackle	*Quiscalus quiscula*
ring-necked pheasant	*Phasianus colchicus*
rose-breasted grosbeak	*Pheucticus ludovicianus*
* red-tailed hawk	*Buteo jamaicensis*

* blue jay	*Cyanocitta cristatta*
* Northern (dark-eyed) junco	*Junco hyemalis*
Eastern kingbird	*Tyrannus*
Eastern phoebe	*Sayornix phoebe*
golden-crowned kinglet	*Regulus satrapa*
ruby-crowned kinglet	*Regulus calendula*
Eastern meadowlark	*Sturnella magna*
bobolink	*Dolichonyx oryzivorys*
Northern mockingbird	*Mimus polyglottos*
* white-breasted nuthatch	*Sitta carolinensis*
* Baltimore oriole	*Icterus galbula*
yellow breasted chat	*Icteria virens [s]*
ovenbird	*Seiurus aurocapillus*
common nighthawk	*Chordeiles minor [s]*
Eastern screech owl	*Otus asio*
* American robin	*Turdus migratorius*
American redstart	*Setophaga ruticilla*
* chipping sparrow	*Spizella passerina*
field sparrow	*Spizella pusilla*
swamp sparrow	*Melospiza georgiana*
white-crowned sparrow	*Zonotrichia leucophrys*
fox sparrow	*Passerella iliaca*
* house sparrow	*Passer domesticus*
* song sparrow	*Melospiza melodia*
white-throated sparrow	*Zonotrichia albicollis*
European starling	*Sturnus vulgaris*
barn swallow	*Hirundo rustica*
rough-winged swallow	*Stelgidopteryx ruficollis*
tree swallow	*Tachycineat bicolor*
purple martin	*Progne subis*
chimney swift	*Chaetura pelagica*
scarlet tanager	*Piranga olivacea*
brown thrasher	*Toxostoma rufum*
* Eastern towhee	*Pipilo erythrophathalmus*
* Eastern bluebird	*Sialia sialis*
* black throated green warbler	*Setophaga virens*
hermit thrush	*Catharus guttatus*
wood thrush	*Hylocichla mustelina*
* tufted titmouse	*Parus bicolor*
veery	*Catharus fuscescens*
red-eyed vireo	*Vireo olivaceus*
white-eyed vireo	*Vireo griseus*

blue-winged warbler	*Vermivora pinus*
black-and-white warbler	*Mniotilta varia*
black-throated blue warbler	*Dendroica caerulescens*
prairie warbler	*Dendroica discolor*
yellow-rumped warbler	*Dendroica coronata*
yellow warbler	*Dendrocica petchia*
Carolina wren	*Thryothorus ludovicianus*
horned lark	*Eremophila alpestris*
killdeer	*Charadrius vociferus*
* cedar waxwing	*Bombycilla cedrorum*
whip-poor-will	*Caprimulgus vociferous [s]*
American woodcock	*Philhela minor*
* Eastern wood-peewee	*Contopus virens*
downy woodpecker	*Picoides pubescens*
* hairy woodpecker	*Picoides villosus*
red-bellied woodpecker	*Melanerpes carolinus*
red-headed woodpecker	*Melanerpes erythrocephalus*

[s]

* yellow bellied sapsucker	*Sphyrapicus varius*
house wren	*Troglodytes aedon*
common yellowthroat	*Geothlypis trichas*
mallard	*Anas platyrhynchos*

A variety of small mammals would also be expected to visit or inhabit the site, including the eastern chipmunk, house mouse, white-footed mouse, Norway rat, eastern mole, short-tailed shrew, masked shrew, and meadow vole. Of the larger mammals, the Virginia opossum, fox, raccoon, and white-tailed deer would also be expected to utilize the property, although in somewhat fewer numbers than smaller mammals. **Table 2-5** lists a variety of species that may be found in habitats that are similar to those found on-site. Species observed by NPV staff during field inspections or recorded during the Bat Acoustic Survey (conducted July 2015) are identified by an asterisk "(*)".

TABLE 2-5
MAMMAL SPECIES LIST

big-brown bat	*Eptesicus fuscus*
hoary bat	*Lasiurus borealis*
Keen's bat	*Myotis keenii*
* little-brown bat	*Myotis lucifugus*
* red bat	*Lasiurus borealis*

* tricolored bat	*Perimyotis subflavus*
Eastern pipistrelle	*Pipistrellus subflavus*
* silver-haired bat	*Lasionycteris noctivagans*
* Eastern chipmunk	*Tamis striatus*
* Eastern cottontail	*Sylvilagus floridanus*
red fox	*Vulpes*
Eastern mole	*Scalopus aquaticus*
house mouse	*Mus musculus*
white-footed mouse	*Peromyscus leucopus*
Virginia opossum	*Didelphis virginiana*
raccoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
masked shrew	*Sorex cinereus*
short-tailed shrew	*Blarina breuicauda*
* Eastern gray squirrel	*Sciurus carolinensis*
meadow vole	*Microtus pennsylvanicus*
white-tailed deer	*Odocoileus virginianus*
* Woodchuck	*Marmota monax*

The site exhibits a wide variety of terrestrial and wetland habitats, and due to its size and habitat types, it is expected that the property supports a variety of other terrestrial and aquatic species including amphibians and reptiles. The spadefoot toad is expected, as it is found in upland habitats, and the Fowler's toad was identified on-site as were several common frogs. The red-backed salamander is the most common salamander on Long Island and is highly terrestrial. It prefers a dry woodland habitat with plenty of leaf litter and fallen logs to forage for insects **(Bishop, 1943)**, and generally lays its eggs in clumps on damp logs or moss (**Conant and Collins, 1991**). The most likely reptiles to be present on site are the colubrid snakes, including the eastern garter snake, eastern hognose snake, worm snake, black racer, and eastern milk snake. The only turtle species common to terrestrial habitats on Long Island is the eastern box turtle, which requires very little water **(Obs., undated)**. Two eastern box turtles were seen during the June 2020 field inspection.

Table 2-6 lists a variety of amphibians and reptiles that are found in similar habitats. Species observed by NPV staff during field inspections or during the amphibian surveys conducted by Dru Associates (2009-2011) are identified with an asterisk "(*)". NYS special concern species are signified by an "[s]" and NYS endangered species are shown with an "[e]".

TABLE 2-6
AMPHIBIAN & REPTILE SPECIES

Eastern tiger salamander	*Ambystoma tigrinum [e]*
* Fowler's toad	*Bufo woodhousei fowleri*
* spring peeper	*Hyla crucifer*
* common gray treefrog	*Hyla versicolor*
red-backed salamander	*Plethodon cinereus*
* bullfrog	*Rana catesbeiana*
green frog	*Rana clamitans melanota*
* wood frog	*Rana sylvatica*
eastern spadefoot toad	*Scaphiopus holbrooki [s]*
worm snake	*Carphophis amoenus [s]*
common garter snake	*Thamnophis sirtalis*
* eastern box turtle	*Terrapene Carolina [s]*
eastern hognose snake	*Heterodon platyrhinos [s]*
eastern milk snake	*Lampropeltis triangulum*

Rare and Endangered Species/Unique Habitat Potential

The NY Natural Heritage Program (ECL 9-1503) was contacted to determine if there is any record of rare plants or wildlife on or in the vicinity of the site. In an updated correspondence letter dated June 8, 2020, the Program listed the following species in the vicinity of the site:

- four (4) threatened or endangered plants,
- one (1) threatened mammal,
- one (1) endangered amphibian,
- one (1) special concern amphibian, and
- one (1) unlisted butterfly as potentially occurring on or in the vicinity of the subject property, as well as
- one (1) high quality occurrence of an uncommon ecological community.

A review of the habitat requirements and potential presence of each species noted above is provided in the following paragraphs. **Appendix D-2** contains a copy of the correspondence received from the NHP.

Threatened or endangered plants

Common rattle box (*Crotolaria sagitallis*) is an endangered vascular plant species which prefers dry, open clearings with sandy soil. This species was last sited on August 19, 1991 within the northern half of the Muttontown Preserve County Park, east of the project site in mowed

pastures. As limited suitable habitat exists on the subject property, and as this species was not observed during any of the site inspections, it is not expected to be present on the subject site.

Smartweed dodder (*Cuscuta polygnorum*) is an endangered herbaceous, parasitic vine which prefers swamps and lowland habitats. This species was last sighted on September 7, 1990 within the Muttontown Preserve County Park. Although suitable habitat does exist on the subject property, this species was not observed during any of the field inspections.

Hairy small-leaved tick trefoil (*Desmodium ciliare*) is a threatened vascular plant species which prefers dry, sandy soil in forest openings with full sun. This species was last observed on August 23, 1989 in the northeast corner of the Muttontown Preserve, along a field edge. As limited suitable habitat exists on the subject property, and since this species was not observed during any of the site visits, it is not expected to be present at the site.

Persimmon (*Diospyros virginiana*) is a threatened, moderately-sized tree species which tolerates a variety of conditions, but generally prefers moist, well-drained soil. Persimmon is listed as imperiled within New York State, having 6 to 20 occurrences, few remaining individuals, or limited acres, thereby making it especially vulnerable in New York. Globally, this species is demonstrably secure, though it may be rare in parts of its range, especially at the periphery. It is found from southern Connecticut and Long Island to southern Florida and is exceedingly common in the southeast and Gulf states but occurs less frequently as it approaches the northern limits of its range. This species was last recorded by the NY Natural Heritage Program on November 2, 1996 within a small depression on the southeast portion of the Hall Estate that was recently donated to the Muttontown Preserve. This tree species was observed during the June 2006 and June 2020 site visits in proximity to the small off-site pond in the southern portion of the land to the east that was previously conveyed to the County for incorporation into the Muttontown Preserve. Persimmons were not identified on-site.

Exploitably vulnerable plant species

Butternut, American holly, great laurel, trillium, northern bayberry, striped wintergreen, lady fern, New York fern and Christmas fern are “exploitably vulnerable” species that are common in Long Island natural habitats. “Exploitably vulnerable” plants are species which are not currently threatened or endangered, but which are commonly collected for flower arrangements or other uses. Under ECL 1503.3, no person may “*knowingly pick, pluck, sever, damage by the application of herbicides or defoliants or carry, without the consent of the owner thereof, protected plants”* (**NYSDEC, 1975**). As per this section of the ECL the project sponsor (i.e. owner) would not be restricted in utilizing the site for the intended purpose. Therefore, the presence of protected plants would not restrict use of the site under the NYS Environmental Conservation Law.

Endangered, threatened, special concern, and rare unprotected wildlife

The endangered tiger salamander (*Ambystoma tigrinum*), a New York State listed endangered species, had been thought to breed within a pond on the southwest corner of the subject property many years ago **(Cryan, 1984)**. Cryan conducted an extensive search for tiger salamander breeding ponds on Long Island and discovered that the small, NYSDEC-regulated wetland (HV-5) located on the north side of Muttontown Road, just west of the entrance to the subject property, contained twenty-one adult salamanders and one egg mass. However, a conversation with the NYSDEC Endangered Species Unit on December 16, 2005 verified that the tiger salamander breeding pond was actually wetland HV-15, approximately 1,000 feet west of HV-5, in the southwest corner of the subject property.

The tiger salamander is a mole salamander that spends much of its adult life underground but requires vernal pools or shallow ponds without predator fish populations to breed and lay their eggs, as well as expansive moist upland woodlands for the emerged adults. Breeding season occurs in late winter and early spring when migrations to the breeding pond are prompted by the first warm rains. Adults remain in the ponds for only a few weeks before returning underground (**Cryan, 1984**). The eggs hatch after three to four weeks, and the larvae remain in the pond until early summer before metamorphosis to the adult stage. Although most adults remain in close proximity to the breeding pond, some individuals may migrate a significant distance following metamorphosis from the larval stage. Adults typically stay within a 500-foot radius of their breeding ponds and therefore, the fate of this endangered species rests on the preservation of their breeding ponds and adjacent woodland habitat.

Surveys were conducted by Dru Associates between 2009 and 2011 to determine whether the endangered tiger salamander is present on the site and if found, whether impacts on this species may occur from the proposed subdivision (see **Appendix D-3** and **Section 2.5.2**). Minnow trapping, drift fences, egg mass searches and larval searches were conducted during appropriate seasons in the on-site ponds. Results of this survey revealed that only spotted salamanders are utilizing the on-site ponds; no tiger salamanders were observed on site. Moreover, the Dru Associates report asserts that limited habitat for herpetofauna is present within the on-site wetlands, suggesting extremely limited use by spotted salamanders. On July 20, 2015, the NYSDEC reviewed this report and supplemental data collected by NYSDEC staff, and issued a determination indicating that the species no longer occupies the subject property, is unlikely to reoccupy the property, and that the site would not fall under NYS ECL Article 11 regulations (**Appendix D-4**).

The Northern long-eared bat is listed by the US Fish and Wildlife Service ("USFWS") as a threatened species. This species requires woodland habitat for foraging with open areas between either the shrub layer or sub-canopy layer and the canopy. Roosting habitat requires trees with peeling bark or snags[13] and less commonly utilize structures for roosting. Habitat for hibernation includes caves and structures that provide some insulation from the winter

[13] A "snag" is a standing, dead or dying tree, often missing its top or most of its smaller branches.

temperatures; however, since caves are not present on Long Island, a variety of other habitat types are utilized, including dead or dying trees and roofs of buildings. Habitat for roosting and foraging is present on the subject site, as is habitat for hibernation as small structures remain on the property. As a result, there is potential for this species to utilize the site for maternity roosting, foraging and hibernation activities.

Due to the presence of suitable habitat for this species, acoustical surveys were requested from a certified wildlife biologist to determine the presence/absence of the species on the site. A copy of the full report detailing the survey methodology and results is provided in **Appendix D-5.** As indicated in Appendix B of this report, the survey protocol was submitted to the United States Fish and Wildlife Service ("USFWS") on June 23, 2015 for approval prior to conducting the surveys and approval was granted on July 13, 2015 to conduct the surveys as outlined in the submission. As per the protocol, two acoustical detectors were set up for two nights (July 28 and July 30, 2015) to gather call data. The call data was then reviewed by software designed to identify bat calls and were also reviewed manually due to the presence of the eastern red bat and the little brown bat. Neither software identification nor manual identification revealed the presence of the Northern long-eared bat. As a result, this species is not expected to be found on-site and impacts to this species as a result of the proposed subdivision are not expected. The findings of the survey have been filed with the USFWS, a copy of which is provided in **Appendix D-5**. Preventative mitigation measures are included in **Section 2.5.3** below for the northern long-eared bat as a precaution until concurrence of no impact on the species is obtained from the USFWS.

Tawny emperor (*Asterocampa clyton*) is an unprotected butterfly/skipper listed as having between 21 to 100 occurrences or limited acreage within New York, making it vulnerable in the State. Globally, the tawny emperor is listed as demonstrably secure, though it may be rare in parts of its range, especially at the periphery. This species prefers wooded uplands near hackberry host plants and was last observed in 1993 in the northeast corner of the Muttontown Preserve County Park. As the host plant (hackberry) was not encountered on the subject site, this species is not anticipated to inhabit or utilize the site.

Of the species which may utilize or be expected on the site, the yellow-breasted chat, red-headed woodpecker, eastern spadefoot toad, eastern hognose snake, worm snake and eastern box turtle are listed as special concern species. An eastern box turtle was seen during the June 2020 field inspection, but no other special concern species were identified during the site inspections. Special concern species are native species which are not recognized as endangered or threatened, but for which there is documented concern about their welfare in New York State as a whole.

Vernal pools were the significant natural community or habitat identified in proximity to the subject site. The pools that are listed are identified as a complex of pools located 0.2 miles east of the project site within the Muttontown Preserve and are of moderate size (**Figure 2-4**). As

per the NHP, this community is in fair to good condition and is surrounded by fair quality successional forest surrounded by extensive suburban development (**Appendix D-2 and D-5**). The following natural community is considered significant from a statewide perspective by the NHP.

2.5.2 Anticipated Impacts

Vegetation Impacts

The impacts to the ecological resources of a project site are generally a direct result of clearing of natural vegetation, an increase in human activity and associated wildlife stressors, and the resulting loss and fragmentation of wildlife habitat. Most of the proposed development is currently wooded (89.41% of the site), with the remainder being comprised of a mix of successional old fields, wetlands, a vernal pool, and terrestrial cultural habits including lawns and gardens, and impervious surfaces, including existing paved surfaces/driveways, buildings, a pool house, swimming pool, tennis court, and other minor man-made structures. It is anticipated that under the proposed development, a total of (±60.97 update later) acres of natural vegetation would be retained, which consists of the remnant coastal oak-heath forest, the entirety of the on-site wetlands and vernal pool, and a portion of the successional old field.

The estimated future habitat quantities are listed in **Table 2.7** and include approximately ±60.36 acres (60.9%) of natural vegetated area as well as ±0.61 acres of wetlands (±0.22 acres of red maple swamp and ±0.39 acres of vernal pond) ±14.7 acres (14.9%) of landscaped area, ±5.77 acres (5.8%) of stormwater recharge areas (including ±4.52 acres of storage area and ±1.25 acres of mixed natural area, landscaped, access driveway/gravel, and cleared land), and ±17.48 acres (17.7%) of impervious surfaces. Clearing as a result of the proposed subdivision would be interspersed throughout the site, further fragmenting existing habitats. It is noted that a 50-foot deep natural buffer will be provided around the perimeter of the existing property boundary and thirty feet of this depth will be set aside as parkland containing an eight-foot wide naturally surfaced bridle path for use by the public. The bridle path will meander through the perimeter parkland area, thereby eliminating the need to remove any additional trees; however, some underbrush will have to be cleared along the path and some limbs may need to be trimmed, resulting in a loss of some native understory and ground cover vegetation. In addition, no new disturbance is proposed within 100 feet of the on-site NYSDEC-regulated freshwater wetlands. As a result, the site will continue to provide some natural habitat for wildlife to utilize, though the removal of the existing woodland vegetation on the property is expected to result in changes to the sizes and characteristics of site habitats; particularly, the coastal oak-heath forest. Tree (removal) Permits will be required from the Village prior to site disturbance and future lot development, and trees will be retained where practicable. For the purposes of this assessment, it is assumed that clearing will be limited to the areas of clearing depicted for each lot on the **Lot Development Plan**.

TABLE 2-7
HABITAT QUANTITIES
Existing and Conceptual Conditions

Coverage Type	Existing Conditions		Proposed Subdivision		Change (Acres)
	Coverage (Acres)	Percent	Coverage (Acres)	Percent	
Coastal Oak-Heath Forest	±89.41	90.39%	±60.24	60.90%	-29.17
Successional Old Field	±0.37	0.37%	±0.12	0.12%	-0.25
Red Maple Hardwood Swamp	±0.22	0.22%	±0.22	0.22%	0
Vernal Pool	±0.39	0.39%	±0.39	0.39%	0
Landscaped	±5.86	5.92%	±14.7	14.86%	+8.84
Impervious(1)	±2.67	2.70%	±17.48	17.67%	+14.81
Recharge Basin(2)	0	0	±5.77	5.83%	+5.77
TOTAL	**98.92**	**100.00%**	**98.92**	**100.00%**	---

Notes:
1) Impervious coverage includes paved portions of proposed street rights-of-way, the maximum principal and accessory structure coverage permitted in the E3 zone (13 percent), and the total combined area of driveways which provides an upper limit projection, so that the worst case scenario (most impervious, most clearing, and least landscaping) is assessed.
2) The two recharge basins include a total storage area of 4.52 acres. The remainder of the space (1.25 acres) will consist of a two double staggered rows of evergreens along the interior facing sides of the recharge basins for screening, two unpaved access driveways, and small areas of natural vegetation near the edges of the basins. For simplicity, the total area of the recharge basins is considered 5.77 acres.

As previously stated, the NY Natural Heritage Program identified the presence of two endangered and two threatened species of plants and one high quality occurrence of an uncommon ecological community type in the vicinity of the subject property. The rare species, however, were not identified on the site during numerous field investigations, and the vernal pool located on the property is of fair quality and not the high quality uncommon ecological community that was identified in the area by the NYNHP. It is also noted that no physical disturbance will occur within the vernal pool or its adjacent upland areas defined as 100 feet from the flagged wetland boundary, and this area will be contained within an area to be set aside as public parkland and protected by filed covenants and restrictions that will be agreed upon by the Applicant and Village. As such, no significant impacts to rare, threatened, or endangered plant species or any uncommon natural communities are anticipated from the proposed subdivision and future development.

Exploitably vulnerable species are classified as such primarily because they are more likely to be indiscriminately collected or removed, rather than actual rarity within the State, and existing

regulations do not prohibit a property owner from removing these plant species from a site. While some loss of these species will occur as a result of the proposed project, significant impacts to the regional populations of these species are not anticipated, as sufficient habitat is available in the region, including in the adjacent Preserve.

Tree Removal and Proposed landscaping

A **Planting and Tree Removal Plan** (Sheet C-105) is attached to the DEIS. The tree survey has been updated and is attached to the DEIS. There is a total of 5,763 trees on-site with a 7-inch caliper or greater diameter. The locations of these trees are shown on the Planting and Tree Removal Plan (Sheet C-105) in Attachment 3. Of these 5,763 trees, a total of 862 would be removed during the subdivision infrastructure construction phase and an estimated 1,701 additional trees will be removed during the lot development stage. The total number of trees with a seven-inch caliper diameter or more to be removed is 2,563. The total number of seven-inch or larger trees to remain on-site is 3,200. The trees to be removed are located primarily within the oak-heat forest.

Regarding planting, a mix of evergreen tree species will be planted along the edges of the proposed stormwater recharge basins to provide vegetative screening and native grasses will be planted within the center island of the access road to soften and improve the appearance and character of the roadway. The evergreen species will include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*) which will provide quality screening. The trees will be planted at heights of 10 to 12 feet and will be arranged in a staggered double row as depicted on the "**Planting and Tree Removal Plan**" (Sheet C-105). The interiors of the recharge basins and shoulders of street rights-of-way will be seeded with an ecology seed mix after disturbance and finish grading. Street trees are not required by the Village/Village Code and are not proposed. Center median grasses will consist of native little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*). The amounts, types, and locations of future landscaping on individual house lots will be determined in the future through the site plan design and review process.

Landscaping and plantings associated with streets and drainage areas including any screening will be maintained by the subdivision's HOA, while individual lawns and lot landscaping will be the responsibility of private property owners. As with roads and drainage, landscaping in common areas associated with ROWs and recharge basins is expected to be subject to performance bonding requirements, to ensure survivability. Areas that might be landscaped are shown on the **Lot Development Plan** (Sheet C-104). Irrigation demand for future lawns and other landscaping is estimated to be ±26,229 gpd on average, annually. Landscaped areas may be fertilized and based on an estimated 14.7 acres of landscaped area, nitrogen concentration in site recharge may increase from an estimated 0.22 mg/l to 0.98 mg/l which is well below the 10 mg/l standard for drinking water and protective of surface waters and freshwater wetlands. See **Appendices C-1, C-2, and C-3**.

Wildlife Impacts

Most of the property is dominated by a remnant coastal oak-heath forest. However, based on numerous site inspections, correspondence with environmental agencies, and literature and database reviews, the property is not known to contain any threatened or endangered flora or fauna but does contain a small population of common birds, mammals, amphibians and reptiles, as well as eastern box turtles which are classified as a NYS special concern species. The proposed project will favor those wildlife species that prefer edge and rural-suburban habitats and those that are tolerant of human activity. Most of the species expected on the property are at least somewhat tolerant of human activity, but others will be impacted by proposed and future clearing, construction, and increase in human activity. It is also expected that particular species of wildlife (particularly avian species) will migrate to undisturbed areas adjacent or near the site as a result of development, and species such as the eastern box turtle could be captured and relocated to the Muttontown Preserve.

A minimum 50-foot deep perimeter buffer will be maintained along the existing property line, with the exception of an 8-foot wide bridle trail which is proposed as part of the parkland requirement. Retention of vegetation within this buffer is expected to allow for marginal wildlife corridors and habitat for species that are tolerant and/or dependent on human activity. In addition, 100-foot deep non-disturbance buffers will be provided around existing on-site wetlands and the vernal pool and areas of steep and very steep slopes will be avoided and left natural to the maximum extent possible per the Village Code. Approximately +/-60.36 acres of natural vegetation are estimated to remain after construction is completed based on the proposed **2020 Preliminary Map**. This area would include perimeter buffers and parkland areas with the exception of the eight-foot wide bridle path, wetland adjacent areas, the cemetery easement area, areas of steep and very steep slopes to remain undisturbed, and lot perimeter areas for screening but the exact amount of remaining natural vegetation cannot be fully ascertained until all of the lots have gone through site plan review and been approved by the Village. Although the anticipated 14.7 acres of landscaped vegetation will provide less habitat than existing natural areas, the landscaping is expected to provide some limited habitat for human tolerant species, while also providing screening and enhanced aesthetic qualities.

In determining impacts on the existing wildlife populations, it can be assumed that an equilibrium population size will be established for each species as determined by availability essential resources within the habitat. Thus, the removal of habitat resulting from the proposed project will result in a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, and population sizes of many species are controlled below the carrying capacity by other factors, it does provide a worst-case scenario in determining the impacts from habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife that will remain on the site and in the area, under post-development conditions.

In the short term, adjacent property will experience an increase in the abundance of some wildlife populations due to displacement of individuals during the construction phase of the proposed project. Mobile species and particularly large mammals such as fox and deer would be expected to find suitable habitat south and east of the site where larger areas of preserved natural open space currently exist. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding land would be expected to result in a net decrease in population size for most species.

Regarding future use of the proposed perimeter parkland as a bridle path, and any potential impacts on wildlife, the site has been used by equestrians for years, and the Village is requiring the perimeter parkland areas be made available to the public for the continuation of this use. It is expected that wildlife that encounter equestrians will take cover or retreat from the area temporarily until riders have passed and human and domesticated animal activities have subsided. Some human tolerant species such as common human tolerant birds and other animals are expected to be little affected by horseback riders and these species should not suffer long-term impacts or permanent displacement from such activities.

As previously noted, surveys were conducted by Dru Associates between 2009 and 2011 to determine whether endangered tiger salamanders are present on the site, and if present, whether impacts on this species may occur (see **Appendix D-3**). Minnow trapping, drift fences, egg mass searches and larval searches were conducted during appropriate seasons in the on-site ponds. Results of this survey indicated that that only spotted salamanders are utilizing the on-site ponds and that no tiger salamanders were observed on-site. Further, the Dru Associates report asserts that limited habitat for herpetofauna is present within the on-site wetlands, suggesting extremely limited use by spotted salamanders. On July 20, 2015, the NYSDEC reviewed this report and supplemental data collected by NYSDEC staff, and issued a determination indicating that the species no longer occupies the subject property, is unlikely to reoccupy the property, and that the site would not fall under NYS ECL Article 11 regulations (**Appendix D-4**). Therefore, no impacts to this species are anticipated from the proposed project.

Habitat that may be suitable for threatened northern long-eared bats was identified on-site; therefore, acoustical surveys by a certified wildlife biologist were requested to determine the presence/absence of the species on the site. A copy of the full report detailing the survey methodology and results is provided in **Appendix D-5.** As indicated in Appendix B of this report, the survey protocol was submitted to the USFWS on June 23, 2015 for approval prior to conducting the surveys and approval was granted on July 13, 2015 to conduct the surveys as outlined in the submission. As per the protocol, two acoustical detectors were set up for two nights (July 28 and July 30, 2015) to gather call data. The call data was then reviewed by software designed to identify bat calls and were also reviewed manually due to the presence of the eastern red bat and the little brown bat. Neither software identification nor manual

identification revealed the presence of the northern long-eared bat. As a result, this species is not expected to be found on site and impacts as a result of the proposed development are not expected for this species. The findings of the survey and assessment have been filed with the USFWS, a copy of which is provided in **Appendix D-5**. Preventative mitigation measures are included in **Section 2.5.3** below for the northern long-eared bat as a precaution.

No other threatened or endangered wildlife species were identified or expected on the site given the habitats present and the extensive ecological surveys performed. The red-headed woodpecker, whip-poor-will, common nighthawk, eastern spadefoot toad, eastern hognose snake, worm snake and eastern box turtle are, however, special concern species that may be located on the site based on habitat, and of these species, only the eastern box turtle was observed in the field.

NYS special concern species are defined by 6 NYCRR §182.2(u) as:

> "...native species of fish and wildlife found by the department to be at risk of becoming threatened in New York based on the criteria for listing in section 182.4(a) of this Part and that are listed species of special concern in subdivision (c) of section 182.5 of this Part. Species of special concern do not qualify as either endangered or threatened, as defined in subdivisions (e) and (y) of this section but have been determined by the department to require some measure of protection to ensure that the species does not become threatened. Species of special concern are listed in subdivision (c) of section 182.5 of this Part and are protected wildlife pursuant to Environmental Conservation Law section 11-0103(5)(c)."

To address concerns over impacts on eastern box turtles on the subject property, and to address the above requirement, an **Eastern Box Turtle Protection Plan** was created to protect this species (**Appendix D-7**).

Finally, the proposed large lot/low density subdivision will include a 50-foot deep perimeter buffer along the shared boundary between the subject property and adjacent properties which will not only retain native vegetation and a wildlife corridor between Muttontown Preserve, the subject property, and the Hoffman Center, but will also provide visual screening and buffering to mitigate other impacts. As previously noted, some wildlife on the subject property may migrate to adjacent properties, but some may also be lost due to a loss of habitat. An eastern box turtle protection plan was prepared, and necessary analyses have been undertaken to demonstrate that endangered or threatened wildlife are not present not known to be present on the site. Based on project design, conformance with the Village Code, and identified mitigation below, significant adverse impacts are not expected on wildlife, ecological communities or to adjacent wildlife preserves.

2.5.3 Proposed Mitigation

- Some native plant species which provide food and shelter to wildlife will be utilized in some of the landscaped areas, but several species of common ornamental evergreen species will be used for the purposes of screening.
- Invasive plant species that are listed in Nassau County Local Law 22-2010 and in 6 NYCRR Part 575, Sections 575.3 ("Prohibited invasive species") and 575.4 ("Regulated invasive species") will not be utilized in the landscaping and shall not be used to landscape any future house lots.
- The loss of woodland habitat on the property will be partially mitigated by the proposed preservation of woodland within the buffers around the property, adjacent to the wetlands and within individual lots, including areas containing steep and very steeply sloping areas.
- Minimize disturbance to the maximum extent practicable, including delineating tree clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- The most sensitive area of the site which includes the wetlands and wetland buffers in the southwest part of the site will be retained and a 100-foot adjacent upland area will remain undisturbed.
- Where practicable, trees will be retained during the development of individual plots and a Tree Permit will be sought from the Village.
- Because it is the disease (WNS) and not habitat that is currently limiting the population of Northern long-eared bats, removal of trees from the landscape is generally not considered harmful unless there are potentially bats within the trees during the time they are harvested or otherwise removed from the landscape. To protect NLEB from unintentional harm, the Department encourages the voluntary implementation of all forest management activities during the hibernation period-November 1 through March 31 throughout the state and December 1 through February 28 in Suffolk County-when bats are not expected to be present.
- Leave snag and cavity trees uncut unless their removal is necessary for protection of human life and property. Snag and cavity trees are defined under DEC Program Policy ONR-DLF-2 Retention on State Forests.
- If any bats are observed flying from a tree, or on a tree that has been cut, tree management activities in the area should be suspended and DEC Wildlife staff notified as soon as possible. A permit may be required to continue work, or you may have to wait until November 1 to resume activities.
- If your project is located within 5 miles of a known hibernation site or 1.5 miles of a documented summer occurrence, please see Protection of Northern Long-eared Bats for additional guidance.
- Implement an Eastern Box Turtle Protection Plan to protect this New York State special concern species. See protection plan provided in **Appendix D-7** of this DEIS.

SECTION 3.0
HUMAN ENVIRONMENTAL RESOURCES

3.0 HUMAN ENVIRONMENTAL RESOURCES

3.1 Land Use, Open Space, Zoning and Plans

3.1.1 Existing Conditions

Land Use and Open Space

The subject site is a large (98.92-acre) irregularly-shaped mostly wooded property that was originally developed as a large estate. The property currently contains several buildings and structures, including the Estate's:

- Main Home with two attached cottages ("East Cottage" and "West Cottage");
- Greenhouse Cottage and Garage;
- Pond Cottage;
- Six-Car Garage with Upstairs Chauffer's Apartment;
- Former Barn/Converted to a Cottage; and
- Pool House and In-ground Swimming Pool and Tennis Court (see **Figure 1-2**).

The current residential density of the property is one dwelling unit per 24.73 acres, based on the four existing residential structures (one occupied and three vacant) and 98.92 acres of land. A portion of the north end of the property contains actively used equestrian trails that are connected to trails on the adjacent County-owned land to the east and northeast ("Muttontown Preserve"). A small fenced-in family cemetery totaling +/-1,925 SF (0.04 acres) or +/-5,325 SF or 0.12-acre including adjacent area as shown on the proposed plans is located at the south end of the property, along Muttontown Road, west of the Woodhollow Court intersection.

The property also contains one small freshwater wetland/vernal pool and part of a second small freshwater wetland which is located primarily on an adjacent outparcel identified on the **2020 Preliminary Map** as "Land now or formerly of Patricia Moed" but extends on to the subject property. Both wetlands are situated in close proximity to Muttontown Road. A third wetland is located nearby on the adjacent County-owned land to the east. This wetland is located approximately 45 feet from the eastern property boundary of the subject property on the Muttontown Preserve; however, its 100-foot adjacent upland area extends on to the subject site a distance of approximately 55 feet.

Land uses in the vicinity of the site are primarily single-family residences and open space and nature preserves, with residential developments located north, south, and west-southwest of the property. Open space and commercial/agriculture land are located to the northwest and nature preserves are located to the east, southeast and west-northwest (see **Figure 3-1**). The pattern of land use in the vicinity can be generally described as low density single-family residential neighborhoods and large undeveloped tracts of agriculture and preserved open

space including the County-owned Muttontown Preserve to the east and Hoffman Center Nature Preserve and Wildlife Sanctuary to the west-northwest, both of which are open to the public. The Muttontown Preserve is a highly utilized equestrian, hiking, and outdoor recreational area. The Hoffman Center is also a former estate which was purchased by a not-for-profit corporation and private operating foundation in 1996 for the purpose of preserving the 155-acre parcel and its existing historically significant buildings and managing the site as a nature preserve and wildlife sanctuary.

Table 3-1 provides a brief summary of the general land use pattern in the area, relative to the project site:

TABLE 3-1
LAND USE

Direction	Land Use Description
North	Wooded, low-density residential lots; church; athletic fields; tree nursery and gift shop
South	Wooded, low density residential lots
East	Open Space, Muttontown Preserve
West	Low-to-Medium density residential lots; Hoffman Center Nature Preserve & Wildlife Sanctuary

Zoning and Other Village Land Development Regulations

Zoning is important in determining the types of land uses that are most appropriate and permitted in an area, the area standards and specifications that must be applied to future development to meet a community's vision and ensure an appropriate and compatible development pattern, building density, and scale within the overall context of the area, and to prevent or lessen potential land use impacts. Most of the land within the Village of Muttontown, including the subject site, is zoned for single-family residential development. **Figure 3-2** shows the zoning districts for the subject property and the pattern of zoning in the vicinity.

The subject property is zoned Residence E-3 which allows for single-family homes on lots of 3 acres or more. In order to determine property yield, however, wetlands and adjacent wetland upland areas and "steep" and "very steep" slopes must first be subtracted from the gross property area pursuant to Chapter 158 ("Subdivision of Land") of the Village Code.

Chapter 158 of the Village Code addresses a variety of land use and development issues, including requirements for conformance to the Village's Official Zoning Map and Comprehensive Plan, minimum frontage requirements along improved streets, preservation of natural cover, establishment of natural buffers, protection of key natural features, and

establishment of recreational areas or remittance of fees in-lieu of on-site parkland. Chapter 55 ("Equestrian Bridle Paths") of the Village Code authorizes the Village to encourage (as well as to regulate) property owners who intend to subdivide or partition their property, to offer for dedication, equestrian bridle path easements to the Village for non-motorized use. Chapter 74 of the Village Code sets forth regulations relating to the protection of freshwater wetlands; Chapter 172 addresses tree removal; and Chapter 62 addresses site excavation and grading which are all relevant to the proposed action. Finally, Chapter 190, "Zoning," sets forth various land use and dimensional zoning standards and requirements for the Village's zoning districts and addresses construction on "slopelands" as defined by the Code.

The dimensional zoning requirements for the E-3 zoning district as established by the Village Code are summarized in **Table 3-2** below:

TABLE 3-2
INCORPORATED VILLAGE OF MUTTONTOWN
E-3 ZONING REQUIREMENTS

Parameter	Required
Minimum Net Lot area (acres)	3.0
Minimum Front lot line width (feet)	200
Minimum Front lot line width, on cul-de-sac (feet)	90
Minimum Lot depth (feet)	250
Minimum Lot width (feet)	200
Minimum Front yard depth (feet)	75
Minimum Side yard depth (feet)	50
Minimum Rear yard depth (feet)	50
Maximum Principal building height (feet)	35
Maximum Principal building height with a flat roof (feet; less than 6 to 12 pitch)	25
Maximum Accessory building height with a flat roof (feet; less than 6 to 12 pitch)	12
Maximum Accessory building height with pitched roof (feet; 6 to 12 pitch or greater) or without roof	18
Maximum Principal building area only (percent % of lot area)	4
Maximum Principal building area and all accessory buildings, including patios and decks (percent % of lot area)	13
Maximum building length, lots less than 3 acres (feet)	110
Maximum building length, lots 3 acres or more (feet)	150[(1)]
Minimum habitable floor area (square feet)	2,000
Maximum habitable floor area (square feet)	9,000

1. According to 190-8D of the Village Code, for every 1 foot of length in excess of 110 feet, the minimum side, rear and front yard setback requirement shall be increased by 2 feet for the principal building, or addition to an existing principal dwelling, for said addition.
2. Future residences will be subject to individual site plan review and approval by the Village.

Detached single-family residences are the primary principal as-of-right land use allowed in the E-3 zoning district. Customarily incidental land uses or activities that are permitted as accessories to single-family residences include home office and noncommercial uses, including the keeping of dogs, poultry, game, birds, bees, horses, and livestock. Accessory uses are subject to numerous standards and conditions as indicated by §190-10 B. of the Village Code, to promote harmony between adjacent developments and prevent nuisance conditions.

Properties immediately to the north are zoned E-3 and E-5, beyond which is an A-1 residence district (see **Figure 3-2**). To the east, the large tracts of public open space (i.e. the Muttontown Preserve) are also zoned E-3 and E-5. South of the property, the land is zoned E-3 and A-1, and to the west, the land is zoned A-1 and E-3. Permissible land uses in the A-1 and E-5 zoning districts are the same as those in the E-3 district, including primarily single-family homes. A minimum of two acres is required for A-1 lots, a minimum of 3 acres is required for E-3 zoned lots, and a minimum of five acres is required for E-5 zone lots. Zoning in the surrounding area fosters the creation of low density development consisting primarily of single-family residences on large lots, and the protection of natural resources and the natural and rural character of the area by limiting overall density.

Plans

New York State Open Space Conservation Plan ("OSCP") - The OSCP is a comprehensive statewide plan that describes current open space conservation goals, actions, tools, resources, and programs administered by state and federal agencies and conservation nonprofits. The 2016 revision to the OSCP was refocused and reorganized to present relevant priorities without altering the primary objective of land conservation for which the Plan was originally intended. This version of the Plan provides an integrated statewide strategy for land conservation and a more holistic view of the interconnections between the State's natural resources.

The goals and principles of the 2016 NYS Open Space Conservation Plan are provided below:

New York's Open Space Conservation Goals

- To protect water quality, including surface and underground drinking water supplies, lakes, streams and coastal and estuarine waters needed to sustain human life and aquatic ecosystems.
- To provide accessible, quality, outdoor recreation and open space to all New Yorkers.
- To protect habitat for the diversity of plant and animal species to ensure the protection of healthy, viable and sustainable ecosystems.
- To improve quality of life and overall health in our communities, especially those with limited current access to open space.
- To maintain critical natural resource-based industries such as farming, forest products, commercial fishing and tourism.
- To address global climate change by encouraging more compact community design patterns.
- To address global climate change by sustainable stewardship of our forests for climate mitigation and adaptation.

- To address climate change by protecting our coastlines, broad riparian corridors and wetlands.
- To address global climate change by adding to the tree canopy in our urban centers and urban communities to moderate temperature fluctuations, thereby lowering our energy consumption.
- To maintain an interconnected network of protected lands and waters enabling flora and fauna to adapt to climate change.
- To protect habitat to sustain the traditional pastimes of hunting, fishing, trapping and wildlife viewing.
- To provide places available to all New Yorkers for education and research relating to ecological, environmental and cultural resources.
- To protect and enhance scenic, historic and cultural resources considered to be valued parts of the common heritage of our citizens.
- To strategically preserve, restore, and/or create a matrix of natural systems sufficiently complex and interconnected to be self-sustaining while performing the critical natural functions necessary to sustain us.
- To improve quality of life with targeted green infrastructure that restores environmental benefits of open space, aesthetics, clean air, water, soil and access to nature in disadvantaged communities that have suffered an excessive, unfair share of environmental degradation.
- To identify, sustain, and rebuild natural lands, features, and systems that prevent or buffer impacts to life and property from extreme weather events.

New York's Open Space Conservation Principles

- Work in partnership with other levels of government, community groups, not-for-profit conservation organizations and private landowners to establish and achieve land conservation goals.
- When using land acquisition as a conservation tool, deal fairly and openly with property owners on a willing seller/willing buyer basis and work cooperatively with local governments and citizens.
- Expand the conservation tools available to communities and to individuals for undertaking complementary action at the local and regional level.
- Establish focused and achievable priorities for state action to conserve specific open space parcels and cultural resources.
- Identify various conservation tools, methods, strategies and actions for protecting a variety of open space resources.
- Establish conservation priorities through the objective measurement of urban and rural land conservation needs and broad-based citizen opinion.
- Identify future funding needs and stewardship expenses when proposing acquisition as a tool for land conservation.
- Strive to combat sprawl through smart growth planning at the local, regional and state planning level.
- Obtain meaningful involvement from the Environmental Justice community in the development of plan priorities.

The only recommendation from the plan that directly relates to the subject property and surrounding land including the Muttontown Preserve is the acquisition of land adjoining

Muttontown Preserve to prevent fragmentation of a heavily used horse and foot trail system in the Oyster Bay SGPA and containing rare plants, tiger salamanders, and glacial kettle-hole ponds **(NYSDEC, OPRHP & NYSDOS, 2016; OSCP, p. 85)**.

Nassau County Comprehensive Plan - As authorized by the Nassau County Charter, Article XVI (Planning Department), the Commission has primary responsibility for developing and adopting a County-wide comprehensive master plan and updating it at least every five years to assure that it remains current. In late 1998, the Nassau County Planning Commission adopted its Comprehensive Plan "…as a policy statement outlining its vision for the future of Nassau County. It focuses on protection of the County's natural resources, current and long-range growth and development which is compatible with the county's quality of life, and provides guidance to decision makers, residents, and organizations" (**NCPC, 1998**).

The Plan was divided into a number of general resource sections for which twenty-two (22) goals were identified, followed by 107 policy recommendations to achieve the goals, which were in turn followed by 332 specific implementation strategies. Following are the individual resource areas and overall goals enumerated in the plan that are pertinent to the proposed development:

Interagency Planning and Coordination

- The overall Goal for this chapter is to facilitate and encourage intermunicipal, interagency, and regional efforts which result in the efficient provision of services, project implementation and better communication.

Land Use

- The overall Goal for this chapter is to promote a balanced pattern of land use that encourages the concentration of future development in established areas with adequate infrastructure and facilities, so as to make efficient utilization of the transportation network, preserve the County's environmental and scenic resources, and revitalize the downtowns and Centers.

Environmental Resources

- The first major environmental Goal is to protect and preserve the County's critical natural resources, including the wetlands, aquifers, shorelines, water bodies, open space, significant vegetation and nature preserves.
- The second major Goal is to protect the quality and quantity of the County's groundwater and surface water resources.
- The third major Goal is to encourage the proper operation, maintenance and improvement of the wastewater treatment plants in the County.
- The fourth major Goal is to promote additional recycling of materials and support reliable options for disposal of non-recyclable; solid waste.
- The last major Goal is to support the timely clean-up of contaminated sites and the proper disposal of hazardous materials.

Transportation

- The first major Goal of this chapter is to enhance the availability and efficiency of mass transit options in order to improve air quality, reduce the number of single-occupancy vehicles, provide convenient service to residents and commuters, and reduce traffic congestion.
- The second major Goal is to maintain the function and improve the capacity of the roadway network to serve a variety of transportation purposes.
- The third Goal is to support opportunities for alternative forms of transportation.
- The fourth Goal is to develop transportation improvements which will enhance competitiveness for Nassau County's transportation, distribution, and production firms without adversely affecting local communities.
- The last transportation Goal is to support safety and efficiency improvements planned for the LIRR service which are designed to benefit local residents and employees commuting to and from Nassau County.

Housing

- The first major housing Goal is to encourage a diversified housing supply that consists of new residential construction, preservation and improvement of the existing housing stock, and reuse of vacant or underutilized buildings.
- The second major Goal is to provide greater rental and homeownership opportunities for County residents.
- The last Goal is to identify obstacles to housing access in the County and efforts to make changes, as well as opportunities to better understand housing market conditions and trends.

The Economy

- The first major Goal is to strengthen the County's economy by encouraging economic development activities which will provide jobs, increase the tax base, ensure a stable land use pattern, and diversify the County's employment sectors.
- The second major Goal is to support efforts to provide training and education which will produce skills required for the present and future labor force.
- The third major Goal is to support initiatives which are targeted at strengthening and improving the County's downtowns and Centers.

Culture and Recreation

- The first major Goal is to support and enhance the cultural facilities, services, programs and events in the County to improve the quality of life and encourage tourism.
- The second major Goal is to support the preservation of historic resources as key attributes to the quality of life and historic evolution of the region.
- The third major Goal is to provide sufficient parks, preserves, and recreational facilities to serve the current residents and growing segments of the population.

Community Facilities and Services

- The overall Goal for this chapter is to assure that there is an adequate system of public and private community facilities, as well as educational and social services to support current and future residents of Nassau County.

The Nassau County Comprehensive Plan recommended that the area encompassing the subject site be developed with a "Very Low Development Density" use (0.05 FAR[1] or less) (see **Figure 3-3**) but provided no additional recommendations for the subject property. The Plan also recommended that the County undertake an inventory of the bicycle, equestrian and pedestrian trails in the County and identify opportunities to establish linkages and greenways.

The 2003 Nassau County Comprehensive Plan Update (approved 1/12/2004) noted as follows:

> **Equestrian Resource Committee and Equestrian Activities**
> In 2003, the Nassau County Department of Parks, Recreation and Museums held two meetings of the Equestrian Resources Committee. This group was brought together by County Executive Thomas Suozzi in order to give the equestrian community in Nassau County the opportunity to voice its concerns. The primary goal of the group is to increase opportunities for equestrian related events and facilities within the County. As a result of these first meetings, the Parks Department will be releasing an "Equestrian Request for Proposals" (RFP) in early 2004. The goal of the RFP is to find a group that would be interested in constructing and managing an equestrian facility on a portion of the Muttontown Preserve.

It should be noted that such a facility is currently open and operating at the adjacent Muttontown Preserve. Persons and groups using the Preserve's trails also use existing trails at the north end of the subject property, although several additional short unconnected dead-end or abandoned and overgrown trail sections exist on the site (See also **Appendix I** for the Muttontown Horseman's Agreement and Muttontown Preserve trails map and the attached **Topographic Map** (attached). The **Topographic Map** shows several short unconnected trail sections on the subject Property, the longest of which runs from the west side of proposed Lot 6, south to the vernal pond and out to Muttontown Road. Another relatively long bridle path runs from Muttontown Preserve directly across the subject Property from east to west to the location of proposed Recharge Basin 1 which is shown on the attached **2020 Preliminary Map**. Bridle paths are more prevalent at Muttontown Preserve and are better connected. Paths are located on both sides of Muttontown Road, and loop and meander throughout the Preserve.

The Nassau County Master Plan was updated again in 2008. This Plan provided an overview of current conditions in Nassau County and described major initiatives that were both planned and underway. From 2003 to 2008, 99 percent of County Planning Commission subdivision applications were for residential development. During this period the County Planning Commission approved 675 single-family lots and 2,746 multifamily units. The median gross

[1] This equates to a 6,534 SF of gross floor area (GFA) for a 3-acre parcel. Note: The Village's E-3 requirements are as follows: maximum principal building area (expressed as a percentage of lot area) is 4 percent which or 5,227 SF for a three-acre lot); the maximum habitable building area is 9,000 SF; and maximum principal building area and all accessory buildings, including patios and decks is 13 percent of the lot which is 16,988 SF for a three-acre lot.

density of single family lots was 4.5 lots per acre, compared to a median gross density of 17.1 units per acre for multifamily developments.

During this period new single-family subdivisions were located primarily in the Town of Oyster Bay and north shore estate villages. Subdivision applications involving property in the Town of Oyster Bay primarily dealt with the creation of parcels ranging from 6,000 square feet to one acre in size. In the Village of Muttontown, the Stone Hill (aka "Kirby Hill") application subdivided 148 acres into 80 one-acre+ lots.

The Nassau County Planning Commission is currently in the process of updating the 2008 Plan (referred to now as the 2010 Plan) but a final version has not been submitted or adopted.

Nassau County Open Space Plan - In September 1999, in response to the recommendations of the Comprehensive Plan, the County Legislature initiated the Nassau County Open Space Project. Completed in 2001, this plan was the result of broad-based support for open space protection received by the county during preparation of the plan.

The plan listed a number of recommendations for county government to establish and implement a county-wide Open Space Plan. The first recommendation would establish a new Nassau County Open Space Committee, which would evaluate open space and natural resources in the County and recommend candidate sites to the County Planning Commission. The plan suggested a process and criteria whereby this new commission would characterize and prioritize these candidate parcels. The plan also discussed use of other private bodies which could preserve open space including The Nature Conservancy; the Open Space Preservation Trust, Inc., The Trust for Public Lands, and creation of a private County Land Trust. Finally, the plan included a listing of potential mechanisms to preserve and maintain existing parks and preserves in the county (**Frederick P. Clark Associates, Inc. & NCPC, 2001**).

The subject site was included on a list of properties to be considered for preservation, due to its open space and natural resources and proximity to existing walking and equestrian trails on the adjacent Muttontown Preserve. The Plan specifically mentioned the subject site, in this regard:

> "The Hall Estate and an adjacent vacant estate next to the Muttontown Preserve have also been shown as potential open space. These areas are conceived of as primarily passive open space, extensions of existing preserves and trails, or natural resource protection."

In August 2004 and September 2006, the Nassau County Legislature unanimously approved its $150 million "Environmental Bond Act Program." The $150 million Environmental Bond Act Program called for the preservation of 400 acres of open space that included 30 acres of the Hall Property in Muttontown. The funds for the acquisition of approximately 18.3 acres of the Hall property (tax lot 1098) from the $100 million NC Open Space Acquisition Bond Act of 2007

resulted in its purchase on April 30, 2009. **Figure 3-4** depicts open space near the subject property.

Special Groundwater Protection Area Plan - The project site is located within the Oyster Bay Special Groundwater Protection Area ("SGPA") as defined under NYS Law. The Long Island SGPA Plan (**Koppleman, 1992**) was prepared by the Long Island Regional Planning Board in in order to study land use and groundwater quality within several SGPA's on Long Island. The Plan makes several recommendations for appropriate watershed management to preserve and enhance groundwater quality within the SGPA's.

A "Special Groundwater Protection Area" is defined in the NY Environmental Conservation Law ("ECL") as:

> "A recharge watershed area within a designated sole source aquifer area contained within counties having a population of one million or more which is particularly important for the maintenance of large volumes of high quality groundwater for long periods of time. For the purposes of this article, each 'special groundwater protection area' shall be classified as a critical area of environmental concern as used under article eight of this chapter (Section 55-0107 ECL Article 55)."

As defined within the Plan, the Oyster Bay SGPA lies to the north of Jericho Turnpike between the Huntington town line and Glen Cove Road, although two heavily developed areas east of the site are excluded. The SGPA Plan makes specific recommendations for development within each SGPA, as well as general recommendations which are applicable to all of the identified SGPA's. The following text will briefly discuss these recommendations.

General Recommendations

Chapter 2 of the SGPA Plan provides general recommendations that pertain to all SGPAs on Long Island. The chapter provides a regional overview of groundwater resources on Long Island and discusses opportunities for protection and enhancement of groundwater quality. The plan then outlines general policy considerations, watershed rules and regulations, and best management practices ("BMPs"). The primary focus of the plan is the use of existing local land use regulations and sanitary codes to manage development, and to reduce residential densities to a level which is environmentally acceptable. Protection of open space through clustering, rezoning, and acquisition and preservation is also identified as important means of protecting the quality of groundwater recharge. The plan also discusses the use of existing regulations to control the discharge of hazardous materials from industrial and commercial development, although this issue is not relevant to the current residential proposal. The following text will analyze the sections of the plan that are applicable to the project site.

The Policy Considerations section of the chapter sets a goal of non-degradation of the aquifer, recognizing that some tradeoffs will be necessary based on economics or other social

considerations. The plan also discusses the regulation of sewage treatment plants within the SGPA, best management practices for limiting fertilizer and pesticide use in landscaped areas, preservation of open space, and other land use management techniques. A groundwater concern associated with development on Long Island is nitrogen loading from on-site disposal of sanitary wastes and lawn fertilization. Specific management practices that can be used at the subject site will be discussed in the impacts section of this document.

The open space section of the chapter discusses acquisition and other methods for preservation of open space within the SGPA's. As acquisition of the entire SGPA area is clearly impractical, the plan suggests that limitation of residential densities to five acre zoning and clustering be utilized to protect remaining large, undeveloped parcels. Five acre zoning is presented as a goal within the plan, and it was recognized that the individual towns and villages have final jurisdiction over residential densities. The plan recommends limits on multifamily and condominium development, and if social need warrants such construction, sewer hookup should be provided. In areas which are already developed at higher densities, which would include most of the Oyster Bay SGPA, the plan suggests that further development be allowed, with upzoning of unsubdivided lots where possible.

Specific Recommendations

Chapter 3 of the SGPA Plan inventories the characteristics of each individual SGPA and provides recommendations based on opportunities and issues and concerns which are specific to each SGPA. The subject property is located on the north side of Muttontown Road, between NYS Route 106 and Serenite Lane, in the Incorporated Village of Muttontown, Town of Oyster Bay, Nassau County, NY. The Plan analyzed the existing land use patterns and zoning within each SGPA and predicted the saturation density which would be permitted under pursuant to municipal zoning codes at that time. Soils, vegetation, hydrogeologic patterns and other existing conditions were also inventoried. This information was then utilized to develop a proposed land use plan (i.e., a future land use map) for the SGPA according to the goals of the Plan.

The subject property is shown on the SGPA plan as recommended "preserved future farmland" (see **Figure 3-5**). The Plan also recommends land acquisition and clustering to preserve open space and buffer sensitive areas within the SGPA. The Plan states that New York State, Nassau County, and municipalities should make every effort to preserve the existing open space character and recharge potential of the SGPA. The Plan also states that Nassau County should continue to acquire key watershed parcels and assist municipalities when they purchase land that are major components of greenbelts or other significant open space, watershed or conservation areas, and that non-residential zoning be restricted to existing commercial centers. The 1992 Plan also identifies a need to preserve property adjacent to the Muttontown Preserve. Section 2.4 includes an evaluation of the proposed project's consistency with the recommendations of the SGPA Plan.

Nassau County Public Health Ordinance - The Nassau County Public Health Ordinance ("NCPHO") dated June 2014 provides the County's overarching policy guidelines to protect the health and safety of the public under its authority. The NCPHO addresses various public health and safety topics, some of which involve issues that may be relevant to or will have an effect on the subject action, such as Article II, "General Sanitation," Article VI, "Drinking Water Supply," and Article X, "Groundwater Protection; Regulation of Sewage and Wastewater." The policies, standards and regulations contained within the NCPHO provide the regulatory framework for the NCHD to ensure that the standards of the NCPHO are implemented and enforced. The County does this by establishing the regulatory framework and working with, overseeing, inspecting, reviewing, and ultimately permitting and approving various actions. The primary applicable issues relating to the subject subdivision are ensuring an adequate volume of potable drinking water, protection of groundwater resources, especially in certain designated groundwater protection areas and making sure that sewage treatment practices are sufficient to safeguard public health.

Muttontown Comprehensive Master Plan - The October 13, 1969 "Village Comprehensive Master Plan" ("Master Plan") contains general guiding principles and a future land use map for achieving the community's vision for its future, and inasmuch, serves as a foundation for guiding the Village's zoning and land management policies. The 51-year-old plan provides brief discussions on the purpose and use of the plan, general background information (existing conditions) as it was in the Village 51 years ago in 1969, as well as recommendations regarding future development, roads and traffic, economic development, businesses and industries and Village facilities. Consistency with relevant policies and recommendations are discussed in **Section 3.1.2**.

3.1.2 Anticipated Impacts

Land Use and Open Space

The proposed project will not change the type of land use on the property (i.e., low-density single-family residential). In this sense, it will not significantly impact the general pattern of land use in the area or the type and density of development envisioned by the Village as reflected in its Zoning Code and pursuant to the Village's own E-3 zoning district. It is acknowledged, however, that the project will increase the overall density of the residential use of the site from a single currently occupied dwelling[2] to 20 new single-family detached homes and an accessory buildings such as a pool house on Lot 18 (former Pond Cottage); however, the project will fully comply with the Village's minimum three-acre zoning which was established pursuant to the Village Master Plan to maintain a desired density. In fact, the proposed subdivision, on average, will consist of one new dwelling unit for every 3.39 acres, after excluding areas required for streets, stormwater recharge, and parkland including wetlands, adjacent wetland areas, and the bridle path (i.e., average net lot size). A 50-foot deep buffer is also proposed

[2] Three of the existing dwellings are vacant.

around the entire perimeter of the 98.92-acre property which adds 12.36 acres of land that will not be disturbed. The 50-foot buffer will contain the 30-foot deep strip of parkland which will contain an 8-foot wide bridle path for public use which will meander throughout the perimeter parkland. This trail was partially constructed in the northern, eastern and westerns portions of the property, and required only limited underbrush removal with the 30-wide proposed parkland area. (The total 50-foot perimeter buffer including areas of parkland within it is 12.36 acres.) Moreover, the previous sale of 18.3 acres from the subject property (i.e., tax lot 1098 from the former Hall property) to Nassau County for open space preservation, has reduced the total development potential of the original estate property and increased the amount of open space in the area. At the same time, the proposed land development will provide additional property tax revenues for the Village and Town and make use of an underutilized residentially zoned property which contains several structures that have been vacant and abandoned for many years.

Zoning

The proposed subdivision is designed to fully conform to the dimensional standards, maximum lot yield, and land use requirements of the Village of Muttontown's E-3 zoning district. As a result, changes to the site's zoning and/or zoning variances are not necessary, and no significant impacts to land use and community zoning patterns are expected.

The project provides various lot sizes all with net lot areas that are equal to or larger than required by Code which reflects the applicant's desire to provide a range of lot sizes for potential homebuyers and facilitate the review and approval processes, and allows for preservation of the sites' freshwater wetlands, 100-foot wetland setbacks extending upland of the wetland boundary. These areas along with the proposed building envelopes and perimeter buffers will help to protect natural resources such as woodlands, wetlands, wildlife habitat, recreational resources (open space, parks and an improved on-site equestrian path system), groundwater recharge areas, rural scenic qualities/community character and the like. Buffers and wetlands setbacks, as well as the proposed parklands can be formalized through properly drafted and executed legal instruments such as a declaration of covenants and restrictions and/or conservation easements in a form that is satisfactory to the Village attorney. The Subdivision also provides park space that is accessible by the public for a proposed equestrian trail connection along the northern, eastern and western perimeters of the property connecting the Muttontown Preserve to the Hoffman Center, and south to the vernal pool in accordance with Chapter 55 ("Equestrian Bridle Paths") of the Village Code and the established standards outlined by the Village Trustees by Resolution at its February 14, 2020 public hearing.

Table 3-3 lists the lot and building requirements under the E-3 zoning district and examines conformance to applicable E-3 zoning standards for the subdivision which were deemed appropriate for the site by the Village upon adoption and subsequent revisions of its Official Zoning Map and Zoning Code. It is also noteworthy that the adjacent properties are either already developed or owned by the County or a private not-for-profit organization for

preservation, so that the proposed project does not have the potential to increase the possibility for development of these nearby sites as part of "spin-off" or growth-inducing development.[3] As a result, the proposed project is not expected to significantly impact the pattern or character of zoning in the area.

TABLE 3-3
INCORPORATED VILLAGE OF MUTTONTOWN
E-3 ZONING REQUIREMENTS AND PROJECT CONFORMANCE

Parameter	Required	Min. Provided
Minimum Net Lot area (acres)	3.0	3.0
Minimum Front lot line width (feet)	200	200
Minimum Front lot line width, on cul-de-sac (feet)	90	90
Minimum Lot depth (feet)	250	250
Minimum Lot width (feet)	200	200
Minimum Front yard depth (feet)	75	90
Minimum Side yard depth (feet)	50	60
Minimum Rear yard depth (feet)	50	100
Maximum Principal building height (feet)	35	To comply(2)
Maximum Principal building height with a flat roof (feet; less than 6 to 12 pitch)	25	N/A
Maximum Accessory building height with a flat roof (feet; less than 6 to 12 pitch)	12	To comply
Maximum Accessory building height with pitched roof (feet; 6 to 12 pitch or greater) or without roof	18	To comply
Maximum Principal building area only (percent of lot area)	4%	To comply
Maximum Principal building area and all accessory buildings, including patios and decks	13%	To comply
Maximum building length, lots less than 3 acres (feet)	110	N/A
Maximum building length, lots 3 acres or more (feet)	150(1)	To comply
Minimum habitable floor area (SF)	2,000	To comply
Maximum habitable floor area (SF)	9,000	To comply

[3] "Spin-off" or "growth-induced" development is secondary growth that is driven by the demands and opportunities that a new development presents (For example, new housing for employees of a large well-paying regional business that attracts new residents looking for work from outside the area). The cumulative effects of a project and the secondary development stemming from it, can further affect land use patterns and exacerbate traffic conditions, delivery of community services, and need for additional public infrastructure, and affect natural resources and other aspects of a community, depending on the type, scale, density, and intensity of a project, the demands it generates, and the opportunities it presents.

1. According to 190-8D of the Village Code, for every 1 foot of length in excess of 110 feet, the minimum side, rear and front yard setback requirement shall be increased by 2 feet for the principal building, or addition to an existing principal dwelling, for said addition.
2. Future residences will be subject to individual Site Plan review and approval.

Plans

New York State Open Space Conservation Plan – As discussed above, the Open Space Conservation Plan recommends that land adjacent to Muttontown Preserve be acquired to maintain and enhance the Muttontown Preserve Trail System **(NYSDEC OPRHP & NYSDOS, 2016)**. This recommendation was previously discussed in prior versions of the OSCP due to concerns that a portion of the Muttontown Preserve Trail System located outside the Preserve boundaries could become fragmented or lost unless actions were taken to protect these existing trails. The 2009 and 2016 OSCP also noted the environmental importance of the land due to its location within the Oyster Bay SGPA and because it contains rare plants, tiger salamanders[4], and glacial kettle hole ponds. It was also noted that the Preserve is part of the Long Island Trail and Greenway System and would require acquisition of parcels along trail corridors and greenways to provide non-motorized travel corridors for people and wildlife, and to link natural, recreational, and cultural attractions.

The long-standing goal of acquiring land adjacent to the subject parcel for preservation was partially fulfilled in 2008 when 18.3 acres of land that was once part of the subject property were acquired from the Hall Estate by Nassau County and incorporated into the Muttontown Preserve.

The following is a brief discussion of the proposed project's consistency with the Goals of the NYS Open Space Conservation Plan.

The policies of the Open Space Conservation Plan are advanced by the proposed subdivision as follows:

- The proposed project will protect surface and groundwater quality by use of approved individual on-site septic systems and stormwater collection on large oversized lots and stormwater detention and recharge systems, including drainage reserve areas to be provided in the western and northeastern sections of the subdivision parcel.
- The subject site, with its close proximity to Muttontown Preserve, will have easy access to outdoor recreational opportunities and will enhance recreational opportunities.
- The proposed project will include a 30-foot wide, roughly 1.8-mile long strip of public parkland that extends along the perimeter of the property from the south side of Lot 18, adjacent to the Muttontown Preserve, north, west and finally south to the vernal pond area. The park corridor

[4] The NYSDEC Division of Environmental Permits in its letter dated July 20, 2015 has indicated based on records and site assessments that eastern tiger salamanders are no longer present and "…the reoccupation of habitat by the [*sic*] eastern tiger salamanders on this property is unlikely." "Therefore, no Endangered Species Act – Incidental Take Permit is required to develop the subject property" (See correspondences in **Appendix D-4**).

will contain an 8-foot wide bridle path that will meander throughout the proposed parkland, including an approximately one mile stretch from the trail gate on the east side of the property connecting to Muttontown Preserve to the existing trail gate on the west side of the property connecting to the Hoffman Center property. The total land area devoted to the parkland is including perimeter trail area, wetlands, wetlands adjacent area and cemetery is +/-17.47 acres.

- The proposed project will retain the existing aesthetic quality of the site, not only for its residents, but also for the public at large, by retaining a 50-foot deep perimeter buffer consisting of natural vegetation, with the exception of minor clearing associated with the removal of underbrush and overhanging limbs within part of the 30-foot strip of parkland estimated to be +/-1.75 acres, to provide a safe and enjoyable bridle path. The total land area of the proposed parkland and remaining portion of the 50-foot buffer outside of the parkland is +/-17.47 acres.
- The proposed project will preserve a minimum of +/-17.47 percent of the property including on-site wetlands, a vernal pond within a kettle hole, upland areas within 100 feet of wetlands, and natural vegetation within the perimeter buffer. In addition, slopelands will be avoided to the extent possible to retain some of the topographic and geologic character of the area.
- The subdivision will provide aesthetically pleasing high-quality residential architecture that will benefit not only its residential occupants, but the community at large by adding to the pleasant residential neighborhood character of the area.
- The proposed project does not include any uses, features or activities that would be considered a significant source of air quality emissions or result in air quality impacts.
- The project site includes unique or rare habitat; however, as indicated by the NYSDEC Division of Environmental Permits in its letter dated July 20, 2015: "…the reoccupation of habitat by the [*sic*] eastern tiger salamanders on this property is unlikely." "Therefore, no Endangered Species Act – Incidental Take Permit is required to develop the subject property." The NYSDEC does, however, affirm in its letter that "…any construction, clearing, excavation, grading, or other ground disturbance located within 100 feet of either regulated Freshwater Wetland (System HV-5 or HV-15) will require a DEC permit in accordance with Freshwater Wetlands Permit Requirements Regulations (6NYCRR Part 663)." It is noted that no disturbance is proposed within the DEC regulated 100-foot wetland adjacent area. The applicant, owner or developer will seek such permits if and as required.
- The proposed project does not include any provision for hunting, fishing or the like, as this is a residential project in a residential area but will allow the use of an equestrian trail on-site by the public.
- The proposed project does not include plans for commercial woodland uses, such as farming, wood products, commercial fishing or tourism.
- The proposed project does not include plans for educational use of the site.
- The proposed project will retain a significant amount of natural vegetation including but not limited to wetland and wetland setback areas and perimeter buffer areas not affected by the bridle paths.

In summary, the subdivision design allows for the retention of natural vegetation, equestrian trails, perimeter buffers, and protection of wetlands and wildlife habitat on-site, while permitting the property to be subdivided and used for the purposes it was specifically zoned for at the density determined appropriate by the Village and its duly adopted Zoning Code. Moreover, the previous acquisition of the adjacent 18.3 acres of land on the east side of the

property by the County for incorporation into the Muttontown Preserve, after the original State recommendation in 2009 was a significant contribution to the State's goal for the area. Therefore, the proposed project along with previous actions affecting the site is consistent with the guiding principles and goals of the New York Open Space Conservation Plan.

Nassau County Comprehensive Plan - The proposed project addresses the relevant goals and policy recommendations of the Nassau County Comprehensive Plan recommendations as follows:

Land Use

- The proposed project will not change the type of land use on the site or the zoning of the site (i.e., low-density residential). In this sense, it will not significantly impact the pattern of land use or the intent of the zoning district established and determined by Village officials and the community to be appropriate for this property. It is acknowledged that the project will increase the current density/intensity of residential use on the site, but, in consideration of the low overall development density proposed (20 lots and 20 dwelling units where 21 lots is permitted, at 0.2 DU/acre or approximately 3.77 gross acres or 3.36 net acres per dwelling), the low-density residential uses of the area, and consistency with E-3 zoning requirements, no significant adverse impacts are anticipated to the pattern of land use or zoning in the area.

Environmental Resources

- Under the proposed project, an estimated +/-60.36 acres of natural vegetation will remain undisturbed at the site. This area, along with 0.61 acres of wetlands, represents approximately 61.6 % of the total site area.
- The proposed project will help to protect and maintain surface and groundwater quality by its low density/large lot design, preservation of natural areas and critical environmental resources, use of approved on-site septic system and ensuring an adequately sized and constructed stormwater collection and recharge system. A drainage reserve area is proposed for the northeast corner of the site. Previous subdivision of the parcel resulting in the sale of over 18.3 acres of land to the County for preservation also contributed to the protection of groundwater resources and went far toward reducing the overlay future development density of the former estate property. Also, minimum 100-foot wetlands setbacks and buffer areas will be provided around on-site wetlands to protect water quality, as well as ecological conditions.
- The fourth major Goal is to promote additional recycling of materials and support reliable options for disposal of non-recyclable solid waste. The future residents of the proposed subdivision must conform to Village Code, Chapter 150, "Solid Waste," including separation and proper disposal of recyclable materials to maximize environmental and economic benefits.
- Any contaminated conditions identified through the Phase I Environmental Site Assessment and the Limited Phase II Investigation of the property that requires remediation will be fully addressed and any hazardous materials that are recovered will be properly handled and disposed in accordance with applicable standards and requirements.

Housing

- The proposed subdivision will provide 20 new residential house lots that comply with the Village's minimum lot area requirement of 3 acres (net) set forth under its E-3 zoning but have a range of sizes to meet various needs and demands and account for areas containing wetlands and steep or very steep slopes. Due to the large minimum lot sizes and subdivision yield requirements established by the Village (which in this instance creates lots that have an average lot size of 3.77 gross acres), lots will likely have to be sold to middle or upper income families who can afford and are willing to invest in such large lots. The E-3 zone also restricts principal uses to just one type of land use (a single-family home) therefore precluding the possibility of multifamily residential developments that could be more affordably marketed and provide both owner-occupied and renter options to persons of more modest incomes. Applicants have elected to remove existing on-site buildings (with the exception of the Pond Cottage), several of which have fallen into disrepair.
- The second major Goal is to provide greater rental and homeownership opportunities for County residents. The subdivision will provide homeownership opportunities but won't provide rental opportunities as described above, which is beyond the applicant's control.
- The last Goal is to identify obstacles to housing access in the County and efforts to make changes, as well as opportunities to better understand housing market conditions and trends. Land values, market conditions, supply and demand for housing, regional economic conditions, development costs, and zoning largely control how land is developed and are beyond the control of the applicant.

The Economy

- The proposed project will strengthen the local economy by creating new development that will require demolition of existing structures, clearing, and site grading; construction of 20 new homes and associated residential accessory structures; construction of new street and drainage systems; and installation of driveways and individual on-site septic systems which will provide new jobs or perpetuate existing jobs, increase the tax base as discussed in Sections 3.2.1 and 3.2.2, and ensure a stable land use pattern. The construction industry and materials suppliers in the area are expected to benefit by the demand for construction materials during site development, while increased demand for goods and services from future residents can be expected upon completion of the project and occupation of the homes.

Culture and Recreation

- The proposed project will provide +/-17.47 acres of open space including a 50-foot deep perimeter buffer that will contain a 30-foot deep strip of parkland to be dedicated for use by the public as a bridle trail that connects to the Muttontown Preserve, as well as 100-foot deep wetland buffer areas around and adjacent to on-site wetlands. The proposed bridle path will be located within the outer 30-foot-deep stretch of perimeter buffer depicted on the proposed plans. The path itself will require clearing of underbrush and overhanging limbs comprising +/- 1.75 acres but efforts will be made to align the path so as to avoid trees and their unnecessary removal. The previous dedication of 18.3 acres of land to Nassau County in 2008 from the subject to expand the Muttontown Preserve also greatly enhanced recreational opportunities at the Preserve.

- A historic and archaeological assessment was conducted including an archaeological survey, examination of the State Cultural Resources Information System ("CRIS") historic resource database, a ground-penetrating radar ("GPR") analysis around the cemetery to search for unmarked graves, and coordination with OPRHP. The existing cemetery will be contained within the 50-foot deep buffer and the proposed bridle trail does not extend to the cemetery. In addition, the previously proposed subdivision access road has been relocated +/-135 feet east and farther from the cemetery to ensure its protection during the construction process. Based on input received from OPRHP, it was determined that the estate was eligible for listing in the State and National Registers of Historic Places and it was recommended that the Pond Cottage, its associated flower garden remnant, and the estate driveway from Muttontown Road be preserved (see **Section 3.4.2**). Therefore, these features will be retained and have been incorporated into the design of the **2020 Preliminary Map**.

The Plan also recommends that development occur at "Very Low Density" (0.05 FAR or less) on the site; however, the Nassau County Comprehensive Plan does not make the distinction between gross lot area and net lot area, and further notes that:

> The FAR ranges have been designed to overlap. This reflects the fact that they are intended only to represent general ranges of relative development intensity rather than fixed and specific numerical standards. The overlapping is also in recognition of the wide variation in existing development intensities and zoning in these areas.

Future homes on the subject property must comply with Village's maximum principal building coverage of four (4) percent, maximum building height of 35 feet, and maximum habitable area requirement of 9,000 SF unless variances are requested by the applicant and granted by the Village Zoning Board. Based on the foregoing, the project appears to be in general conformance with the above recommendation for very low density development.

In regard to the provision of an equestrian facility on the adjacent Muttontown Preserve recommended by the County, such a facility has been established. In fact, that facility utilizes unpaved trails that traverse a portion of the subject site's north end, which the proposed project will relocate as needed to be contained within the proposed parkland, extend, formalize, and dedicate for public equestrian use. As a result, the proposed project is consistent with this Plan.

Nassau County Open Space Plan – The 2001 Nassau County Open Space Plan shows the subject site on the County's "Potential and Existing Open Space Map" as a "potential open space." As indicated previously, 18.3 acres of the site was acquired by the County in 2008 and incorporated into the Muttontown Preserve in partial fulfillment of the site's potential as open space. Moreover, the proposed project has been designed specifically to achieve maximal open space preservation and protection, including the protection of wetlands, steep slopes, woodlands and wildlife habitat as well as existing equestrian trails that encroach on to the property, while maintaining the owner's development rights and the potential for an economic

return on significant investment, and providing an attractive and well planned and designed project that offers quality homes and properties for future residents, while protecting the interests of adjacent landowners.

Special Groundwater Protection Area Plan - The following discussion addresses the proposed project's consistency with the recommendations of the SGPA Plan. The SGPA Plan presents several recommendations for the Oyster Bay SGPA with which the proposed project will comply or have no impact. Specifically, the Plan recommends the protection of open space as well as the area on the west side of the Muttontown Preserve, east of the subject parcel which was once part of the property and has already been preserved (Tax Lot 1098). The SGPA Plan also suggests that the State, County and municipality consider acquiring open space in the area, which is the responsibility of these agencies and not the applicant. The SGPA Plan also states that non-residential land uses should not be established in areas that are outside of existing commercial zones, which also does not apply to the subject action as the required principal use of the land is single-family homes. The proposed project will leave an estimated 60.36 acres of the subject site as naturally vegetated open space and privately owned undisturbed land that lies adjacent to two nature preserves.

Overall, development of the proposed project will be consistent with the pertinent recommendations of the Oyster Bay SGPA and other groundwater management plans, while other recommendations do not apply.

Nassau County Public Health Ordinance (NCPHO) - It is the applicant's responsibility to ensure that future development conforms with applicable rules and regulations including but not limited to Article X of the NCPHO, that all required approvals are secured, and that work is performed with oversight from the County to ensure that the subdivision complies with all applicable County health requirements. Applicants will work closely with the NCHD to ensure that future sanitary systems are properly designed, sited and installed and that existing on-site wastewater disposal systems are located, inspected, sampled and pumped clean if necessary, and removed and backfilled with clean fill of a suitable texture under the supervision of the NCDH so that it may be granted approval for the subdivision. The developer will also ensure that the soil media is sufficient to ensure proper functioning of each septic system. The proposed development far exceeds the standard under Article X of the NCPHO for a minimum net 40,000 SF of land area per dwelling unit requirement by more than tripling this standard.

Based on a review of surface and subsurface characteristics and NCDH regulations, the proposed sizes of the proposed lots, anticipated design of future on-site sanitary systems by a qualified engineer, and future oversight and permitting by the NCHD, significant impacts to public health and safety or groundwater resources from on-site sanitary waste discharges are not anticipated. Moreover, the subject project is consistent with the standards of the area's SGPAs, and analyses performed for this DEIS, including evaluation of soil, geologic and hydrologic conditions, as well as assessment of future impacts from nitrogen loading, support a

finding that no significant impact is likely and the project will be consistent with the requisite requirements and intent of the Public Health Ordinance.

The proposed subdivision will rely on the Jericho Water District ("JWD") to furnish its drinking water based on its water delivery/consumption rates, install the requisite infrastructure, and abide by other requirements the County may impose. With regard to delivery of drinking water, the JWD has indicated that an eight-inch diameter water main must be installed on-site to serve the subdivision, which the applicant has agreed to do. It is incumbent upon the JWD and NCDH to ensure that the water supply is routinely monitored and that a suitable supply of potable water is furnished to future homes once the subdivision is connected to the system. The project team is continuing to work with the JWD to secure final water approvals but is confident that the district has sufficient infrastructure and water supply to fulfill the demand for the subdivision. See **Section 3.2** for more about community services.

Village Comprehensive Master Plan – Muttontown's October 13, 1969 "Village Comprehensive Master Plan" ("Master Plan") contains general guiding principles and a future land use map for achieving the community's vision for its future as determined in 1969, and as such, serves as a foundation for guiding the Village's zoning and land management policies. The 51-year-old plan provides brief discussions on the purpose and use of the plan, provides general background information (i.e., existing conditions in the Village in 1969), and contains recommendations regarding future development, roads and traffic, economic development, businesses and industries and Village facilities. Relevant recommendations of the Comprehensive Master Plan, proposed project consistency, and potential impacts are discussed below.

<u>Land Use and Development Density</u>
The Master Plan states that at the time of its preparation, there were just three residential zoning districts in the Village: Residence A-1 (minimum two acres per lot); Residence A-2 (minimum one acre per lot); and Residence A-3 (minimum one-half acre per lot) and indicated that "the present [i.e., 1969] overall character of two acres per family should be maintained" (Master Plan, Page 11, No. 2). Since 1969, the Village has created two additional residential zoning districts to meet the Master Plan's overall residential density objective of at least 2 acres per family in the Village. These "new" districts are the Residence E-3 district (minimum three acres per lot) which is the zoning of the subject property, and Residence E-5 district (minimum five acres per lot). In addition, the "Village Land Use Plan," which can be found on the last page of the 25-page Comprehensive Master Plan, is a color coded map that depicts recommended future land use and development densities of land throughout the Village and specifically recommends that the subject property be used for "low density residence[s]" at a density of "2 or more acres per family."

The proposed subdivision plat contains just 20 single-family residential lots which is one less than the maximum permissible yield under the property's E-3 zoning now that perimeter buffers do not have to be eliminated from yield calculations. Gross lot areas range between

3.05 and 6.21 acres with an average gross lot size of 3.8 acres and net lot areas (i.e., areas remaining after subtracting on-site freshwater wetlands, adjacent wetland areas, and slopelands with gradients of 15%) range between 3.0 acres and 5.38 acres, with an average net lot size of 3.39 acres. Based on the above assessment, the proposed subdivision is consistent with the Master Plan's land use and development density recommendations and fully compliant with the property's E-3 zoning requirements. Moreover, the above analyses do not take into consideration that back in 2008, 18.3 acres of the subject property was conveyed to Nassau County and incorporated into the Muttontown Preserve for use as open space and recreation, thereby further and significantly reducing the potential development density of the original property; particularly as considered in 1969.

Parks and Open Space

The 1969 Master Plan (pp. 23-24) also addressed the need for parks, open space and the retention of a rural character stating in part:

> No specific area is recommended on the Plan for a Village park, since there are many places which would be appropriate. An area of perhaps 25 acres should be sought as the opportunity is presented in the sale and disposition of property. The park should have direct access to one of the principal traffic roads in the Village. As part of its continuing review of the Village Plan, and especially through the subdivision review process, Muttontown will be able to study the appropriateness of Village lands for park and recreation purposes. As mentioned earlier, under its authority to require recreation land (up to 10% of the gross area of a proposed subdivision) or money in lieu of such land where no appropriate recreation sites exist, the Planning Board can add another useful and important function to its duties of land development review and control.

The proposed project not only complies with the land use, density, and zoning requirements and recommendations for the site but it has also has helped the Village to achieve and exceed its original Village-wide goal of creating "perhaps 25 acres" of additional parkland in the Village by providing a total of 10.53 acres of on-site parkland including a bridle path and the previous conveyance of 18.3 acres of land from the site in 2008 to the County as open space long after the 1969 goal was established for a total of 28.83 acres total. The proposed project also provides perimeter buffers and focuses open space protection along Muttontown Road to meet recommendations of the Comprehensive Master Plan for screening and maintaining a low density rural character, particularly along streets. Further discussion of park and open space requirements is provided in the subsection titled "Village Code Requirements for Recreational Areas and Public Use of Lands" below.

Infrastructure

The Comprehensive Master Plan also touches on essential infrastructure such as streets,[5] drainage,[6] water supply and wastewater management.[7] Since zoning codes must be consistent with a municipality's master plan, the Village Code contains a variety of standards and specifications to guide the design and development of streets and drainage. These requirements and specifications are further supported or guided by the regulations and standards of other agencies and entities such as stormwater control requirements set forth by the State. The proposed action is consistent with these policies and guidance and their design standards as detailed in this DEIS, including on-site collection and management of stormwater for the requisite design storm and conformance to applicable engineering and design standards for subdivision roads.

Issues such as water supply and waste management are overseen by others (i.e., Jericho Water District and Nassau County Department of Health, respectively) and the DEIS goes into significant detail regarding outreach to these agencies, project consistency with regulations, and required future cooperation in ensuring an adequate level of service delivery and a safe and healthy supply of water, and protection of the environment.

Village Code Requirements for Recreational Areas and Public Use of Lands

Chapter 158, Part 2, Article VI, Section 158-28 of the Village of Muttontown Code sets forth requirements for the reservation and dedication of "Recreation Areas and Public Uses" for subdivision applications. Subsection B of this section states that:

> In cases where the Village Comprehensive Plan does not show a recreation area within a proposed subdivision, and the Board of Trustees has made a finding that a proper case

[5] For example, page 20 of the Comprehensive Master Plan states: "[a]ll new roads built in the Village are likely to be strictly local in nature, built by developers in connection with subdivisions of land. The layout, design and standards of construction for all these new roads will be set by the Planning Board operating under regulations approved by the Village Board. The Village is now equipped with a modern set of regulations to guide this development, due to work completed about eight years ago at the start of the Village planning program."

[6] For example, page 20 of the Comprehensive Master Plan states: "[t]he Village's consulting engineer has prepared a comprehensive plan designed to solve the many drainage problems which will be encountered as the Village develops. In order to preserve the natural beauty of the land, the drainage plan contemplates the use of natural ponding areas with a minimum of large drainage pipes and related facilities. The concept calls for each subdivider of a tract of land to solve his own drainage problems within his own development, with the drainage facilities in each individual subdivision becoming part of a larger system that will eventually be complete as the Village is developed.

[7] The supply of public water is furnished to Village residents through the mains of the Jericho Water District with offices in Syosset. The District's mains are located along the major roads of the Village, making the extension of public water to buildings in new developments relatively easy. Fire hydrants are also available along these water mains. There is no public sanitary sewer system in the Village. For the most part, disposal of sewage is by individual septic tanks for each property. This method has generally proved adequate for the waste disposal requirements of low density residential development.

> exists for requiring that a park or parks be suitably located for playground or other recreational purposes, the Board of Trustees may require the dedication or reservation of designated sites for park, playground or other recreation purposes. Such sites shall be of suitable size, dimension, topography, location and general character for the particular purposes envisioned by the Board of Trustees. In no case shall the Board of Trustees require that more than 10% of the gross area of the subdivision be dedicated or reserved for recreation purposes. In calculating such percentage, the Board of Trustees may give due credit for open areas reserved, by covenants in all deeds, for the common use of all property owners in the proposed subdivision.

The Village Trustees held public hearings on February 8, 2017 and February 14, 2018 to discuss parkland requirements for the proposed subdivision, solicit input from the applicant's representatives and the public, and determine a course of action in this regard. The hearings included discussions on a variety of topics including:

- the current inventory of public parks, preserves, and private recreational facilities in the Village;
- the level of need for open space and public recreational facilities, including any additional demand that may be placed on public parks, open spaces, and recreational facilities from the proposed subdivision;
- whether a fee-in-lieu of parkland should be required or whether an actual dedication of on-site open space or recreational facilities was warranted;
- the amount of parkland that must be provided as a percent of the total land area of the property if on-site dedication is the preferred course of action;
- the type of parkland that is needed and would be most beneficial to the community based on site location and land characteristics; and
- the general location of any required on-site open space and parkland.

The Trustees concluded at its February 14, 2018 meeting by affirming a series of motions requiring that the:

- Village's open space and parkland requirement be fulfilled by an on-site dedication of land;
- That the dedicated parkland and open space include a bridle path with sections having a north/south and east/west alignment and a connection to Muttontown Preserve, and that the space be used to protect important environmental features on-site as open space; and
- The parkland be concentrated along the south side of the property near Muttontown Road.

To fulfill the above requirements, the applicant has provided ±10.53 acres of parkland and open space on-site which is ±11.2 percent of the gross land area of the 98.92-acre property, thereby *exceeding* the *maximum* allowable 10 percent requirement. The proposed parkland will include a 30-foot-wide strip of land along most of the 50-foot deep perimeter buffer and a large area of open space around the vernal pond and its adjacent wetland and upland areas, the cemetery and nearly all of the 100-foot cemetery easement, including some areas of steep and very steep slopes at the southwest end of the property (see **2020 Preliminary Map**). The 30-foot deep perimeter parkland will contain a bridle path that will stretch from the south side of the subject property near Lot 18, adjacent to the Muttontown Preserve, all the way around to the

southwest corner of the property to the open space area that will surround the wetland and adjacent uplands. The location of the proposed bridle path along the east side of the property will facilitate connections to existing bridle paths at the Muttontown Preserve and enhance public recreational opportunities. The total length of the outer perimeter of the perimeter parkland containing the bridle path is ±1.81 miles, one-way, or ±3.62 miles, both ways. Based on the preceding, the proposed parkland, will fully comply with the Village's requirements, and in the case of the percentage of land to be dedicated, will exceed the Village's *maximum* requirement.

3.1.3 Proposed Mitigation

- Mitigations have been incorporated into the project plans. No further mitigation is provided as:
  - The project is not anticipated to significantly change the nature of land use of the area as the project proposes a low-density single-family residential development that is designed to conform to Village zoning and is consistent with the large lot/low-density wooded single-family residential and open space character of the area.
  - The proposed subdivision plat contains just 20 lots with gross lot areas ranging between 3.05 and 6.21 acres with an average gross lot size of 3.8 acres. Net lot areas (i.e., areas remaining after subtracting on-site freshwater wetlands, adjacent wetland areas, and slopes of 15% or more) for the protection and perpetuation of these resources range between 3.0 acres and 5.38 acres, with an average net lot size of 3.39 acres.
  - The proposed lots are designed to conform to the dimensional requirements of the Village Residence E-3 zoning district.
  - The proposed project is consistent with Plans that govern the subject property, including the New York State Open Space Conservation Plan, Nassau County Comprehensive Plan, and the Nassau County Open Space Plan.
  - The proposed project will protect 0.61-acre of wetlands, an additional 100-foot buffer around the wetlands, and perimeter buffer for screening and use as open space and a horseback riding trail that extends from the Muttontown Preserve around the northern perimeter of the site and south along the western property boundary to the Hoffman Center property.
  - Consistency with recommendations of the Oyster Bay Special Groundwater Protection Area including previous sale of an 18.3-acre portion of the subject property (Lot 1098) now or formerly owned by the County of Nassau) and incorporated into the Muttontown Preserve for open space and protection of natural resources

3.2 Community Services

3.2.1 Existing Conditions

<u>Public Schools</u>

The Silver Path Estates property is located within the Oyster Bay-East Norwich Central School District. The Oyster Bay-East Norwich Central School District consists of three schools: Theodore Roosevelt Elementary School (Grades K-2), James H. Vernon School (Grades 3-6) and Oyster Bay High School (Grades 7-12). The District's 13.1 square miles include the hamlets of

Oyster Bay and East Norwich and the Incorporated Villages of Centre Island, Oyster Bay Cove, Cove Neck, and portions of Mill Neck, Muttontown, Laurel Hollow and Upper Brookville (**Figure 3-6**).

NPV sent letters to the Oyster Bay-East Norwich Central School District on August 20, 2015 and July 28, 2020 requesting the following information:

- Names and locations of the schools which will serve the students generated;
- Current enrollment of each school;
- Overall school district expenditures on a per student basis;
- Projected enrollments at each school;

The response letter, contained in **Appendix E** is summarized below:

Oyster Bay High School	723
James H. Vernon School	480
Theodore Roosevelt Elementary School	355
Total:	**1,558**

The District responded that enrollment is currently flat. The cost to educate students is $24,423/student for general education students and $42,237/student for special education students. The district enjoys the lowest true value tax rate in Nassau County, yet its pupil expenditure is reportedly one of the highest in the county **(OB-EN CSD, 2020)**.

Currently, there is only one occupied residence on the subject property (i.e., the Gardener's Greenhouse Cottage). The total estimated number of school age children who would attend public schools from this one home is one (1).[8]

Total school tax revenues generated from the property in 2019-20 totaled $291,959. The School Budget for the 2019-20 school year was $58,748,267 or 1.98 percent higher than the previous year's budget. The current 2020-2021 Budget is $60,128,038, a 2.35% increase from the prior year.

Property Taxes

Table 3-4 below provides a summary of the current tax rates and the taxes that were paid for the site, based on the most recent tax bills (2020 Tax Year for the School District, Town and County provided by the Nassau County Department of Assessment and 2019-20 Tax year for the Village) provided by the Village of Muttontown Clerk/Treasurer's office. At present (2020),

[8] Based on Rutgers University Residential Demographic Multipliers (2006) for "All School Children" living in 3-bedroom single-family detached residence valued at greater than $194,500 in the State of New York (0.58 per dwelling) (Burchell *et al*, 2006) and US Census Bureau public vs. private school enrollment data (76.5% vs. 23.5%) (Table B14003), Oyster Bay-East Norwich Central School District (2014-2018), ages 5 through 17.

the existing assessed value for the site totals $42,023 for Nassau County taxing purposes and $2,632,800 for Village taxing purposes. Assuming such assessments and the current tax rates, the subject site generates a total of $433,061 in taxes annually. The East Norwich-Oyster Bay Central School District receives the largest single share of the taxes generated, $291,059 annually, or 67.4% of all taxes paid. **Table 3-4** provides a breakdown of tax rates, current tax revenues and percent of total taxes by taxing jurisdiction.

TABLE 3-4
TAX GENERATION AND DISTRIBUTION - EXISTING CONDITIONS

Taxing Jurisdiction	Class I Tax Rate (per $100 Assessed Valuation)	Current Tax Revenue	Percent of Total
School Taxes (East Norwich-Oyster Bay Central School District)	**694.760**	**$291,959**	**67.4%**
Library Taxes	**25.415**	**$10,680**	**2.5%**
Nassau County Taxes	**123.754**	**$52,005**	**12.0%**
County General Fund	11.677	$4,907	1.1%
County Environmental Bond	2.535	$1,065	0.2%
Fire Prevention	4.345	$1,826	0.4%
Nassau Community College	12.183	$5,120	1.2%
County Police Headquarters	90.056	$37,844	8.7%
New York State Property Tax Refund Fund	0.000	$0	0.0%
Storm Water Resources Zone of Assessment	2.958	$1,243	0.3%
Town of Oyster Bay Taxes	**58.833**	**$24,723**	**5.7%**
Town General Fund	58.833	$24,723	5.7%
Special District Taxes	**6.765**	**$2,854**	**0.7%**
Jericho Water District	6.765	$2,843	0.7%
Unpaid Water Taxes	--	$11	--
Village of Muttontown Taxes	**2.004**	**$50,839**	**11.7%**
Village Tax	1.643	$41,335	9.5%
East Norwich Fire Company	0.361	$9,504	2.2%
TOTAL: ALL TAXING JURISDICTIONS	**918.296**	**$433,061**	**100.0%**

Police Protection

Police protection is provided by the Muttontown Police Department. Muttontown Police station is located at One "Raz" Tafuro Way in Muttontown which is slightly over one (1) mile from the project site. Response time to the site from the police station, therefore, is 1 to 2 minutes but may be more or less for patrolling officers. **Figure 3-7** depicts emergency services districts in the area of the site.

Fire/Emergency/Ambulance Services

Fire protection and ambulance services for homes located on the subdivision parcel are the responsibility of the East Norwich Fire Company No. 1 which is located at 900 Oyster Bay Road in East Norwich. The East Norwich Fire Company is an all-volunteer fire department with ±75 firefighters, 13 Emergency Medical Technicians ("EMTs"), three EMT-Paramedics, three EMT-Critical Care personnel, and 18 FAST Team qualified members. The East Norwich Fire Company is located approximately two miles from the project site or a 3 to 4 minute drive from the site and serves the communities of East Norwich, Upper Brookville, and parts of Brookville and Muttontown. Based on the most recent information available, the fire company has the following equipment:

(1) Heavy Duty Rescue Truck;
(2) New York State Certified Ambulances;
(1) 2,000 GPM pumper;
(1) 4-wheel drive 1,500 GPM pumper;
(1) 2,000 GPM truck with a 75-foot ladder;
(1) 95-foot Aerial Platform with a 2,000 GPM pump;
(1) Pickup truck with plow;
(3) Chief cars;
4,000 feet of 5-inch hose; and
1,000 feet of $1^3/_4$-inch hose.

Hospital Services

Syosset Hospital is located along Jericho Turnpike and is less than three miles from the project site.

Water Supply

The Jericho Water District ("JWD") provides public water service to the area. The main supply of water to the subdivision will come from one of two wellfields which have a combined total of three (3) wells. Both wellfields are located approximately 1.5 miles from the subject property but are all connected to the same water distribution system. The current water demand for the two occupied dwellings as indicated in **Table 1-1** is as follows:

Domestic:	750 gpd
Irrigation:	6,969 gpd
Total:	**7,719 gpd**

Solid Waste Removal

Occupancy of the existing occupied residences on-site is estimated to be +/-3 persons. Assuming a solid waste generation rate of 4.4 lbs/day/person provided by the **USEPA (2015)**, the total current solid waste generation is estimated to be 13.2 lbs per day.

Solid waste removal in the Village is provided by a private carter under the jurisdiction of the Board of Trustees. Village Code Chapter 150, Article I contains regulations pertaining to requirements for materials separation and recycling and Article II regulates the collection and disposal of garbage and refuse.

Energy Suppliers

There are existing PSEG Long Island service facilities in the area and on-site which currently serve the existing occupied residence on the subject property. NPV also sent letters to National Grid on July 20, 2015, March 8, 2016, and June 29, 2020 requesting information about the availability of natural gas in the area. On April 13, 2016, NPV received a telephone call from a representative of the utility who indicated that there are currently no natural gas lines along Muttontown Road and that the closest available lines are along NYS Route 106 at the intersection of Muttontown Road and NYS 106 and along Brookville Road at the intersection of Muttontown Road and Brookville Road. **Appendix E** contains a summary of the information received from service providers. To date, responses to the most recent correspondences have not been received.

3.2.2 Anticipated Impacts

Public Schools

Letters were sent to the Oyster Bay-East Norwich Central School District on July 20, 2015 and June 29, 2020 requesting information about the School District and any issues, concerns or recommendations the District may have. The School District responded to the July 20, 2015 by letter dated August 20, 2015 which provided information about the current enrollment in its elementary, junior-high and high schools and the per student costs to educate general education students and students with disabilities. The School District also responded to NPV's July 20, 2020 letter by letter dated July 28, 2020 which updated the current enrollment and costs per student. The information received is provided in **Section 3.2.1** and all correspondence are provided in **Appendix E**.

The proposed project will involve the construction of 20 new single-family homes in place of one existing occupied home and is expected to generate a total of 29 students, of which 22 are anticipated to be enrolled within public schools in the Oyster Bay-East Norwich Central School District. This represents 21 more students than is currently projected to attend the public school system from existing on-site residential uses. The Pond Cottage structure is being retained but is to be used as an accessory structure and therefore is not expected to generate school age children that would otherwise affect the school district.

The estimated 22 school-aged children anticipated to attend public schools within the Oyster Bay-East Norwich Central School District will result in additional costs to the school district; however, this cost will be offset by the school tax revenue generated by the proposed project

upon full taxation, with a substantial surplus that will benefit the school district as noted in **Table 3-5** below. The ratio of special education students to the total enrollment within the Oyster Bay-East Norwich Central School District is approximately 13.9%.[9] For lack of any other statistics to use as a basis for projection, it is assumed that the portion of special education students will remain constant with the development of the proposed project. When applied to the estimated 22 school-aged children that are projected to attend public schools, it is anticipated that 19 of these students would be enrolled within the general education program, while three (3) of these students would be enrolled within the school district's special education program. Given the assumptions regarding the per-pupil expenditures of $24,423 for general education students and $42,237 for special education students, it is estimated that the 22 public-school students will result in additional costs to the Oyster Bay-East Norwich Central School District amounting to approximately $590,748 per academic year.

As seen in **Table 3-6**, the proposed project is anticipated to levy tax revenues for the Oyster Bay-East Norwich Central School District, estimated to total $1.1 million per year, upon full build-out and full taxation. These property tax revenues would cover all associated expenses incurred by the 22 public-school students, resulting in a net surplus revenue to the school district of over $521,000 per year upon full taxation of the property. This is shown in **Table 3-5**. Additional revenues will also be generated through various other sources and factored into the school district's financial planning. This net revenue could ease the district's need to tap into additional fund balances and could also help alleviate an increased burden on other taxpayers throughout the district.

TABLE 3-5
FISCAL IMPACT ON SCHOOL DISTRICT
Proposed Project

Parameter	General Education	Special Education	Total: All Students
Student Enrollment: Existing Conditions	1,540	249	1,789
Percentage of Enrollment: Existing Conditions	86.1%	13.9%	100.0%
Number of Additional Students in Public Schools: Proposed Project	19	3	22
Expenditure per Pupil: Existing Conditions	$24,423	$42,237	--
Additional Expenditures: Proposed Project	$464,037	$126,711	$590,748
Projected Tax Revenue Allocated to School District: Proposed Project			$1,112,200
Net Additional Revenue			**$521,452**

Source: Oyster Bay-East Norwich Central School District; New York State Education Department; Analysis by Nelson, Pope & Voorhis, LLC.

[9] New York State Department of Education, data specific to the 2017-18 academic year.

The additional students generated by the subdivision will increase demands on the School District but will be mitigated by the increased property tax revenues generated by subdivision.

Property Taxes

Real estate tax revenue supports community services. The largest recipient of tax revenue is the Oyster Bay-East Norwich Central School District. Other Village, Town and County community services are also supported by tax revenues and will receive an increase in tax revenues from the proposed project.

The assessed valuation for the proposed project was determined based on an analysis of 11 comparable single-family homes, five of which are in the Stone Hill Subdivision located off of Jericho Turnpike in the Village of Muttontown; the other six comparable properties are located in other parts of Muttontown. Comparables were constructed between 2010 and 2019 (average 2013), were between 4,500 SF and 8,100 SF (average 6,356 SF) and contained between 4 and 7 bedrooms for an average of 5.6 bedrooms. Listing prices/sold prices of the 11 comparables ranged between $2,280,000 and $5,200,000, with an average listing/selling price of $3,201,682. Sales prices are expected to be more than full value for taxation purposes and ultimately, it is the assessor who determines this value. A reasonable full value for the new homes on the subject site is estimated to be $64,033,636, or $3,201,682 per lot for County taxing purposes, based on new construction of a six (6) bedroom home. This is considered to be reasonable given the setting with restricted clearing and existing comparable sales in the Village.

Full value is adjusted to determine total assessment by a factor of 0.25% of value for County taxing purposes, and 10% of value for Village taxing purposes. As a result, each home is expected to have a total assessment of $8,004 for County purposes and $501,475 for Village taxing purposes. This taxable value is then used to compute the tax amount. For the school tax levy, the tax rate per $100 of assessed value is 694.760 and is 25.415 for library tax, both levied by the Oyster Bay-East Norwich Central School District. This results in a tax amount of $55,610 for school tax and $2,034 for library tax for each new home.

Table 3-6 shows the tax rates and revenues that are projected to be levied from the build-out of the proposed project. The information provided in the table was derived from the current assessment rates provided by the Village of Muttontown and Nassau County Department of Assessment tax bills, as well as the total projected assessed value as noted above. The final assessment and levy will be determined by the sole assessor at the time of occupancy. Projections included herein are as accurate as possible using fiscal impact methodologies, for the purpose of the planning and land use approval process.

TABLE 3-6
TAX GENERATION AND DISTRIBUTION, 2019-20 TAX YEAR
Proposed Project

Taxing Jurisdiction	Class I Tax Rate (per $100 Assessed Valuation)	Current Tax Revenue	Projected Tax Revenue	Change in Tax Revenue	Percent of Total
School Taxes - East Norwich/Oyster Bay Central School District	**694.760**	**$291,959**	**$1,112,200**	**$820,241**	**67.4%**
Library Taxes	**25.415**	**$10,680**	**$40,685**	**$30,005**	**2.5%**
Nassau County Taxes	**123.754**	**$52,005**	**$198,110**	**$146,105**	**12.0%**
County General Fund	11.677	$4,907	$18,693	$13,786	1.1%
County Environmental Bond	2.535	$1,065	$4,058	$2,993	0.2%
Fire Prevention	4.345	$1,826	$6,956	$5,130	0.4%
Nassau Community College	12.183	$5,120	$19,503	$14,383	1.2%
County Police Headquarters	90.056	$37,844	$144,165	$106,321	8.7%
New York State Property Tax Refund Fund	0.000	$0	$0	$0	0.0%
Storm Water Resources Zone of Assessment	2.958	$1,243	$4,735	$3,492	0.3%
Town of Oyster Bay Taxes	**58.833**	**$24,723**	**$94,182**	**$69,459**	**5.7%**
Town General Fund	58.833	$24,723	$94,182	$69,459	5.7%
Special District Taxes	**6.765**	**$2,854**	**$10,830**	**$7,976**	**0.7%**
Jericho Water District	6.765	$2,843	$10,830	$7,987	0.7%
Unpaid Water Taxes	--	$11			--
Village of Muttontown Taxes	**2.004**	**$50,839**	**$200,991**	**$150,152**	**11.7%**
Village Tax	1.643	$41,335	$164,785	$123,450	9.5%
East Norwich Fire Company	0.361	$9,504	$36,206	$26,702	2.2%
TOTAL: ALL TAXING JURISDICTIONS	**918.296**	**$433,061**	**$1,667,829**	**$1,234,768**	**100.0%**

The proposed development will increase total annual taxes generated by the subject property from $433,061 to $1,667,829, for an increase of $1,234,768. School taxes, which comprise the largest portion of the property taxes, will increase from $291,959 to $1,112,200 for an increase of $820,241 annually, which is approximately 281 percent higher than is currently generated from the subject property.

Police Protection

NPV sent letters to the Muttontown Police Department on July 20, 2015 and again on June 29, 2020 requesting information about the police department and any issues, concerns or recommendations the Department may have regarding the proposed Subdivision. NPV received correspondence dated November 19, 2015 from the Chief of Muttontown Police, Phil

T. Pulaski which provided information relating to the location of the Village police station (which is just a +/-1.5 mile drive from the project site) and states:

> "…the concern I have with our capacity to serve your location is related to the proposed subdivision's maintenance of the roadways. The roadways must be properly maintained, plowed, salted, etc., to allow easy and safe access by emergency vehicles to the entire community."

A homeowners association ("HOA") will be formed and will be responsible for maintaining the subdivision roads and ensuring safe and unrestricted access by police and all others at all times. This would include plowing, sanding, deicing, and general road maintenance. The costs of maintaining the roads will be covered by HOA fees paid by each property owner in accordance with applicable NYS laws. **Appendix E** includes a copy of Chief Pulaski's letter.

No response to the June 29, 2020 letter had been received by the time the DEIS was finalized.

Fire Protection/Rescue and Ambulance Services

Letters were sent to the East Norwich Volunteer Fire Company on July 20, 2015 and June 29, 2020 requesting information about the Company's fire-fighting and emergency medical response services and input on any issues, concerns or recommendations the Company may have. East Norwich Volunteer Fire Company Fire Chief, Wayne R. Placella, responded in his October 25, 2015 correspondence that there are:

> "[n]o present issues or concerns at this time other than the fire hydrants will be adequately spaced apart (500ft)."

Hydrants will be spaced in accordance with Chief Placella's requirements. The proposed streets are designed to allow safe and efficient access by large vehicles such as fire trucks and sufficient turning radii are provided at the ends of Fan Courts East and Fan Court West. Proposed streets will be maintained, plowed, sanded and/or deiced by a private maintenance staff or contractor hired by the HOA at the HOA's expense to ensure unrestricted emergency access to every house lot. The Chief had no comment and raised no concerns regarding the delivery of ambulance services to future residents of the 20-lot subdivision. The Chief's letter is available for review in **Appendix E**.

No response to the June 29, 2020 letter had been received by the time the DEIS was finalized.

Solid Waste Handling

The proposed 20 lot subdivision is expected to have a population of +/-85 persons[10] which would be expected to generate +/-374 lbs per day or +/-68.26 tons per year. The 85 new residents are a small fraction of the Village's total population and will not significantly increase solid waste generation. Private solid waste carter(s) would be hired by the HOA or individual households and solid waste would be shipped to a licensed solid waste disposal facility.

As per Chapter 150, "Solid Waste," Article II, "Recycling," the Village will provide each homeowner with color-coded recyclable materials containers. Residents are responsible for separating their recyclables from non-recyclable refuse and placing them in Village-approved containers that have been designated for each recyclable waste stream and leave the respective containers out for pickup by a private carter on the scheduled day of pickup. Newsprint must be bundled and securely tied with a string or placed in a brown paper bag. The privately contracted carter must pick up the recyclables and deliver them to the appropriate recycling facility.

Public Water Supply

The total projected water demand one the subdivision is constructed and fully occupied is +/-18,000 gpd of domestic water use (900 gpd per home) and +/-26,229 gpd for irrigation purposes for a total of +/-44,229 gpd.[11] An October 15, 2015 email correspondence from Peter Logan of the Jericho Water District (see **Appendix E**) indicates that the District does not currently impose water use restrictions; however, it was noted that the District's greatest concern is the anticipated increase in water consumption as the site goes from two active residences to 20 active residences and additional site landscaping. Mr. Logan also noted that although the District does not have water restrictions or caps, Nassau County regulations do restrict lawn watering. An eight-inch water main must be installed on the subdivision property to serve each of the proposed house lots. Laterals will also have to be installed from the street to each home to provide individual service connections. The applicant will begin the process of water main design and formal agreements with the Water District upon the issuance of a preliminary approval of the subdivision (so the roadway and lot layout are known).

A letter was sent to Jericho Water District on June 29, 2020 requesting any input, issues, concerns or recommendations the JWD may have regarding its current ability to provide service to the proposed subdivision and a reminder email was sent to Mr. Logan on August 19, 2020. A response was received from Mr. Logan by email dated September 23, 2020 stating:

[10] The projected population, as previously established in Section 1, Table 1-1, is based on 4.23 persons per 5-bedroom single-family detached residence valued at greater than $748,500 in the State of New York (Burchell et al, 2006).

[11] Assumes all landscaped areas are irrigated at 24.0 inches/year (one inch per week over a six month irrigation season) which is averaged over the course of one year to get average gpd.

> Attached is a "Deposit for Study" agreement and the proposal from our engineers, D&B Engineers & Architects, to perform a feasibility study on the impact that Silver Path Estates will have on my district's infrastructure. Kindly execute the agreement, and forward that along with a check for the cost of the study, to me at your earliest convenience.

See **Section 2.4.2, "Water Resources,"** for more on drinking water.

Wastewater Treatment

Total projected wastewater generation for the proposed subdivision, as determined in Section 1 of this DEIS is 18,000 gpd based on NCDH's 900 gpd standard for single-family residences on any lot larger than one acre.[12] Wastewater treatment and disposal will involve the construction of individual on-site septic systems for each home. Systems will be designed, sited, and installed in accordance with NCDH standards and requirements. Soils at each sanitary system location will be inspected and any soil encountered during excavation that are found to be unacceptable will be removed and replaced with clean sand of a texture and to a depth acceptable to the NCDH to ensure suitable system functioning and public health and environmental protection. Siting of sanitary systems will be in accordance with required setbacks including setbacks from wetlands, waterbodies, property lines, and other applicable setback requirements. Lots at the site will be very large and range from 3.05 acres to 6.21 acres with an average gross lot size of 3.8 acres +/-165,528 SF and have an average net lot size of 3.39 acres or ±147,688 SF (ranging from 3.00 acres to 5.38 acres). The minimum 3.00-acre (i.e., at least ±130,680 SF) net lot size proposed for the subject subdivision far exceeds the minimum 40,000 SF lot size requirement per single-family dwelling established by Article X of the NCPHO. In fact, the proposed net areas of the lots exceed the County's minimum lot size standard by between 3.27 and 5.86 times the minimum requirement (See **Section 3.1.2** for additional discussion of Article X of the NCPHO). These large lot sizes also provide ample space to properly site sanitary systems on each lot to avoid areas of steep slopes and comply with system setbacks. Considering the substantial depth to groundwater in the area, a commitment to ensure properly drained soils are provided around leaching pools should restrictive soils be encountered, the large lot sizes of the proposed lots, which fully comply with Village lot area standards and the recommendations of the SGPA Plan and NCPHO, and necessary review and approval by the NCDH, no significant impacts from on-site wastewater disposal are anticipated.

Energy Supply

PSEG Long Island responded to an original request for confirmation of service indicating in its October 20, 2015 letter that:

[12] NCDH can waive this requirement for 5-bedroom homes when it can be demonstrated that 750 gpd is appropriate.

> "…PSEG will provide service to the above referenced project in accordance with our filed tariff schedules in effect at the time service is required.

A copy of the letter from PSEG is available for review in **Appendix E**.

The cost to extend National Grid's utilities is $101/foot (in 2016 dollars) but with a 20-lot subdivision the utility would provide 2,000 feet of line free of charge. The estimated distance from NY 106 to Woodhollow Court is +/-4,137 feet and from Brookville Road to Woodhollow Court it is +/-2,519 feet. National Grid will need to know the anticipated total natural gas demand from the subdivision before they can guarantee service (memo to file, **Appendix E**). In addition, National Grid has stopped processing new applications for gas service due to NYSDEC's denial of a water quality permit for the Williams Pipeline ("NESE" project); nevertheless, progress has been made between the involved parties and it appears that the moratorium may be lifted soon (or already has been lifted), which would allow for new connections. If and when this happens, it will be necessary for the project sponsor to confirm gas availability with National Grid prior to final project approvals. In the event that a gas main cannot be extended to the site, service is denied, or the applicant chooses not to extend gas to the site for some unforeseen reason, homes will have to rely on individual home heating fuel oil tanks and be served by private oil delivery companies.

The Applicant is not planning on extending natural gas service to the property at this time.

3.2.3 Proposed Mitigation

- Fire hydrants will be spaced in accordance with Chief Placella's recommendations.
- Subdivision streets are designed so that emergency vehicles can access each proposed house lot, maneuver through the subdivision and be able to easily turn large vehicles such as fire trucks around.
- Subdivision streets will be maintained, plowed, sanded and/or deiced to ensure unrestricted emergency access to house lots during inclement weather. Subdivision streets, recharge basins, associated street drains and other commonly held subdivision assets will be maintained by a private maintenance staff or contractor that is hired by and paid for by an HOA through the assessment of HOA fees.

3.3 Traffic

Appendix F contains the Traffic Assessment prepared by Nelson + Pope Engineers, Architects and Surveyors (Nelson + Pope) for the project and site; the following description of the site's existing traffic resources and characteristics has been excerpted from that document.

3.3.1 Existing Conditions

Roadway Conditions

The 98.92-acre site is located on the north side of Muttontown Road in the vicinity of Woodhollow Court in the Village of Muttontown. Muttontown Road is an east-west collector roadway under the jurisdiction of the Village, intersecting Brookville Road to the west and NYS Route 106/Oyster Bay Road to the east. Within the vicinity of the site, Muttontown Road has one travel lane in each direction and carries an average annual daily traffic (AADT) of 1,267 vehicles according to traffic data obtained by N+P in June 2015. The posted speed limit along this roadway is 35mph and on-street parking is prohibited.

Woodhollow Court provides access to residential properties on the south side of Muttontown Road. Its intersection with Muttontown Road is an all-way stop controlled intersection with stop signs at all three approaches. The nearest traffic signal to the site is on Muttontown Road at NYS Route 106/Oyster Bay Road, east of the site. NYS Route 106/Oyster Bay Road is a major arterial roadway providing connections to Northern State Parkway and Long Island Expressway (I-495).

Accident History

Accident data for the most recent 4-year period available (July 2016 to present) was requested from the New York State Department of Transportation (NYDOT) for the section of Muttontown Road between Serenite Lane and Willowdale Avenue. The data revealed that there were no accidents experienced during the study period.

Site Access

Access to the property is currently located via a paved driveway on Muttontown Road on the eastern portion of the property. Access shown on the 2020 Preliminary Subdivision Map is proposed via a new 70 foot wide private right of way approximately 160 feet east of Woodhollow Court ("Proposed Access"). As required by the Village, an alternative access plan was also proposed. The Alternative Access plan places the roadway approximately 1,100 feet east of Woodhollow Court in the proximity of the existing site driveway ("Alternative Access"). Both the Proposed Access and the Alternative Access are considered and analyzed herein.

Sight Distance Analyses

Field sight distance measurements were performed on Muttontown Road at the locations of the Proposed Access and Alternate Access to determine available sight distance, which were then compared to recommended values based on the posted speed limit (35mph) for Muttontown Road. The field sight distances were measured according to the standards contained in the reference, *A Policy on Geometric Design of Highways and Streets* published in 2011 by the American Association of State Highway and Transportation Officials (AASHTO).

Due to dense vegetation currently occupying the project site and up to the edge of pavement, performing sight distance measurements 14.5 feet from the travel lane of Muttontown Road in the vicinity of the proposed site driveway is impractical. Sight distance measurements at this access point were performed assuming the clearing of brush along the roadway upon development of the subject property. Efforts were made to be as conservative and practical as possible.

The available sight distance was recorded and compared with the recommendations contained in AASHTO. The following table presents a summary of the sight distance data.

TABLE 3-7
Sight Distance Values

Roadway	Recommended by AASHTO Sight Distance (FT)		Field recorded Sight Distance (FT)	
	Left turn	Right Turn	Left turn	Right turn
Proposed Access Muttontown Road 160 feet east of Woodhollow Court –	390	335	240	350
Alternative Access Muttontown Road 1,100 feet east of Woodhollow Court	390	335	660	690

Upon review of the table above, available sight distance from the Proposed Access satisfies recommended sight distance criteria for vehicles turning right onto Muttontown Road assuming that brush along the site frontage is removed within the Village right-of-way. Available sight distance for vehicles turning left is below the recommended distance, however, 160 feet to the west is the all-way stop controlled intersection of Muttontown Road and Woodhollow Court. There is clear view of this stop controlled intersection which provides metering of vehicles on Muttontown Road and Woodhollow Court. Therefore, since this all-way stop controlled intersection is easily viewable from the Proposed Access, sufficient sight distance is available for right and left turning vehicles. In conjunction with the trimming of brush within the Village right-of-way in the vicinity of the proposed site driveway, we recommend the installation of an advance intersection warning sign on the north side of Muttontown Road for westbound traffic if this site access is pursued. This sign will provide motorists with additional notice that they are approaching a T-intersection.

The available sight distance for the Alternative site driveway, located approximately 1,100 feet east of Woodhollow Court in proximity of the existing site driveway, exceeds recommended criteria for left and right turns onto Muttontown Road. No trimming of brush within the Village right-of-way is necessary in the vicinity of this access.

By implementing these safety improvements for the Proposed Access, it is our professional opinion that both site access locations would operate in a safe manner.

Location of Access Points

The Proposed Access (a southbound leg) is 160 feet east of Woodhollow Court (which is a northbound leg). The configuration of the two roadways (Proposed Access and Woodhollow Court) are such that there are no conflicts between the northbound left turn and south left turns out of these roadways on to Muttontown Road. The Alternative Access (a southbound leg) is located between two northbound driveways to single family homes. The northbound left turns from the single-family home to the east of the alternative driveway conflict with the southbound left turns from the alternative driveway. However, it should be noted that the anticipated northbound left turn traffic volumes from these driveways are very minimal during peak hours reducing the possibility of vehicles trying to make left turns out of the northbound driveway and the southbound driveway at the same time and hence reducing the possibility of left turn conflicts. Based on the very low volume of trips (and possibility of conflicts), it is our professional opinion that left turns can be made from both the proposed and alternative driveways with minimal or no traffic conflict with vehicles exiting adjacent driveways.

Existing Traffic Volumes

An automatic traffic recorder (ATR) machine was placed along Muttontown Road in June 2015 for a seven-day period between Woodhollow Court and the existing site driveway. The ATR machine recorded hourly traffic volumes and operating speeds during each 24-hour period for both directions of travel. The results indicate that the weekday peak hours on Muttontown Road occur between 8:00 and 9:00 AM when 134 vehicles were recorded (46 eastbound and 88 westbound) and between 3:00 to 4:00 PM when 156 vehicles were recorded (81 eastbound and 75 westbound). The Saturday peak hour occurs between 11:00 AM and 12:00 PM, with 67 vehicles recorded (34 eastbound and 33 westbound). The characteristics and land uses within the study area have not significantly changed since the collection of the traffic data in 2015, hence there are no anticipated changes to the traffic volumes in the study area in 2020. The data collected in 2015 should be similar to current volumes. However, to perform a conservative analysis, the 2015 traffic volumes are adjusted to 2020 traffic volumes by applying a 0.6% annual growth factor for a period of five (5) years. The 0.6% annual growth factor was obtained from the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 Study (LITP2000) for the Town of Oyster Bay. Based on the growth factor, in 2020 there will be a total of 138 vehicles (47 eastbound and 91 westbound), 161 vehicles (84 eastbound and 77 westbound) and 69 vehicles (35 eastbound and 34 westbound) on Muttontown Road during the AM, PM and Saturday midday peak hours respectively.

Future Traffic Volumes

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2022 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report.

Traffic Growth

Based on the New York State Department of Transportation (NYSDOT) Long Island Transportation Plan 2000 Study (LITP2000) for the Town of Oyster Bay, an annual growth factor of 0.6% was applied to the 2020 existing traffic volumes for a period of two (2) years to obtain the 2022 No Build Traffic Volumes.

Other Planned Projects

"Other Planned Projects" is a term that refers to developments located near the project site that are currently under construction or in the planning stages. Traffic generated by these projects may significantly influence the operations of the study intersections and would not be represented in the field data collected. The Village of Muttontown was contacted to obtain information on other planned projects in the area. At the time of this study no other planned development information was provided to us by the Village. However, it should be noted that, the background growth factor applied is high enough to account for potential planned developments in the vicinity.

The 2022 No Build volumes are summarized in the next section of the report. The detailed results for the 7-day ATR machine data volumes are attached (Attachment 1). The 85th percentile operating speeds on Muttontown Road are 34 mph and 32 mph for the westbound and eastbound directions respectively. These speeds are similar to the posted speed limit (35 mph).

3.3.2 Anticipated Impacts

Trip Generation

The trip generation estimates for the traffic to be generated by the proposed twenty (20) single family homes was calculated using the statistical data provided in the manual, *Trip Generation*, *10th Edition*, published by the Institute of Transportation Engineers (ITE). Land Use Code 210 – Single Family Detached Housing) was used to calculate the trips for proposed dwelling units. It is expected that the site will generate a total of 19 trips during the AM peak hour (5 entering, 14 exiting), 22 trips during the PM peak hour (14 entering, 8 exiting) and 35 trips during the

Saturday midday peak hour (19 entering, 16 exiting). The trip generation volumes are presented in the table below.

TABLE 3-8
ESTIMATED TRIP GENERATION
(Vehicle trips)

Land Use		AM Peak Hour	PM Peak Hour	Saturday Peak Hour
Single Family Detached Housing Land Use Code: 210	Enter	5	14	19
	Exit	14	8	16
	Total	19	22	35

As shown in the table above, the site is not expected to generate many trips during the weekday AM and PM peak hours and Saturday midday peak hour. The most trips expected to be generated are thirty-five (35) during the Saturday midday peak or an average of approximately one trip every two minutes. It is assumed that the distribution of these residential single-family trips will follow the typical commuter distribution pattern. Therefore, the projected trips will disperse more towards the east in the morning peak period where access to the major highways (LIE and Northern State Parkway) and LIRR train station are located, with the reverse pattern occurring in the evening peak hour. Saturday will experience a more even distribution. It is not expected that these trips will generate any significant traffic impact on Muttontown Road considering the relatively low projected site volumes and the currently low roadway volumes.

The following is a summary of the 2022 No Build volumes and 2022 Build volumes.

Table 3-9
INTERSECTION TRAFFIC VOLUMES

		2022 No Build Volumes			**2022 Build Volumes**		
Intersection	**Movement**	AM Peak	PM Peak	Sat Peak	AM Peak	PM Peak	Sat Peak
Muttontown Road at Site Access	EB Left turn	0	0	0	2	5	9
	EB Through	47	85	36	47	85	36
	WB Through	92	78	36	92	78	35
	WB Right	0	0	0	3	9	10
	SB Left turn	0	0	0	9	5	8
	SB Right turn	0	0	0	5	3	8

Site Access Analysis

As previously stated, the Proposed Access will be constructed on Muttontown Road approximately 160 feet east of Woodhollow Court to form the stop-controlled leg of a T-intersection. The roadway is designed with two, 22 foot wide travel lanes (one each direction) and will extend into the site to providing access to each of the proposed residential home driveways. The Alternate Access is located approximately 1,100 feet east of Woodhollow Court in the proximity of the existing site driveway.

The future capacity and levels of service at the Muttontown Road and the access points were evaluated for the future weekday AM and PM peak hours and the Saturday midday peak hour. The traffic volume used in the intersection capacity analysis were calculated by adding the estimated trips to be generated by the residential units during the weekday AM, PM and Saturday midday peak hours to the estimated 2022 No Build Volumes on Muttontown Road during these same peak periods. The intersection capacity analysis was performed in accordance with the standard methodology outlined in the *Highway Capacity Manual* 6th Edition (HCM 6). The process is conducted using the Highway Capacity Software (HCS 7 release 7.8.5), which incorporates this methodology to evaluate the operations of an unsignalized intersection such as the site access. Level of service (LOS) is a measure of the operation of the intersection represented by associating a range of values LOS A through F with the amount of delay attributed to each movement. A LOS "A" value represents very little delay, whereas a LOS "F", the worst condition, represents average delays of over 50 seconds per vehicle. The detailed capacity analysis worksheets are attached (Attachment 2).

TABLE 3-10
LEVEL OF SERVICE SUMMARY
Site Driveway at Muttontown Road

Approach/ Movement		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
		LOS	Control Delay	LOS	Control Delay	LOS	Control Delay
EB	LT	A	7.4	A	7.4	A	7.3
SB	LR	A	9.2	A	9.3	A	8.9

Notes: LOS = level of service; Control Delay = seconds/vehicle

As shown on the table above, all the approaches will operate at levels of service A, with control delays of less than 10 seconds per vehicle.

Conclusion

It is the professional opinion of Nelson + Pope that the volume of traffic generated by the proposed project will not create significant impacts to the adjacent roadway during the peak periods. The location of both the Proposed Access and the Alternative Access would operate in a safe manner. Either driveway will intersect a section of Muttontown Road with a very low traffic volume and low frequency of accidents.

3.3.3 Proposed Mitigation

- For the Proposed Access, trimming of brush within the Village right-of-way in the vicinity of the proposed access road is recommended to optimize sight distance.
- Additionally, Nelson + Pope recommend the installation of an advance intersection warning sign on the north side of Muttontown Road for westbound traffic if this site access is pursued. This sign will provide motorists with additional notice that they are approaching a T-intersection.
- During grading operations, truck traffic to and from the site will be routed along major roadways and truck drivers will be instructed to avoid secondary residential streets to the maximum extent practicable. The 98.92-acre property has ample space to fully accommodate construction vehicles and provide equipment and materials staging areas during the construction process, thereby keeping work vehicles off public rights-of-way.

3.4 Community Character and Cultural Resources

3.4.1 Existing Conditions

Visual Resources and Community Character

Overall, the area has a low-density residential character with large forested open spaces surrounding it; particularly, the Muttontown Preserve to the east and the Hoffman Center Preserve to the west. For observers along Muttontown Road, south of the site, the subject property is representative of a large tract of native woodlands; this also holds true for views into the property from adjacent land located to the north, northwest, and east of the subject property. Adjacent to the east, northeast and west of the property are large, rolling tracts of land consisting primarily of forested open space with recreational trails used for equestrian uses. An adjacent outparcel contains a small freshwater pond and a house that are visible from Muttontown Road. Land to the northwest is also mostly undeveloped. Land adjacent to the west is developed with a low-density single-family residential neighborhood that has access from Serenite Lane which is a dead end/cul-de-sac street (see **Figure 1-2**).

Views outward from within the subject site are of a naturally-forested open space character to the east and northwest, and a small freshwater pond near the south side of the property, and intermittent low-density rural single-family residential development to the north, south and west. Low density single-family development exists to the west and south of the site. Existing

conditions photographs of the subject property are provided in **Appendix B-1** and photographs along the perimeter of the property taken from the area proposed for the 30-foot wide perimeter parkland area are provided by **Appendix B-2**.

Cultural Resources

According to archives, the property was once owned by Diego Suarez who was a landscape architect from Argentina. The Hall family purchased the property from Mrs. Marshall Field Suarez around 1952-53. The property has been determined to be eligible for listing on the State and National Registers of Historic Places by the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") under Criterion C, in the areas of country estate architecture and landscape design (see **Appendix G-1**). While the main house was demolished in 1953 and later the exterior shell of a Georgian-inspired structure was built atop the original foundation in 1989, the current 98.92-acre estate retains a collection of original buildings, landscape features and overall character of its original plan, although many of the building interiors have been modified over time. Contributing buildings on the estate include: the Main Home and attached East Cottage and West Cottage; Gardener's Greenhouse Cottage and Garage; Pond Cottage; Six-Car Garage with Upstairs Chauffeur's Apartment; former Barn/Converted Cottage; and Pool House (with associated in-ground swimming pool and tennis court). Significant components of the site's landscape design include the U-shaped lawn forecourt, specimen trees and other plantings, circulation pattern of curving drives and walks, stone drainage gutters, and cottage gardens.

The proposed subdivision plans and supporting cultural resource information was forwarded to the New York State OPRHP for its review. Essential cultural resource analyses were conducted by qualified personnel and applicable information was sent to the OPRHP for consideration. OPRHP recommended the completion of a Phase I Archaeological Investigation to investigate potential archaeological resources on the property. Additionally, by letter dated September 3, 2015, OPRHP made the following recommendations (see **Appendix G-2**):

> The submitted proposed project includes the demolition of all buildings (and landscape) on the site. Demolition of historic buildings and landscapes is, by definition, an Adverse Impact to historic resources. This is a finding that triggers an exploration of all prudent and feasible alternatives that might avoid or minimize the adverse project impacts. If no alternatives are identified to alleviate the adverse impacts, we would enter into a formal Letter of Resolution (LOR) which would identify proper mitigation measures that may minimize harm and be incorporated into the work.

As a result of the OPRHP letter, a building evaluation was conducted to consider the possibility of retaining and reusing the buildings on the former Easton Estate as part of the subdivision. As documented in this report, it was determined not feasible to retain all or even most of the buildings on the property either with or without a subdivision. The nearly 100-acre property contains a number of small accessory estate buildings, where the main house has been

demolished and replaced by an uninhabitable shell of a structure. Annual property expenditures far exceed rental income that could be derived, a number of the buildings are in poor condition and during the sale of the property by the former owner of the land, (the Hall Family), it was evidenced that prospective buyers consisted of developers, not buyers interested in purchasing the property for reuse intact (see **Appendix G-2**). One possible exception is the Pond Cottage, along with associated landscaping and the estate driveway located near the southeast corner of the subject property.

Archaeological Investigations

Appendix G-3 contains the Phase I Archaeological Investigation report prepared in 2007 for the subject property. The following description and discussion of the findings of the study have been adapted from that document.

Introduction

Between July 12 and September 18, 2006, Tracker Archaeology Services, Inc. conducted a Phase IA [documentary] study and a Phase IB [archaeological] survey for the proposed Hall subdivision [now Silver Path Estates] in the Village of Muttontown, Town of Oyster Bay, Nassau County, New York. The purpose of the Phase IA study was to determine the prehistoric and historic potential of the property for the recovery of archaeological remains. This was accomplished by a review of the original and current environmental data, archaeological site files, other archival literature, maps, and documents.

A prehistoric site file search was conducted utilizing the resources of the New York State Historic Preservation Office ("NYSHPO") – Field Services Bureau in Waterford, New York by the firm of Edward Curtin, archaeologist. Various historical and archaeological web sites were reviewed for any pertinent information.

The purpose of the Phase IB survey was to recover physical evidence for the presence or absence of archaeological sites on the property. This was accomplished through subsurface testing and ground surface reconnaissance.

The APE [area of potential effect] consists of the entire "*original*" property, which consisted of approximately 117 acres, inclusive of developed areas with buildings, driveways, road, and cemetery, and wetlands and steep slopes. The property is bounded on the southwest by Muttontown Road and to the remaining sides by private or other properties.

(Note: The ±117 acres include the current 98.92 acres of land plus the 18.3 acres that was previously conveyed to Nassau County for incorporation into Muttontown Preserve)

Prehistoric Potential

A prehistoric site file search was conducted at NYSHPO. Archaeological sites recorded within 1 mile of the study area included.

- No sites are recorded.

Indian foot trails passed through the vicinity. One such trail traversed along Main Street in Oyster Bay and another along Jericho Turnpike. Although recorded historically, it undoubtedly existed prehistorically.

Assessing the known environmental and prehistoric archaeological data, we can summarize the following points:

- Freshwater wetlands are on and adjacent to the project area.
- The project area contains moderate to steeply sloped topography with well drained soils.
- Indian foot trails were in the vicinity of the project area.
- No prehistoric sites are recorded near the project area. However, this may be due to the very early development of the county before archaeological surveys were common.

In our opinion, the study area has a higher than average potential for the recovery of prehistoric archaeological remains.

Historic Potential

Contact Period (Seventeenth Century)

At the time of European contact and settlement, this section of Long Island was occupied by the Matinnecock tribe. The nearest villages of the Matinnecock tribe were the Syosset and the Lusam.

Indian trails have been reported in the vicinity of the project area. They traversed along the Main Street in Oyster Bay and Jericho Turnpike.

By 1650, the Matinnecock tribe consisted of only 30 families. This number was most likely greatly reduced from their pre-Contact population. At this time “great numbers of Indian plantations now lie waste and vacant”.
Between 1653 and 1654, the Matinnecock “sold” the last of traditionally occupied territory to the new European settlers.

Actually, the Matinnecock may have been pressured to “sell” their land. They were likely influenced by the now powerful (probably due to European influence) Wyandanch, chief of the Montauket tribe. Wyandanch denied the Matinnecock access to any land between Cow Harbor (Northport Harbor) and the Nissequogue River which they sold to the settlers. Land in Huntington, including the present day Township of Babylon, was sold either by Wyandanch himself or under pressure from Wyandanch by the local villages. Since hunter-gatherers are normally exogamous, and since the Long Island Indians also appeared to

follow this custom, genealogical connections between individuals or villages may have also played a part in political influence between tribes.

The map of early settlements shows the project area was "acquired" in 1653 from the Indians as part of the First or Old Purchase.

Eighteenth Century

The old Indian trails became established roads used by settlers. Wigwams were reported in the 1740's by Reverend Horton, who may have lived in them. The nearest such wigwam/village was reported along the Indian foot trail that followed along or near Main Street.

The Matinnecock tribe was nearly passed away by this time. Many scattered survivors of the tribe lived as servants to the European-Americans. Farming operations were in all parts of the Township and the associated buildings consisted of small, rude houses and barns with thatched roofs.

Nineteenth Century

About 1810 a movement to improve the old Indian trails (now established roads) spread to Long Island from upstate. Private companies were hired to improve roads, build tollgates and levy tolls. These roads became known as turnpikes and were merely old dirt roads, in some cases straightened a bit, but worked into such shape that the road was raised toward the middle for better drainage with gutters along the edges. A tollgate along Jericho Turnpike was placed at Commack in the Huntington-Smithtown border.

Farmers were principally engaged in raising wheat, rye and corn, and the raising of livestock, including horses, cattle and sheep. Only a limited amount of sheep were originally raised due to the ever present threat of wolves. As many as five flour mills were constructed.

The 1836 Colton map shows Jericho Turnpike and [NYS Route 106] . No buildings are depicted on or immediately adjacent to the project area where Muttontown road should be, although it is not depicted (or depicted accurately).

The 1873 Beers atlas shows the Underhill dwelling on or adjacent to the project area. The J.F. Youngs dwelling and the cemetery appear to be on the project parcel.

The 1896 Hyde atlas depicts the aforementioned Underhill building in the outparcel, adjacent to the project area. The J.M Layton building appears to be on the project area (where the aforementioned Youngs house was).

Twentieth Century

The 1900 USGS map depicts what appear to be two structures on the project area.

An historic site file search was conducted at NYSHPO. Archaeological sites recorded within 1 mile of the study area included

- No sites are recorded.

Assessing the known environmental and historic archaeological data, we can summarize the following points:

- Freshwater wetlands are on and adjacent to the project area.
- The project area contains moderate to steeply sloped topography with well-drained soils.
- Indian foot trails were in the vicinity of the project area.
- Historic map documented structures on and adjacent to the project area.

In our opinion, the study area has a higher than average potential for the recovery of historic archaeological remains. The type of site encountered would likely be associated with either the Youngs/Layton family or the Underhill family.

Conclusions and Recommendations

Based upon topographic characteristics, distance to other known prehistoric sites and an Indian trail, the property was assessed as having a higher than average potential for encountering prehistoric sites.

Based upon topographic characteristics, distance to historic map documented structures and an Indian trail, the property was assessed as having a higher than average potential for encountering historic sites.

The field testing included the excavation of 1,888 shovel test holes on the project area. Phase I field work resulted in the recovery of 86 European American artifacts and 3 Native American artifacts with six loci and 7 features.

The purpose of the Phase I archaeological survey is to establish the presence or absence of archaeological sites. If the site is to be impacted by construction or other activities, then Phase II intensive testing of the archaeological site is specified by the regulations of the NYSHPO and the National Advisory Council on Historic Preservation. Phase II investigation methods should interpret and determine if the site is eligible for the nomination to State or National Registers of Historic Places.

Phase IB Survey and Phase II Archaeological Testing: A Phase IB Archaeological Survey and Phase II Archaeological Testing were performed by Tracker Archaeology between October 20, 2015 and January 2, 2016 (**Appendix G-3**). The purpose of this work was to conduct additional follow-up work (Phase II) on 3 Areas: Locus B (also known as "FT1"), Locus E, and Locus F. Eight other areas, including FT's 3 and 7 (Locus A) did not warrant further investigation based on the recommendations of the 2007 Phase I analyses; however, Locus A was, at that time, within a proposed 500-foot wetland setback. Since current plans have a narrower (100 foot) wetland buffer, NYS SHPO recommended the additional Phase IB work be performed at Locus A (**Cammisa 2007**, **Appendix G-3**). The purpose of the Phase IB addendum was, therefore, to provide physical evidence for the absence or presence of archaeological sites within this formerly protected area.

The purpose of the Phase II archaeological investigation was to interpret the historic sites and to determine their significance for inclusion on State or National Historic Registers. The Phase II intensive testing would identify and delineate any activity areas and feature potential through close interval shovel testing and exploratory excavation units.

The conclusions and recommendations of the Phase IB Archaeological Survey and Phase II Archaeological Testing as provided in Tracker Archaeology's report are as follows:

> A site is eligible for nomination to the National Register of Historic Places if it meets one or more of the following criteria (as set forth in 9 NYCRR 427 and 428 or CRF 800):
>
> A) Associated with events that have made a significant contribution to the broad patterns of Our history;
> B) Associated with the lives of persons significant in our past;
> C) Embodies the distinctive characteristics of a type, period, or method of construction, or represents a significant and distinguishable entity whose components may lack individual distinctions; or
> D) Has yielded, or may be likely to yield, information important in prehistory or history.
>
> Locus B is a small surface scatter with very little depth, dating to about 1917 when Percy K. Hudson owned the property. Shovel testing here at 7.5 foot intervals only produce 1 positive ST. Two TU's [Test Units] excavated here where shallow and produced between 16 [and] 40 artifacts per TU, although many were from fragments of the same artifact (bottle or plate). In our opinion, Locus B will likely *not* yield any significant life-ways information to the history of P.K. Hudson family or the Gold Coast Era on Long Island's North Shore.
>
> Locus E is a small early twentieth century coal related dump. Phase II shovel testing here produced no artifacts, only coal at 2 ST's. The 2 TU's excavated here produced between

9 [and] 10 artifacts per TU. In our opinion, Locus E will likely *not* yield any significant life-ways information history of the early twentieth century here.

Locus F was originally a small [N]ative American site (see Cammisa 2007). The Phase II intensive shovel testing at 12.5 foot intervals produced no [N]ative American artifacts. Two positive ST's with only Euro-American artifacts dating to the early twentieth century were encountered. The 2 TU's here produced between 20 to 46 artifacts per TU in mottled, graded and filled, soils. In our opinion, Locus F will likely *not* yield any significant life-ways information to either [N]ative Americans here or early twentieth century in this region.

Locus A was originally a small surface scatter around FT's 3 and 7 (actually 1 field stone foundation) encountered during 2007 within the (then) 500 foot wetland setback. However, the Phase IB and Phase II shovel testing here produced only 2 positive ST's. The 2 TU's excavated here were shallow and produced between 11 to 21 artifacts per TU, mostly architectural. The only dateable artifacts were machine cut nails from the TU's and a slipware fragment from an adjacent Phase I ST. In our opinion, Locus A will likely Not yield any significant life-ways information to nineteenth century farming practices here or the Weekes, Fickens, Youngs, or Underhill families,

Locus G is a midden next to FT 9, large concrete house ruins. Although shovel testing around FT 9 was negative, TU 9 which was excavated within Locus G (midden) had depth, producing 34 artifacts while avoiding what appears to be the most artifact dense part of the midden. Artifacts were more varied than other TU recoveries, representing less broken fragments and more functions/use. This midden apparently dates between 1910 to 1920, when Percy K. Hudson lived here, while his dad lived on the adjacent property at Knollwood, during the Gold Coast Era on Long Island's north shore. In our opinion, Locus G, May Yield significant life-ways information of P.K. Hudson's family and the Gold Coast Era on Long Island's North Shore.

3.4.2 Potential Impacts

<u>Visual Resources</u>

The proposed development will change the visual appearance of the subject site, by removing some existing natural vegetation and estate structures and replacing all but one of the structures (the Pond Cottage) with 20 new homes and associated accessory structures, two subdivision streets, and two stormwater recharge basins. However, the project proposes to preserve a 50-foot deep wooded buffers around the entire perimeter of the site, with the exception of the street opening for the new subdivision road from Muttontown Road and an eight-foot wide bridle path through the park portion of the perimeter, as well as land around the wetland in the southwest portion of the site. The buffer and parkland will consist of an estimated +/-17.47 acres of native woodlands providing significant natural buffering that will

help to maintain the rural character of Muttontown Road, nearby nature preserves, and adjacent house lots. A trail has been installed along the perimeter of the property on the north, east and west sides of the property, which involved only removal of existing underbrush in certain portions of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long. **Appendix B-2** provides photographs along the perimeter of the property, demonstrating the existing buffer conditions along the perimeter of the property and the existing screening that exists along the trail area. The photographs demonstrate that adjoining properties are largely screened from the trail location due to the extent of existing vegetation and topography, with the exception of the northwest portion of the property (see photograph #11) and northern portion of the property (in the vicinity of photograph #6) where the adjoining homes are cleared to the property line. Supplemental evergreen screening can be provided in these locations to provide additional screening of the proposed perimeter parkland area and trail.

The proposed building envelopes are at least 150 feet from any existing adjacent home. Lots having frontage on Muttontown Road will be setback at least 125 feet from this road and lots having frontage on proposed interior (subdivision) streets will be setback at least 75 feet in accordance with the required front yard setback line. Perimeter buffers, wetlands buffers, parkland areas and restrictions posed by building envelopes will provide significant natural buffering along Muttontown Road. The proposed Subdivision Road off of Muttontown Road ("Hall Drive") will require the removal of trees and grading that will open up views of the interior of the subdivision along the new street from the perspective of a passerby along Muttontown Road. However, since the alignment of the road at this location is not perfectly straight, and the road will be sloped, deep views into and out of the site are not expected.

The two proposed stormwater recharge basins are located in areas where there is no adjacent clearing or development, and which are heavily wooded. The closest structure or development to the proposed recharge basins is over 600 feet away. The outward sides of the recharge basins facing adjacent (off-site) properties will be screened by the 50-foot perimeter buffer and the internal facing sides of the recharge basins (facing proposed lots) will be lined by a double staggered row of mixed evergreen trees planted at 10-12 feet in height that will provide year round screening. Proposed trees for recharge basin screening include a mix of Japanese cryptomeria (*Cryptomeria japonica*), Norway spruce (*Picea abies*), white spruce (*Picea glauca*), Serbian spruce (*Picea omorika*), and Western arborvitae (*Thuja plicata*). The "**Planting and Tree Removal Plan**" (Sheet C-105) depicts the location, arrangement and density of the proposed vegetative screening.

Chain-link fencing will also be installed around the perimeters of both recharge basins to keep unauthorized persons from entering these spaces. The preserved land that is adjacent to the recharge basins are not likely to be cleared or developed and any future development on nearby privately owned land would be expected to comply with Village setbacks and other

applicable requirements. The recharge basins will be set into the ground in topographically low-lying areas and will therefore be primarily subsurface features.

Street trees are not required by Village Code and are therefore not proposed; however, native grasses will be planted within the center islands of the access road (Hall Drive) and cross street (Fan Court East/Fan Court West) to improve the appearance of these features. Center median grasses will consist of native little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogen gerardii*).

Care was taken to limit disturbances to steep slope areas by first identifying and delineating them and then avoiding disturbance to the extent practicable during site preparation and construction. Areas that are disturbed during the construction process will be reseeded with an ecology mix. Wetlands will be protected from development activities by the 100-foot wetlands non-disturbance buffers and temporary project limiting fencing can be provided along the wetland setback boundaries if needed to prevent over-clearing and other encroachments during construction. The removal of trees for development is an unavoidable impact of the proposed action, and most other development projects, but considerable effort has been taken to limit clearing, provide buffers and open space, and ensure that significant natural features are protected, and natural vegetation is retained to the extent possible. In addition, some of the trees, shrubs and ground covers that must be removed, will be replaced with landscaping to stabilize soils and prevent erosion, provide screening for privacy, and enhance the aesthetic quality of house lots. Landscaping details for individual lots will be determined during future site plan reviews and comply with applicable requirements of Chapter 144 of the Muttontown Code, titled “Site Plan Review”.

The change in visual character is not anticipated to result in a significant adverse impact, as the proposed development and associated landscaping and perimeter and wetland buffers are expected to maintain the forested and rural character of the area and mitigate impacts to the maximum extent practicable while maintaining consistency with Village zoning and providing on-site open space that includes an equestrian trail that will be accessible by the public.

<u>Cultural Resources</u>

The conclusion of the building alternatives analysis (**Appendix G-2**) was that “due to the characteristics of the estate buildings, their condition, zoning requirements that restrict developable area, market conditions in Muttontown, and capital investments to purchase the property, it is not feasible to retain the buildings on the site as part of a subdivision. The applicant, however, has determined that it is feasible to retain the Pond Cottage, its associated gardens, and estate driveway from Muttontown Road as the retention of the building and associated landscape elements are situated in a manner that they may be logically incorporated into the subdivision, and their retention provides a substantive preservation component.”

The proposed subdivision plans and information relating to the building alternatives analysis were forwarded to the New York State OPRHP for its review. By letter dated September 7, 2016, Laurie E. Klenkel, Historic Site Restoration Coordinator with the OPRHP Division for Historic Preservation, responded to the submission as follows:

> As you are aware the Easton Estate in its entirety is eligible for listing in the State and National Registers for Historic Places. Based upon this review, the OPRHP concurs with your findings that "there are no prudent and feasible alternatives to the demolition of the former Easton Estate buildings on the property with the exception of the Pond Cottage, its associated flower garden remnant, and estate driveway from Muttontown Road. Subject to Village approval, the Pond Cottage would be used as an accessory dwelling. Otherwise, it would be retained as an accessory structure under the Village Code, which would limit its use to a non-residential purpose, e.g. a pool house."
>
> It is the opinion of the OPRHP that demolition of the remaining historic buildings and landscape features associated with the National Register-eligible Easton Estate will have an Adverse Impact upon historic resources. In accordance with Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law, prior to demolition, a formal Letter of Resolution ("LOR") must be prepared to complete the Section 14.09 review process. This agreement document should identify proper mitigation measures such as:
>
> 1. Continued design consultation with OPRHP for the preservation of the historic landscape feature that is the main entrance drive from Muttontown Road and the reuse of the Pond Cottage and associated landscape features.
> 2. Recordation of the architectural and landscape features prior to removal.
> 3. Salvage and/or relocation of architectural and landscape features.
>
> Please proceed with the development of the LOR with the New York State Department of Environmental Conservation. (See **Appendix G-2** for the full correspondence.)

The retention of the Pond Cottage and its associated gardens and section of the estate driveway was previously evaluated as an alternative plan in the draft 2016 DEIS and is now a component of the preferred plan, thereby addressing the OPRHP's recommendation, and mitigating cultural impacts to the maximum extent practicable considering, social, economic and other essential considerations from the reasonable alternatives.

With respect to archaeological resources, ORPHP reviewed the Phase IB Archaeological Survey and Phase II Archaeological Testing as provided in Tracker Archaeology and by letter dated June 9, 2016 responded to the submission as follows:

> OPRHP concurs that the Hall Native American site (No. 05956.000121) and the Hall Historic site (No. 05956.000122) are not National Register eligible and that no further archaeological investigation is necessary. OPRHP also concurs that the Percy K Hudson archaeological site (No. 05956.000130) warrants a Phase II archaeological site investigation based on the substantial artifact recovery associated with PK Hudson's brief residence.
>
> OPRHP feels that the issue of potential impacts to the adjacent cemetery has not been resolved. Recommendations were made on August 04, 2015 and again on May 03, 2016 for the placement of a sufficient construction buffer around the cemetery and/or the identification of the cemetery boundary through remote sensing and topsoil stripping. OPRHP continues to recommend these measures. OPRHP feels that avoidance of the cemetery with a buffer of at least 30m/100ft would ensure adequate protection from project impacts.

To address these comments, Tracker Archaeology contacted OPRHP to finalize the scope of additional Phase II investigation work for the PK Hudson site. By letter dated August 4, 2016, OPRHP recommended the installation of additional excavation units for the PK Hudson site to better sample the identified midden (a former ash pile adjacent to the foundation remains of the original house occupied for a time by Percy K. Hudson). The additional excavation units for the PK Hudson site has been completed and requested revised Phase I and II report addressing the PK Hudson site is being prepared (see Tracker Archaeology October 21, 2016 letter, **Appendix G-3**) and will be submitted to OPRHP and the Village upon completion.

As noted above, OPRHP also recommended investigation of the areas near the existing cemetery to determine if past unmarked gravesites may exist in the vicinity of the existing cemetery. OPRHP recommended remote sensing and topsoil striping to investigate the area 75 feet east of the existing cemetery (in the location of the previously proposed disturbance for the proposed subdivision access road which was directly across from Woodhollow Road at that time). A Ground Penetrating Radar ("GPR") study was conducted in this area, which showed inconclusive results. Therefore, further investigation (soil stripping) will be necessary if disturbance is proposed within 100 feet of the cemetery. As an alternative, the applicant evaluated a plan which shifted the proposed roadway access so that it was approximately 160 feet to the east of the cemetery fence and approximately 135 feet from centerline to centerline from Woodhollow Court). Development in accordance with the currently proposed subdivision map would provide far more than the recommended 100-foot buffer from the cemetery.

3.4.3 Proposed Mitigation

- The 50-foot wide naturally vegetated buffer along the property perimeter will substantially obscure views of the development from the perspective of outside observers and most of the proposed passive parkland will be concentrated on the south side of the subdivision along Muttontown Road where the site is most visible.
- Retention of natural vegetation within buffer areas (with the exception of the eight-foot wide bridle trail) will help to maintain the open space character of the area. A trail has been installed along the perimeter of the property on the north, east and west sides of the property, which involved only removal of existing underbrush in certain portions of the property. This trail is proposed to serve as a bridle trail within the 30-foot wide parkland area around the perimeter of the property, ultimately planned to be approximately +/-1.8-mile long. Supplemental evergreen screening can be provided in the two locations where the trail may be visible to the adjoining properties (northern and northwest portions of the property; see photographs #6 and #11 **Appendix B-2**) to provide additional screening of the proposed perimeter parkland area and trail.
- Homes will be constructed of high quality construction materials and will be designed to complement the appearances of prevailing residential development in the Village and conform to current development standards.
- The development will be consistent with the rural community character by fully complying with Village land use and dimensional zoning requirements, including developing at a very low density, preserving and protecting some of the natural areas on-site, and enhancing site appearances through high quality landscaping and home design.
- Retention and reuse the Pond Cottage as a non-residential accessory use and preserve associated landscape features and the original estate driveway.
- The relocated subdivision access will be located 135± feet east of the intersection of Woodhollow Court and Muttontown Road and farther from the cemetery to ensure the protection of the cemetery during the construction process as shown on the preferred plan.
- A 100-foot wide non-disturbance easement is proposed around the cemetery to increase the protection of this cultural resource.
- In accordance with a Letter of Resolution ("LOR") agreement, the following commitments will be formalized through the final terms and signature of the LOR by the applicant, OPRHP and DEC (see **Appendix G-2**):
    - Record other existing architectural and landscape features prior to removal.
    - Salvage and/or relocate architectural and landscape features where possible.
    - Continue design consultation with OPRHP for the preservation of the historic landscape feature that is the main entrance drive from Muttontown Road.

SECTION 4.0
OTHER REQUIRED SECTIONS

4.0 OTHER REQUIRED SECTIONS

4.1 Cumulative Impacts

Impacts of the proposed project were considered in conjunction with those of other pending development applications within a two-mile radius of the subject property to examine the potential for cumulative environmental impacts; particularly, area-wide traffic impacts. This two-mile radius encompasses a large portion of the Village's 6.25-mile jurisdiction and is in excess of the neighborhood area that is normally used to identify cumulative impacts in EISs. However, numerous single-family homes were being constructed in the Village at the time, and the Village's consultant, VHB, requested that the parameters for the size and location of developments be specified as well as a request for any traffic studies (**Appendix E**). The Village of Muttontown was contacted early on in the DEIS process to determine whether there were other developments planned or recently approved within the area of the project site including the mailing of letters on (September 29, 2015, July 20, 2015, and October 28, 2015, and June, 29, 2020 **Appendix E**). However, the Village of Muttontown did not identify any pending developments for inclusion in this DEIS. As a result, no additional residences or significant projects were considered in this analysis of cumulative impacts.

Cumulative impacts stemming primarily from the proposed project are as follows:

- Temporary increases in the potential for fugitive dust and construction traffic and noise impacts during construction from the preferred plan and any other development proposal. However, as these impacts would be temporary in nature and controlled to the extent practicable as indicated in the mitigation sections for Topography **(Section 2.1.3)**, Soils **(Section 2.2.3)**, and Construction-Related Impacts **(Section 4.6)**, no significant unavoidable cumulative construction impacts are expected.
- As indicated in the TIS prepared for the proposed project, and in consideration that there are no other major projects pending in the two-mile radius study area and considering background traffic growth, all of the intersections studied will continue to operate at LOS "A" or better. A LOS "A" value represents very little delay and no further mitigation is needed.
- The Silver Path Estates project will utilize individual on-site septic systems for treatment of the maximum 18,000 gpd of wastewater anticipated to be generated on the site, thereby minimizing the potential for impacts on groundwater from this pathway. Should other developments be proposed in the area in the future, they would be also subject to applicable NCDH requirements to ensure public health and safety, and that potential impacts to groundwater resources are minimized.
- While single home applications would combine to increase the demand upon local community services (e.g., schools, fire and police, utilities, and solid waste handling), these increases in service demands would be incremental in nature, and will receive increased funds from tax revenues generated from the developments or in the case of energy and water suppliers, receive monthly payments based on use, which will enable these service providers to continue to provide services.
- As each of the individual home projects and the overall subdivision project would change the use and general overall appearance of the land, there will be a cumulative impact on the visual resources and character of the area. However, the uses of the type proposed (single-family homes

on large lots) are similar to those of other single-family residential projects in the Village and would be expected to comply with zoning or have reasonable bases for variances in order to be approved. New uses are anticipated to occupy buildings that appear to conform to height, bulk and setback requirements of their respective zonings, unless special permits or variances are requested. In such cases, the applicable Village entity would be responsible for determining the degree of conformance to, among other parameters, the land use pattern, recommendations of the Village Comprehensive Master Plan, etc. As a result, development of each of the sites is expected to conform to established Village use requirements, minimizing the potential for adverse visual and community character impacts.

- Based on project layout and design, conformity to zoning, and identified environmental mitigation, no significant cumulative impacts to the area zoning pattern are anticipated.

In general, while some cumulative impacts are anticipated from the proposed project and on-going individual home construction in the surrounding community, based on the forgoing considerations, it is the applicant's opinion that cumulative impacts would not be significant. Ultimately, the involved agencies will review each development application on its own merits, will weigh the potential cumulative impacts outlined herein, and will render a decision on the significance of impacts and appropriateness of each project.

4.2 Adverse Impacts That Cannot Be Avoided

The site has been characterized, and potential impacts to the existing site have been assessed. Some impacts may still exist for which no mitigation is available. The impacts themselves have been quantitatively and qualitatively discussed in previous sections of this document. The impacts of the proposed project will be minimized where possible, but this section acknowledges those impacts that may still occur:

- Grading, cutting and filling of portions of the site to construct the proposed subdivision streets, provide suitable lots for development, construct foundations, and install individual sanitary systems, drainage structures, and utilities, which will permanently alter the natural topography. This will include excavation of the proposed recharge basins below the existing ground surface.
- Despite the planned mitigation measures for controlling dust (e.g., soil wetting as necessary, seeding, etc.), there is the potential for occasional increases in dust during the construction process.
- Temporary increases in construction traffic and noise during the demolition and construction period.
- Increased vehicle trip generation on the site and on area roadways during the construction process and once future homes are occupied. The Traffic Assessment (**Appendix F**) estimates that conditions at the proposed access intersection will remain at Level of Service "A" during morning, evening and weekend peak traffic hours despite the proposed development. Impacts from activity associated with the new intersection of Muttontown Road and Hall Drive will be controlled by installation of a "Stop" sign at the end of Hall Drive. During grading operations, truck traffic to and from the site will be routed along major roadways and truck drivers will be instructed to avoid secondary residential streets to the maximum extent practicable. The 98.92-acre property has ample space to fully accommodate construction vehicles and provide equipment and materials staging areas during the

construction process, thereby keeping work vehicles off public rights-of-way. The traffic study concludes that significant impacts are not expected, and no further mitigation is needed.

- Increase in the concentration of nitrogen in site-generated recharge, from 0.22 mg/l from its present residentially developed condition, to 0.98 mg/l, which is still far below the maximum 10 mg/l standard for drinking water.
- Removal of an estimated +/-41.86 acres of vegetation from the site (+/-29.5 acres in lots, 6.59 acres in the road right-of-way, and a conservative +/-5.77 acres associated with on-site recharge basins) but an estimated additional +/-14.7 acres of landscaping would replace some of the vegetation to be removed.
- Increase in impervious surfaces (buildings, accessory structures, roads and driveways) on the site from +/-2.67 acres to +/-17.48 acres.
- Increased total anticipated water consumption on the site, from +/-7,719 gpd at present to +/-44,229 gpd.
- Increase in the number of school-aged children generated on the site by new home construction that will attend public schools by +/-22.
- Increased potential need for emergency services of the Village Police Department and the East Norwich Fire Department (increased costs to be offset by increase in tax revenues).
- Increased demand on energy services of PSEG and National Grid (to be paid for by occupants of the subdivision in according to existing utility rates).

4.3 Irreversible and Irretrievable Commitment of Resources

This subsection is intended to identify those natural and human resources discussed in **Sections 2.0** and **3.0** that will be consumed, converted or made unavailable for future use as a result of this project. The proposed project will result in irreversible and irretrievable commitment of certain resources including:

- Materials used for construction of homes and incidental customary residential accessory structures, home furnishings, and necessary infrastructure and utilities on the site, including but not limited to wood, asphalt, concrete, fiberglass, steel, aluminum, etc.
- Energy and resources used in the operation and maintenance of this project, including fossil fuels (i.e., oil and natural gas), electricity and water.
- An estimated +/-41.86 acres of vegetation to be cleared from the site.
- Increase in the concentration of nitrogen in site-generated recharge.
- Potable water to be consumed for domestic and landscape irrigation purposes will average +/-44,229 gpd on a daily basis.

The impact of this commitment of irreversible and irretrievable resources is not anticipated to be significant, as the magnitude of these losses have been mitigated, are not substantial and said losses are a necessary and unavoidable impact of development.

4.4 Growth-Inducing Aspects

Growth-inducing aspects are those aspects of a project that would stimulate, support, promote or otherwise result in further development in the vicinity, either directly from the project, or indirectly as a result of a change in the population, markets or potential for development in a community from the project. Direct growth-inducing impacts might include increased jobs and economic activity from the creation of a major employment center; increased demand for utilities and public services from new development or new or extended utilities (e.g., sewers); or increased use of social services after the development of a large residential project, especially if that project was designed for a specific age group or persons with financial, medical or other special needs (e.g., senior and or housing for the disabled that may increase demand for medical services etc.). An indirect impact would occur as a result of a direct impact; for example, an increase in the potential for further development in an area after creation of a major employment center (e.g., an industrial park, college campus, etc.) due to people relocating near the new jobs or businesses opening to support or serve the new employment center.

It is anticipated that the proposed project would contribute to a small increase in activity for local businesses. The project will increase the number of residents in an area where commercial and service-oriented businesses are available by relatively short auto trips. These businesses would tend to experience incrementally increased activity due to the increase in their customer bases but with the limited number of new homes and total population from the project, this is likely to be a benefit to local businesses but is unlikely to support any significant new development.

During the construction period, direct *employment* refers to the number of short-term jobs necessary to build the proposed project. This assumes a construction cost of approximately $42.8 million, and that labor represents approximately 50% of such residential construction costs[1]. The labor budget was divided by the average wage (and adjusted for inflation to reflect the projected wages anticipated at the commencement of the construction period), as well as the number of years comprising the construction period to estimate the number of jobs that would be generated. Assuming an average wage of $71,664 among construction workers in the Long Island region[2], as well as a conversion factor to adjust these jobs to full-time equivalent ("FTE") employees, it is projected that the construction period will necessitate 96.3 FTE employees annually over the three (3)-year construction period (estimated). This direct employment creates additional opportunities for job creation throughout other sectors of the economy through expenditures derived from labor income and output. This job creation –

[1] Construction labor and materials estimates per architectural design group Nelson and Pope.
[2] New York State Department of Labor's Occupational Employment Statistics Survey reports an average wage of $67,550 among those employed within the construction and extraction occupations in the Long Island labor market as of the first quarter of 2019. An additional annual inflation factor of three percent (3%) was applied to the average wage, to reflect wages at the commencement of the construction period.

direct, as well as spin-off – presents significant opportunities for those persons who are unemployed or underemployed throughout the region.

Development of the site will result in an incremental increase in utility demand. Electrical and natural gas services are generally available throughout Long Island; electric is currently at the site but natural gas would have to be extended or an alternative fuel source may be required, and water mains are adjacent to the project site; therefore, extension of water to the site is not necessary. There is no natural gas line along Muttontown Road. The closest available lines are at the intersections of Muttontown Road and NYS Route 106 or Muttontown Road and Brookville Road. The installation of a pipeline in an area not previously serviced can stimulate or support some development of surrounding properties but since these facilities and services already exist and have the capacity to service the proposed project, and since much of the immediate area is preserved and zoned for large lots (2, 3 and 5 acres), no significant change in growth patterns is expected to result solely from this availability. Also, as discussed in **Section 3.2.2**, National Grid has not been processing new applications for gas service in the region due to NYSDEC's denial of a water quality permit for the Williams Pipeline ("NESE" project); Nevertheless, progress has been made between the involved parties and it appears that the moratorium may be lifted soon, which would allow for new connections. If and when this happens, it will be necessary for the project sponsor to confirm gas availability with National Grid prior to final project approvals. In the event that a gas main cannot be extended, service is denied, or the applicant chooses not to extend gas to the site for some unforeseen reason, homes will have to rely on individual home heating fuel oil tanks and be served by private oil delivery companies.

The Applicant is not planning on extending natural gas service to the property at this time.

The proposed project may lead to the improvement or expansion of community services in the area as stimulated by the increased need for services, the costs of which would be offset by the increased taxes generated by the project.

In consideration of the above, it must be acknowledged that Silver Path Estates, itself, has some minor growth-inducing characteristics that would result in direct and/or indirect impacts, including:

- increased residential population;
- increased number of school age children that will attend public schools;
- increased water demand;
- increased site disturbance;
- increased impervious surfaces;
- increased utility and energy use;
- increased trip generation; and
- increased tax revenues.

These impacts are examined throughout this EIS, and in summary, the proposed project is not expected to result in significant direct growth-induced impacts, though an incremental increase in minor indirect growth-induced impacts and benefits can be expected.

4.5 Use and Conservation of Energy Resources and Greenhouse Gas Emissions

Energy Conservation

An increase in the consumption of energy resources would typically be expected from a subdivision and development project. Use of new and generally more energy-efficient building materials than used in the past (e.g., insulations, windows, weather stripping, door seals, etc.) and mechanical systems (e.g., air conditioners, heating systems, HVAC systems, water heaters, heat pumps, etc.) is anticipated, which would help to minimize the energy resources required. Incorporation of such energy-conserving measures is not only required by New York State, but is a sensible building practice, particularly in light of the increasing cost of energy resources, impacts on climate, limited nonrenewable resources, and the availability of new and innovative green technologies. It is fully expected that existing public utilities at the site will be provided to meet the expected demand.

There will be an increase in energy use (fossil fuels, electricity) during the construction phase of the proposed project to operate trucks and other heavy equipment and power tools. These impacts are expected to be of short duration and relatively small in the scope of overall demand throughout the Village and Long Island and therefore the long-term energy demand is expected to remain stable.

Future homes will be constructed in accordance with applicable New York State and local building codes, which require adequate insulation as well as other design standards that would minimize energy use. Water-saving plumbing fixtures can be specified for the proposed buildings in accordance with current building requirements and practices of the trade. Installation of low-flow but properly functioning toilets, showers, sinks and equipment would reduce unnecessary water loss, which would translate into conservation of the energy resources required to heat this water.

In summary, it is not anticipated that the project will result in significant adverse impacts on energy resources.

Greenhouse Gas Emissions

Additional energy demand and associated need for energy generation and resources is expected from the proposed subdivision. Related to this is the generation of gaseous emissions from construction vehicles and equipment and energy used by future homes and personal automobiles, lawn equipment and other potential minor sources. These emissions are a scientifically well-established contributor to global climate change through a mechanism known as “the greenhouse effect,” and are termed “greenhouse gases.” The following description and

discussion of greenhouse gasses ("GHG") is taken from the document, "Guide to Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements" **(NYSDEC, July 15, 2009)**.

Global climate change is emerging as one of the most important environmental challenges of our time. There is scientific consensus that human activity is increasing the concentration of GHGs in the atmosphere and that this, in turn, is leading to serious climate changes. Climate change will continue to adversely affect the environment and natural resources of New York State, the nation, and the world.

There are six main GHGs: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Emissions of CO_2 account for an estimated 89% of the total annual GHG emissions in New York State. The overwhelming majority of these emissions - estimated at 250 million tons of CO_2 equivalent per year - result from fuel combustion. Overall, fuel combustion accounts for approximately 89% of total GHG emissions (N_2O and CH_4 also result from fuel combustion). Additional GHG sources include electricity distribution (SF_6); refrigerant substitutes (HFCs); the management of municipal waste, municipal wastewater, and agriculture (CH_4 & N_2O); natural gas leakage (CH_4); and others.

SEQRA requires that lead agencies identify and assess adverse environmental impacts, and then prevent or mitigate such impacts to the extent they are found to be significant. Consistent with this requirement, SEQRA can be used to identify and assess climate change impacts, as well as the steps to minimize the emissions of GHGs that cause climate change. Many measures that will minimize emissions of GHGs will also advance other long-established State policy goals, such as energy efficiency and conservation; the use of renewable energy technologies; waste reduction and recycling; and smart and sustainable economic growth. This policy is not the only state policy or initiative to promote these goals; instead, it furthers these goals by providing for consideration of energy conservation and GHG emissions within EIS reviews.

In general, it is critical that new development proposals consider designs and practices that reduce emission of greenhouse gases. Greenhouse gas emissions result from combustion of fossil fuels, including direct and indirect emissions from stationary and mobile sources. The proposed 20-lot residential subdivision is considered to be a relatively clean and essential land use that is of very low development density and intensity, and the traffic it will generate will be minimal. Based on the preceding, the project is expected to have relatively little contribution to greenhouse emissions.

4.6 Construction-Related Impacts

Construction activities are anticipated to result in short-term transportation, noise, dust, erosion, runoff, heavy truck and temporary aesthetic impacts. As indicated in the EAF Part 1 Long Form (**Appendix A-1**), the entire construction phase from start to project completion including completion of homes is anticipated to last approximately 36 months from start to finish; however, these impacts are not expected to extend throughout this entire period, and are properly mitigated or are unavoidable and insignificant impacts.

It is anticipated that +/-41.86 acres of the site will be cleared for road, stormwater recharge basins, stormwater and wastewater disposal infrastructure and home and accessory structure construction; however, an estimated net increase of ±8.84 acre of landscaping from 5.86 acres to ±14.7 acres will be provided to offset this loss in vegetation once homes are constructed. Construction will also result in an increase in total impervious surface coverage (e.g., roads, houses, accessory structures, driveways, etc.) from the current 2.67 acres to an estimated ±17.48 acres for an overall increase of ±14.81 acres (see **Table 1-1**).

Disturbed areas, including areas that are cleared, excavated and graded for internal roadways, homes, accessory structures, driveways, utilities and landscaping, will be temporarily vulnerable to erosion during the construction phase, and become locations from which dust could rise from wind and truck and heavy equipment traffic. Erosion control measures, including but not limited to, use of clearing limits, silt fencing, groundcovers, stabilized construction entrances, water sprays and minimization of the time period that bare soil is exposed to erosive elements, will be taken, to minimize the potential for impacts on sensitive on- and off-locations. See attached Erosion Control Plan (Sheet C-109) and Erosion Details (C-110) in **Attachment 3**.

As construction equipment loading/unloading, materials storage, and construction staging areas and construction worker parking will be located within the site, no significant or long-term construction impacts to the surrounding residences are anticipated. Construction of an access/exit on and off Muttontown Road, at roughly the mid-point of the property's frontage at the proposed site entrance, will minimize impacts to the operation of Muttontown Road and Muttontown Road will be accessed from NYS Route 106 only. Vegetated setbacks are proposed, a 50-foot deep buffer will be provided around the periphery of the entire property (with the exception of minor clearing for a bridle path) to maintain a rural character and aesthetic value, screening, and noise attenuation as a result of the inverse square law,[3] and the maximization of the distances between construction activities and the nearest residential noise receptors, which will be at least 150 feet, and will help to minimize the potential for adverse impacts during the

[3] Sound pressure level ("SPL") or perceived loudness changes in inverse proportion to the square of the distance from the sound source ("inverse square law"). At distances greater than 50 feet from a sound source, every doubling of the distance produces a 6 dB reduction in the sound. Therefore, a sound level of 70 dB at 50 feet would have a sound level of approximately 64 dB at 100 feet. At 200 feet sound from the same source would be perceived at a level of approximately 58 dB **(NYSDEC, 2001)**.

construction period.

It is not anticipated that there will be a decrease in the existing level of traffic safety from construction phase truck traffic, for the following reasons: 1) peak traffic occurs during early morning and afternoon hours, when only a limited number of trucks are utilizing the roads; 2) truck drivers are trained and specially licensed to operate their vehicles in a safe manner, observing applicable traffic laws; 3) the roadway on which the majority of construction phase traffic will occur is lightly-traveled; and 4) the section of Muttontown Road in the vicinity is a standard 50-foot wide right-of-way that is straight and flat in horizontal and vertical alignment and has excellent sight distance for safe operation.

The subject property has long been zoned for residential development and is grossly underdeveloped by any zoning specification; therefore, it is reasonable to expect that the property will be developed at some point in the near future. Proposed development activities will result in temporary impacts such as noise that will occur during acceptable/permitted construction hours as per Village Code (Monday through Friday between 8 AM and 6 PM, except on State holidays) but will take place on a large enough property that is far enough removed from most land uses in the area to have limited impact. In general, the construction phase is anticipated to progress in a manner typical for a project of this size and nature and no unique or unusual issues or obstacles are anticipated. Construction phase impacts are commonly expected, especially for a large project on property of this size. As noted, these impacts are temporary in nature, and will be variable in terms of overall intensity.

As discussed in **Sections 1.4.2** and **1.5**, and in accordance with the NYSDEC's Phase II SPDES Program, a SWPPP will be prepared to ensure compliance with water quality and quantity requirements pursuant to Technical Guidance and GP-0-15-002 requirements. In addition, an erosion control plan incorporating the NYSDEC Technical Guidance manual, and use of measures including the following is provided:

- Silt fencing, hay bales, storm drain inlet protection, and good housekeeping procedures will be utilized.
- Construction trucks, equipment and employee vehicles will be parked and loaded/unloaded on-site.
- "Rumble strips" or stabilized construction entrance will be placed at the site entrance to prevent soil on truck tires from being tracked onto the public road system.
- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures.
- Construction of the buildings and structures can then begin concurrent with the utility installations. Once heavy construction is complete, finish grading will occur followed by soil preparation using topsoil mix, turf and planting of landscaping, which will be performed while the structures are being completed.
- The drainage system and revegetation plan will provide permanent stormwater management and control once construction is completed.

SECTION 5.0
ALTERNATIVES

5.0 ALTERNATIVES

5.1 Introduction

SEQRA requires all DEISs to contain an evaluation of reasonable project alternatives that are feasible considering the objectives and capabilities of the project sponsor. This phase of environmental review provides the context, framework, and investigative approach for identifying, assessing, and comparing and contrasting project alternatives and helps in identifying impact prevention and mitigation strategies for informed decision-making or new and improved plans that are feasible considering the Applicant's objectives and capabilities of the project sponsor. Alternatives may include changes to a project or action's location, size, scale, density, intensity, design, technologies, layout, alignment, orientation, implementation, phasing, overall timeframe, or other aspect of an action.

SEQRA specifically requires a comparative evaluation of what it refers to as the "No Action Alternative". The No Action Alternative provides a basis for identifying, characterizing and assessing anticipated site changes and the possible impacts and benefits that are likely to result in the reasonably foreseeable future in the absence of any new site disturbances, construction activities, land use(s), or other reviewable activities. SEQRA requires that assessments of project alternatives be conducted at a level of detail sufficient to facilitate a comparison of the types and magnitudes of potential impacts and the potential effectiveness of various impact avoidance and mitigation techniques by the Lead Agency and other involved agencies.

The alternatives considered by this DEIS are as follows:

1) **Alternative 1: No Action Alternative:** The No Action Alternative for this review is the existing or s*tatus quo* condition as described above.

2) **Alternative 2: Access Road at the Southeast Corner of Property (existing driveway):** This alternative as shown on Alternate Plan 2 (**Attachment 4**) assumes access to the subject subdivision will be taken from Muttontown Road at the southeast corner of the property near the location of the existing site driveway. This location also closely parallels a separate driveway to a privately owned outparcel to the west (+/- 60 feet along Muttontown Road) known as the Moed property. As with the preferred 2020 Preliminary Map, Alternative 2 consists of 20 new residential lots, retains the Pond Cottage for use as an accessory structure for Lot 18, and provides a 50-foot deep perimeter buffer which includes a 30-foot deep perimeter park with eight-foot wide bridle path, and dedicated parkland and buffers around the vernal pond and other on-site freshwater wetlands. This alternative would comply with zoning in every respect except the possible need for a variance due to the access road's encroachment into the required 50-foot perimeter buffer over a distance of +/-555 feet and parallels part of the Muttontown Preserve's westerly property

boundary and approximately 418 feet along the adjoining Moed property to the west. This alternative is also expected to require a wetland permit for some limited clearing, grading and possible construction of part of the access road and its drainage within 100-feet of an off-site pond located on the Moed property; although most of the ROW would be outside the 100-foot upland area. The access road would consist of one lane in and one lane out. The configuration of the proposed roadway would follow the existing site driveway for the one lane exit roadway and would replicate the look of the existing Belgian block gutter to maintain a historic appeal. A vegetated center median would be provided between the lanes and Belgian block gutter would be installed. OPRHP review would be needed for the modification of the existing estate driveway, as OPRHP had requested the existing driveway remain intact. The two stormwater recharge basins would be the same as those of the **2020 Preliminary Map (Attachment 3)** and **Alternative 3: 2015 Preliminary Map** (**Attachment 5**).

3) **Alternative 3: 2015 Preliminary Map with Access directly across from Woodhollow Court** Alternative 3 is a zoning compliant alternative and previously proposed subdivision which locates the access road directly across from and aligned with Woodhollow Court creating a four-way stop controlled intersection. The right-of-way for the access road would be immediately adjacent to a small family cemetery located on the site, and the paved portion of the access road would be located between 10 and 19 feet from the existing cemetery perimeter fence. Alternative 3, as with the 2020 Preliminary Map and Alternative 2, includes the 30-foot deep perimeter parkland with eight-foot wide bridle path, parkland/buffers around the vernal pond and existing estate driveway next to the Muttontown Preserve, and a 50-foot perimeter buffer around the entire property.[1] This alternative, like the others, would also retain the Pond Cottage as an historic design feature of the original estate. The **Alternative 3: 2015 Preliminary Map** (**Attachment 5**) would have the same two recharge basins as those shown on the **2020 Preliminary Plan** (**Attachment 3**) and **Alternate Plan 2** (**Attachment 4**).

It should be noted that prior agency input and analysis of alternatives lead to the previously proposed subdivision map (now Alternative 3) being replaced by the currently proposed "2020 Preliminary Map." The current map incorporates various additional mitigation including but not limited to relocating the Hall Drive access approximately 161 feet farther to the east, incorporation of a 100-foot cemetery buffer, retention of the Pond Cottage, and dedication of

[1] Please note that whenever the 30-foot wide perimeter parkland is mentioned in Section 5 or any other section of the DEIS, only those areas within the 50-foot buffer that are also shown as parkland will be accessible by the general public. Portions of the 50-foot perimeter buffer that are not shown as also being within parklands are on private property and may not be accessed by the general public. These portions of the 50-foot buffer, as well as parts of the parkland within wetlands or within the cemetery easement may not be disturbed.

on-site parkland that contains an eight-foot wide bridle path, as well as the vernal pond, freshwater wetlands and wetland adjacent areas.

5.2 Analysis

5.2.1 No Action Alternative

The "No Action Alternative" must always be considered under SEQRA. The No Action Alternative is intended to identify the baseline conditions that currently exist on-site and those that may be expected or continued into the future if no action is taken and the project site and current use(s) and site activities remain unchanged. The No Action Alternative allows for an assessment of anticipated future impacts and benefits under current design conditions and provides a foundation for comparing and contrasting the proposed project and project alternatives with *status quo* conditions. The No Action Alternative is sometimes assessed as a build condition under existing zoning; however, since the preferred action **(2020 Preliminary Map, see Attachment 3)** is an "as-of-right" action that fully complies with the property's E-3 zoning, this review is based on the no action status quo condition.

Several buildings and structures currently exist on the subject property, of which all, except for the Pond Cottage are proposed for removal upon approval of the preferred subdivision design; therefore, the No Action Alternative assumes that all of the existing buildings and structures, including the Main Home and its east wing (East Cottage) and west wing (West Cottage); Gardener's Greenhouse Cottage and Garage; Pond Cottage; Six-Car Garage with Upstairs Chauffeur's Apartment; former Barn/Converted Cottage; Pool House; Abandoned In-ground Swimming Pool and Abandoned Tennis Court remain. The six-car garage with upstairs apartment and one of the other residences (under this scenario, the Pond Cottage) would be occupied as was the case when the previous DEIS was submitted, while the rest of buildings and structures would remain unoccupied and unused and would fall further into disrepair and potentially posing hazards to the public over time.

The No Action Alternative also assumes that there will be no subdivision of the property; no further clearing or site disturbance; no new homes, structures or streets constructed; or any new, expanded, maintained or improved drainage structures, site infrastructure, or utility extensions on the 98.92-acre property. Persons accessing the site by motor vehicle would continue to enter and exit from the existing estate driveway located off of Muttontown Road at the southeast corner of the subject property, adjacent to Muttontown Preserve, and existing unoccupied buildings, and accessory structures would not be maintained, repaired, improved, expanded or demolished and removed. Additional clearing, grading, home development, road construction, stormwater and wastewater generation, and additional demand for utilities and community services would not occur, additional property tax revenues would not be generated and the bridle trail easement as proposed would not be officially established and dedicated for the use and enjoyment of the general public.

The "No Action Alternative" (Alternative 1) is not in keeping with the goals and objectives of the project sponsor. In consideration of the above discussion, it may be concluded that the long-term costs of retaining the property in its current state while continuing payment of property taxes, is not sustainable when there is limited use and economic return on the land under present conditions. Since this property is currently not improved to its development potential or used for its highest and best use as permitted by the Village under its duly established E-3 zoning, it is anticipated that continued pressure for future subdivision of this land or other development would continue until such time that the property is developed as envisioned and permitted pursuant to the Village's Official Zoning Map and applicable sections of the Zoning Code.

5.2.2 Comparison of Alternative 2 (Access from the Southeast Corner of the Property); Alternative 3 (Access opposite Woodhollow Court); and the Preferred Subdivision (2020 Preliminary Map)

The following is a brief discussion of the differences, impacts and benefits of Alternatives 2 and 3 compared to the preferred 2020 Preliminary Map.

Alternative 2 (Access in the Vicinity of Existing Driveway) evaluates a 20-lot subdivision map with site access in the vicinity of the existing driveway and is fully compliant with the Village of Muttontown's Zoning Code except for the possible need for a variance to construct the access road within a ±555-foot long stretch of the 50-foot perimeter buffer along Muttontown Preserve and approximately 418 feet along the adjoining Moed property to the west. The rest of the 50-foot perimeter buffer would remain and would include the existing on-site cemetery. A 30-foot deep perimeter park containing an eight-foot wide bridle path and encompassing on-site wetlands and adjacent upland areas within 100 feet of wetland would also be provided. Under this development scenario, the access to the subject subdivision will be taken from Muttontown Road at the southeast corner of the subject property near the location of the existing estate driveway. This location closely parallels a separate driveway serving a privately owned outparcel that is +/-60 feet to the west of the envisioned access along Muttontown Road and would be partially within 100 feet of regulated freshwater wetlands. The configuration of the proposed roadway would follow the existing site driveway for the one lane exit roadway and would replicate the look of the existing Belgian block gutter to maintain a historic appeal. However, at the proposed driveway intersection with Muttontown Road, the roadway access would be relocated sightly to the west of the existing driveway and graded to raise the exit/entrance drives to meet roadway design standards and optimize sight distance along Muttontown Road. The design of the subdivision is shown on **Alternate Plan 2 (Attachment 4)** provided with this DEIS.

Alternative 3 (Roadway Opposite Woodhollow Court) is a zoning compliant alternative of the originally submitted 2015 Preliminary Subdivision Map (incorporating the on-site parkland and

accounting for the 2019 changes to the Village Subdivision requirements, see Section 1.2.1), which locates the access road directly across from Woodhollow Court creating a four-way stop controlled intersection where a three-way intersection currently exists (se **Attachment 5**). The right-of-way for the access road would abut the existing on-site Weekes family cemetery, and the paved portion of the access road would be located 10 feet from the cemetery at its closest (i.e., at its access point), which does not meet OPRHP's recommendation for a 100 foot buffer around the cemetery. Alternative 3, as with Alternative 2 and the currently preferred subdivision map **(2020 Preliminary Map)**, would include a 30-foot deep perimeter park containing an eight-foot wide bridle path, additional parkland/buffers around the on-site wetland and existing estate driveway, and a 50-foot perimeter buffer around the entire property and across the Weekes family cemetery. This alternative, like the other subdivision designs, would also keep the Pond Cottage as a historic design element of the original estate. The two recharge basins would be the same size and at the same locations as those shown on the preferred plan and Alternative 2. However, since the 100-foot nondisturbance buffer around the cemetery cannot be maintained with this alternative, there are potential impacts on cultural resources and this alternative has been eliminated from consideration due to this limitation. The **Alternative 3: 2015 Preliminary Map** is attached (see **Attachment 5**).

The Preferred Subdivision Layout **(2020 Preliminary Map)** is fully compliant with all Village Code requirements but provides access to the subject subdivision at a point that is +/-161 feet east of the Woodhollow Court/Muttontown Road intersection when measured from center line to center line. The realignment of the site access has the benefit of providing 160 feet of separation from the existing cemetery located to the west, as suggested by OPRHP. This subdivision design would have the same number of lots, the same recharge basins, and would have the required 50-foot perimeter buffer and required on-site parkland with bridle trail and protection of on-site wetlands. The **2020 Preliminary Map** is attached to the DEIS (see **Attachment 3**).

Assessment

Topography, Soils and Geology

The location of Alternative 2's access road (Hall Drive) is in an area that has flatter topography than the access location for the preferred 2020 Preliminary Map or *previously* proposed plan (Alternative 3: 2015 Preliminary Map). Some previous clearing and grading for the existing site access driveway which has less than half the width required for a new access road, and another small stretch (+/-225 feet in length) along the existing narrower access road[2] which is coincident with the proposed roadbed, would result in less grading and soil disturbance than

[2] The paved widths of the proposed and alternative access roads would be a total of 44 feet between curbs (i.e. 22 feet in the northbound lane and 22 feet in the southbound lane), whereas the paved width of the existing site access road at the southeast corner of the property is estimated to be a total combined width of +/-18 feet. The total width of the ROW for the proposed and alternatives access roads is 70 feet; whereas the width of the cleared roadway, including unimproved shoulder areas, is variable at +/-30 feet in width.

the 2020 Preliminary Map (access east of Woodhollow Court) and Alternate Plan 3 (access aligned with Woodhollow Court). Nevertheless, the roadbed at this location would be +/-1,350 feet in length +/-275 feet longer than the proposed +/-1,075-foot subdivision road depicted on the 2020 Preliminary Map, and +/-220 feet longer than the access road located opposite Woodhollow Court as shown on the Alternative 3: 2015 Preliminary Map, which is estimated to be +/-1,130 feet in length. Therefore, Alternate Plan 2 would have the longest access road (Hall Drive portion), Alternate 3 would have the second longest access road, and the preferred 2020 Preliminary Map would have the shortest access road. Also, under Alternative Plan 2, part of the existing estate driveway would have to be removed and a series of drainage catch-basins and leaching pools would have to be installed nearby to address stormwater runoff which would likely require a wetlands permit due to its proximity to the pond on the adjacent Moed property. Moreover, the Alternative Plan 2 access road appears to require a variance for encroachment into the required 50-foot perimeter buffer along the Muttontown Preserve, not just at its access point but along the first ±555 feet of its length. Alternative 2, however, might be preferred over Alternative 3 (opposite Woodhollow Court) from the standpoint of cultural resources since the access road ROW for Alternative 3 abuts the Weekes family cemetery. Alternative 2 also requires less disturbance to steep slopes than the access road (Hall Drive) for Alternate Plan 3 and the 2020 Preliminary Map.

In terms of net cut, the total net cut for the 2020 Preliminary Map for the subdivision is 107,564 CY, the total fill is 29,276 CY for a **net cut** of 78,288 CY required for the subdivision improvements (i.e., installation of roadways and recharge areas). Total **net cut** for subdivision improvements for Alternative 2 is 91,735 CY.

The access road for the preferred plan (2020 Preliminary Map) and Alternative 3 also do not require wetlands permits due to their distance from the vernal pond and red maple swamp, and only cross the 50-foot perimeter buffer as necessary at their respective access points off Muttontown Road. In addition, the 2020 Preliminary Map is approximately 160 feet from the cemetery and Alternative 2 is nowhere near it. The 2020 Preliminary Map and Alternative 3 do, however, require more disturbance to steep slopes than Alternate Plan 2 and the 2020 Preliminary Map would create a new (second) street intersection along the frontage of the property and would not provide the more typical four-way intersection like Alternative 3: 2015 Preliminary Plan does with Woodhollow Court.

Water Resources

The paved portion of Alternative 2's subdivision access road would be located just over 100 feet east of a small freshwater pond located on the outparcel to its west and would therefore be outside of the NYSDEC's 100-foot wetlands jurisdiction; however, some grading and installation of catch basins and leaching structures required to serve this alternative access road, would likely fall within NYSDEC wetlands jurisdiction and therefore require a freshwater wetlands permit from the NYSDEC. Also, a section of the existing estate driveway which would be partially converted or affected is within 100 feet of the wetlands and may itself trigger the need

for a permit. Alternative 3 and the preferred subdivision layout are far outside NYSDEC wetlands jurisdiction. Since all three subdivision designs contain 20 residential lots, the overall water demand and on-site wastewater generation are expected to be the same.

Ecological Resources

The Alternative 2 access road would require an additional +/-220 linear feet and seemingly more clearing than the Alternate 3 access road, but a small area along the alternate roadbed near Muttontown Road is already cleared due to the presence of the existing access driveway and the topography is flatter at this location requiring less clearing and grading than appears necessary along the access road for Alternate 3 and the preferred subdivision design. The Alternate 2 access is also closer to the pond than the Alternate 3 access and could therefore result in greater impacts on this sensitive environmental feature during construction. A wetlands permit would likely be required by the NYSDEC for Alternative 2 but not for the proposed access shown on the 2020 Preliminary Map or Alternative 3.

Each of the subdivision designs provide perimeter and wetland buffers to protect important natural and cultural (cemetery) resources to the extent practicable. Alternative 3 and the 2020 Preliminary Map are expected to involve greater disturbance to slopes but Alternative 2's access road is longer and would be located adjacent to the Muttontown Preserve and encroach into the 50-foot perimeter buffer for both the Muttontown Preserve and the adjoining Moed property to the west resulting in additional activity in the vicinity to both properties.

Land Use, Open Space, Zoning and Plans

Siting the subdivision roadway at the Alternative 2 location (in the vicinity of the existing site driveway) would put it adjacent to the Muttontown Preserve which is acceptable but not optimal as it could slightly diminish the natural aesthetic and open space qualities and tranquility and enjoyment from the perspective of someone enjoying the County park near this alternative access road. A portion of the 50-foot deep perimeter buffer proposed along the east side of the property adjacent to the Muttontown Preserve (approximately ±555 linear feet), as well as approximately 418 feet along the northeast side of the adjoining property (land that is "Now or Formerly of Patricia Moed") would not be provided. While the proposed roadway would be in the same general location as the existing site driveway, the proposed subdivision roadway would have additional traffic than currently experienced on the existing site driveway. The encroachment into the perimeter buffer, rather than just an access horizontally crossing the buffer, may require a zoning variance since the perimeter buffer is required by code. Other than this variance, each of the three development scenarios comply with zoning. Little else would change from a land use, open space, zoning or existing adopted plans perspective.

The proposed open space for the three subdivision designs are the same or quite similar, each of which provides a 30-foot deep perimeter strip of parkland containing an eight-foot wide bridle path and additional parkland around the vernal pond and other wetlands.

Community Services

No significant impacts or issues related to community services were identified from a review of **Alternate Plan 2**, **Alternative 3: 2015 Preliminary Map**, and the **2020 Preliminary Map** or preferred subdivision design. This is due primarily to the fact that all three scenarios involve the creation of 20 lots containing single-family residential homes with the same number of residents and same number of school age children that may attend public schools. Each of the three development scenarios also includes the retention of the Pond Cottage which for the purposes of this analysis would have the same energy demands under each subdivision design.

Traffic

The access alignment for Alternative 2 provides a clear view of approaching traffic at this four-way intersection. Motorists turning left out of this road would have a sight distance of 660 feet while those turning right would have a sight distance of 690 feet which exceeds AASHTO's requirement of 390 feet and 335 feet respectively (see **Appendix F**). Since sight distance is good at the southeast end of the subject property, the difference between the access for Alternative 3 (four-way stop controlled intersection) and Alternative 2 from a sight distance perspective is negligible. The primary difference between the Alternative 3 and Alternative 2 accesses is that Alternative 2's access is more likely to affect the small freshwater pond to its west during construction if suitable precautions are not taken (NYSDEC freshwater wetland permit would be necessary to address disturbance within 100 feet of the wetland), and encroach into the required perimeter buffer that is runs adjacent to the Muttontown Preserve and the adjoining property (land that is "Now or Formerly of Patricia Moed"). Any disturbance occurring within the 100-foot adjacent upland area of the off-site pond would require a permit from NYSDEC.

The access for the 2020 Preliminary Map would also have considerable site distance in both directions but does create an additional stop controlled intersection along the frontage of the property; however, unlike Alternative 3, does not provide the benefit of the single four-way intersection at Woodhollow Court and Muttontown Road. Nevertheless, the relocation of the proposed access 160 feet from the cemetery provides considerably greater protection of the cemetery and is still an acceptable location.

Road Construction Activities

Alternative 2's access road (i.e., access at the southeast corner of the property extends a total of +/-1,350 LF from Muttontown Road to Fan Court) and is slightly longer than Alternative 3's +/-1,130 LF access road and is even longer than the 2020 Preliminary Map's +/-1,075 LF of access road. Slopes are much flatter along the Alternative 2 ROW and some parts of the existing site access is already within Alternative 2's ROW, so this alternative would be expected to require less cutting, filling, grading and overall disturbance to steep slopes than Alternative 3 (opposite Woodhollow Court) and the preferred subdivision design (offset 161 feet from Wood Hollow (centerline to centerline). A longer road surface and more impervious pavement (220

feet more than Alternative 3 and 275 feet more than the 2020 Preliminary Map) is required under Alternative 2, thereby increasing overall stormwater runoff which would be handled by leaching pools to be installed along the south end of the street, some of which may be within NYSDEC wetlands jurisdiction.

Road construction activities would be similar with respect to requirements for compliance to a project SWPPP, SPDES Stormwater General Permit, and state and local drainage design standards. Also, erosion and sedimentation controls such as silt fencing, stabilized site entrances or installation of "rumble strips" to prevent tracking of soil on to Muttontown Road, seeding or paving/ building as soon as possible after ground disturbance to stabilize loose fully exposed soils and prevent erosion, dust control, etc. during the construction process would be the same for each access scenario. There would be less of an issue with regard to the level of slope stabilization and potential for erosion and sedimentation due to flatter topography under Alternative 2 but the proximity of necessary drainage catch basins and leaching pools and Alternative 2's roadbed to a small freshwater pond would require efforts to ensure that this feature is not adversely impacted. A wetlands permit would likely be required by the NYSDEC. As with the proposed project, construction of this access will not require the import of soil, but exportation of soil will be required. Construction staging would be on-site.

Community Character and Visual and Cultural Resources
The Pond Cottage will be retained on-site and used as an accessory building under Alternative 1 (No Action Alternative), Alternative 2, Alternative 3, and the preferred subdivision map to preserve the structure and its original architectural character which has not undergone significant renovation since its construction and will help to mitigate cultural resource impacts.

Locating the access to the subdivision at or near the current estate driveway instead of opposite Woodhollow Court would prevent the need to site the access road adjacent to the Weekes family cemetery as is the case with Alternative 3. Since the 100-foot nondisturbance buffer around the cemetery cannot be maintained with Alternative 3, there are potential impacts on cultural resources and this alternative has been eliminated from consideration due to this limitation.

Construction of the access for Alternative 2 would require disturbance and changes to the existing estate driveway which was identified by OPRHP as an important historic/cultural element of the former estate that still can be protected. Constructing a new roadway in proximity to the existing driveway will require site grading at the entrance to create a level area for cars to approach Muttontown Road for the roadway to meet current design requirements and to optimize sight distance. This would also require additional encroachment into the pond's buffer area, and lessen adjacent natural qualities and buffering since the road would be much wider than the existing driveway. Alternative 2's access location along the southeastern property boundary would also eliminate ±555 linear feet of the buffer along the Muttontown Preserve and 418 linear feet along the northeast side the adjacent Moed property to the west,

as the road closely follows the property boundary. This would result in additional vehicles entering and existing the new roadway in proximity to three existing driveways (the Moed driveway to the west and two driveways on the south side of Muttontown Road), which would increase activity in this area.

Alternative 3 would provide a slightly better option from a traffic standpoint than the proposed subdivision design because this alternative would create a four-way stop controlled intersection whereas the proposed action would create a second intersection 161 feet from the Woodhollow Court intersection, but all three options have been evaluated from a traffic safety standpoint and found to be feasible.

5.2.4 Summary

Table 5-1 contains a summary of key impact indicators. The resulting data characterize anticipated impacts and conditions and enable comparisons of the Proposed Subdivision against the No Action Alternative and Alternatives 2 and 3. It is noted that each subdivision has its own impacts and benefits and although these differ in type, based on available mitigation and individual subdivision designs, significant impacts have been mitigated to the maximum extent practicable for each. The currently proposed map **(2020 Preliminary Map)** plan is the result of numerous suggestions, recommendations and requirements by the Village, including but not limited to dedicating on-site parkland including an eight-foot wide bridle path, a 50-foot deep property perimeter buffer, relocating the site access to avoid the cemetery, protection of wetlands and steep and very steep slopes, retaining the Pond Cottage, the estate driveway and garden to retain parts of this historic and cultural resources of the site intact, protection of the cemetery by including it in a cemetery easement and part of the parkland area, and compliance with numerous code requirements and standard planning, zoning and engineering design practices.

TABLE 5-1
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES

Parameter	**Alternative 1** (No Action Alternative)	**Alternative 2** (Access at Southeast Corner of Property)	**Alternative 3** (Access opposite Woodhollow Court)	**2020 Preliminary Map** (Access Offset to the East of Woodhollow Court)
Compliance to Zoning	Yes (No change)	Yes, except possible variance for perimeter buffer disturbance	Yes	Yes
Access/Egress Site Distance (FT) Left Turn (L) Right Turn (R)	N/A (No change)	660 (L)[(2)] 690 (R)[(3)]	N/A Four-Way Stop Controlled Intersection[(1)]	240 (L)[(2)(4)(5)] 350 (R)[(3)(4)(5)] existing driveway to remain for Lot 18/Pond Cottage
Traffic Management	(No change)	Less efficient; 3 driveways & access road +/-50-60 feet from each other; two additional driveways on to Muttontown Rd at Lots 1 & 20; good site distance	Preferred 4-way stop controlled intersection; good site distance	Less efficient; located 161 feet from Wood Hollow intersection; use of existing driveway for Lot 18 and Pond Cottage; good site distance with trimming of vegetation in Village right of way.
Clearing for Hall Drive, including areas for grading	N/A (No change)	+/-10.3 acres (+/-1,340 LF)	+/-9.7 acres (+/-1,150 LF)	+/-9.6 acres (+/-1,097)
Cut for Hall Drive ROW	N/A (No change)	+/-900 CY	+/-1,000 CY	+/-1,000 CY
Fill	N/A (No change)	Dispersed across site where needed and as possible	Dispersed across site where needed and as possible	Dispersed across site where needed where needed and as possible
Water Quality Issues	N/A No change	Drainage within wetlands setback	N/A	N/A
Open Space and Parkland	N/A (No change)	50-foot deep perimeter buffer; 30-foot strip of parkland w/ bridle path and open space around wetlands	50-foot deep perimeter buffer; 30-foot strip of parkland w/ bridle path and open space around wetlands	+/-10.53 acres of parkland consisting of a 30-foot wide perimeter strip of parkland w/ bridle path and open space in and around wetlands; the overlapping 50-foot wide perimeter buffer adds an additional +/-6.94 acres of buffer to the

Parameter	**Alternative 1** (No Action Alternative)	**Alternative 2** (Access at Southeast Corner of Property)	**Alternative 3** (Access opposite Woodhollow Court)	**2020 Preliminary Map** (Access Offset to the East of Woodhollow Court)
				parkland.
Ecological Resources	N/A (No change)	Encroachment of drainage into wetlands setback; protects other wetlands and provides perimeter buffer	Protects wetlands and provides perimeter buffer	Protects wetlands and provides perimeter buffer
Community Character & Visual Resources	N/A (No change)	New subdivision; puts road rather than perimeter buffer adjacent to portion of Preserve; large lots designed to conform to zoning	New subdivision; protects wetlands and provides perimeter buffer; large lots designed to conform to zoning	New subdivision; protects wetlands and provides perimeter buffer; large conforming lots, retains original driveway & landscaping in southeast corner along Muttontown Road
Cultural Resources	N/A (No change)	Retains Pond Cottage and associated gardens but impacts original condition of estate driveway	Retains Pond Cottage, associated gardens, and estate driveway; Access would be adjacent to cemetery and does not comply with recommendations of OPRHP for 100' foot setback from cemetery, therefore this Alternative has been dismissed.	Allows the preservation of the Pond Cottage and associated landscaping and estate driveway; the access meets the OPRHP's requested 100-foot setback from the cemetery

Notes:
1-Sight distance does not apply since vehicles along all four approaches must stop at a four-way stop controlled intersection.
2-Recommended AASHTO sight distance at 35mph for left turns is 390 feet.
3-Recommended AASHTO sight distance at 35mph for right turns is 335 feet.
4-Assumes necessary clearing of brush.
5-Does not meet AASHTO standards but impact is mitigated by the all-way stop-controlled intersection at Muttontown Road and Woodhollow Court making sight distance acceptable (See **Appendix F**). An advance intersection warning side could also be provided at this location to further motorist safety.

SECTION 6.0
REFERENCES

6.0 REFERENCES

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FIGURES

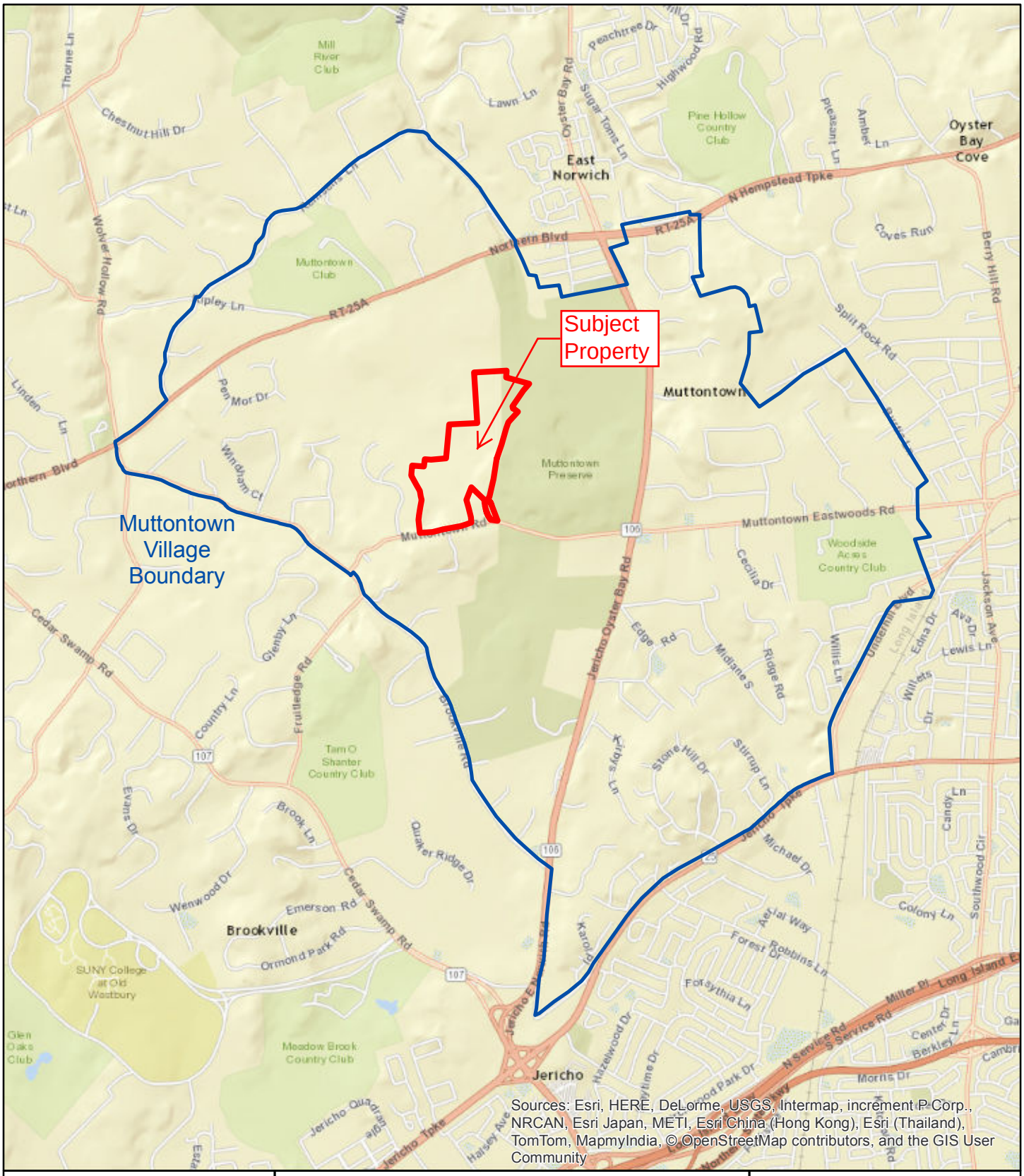

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FIGURE 1-1
LOCATION MAP

Source: ESRI Web Mapping Service

Scale: 1 inch = 3,000 feet

N

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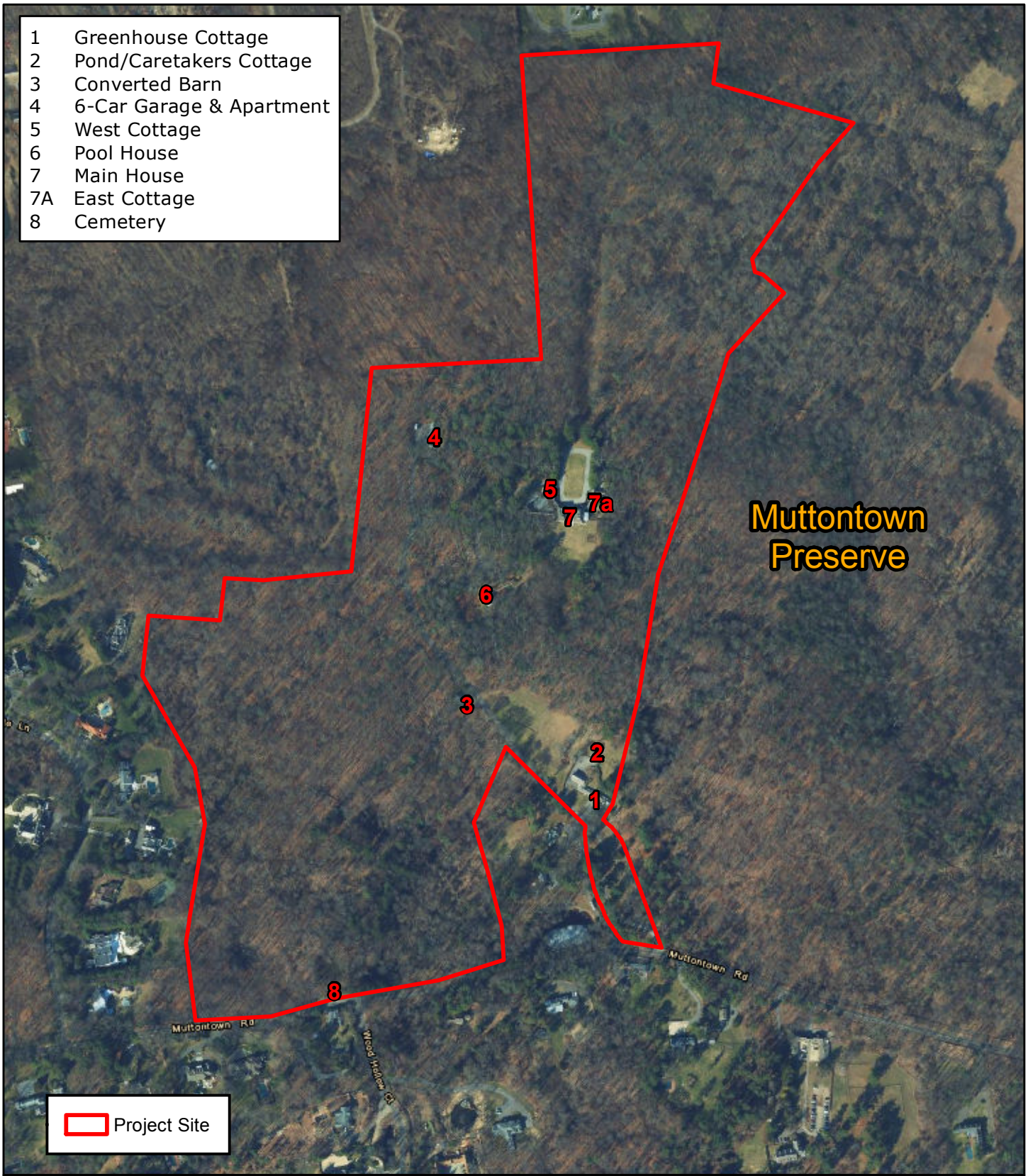

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FIGURE 1-2
EXISTING SITE MAP

Source: NYS Orthophotography, 2016
Scale: 1 inch = 500 feet

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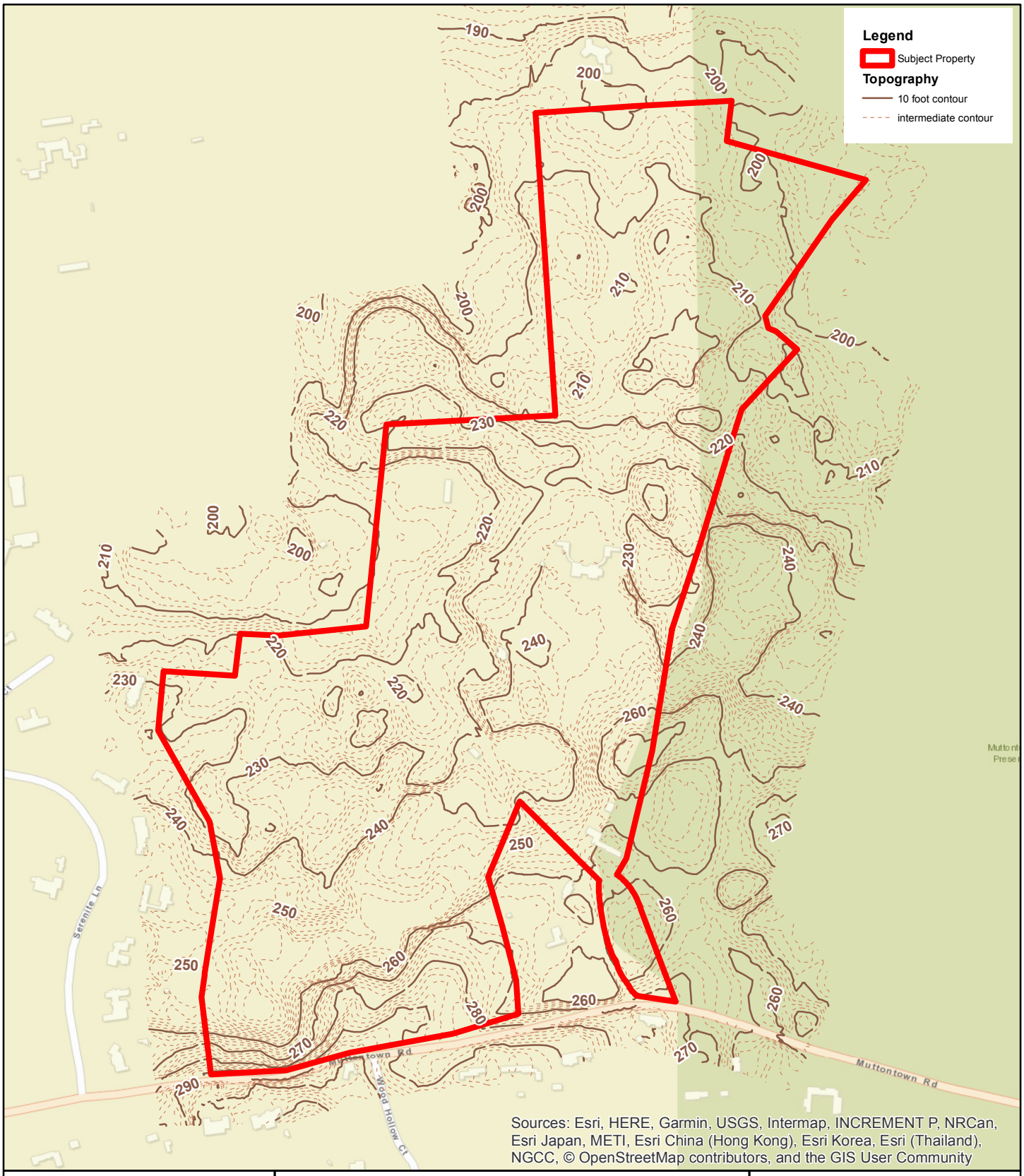

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FIGURE 2 - 1
TOPOGRAPHIC MAP

Source: ESRI wms; Topo from NED 2011

Scale: 1 inch = 500 feet

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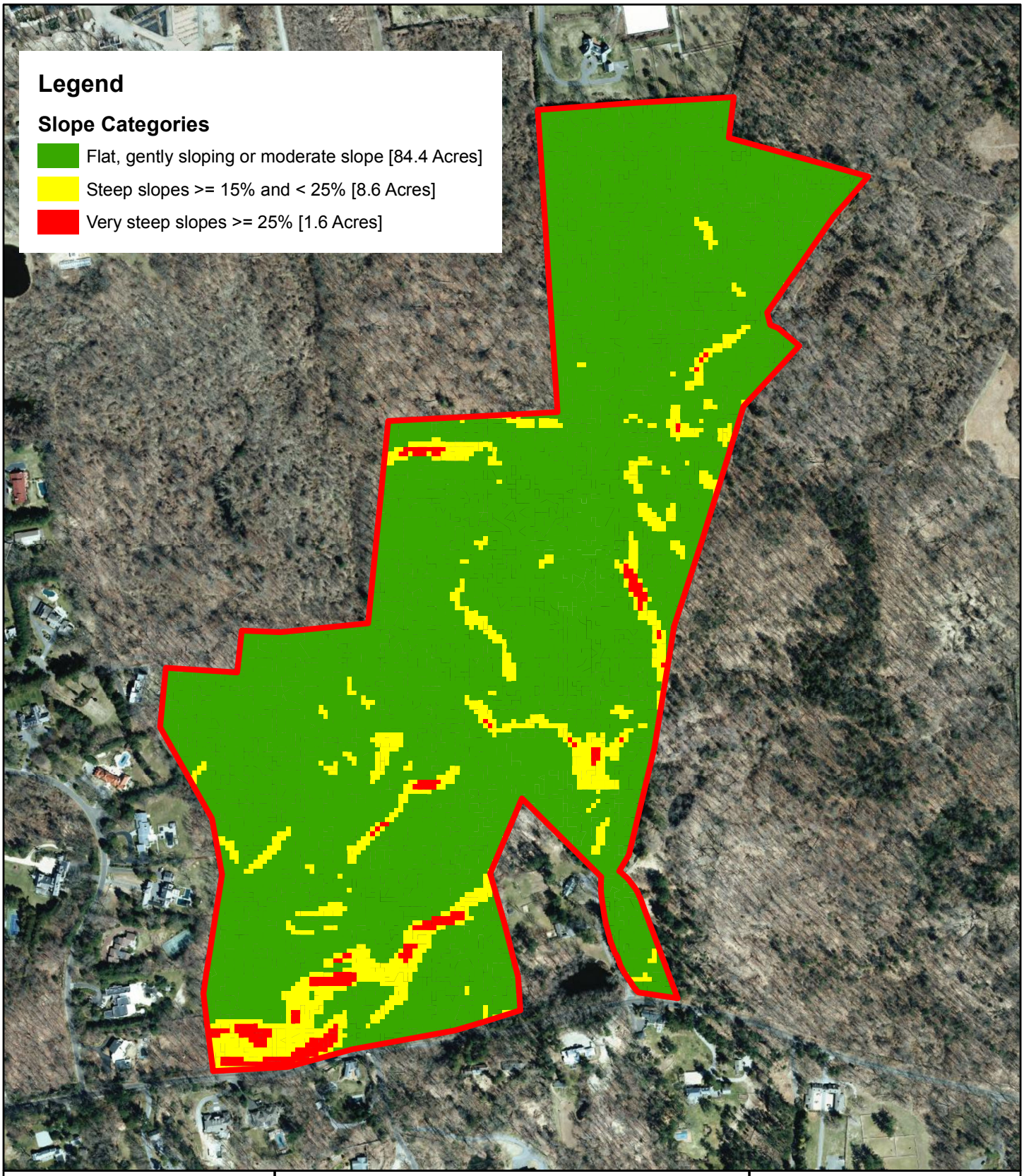

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FIGURE 2 - 2
SLOPE MAP

Source: NYS Orthophotography, 2013, Calculated Slope
Scale: 1 inch = 500 feet

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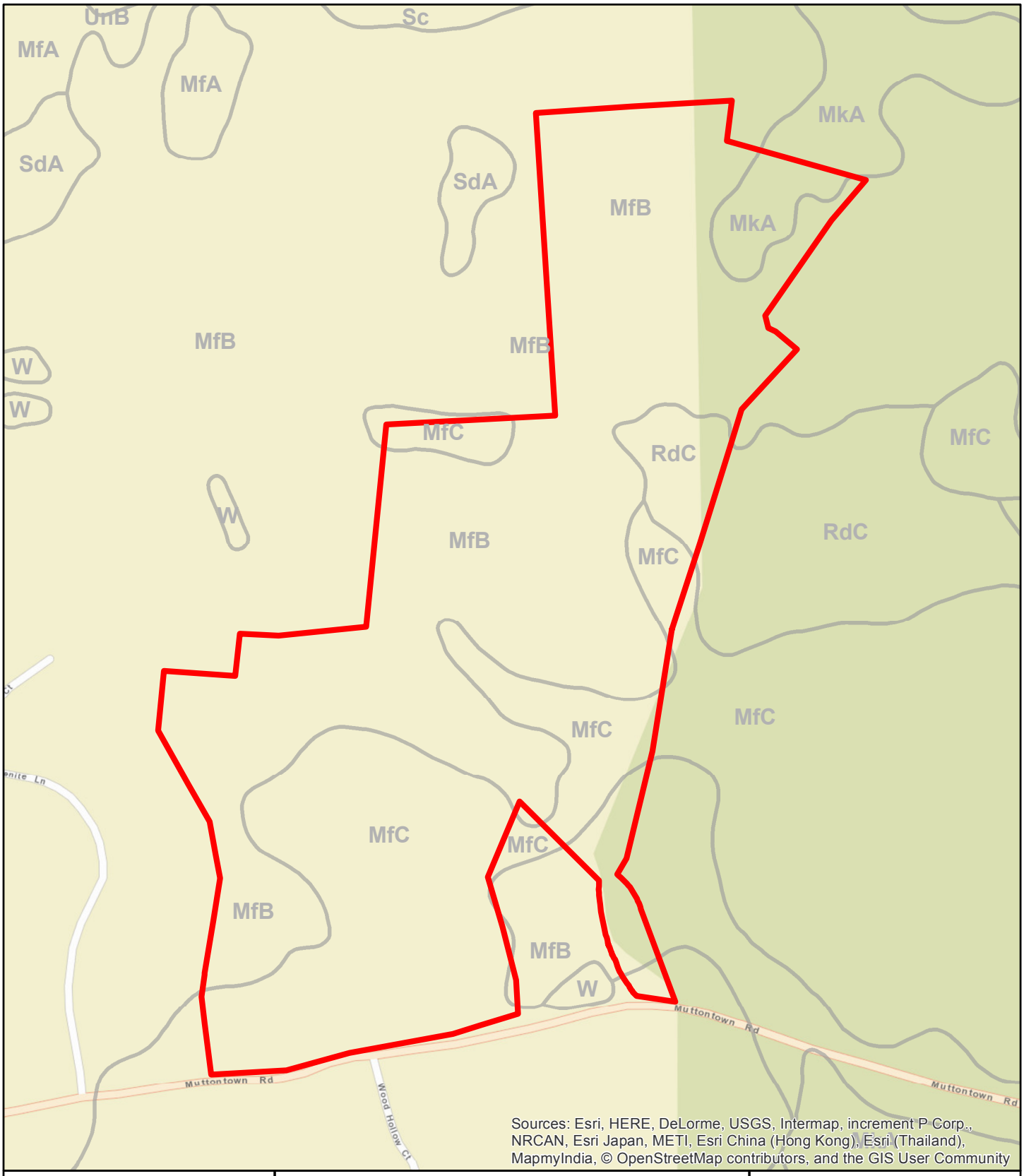

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FIGURE 2 - 3
SOIL MAP

Source: ESRI Web Mapping Service, NRCS SSURGO soils from CUGIR website
Scale: 1 inch = 500 feet

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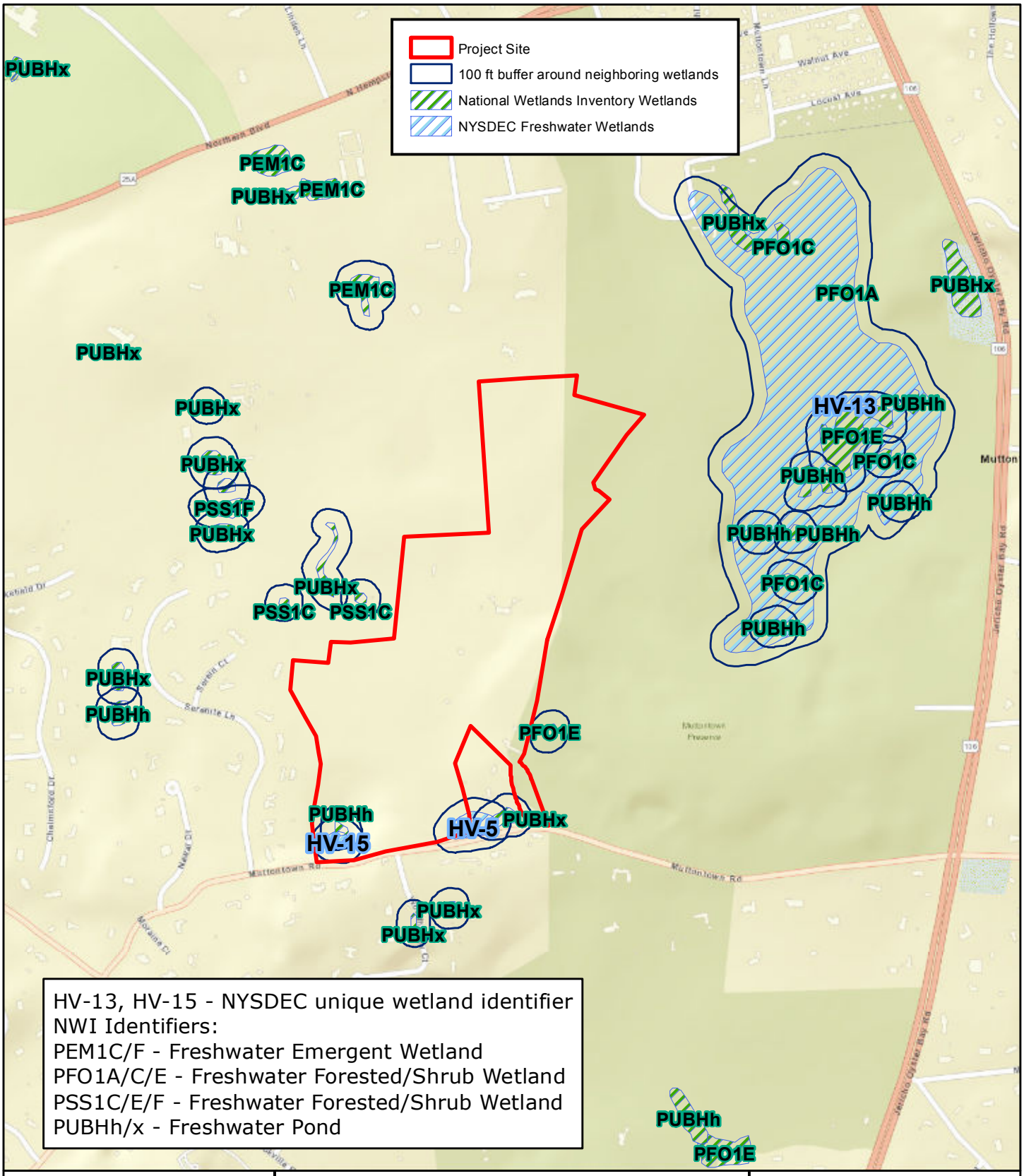

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FIGURE 2-4
FRESHWATER WETLANDS MAP

Source: ESRI WMS; US Fish & Wildlife Wetlands, NYSDEC Freshwater Wetlands
Scale: 1 inch = 1,000 feet

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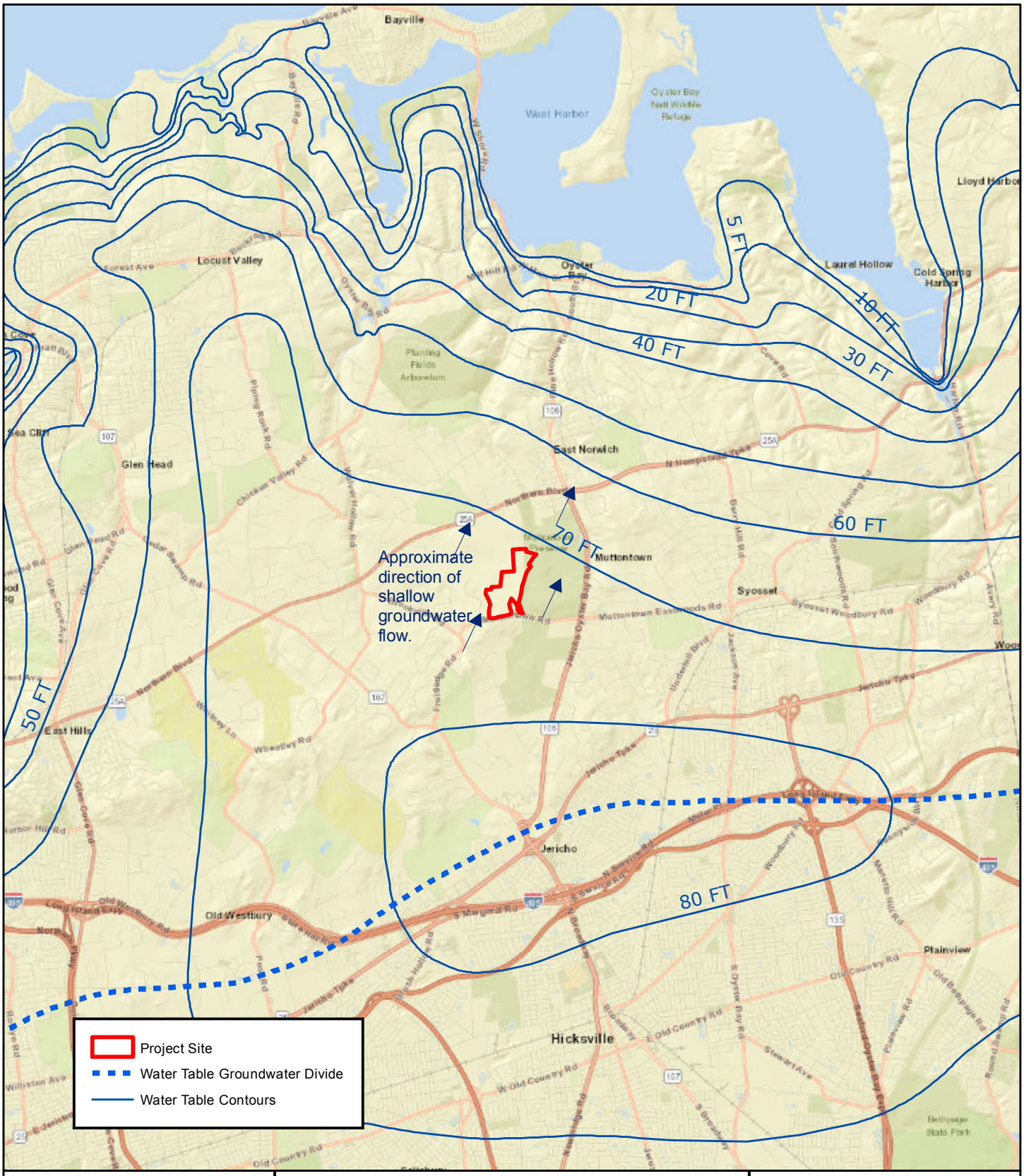

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FIGURE 2-5
WATER TABLE MAP

Source: ESRI WMS; USGS SIM 3398, 2016 data
Scale: 1 inch = 7,000 feet

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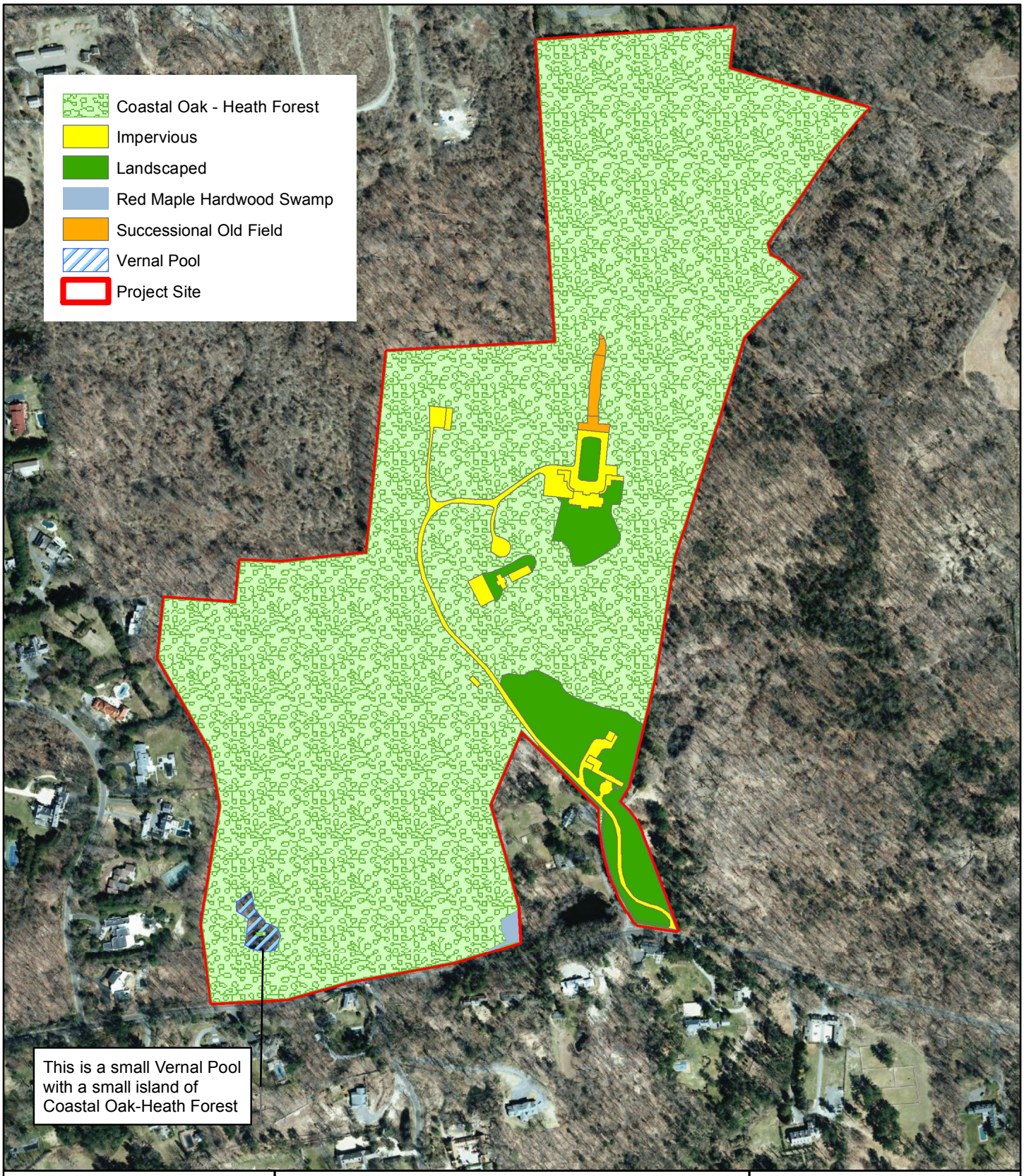

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FIGURE 2 - 6
HABITAT MAP

Source: Village of Muttontown GIS Tree Cover
NYS Orthophotography, 2010
Scale: 1 inch = 500 feet

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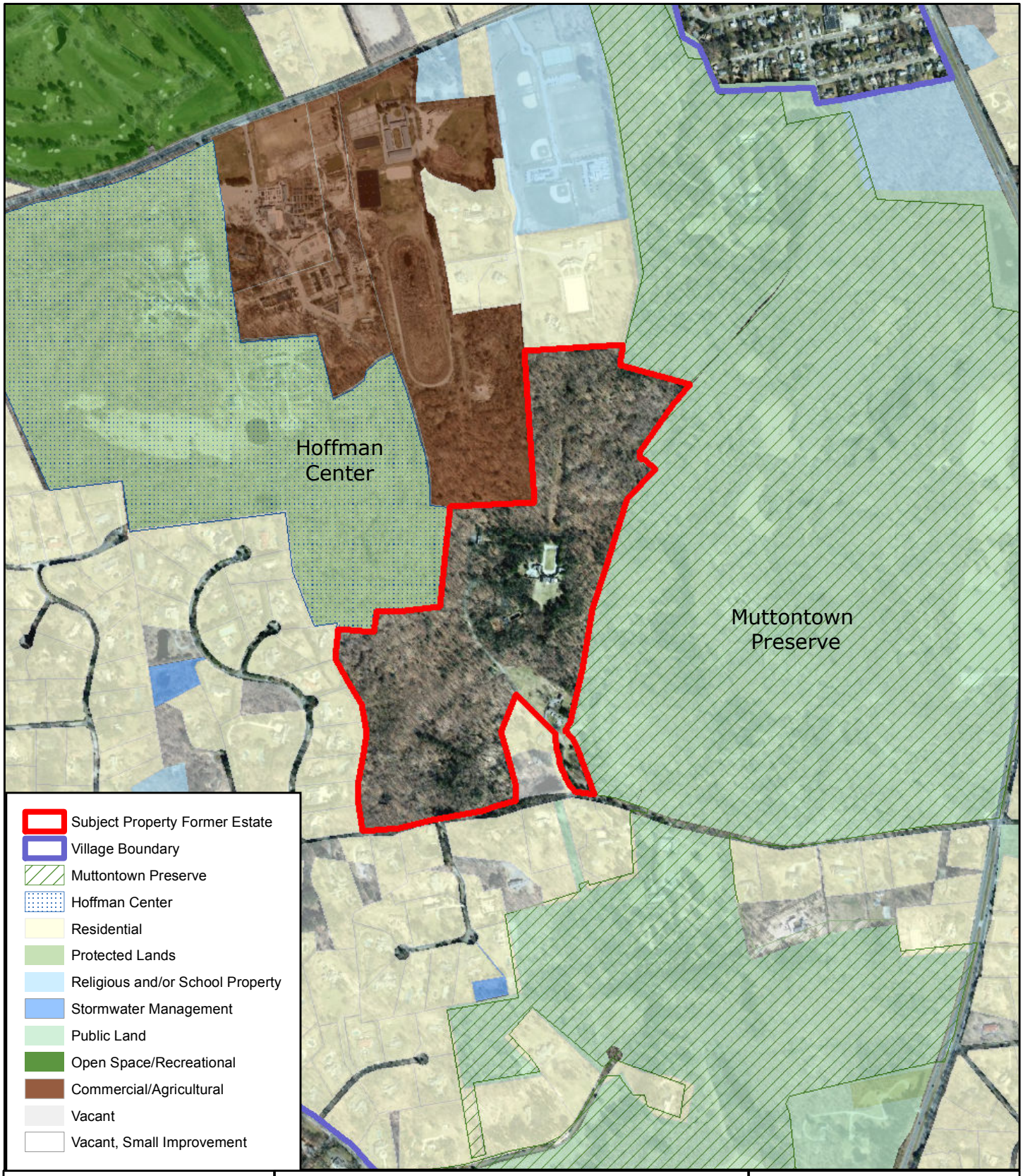

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FIGURE 3 - 1
LAND USE MAP

Source: NYS Orthophoto, 2013, Nassau County GIS
Scale: 1 inch = 1,000 feet

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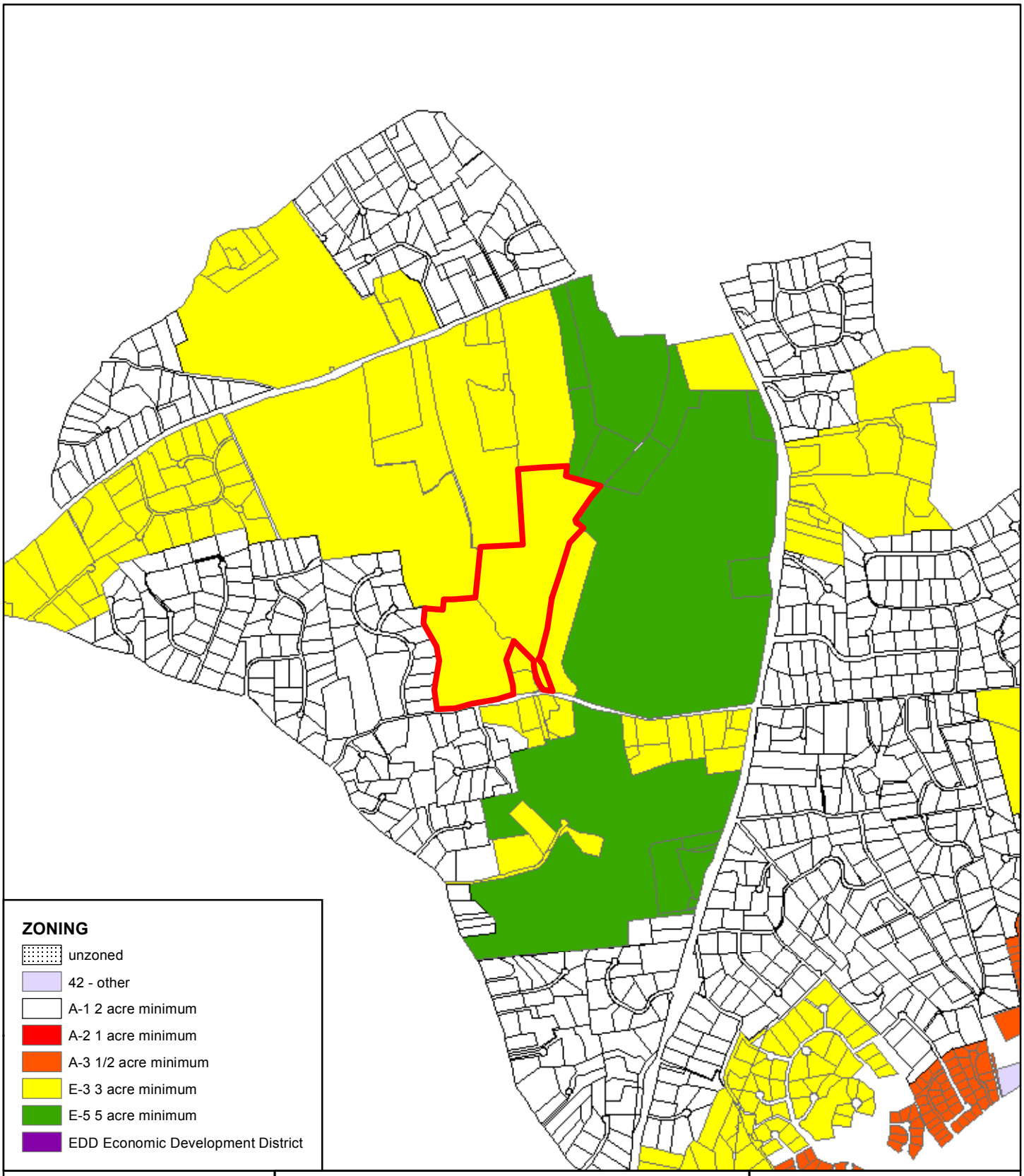

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FIGURE 3 - 2
ZONING MAP

Source: Village of Muttontown GIS Zoning

Scale: 1 inch = 2,000 feet

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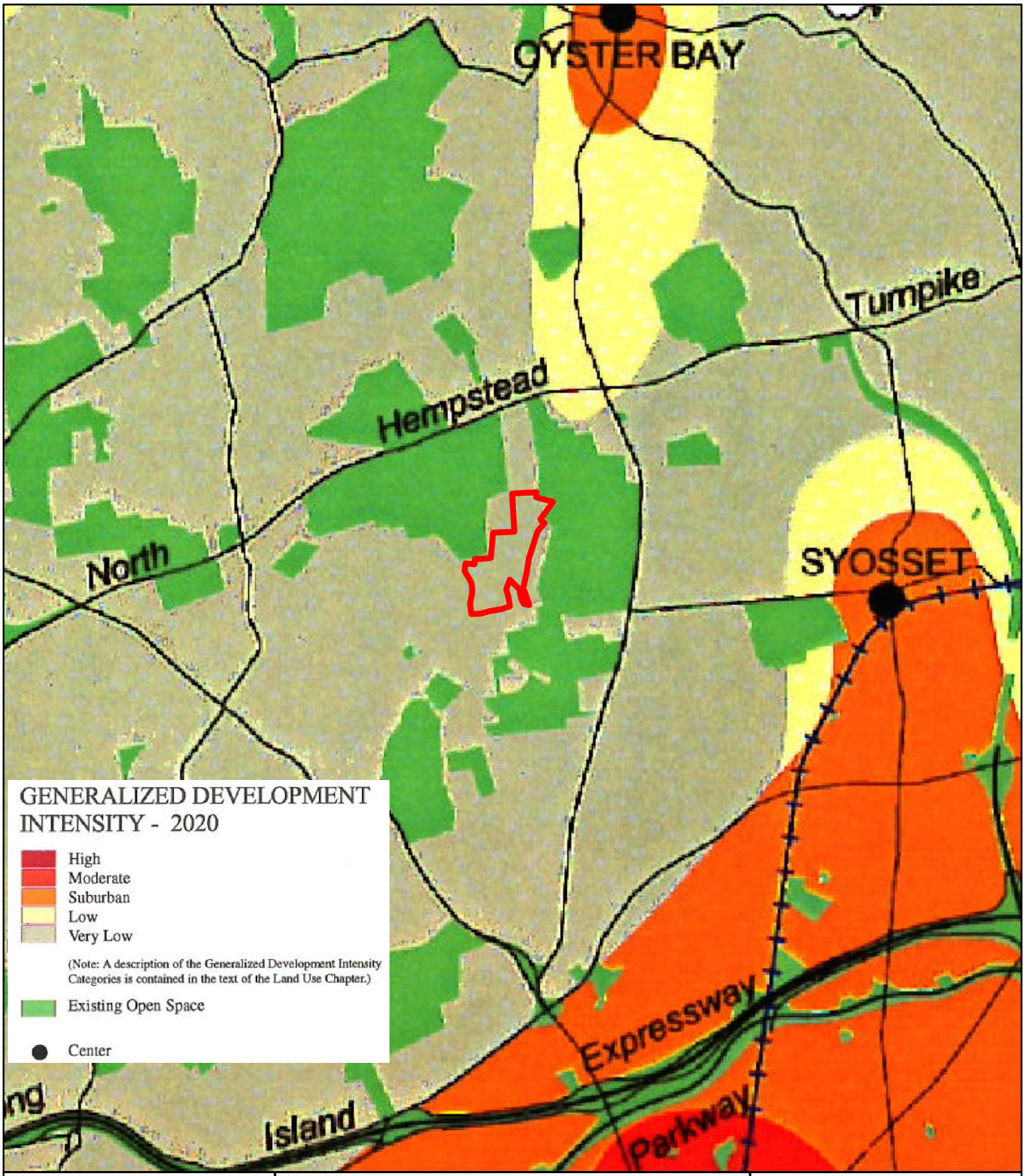

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FIGURE 3 - 3
NASSAU COUNTY COMPREHENSIVE PLAN MAP

Source: Nassau County Planning Commission, 1998
Scale: 1 inch = 4,000 feet

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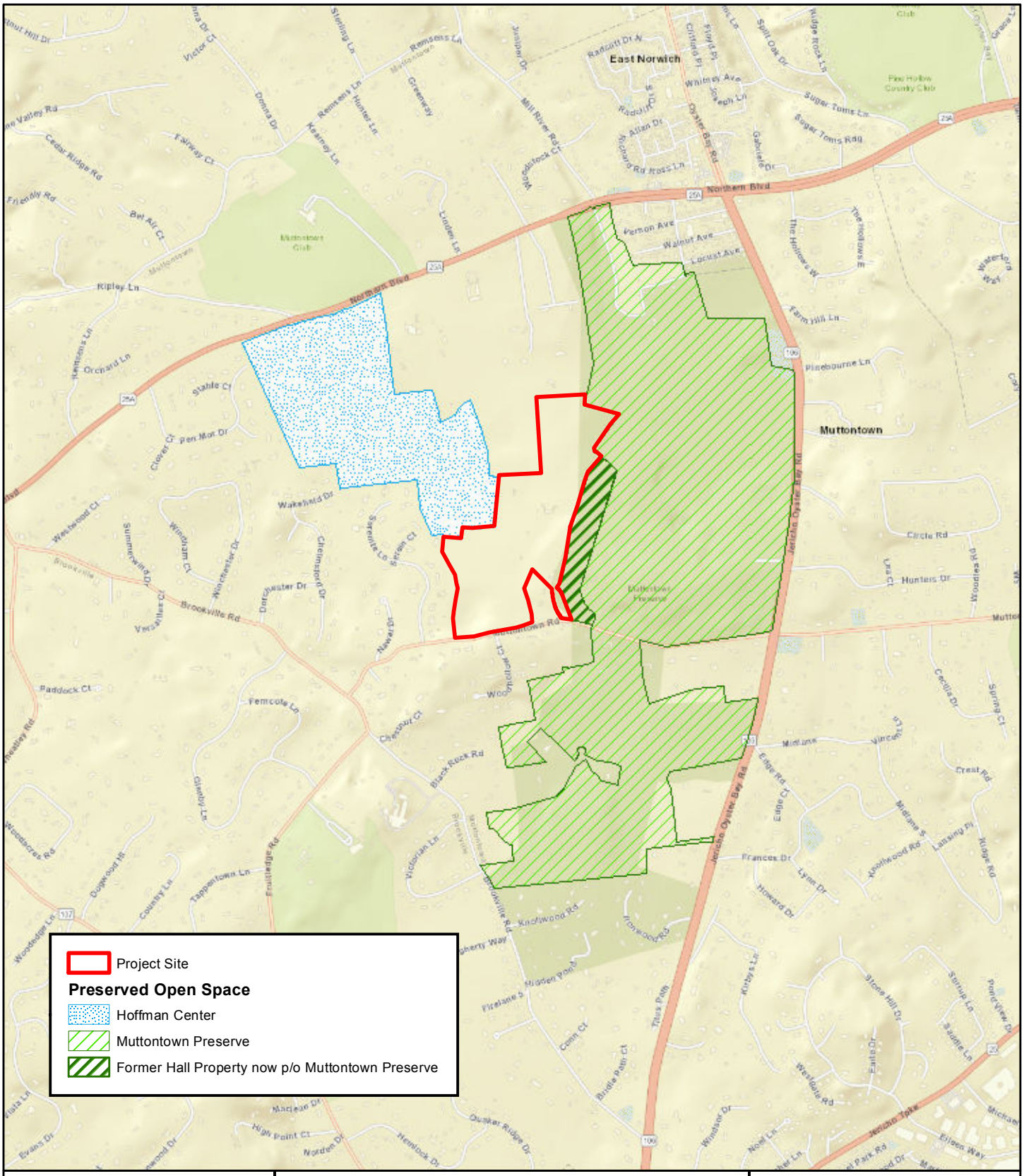

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FIGURE 3-4
MUTTONTOWN PRESERVE MAP

Source: ESRI WMS; Village of Muttontown GIS
Scale: 1 inch = 2,000 feet

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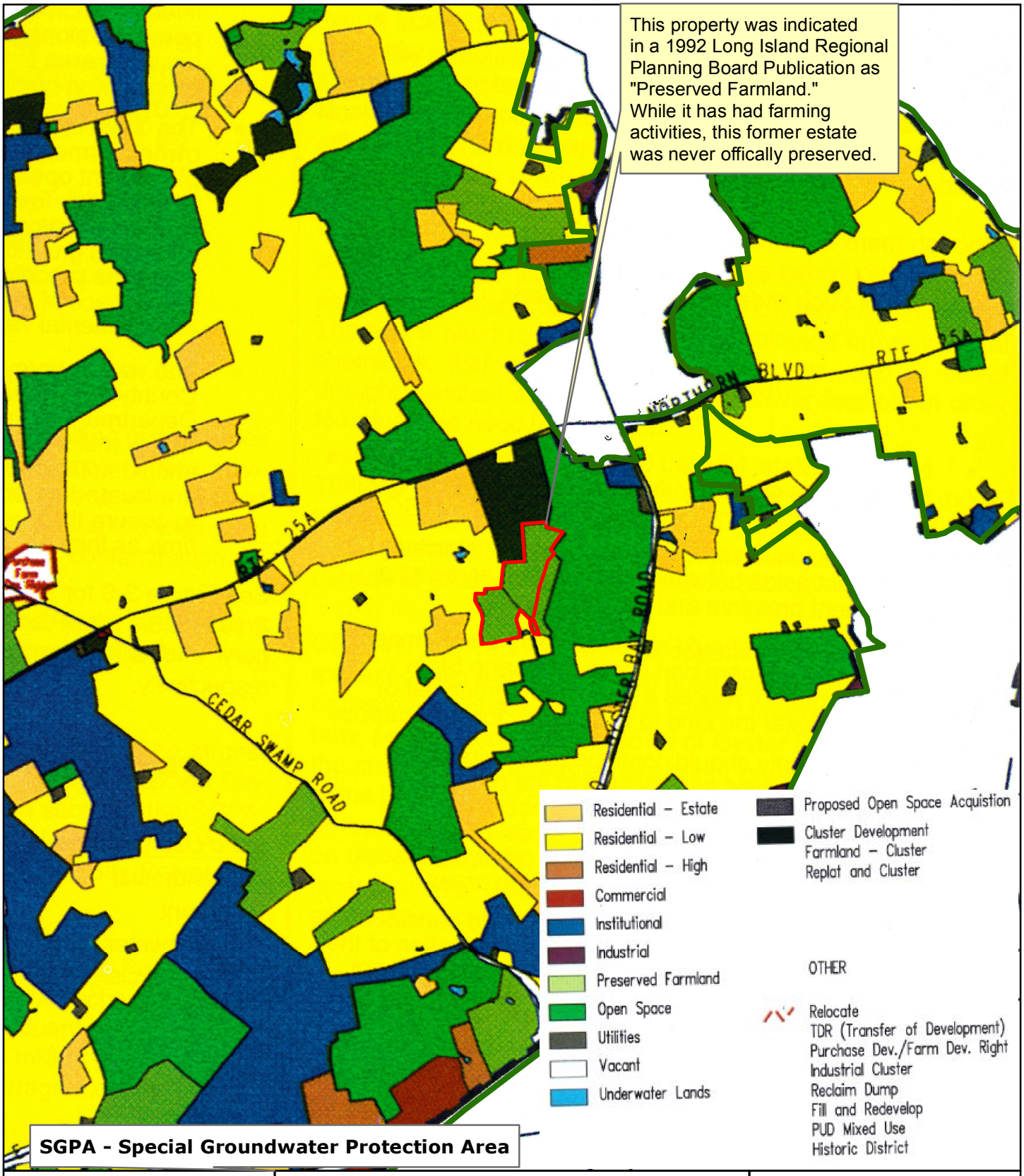

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FIGURE 3 - 5
SGPA MAP

Source: Long Island Regional Planning Board
Oyster Bay SGPA, Fig 3-6, 1992
Scale: 1 inch = 4,000 feet

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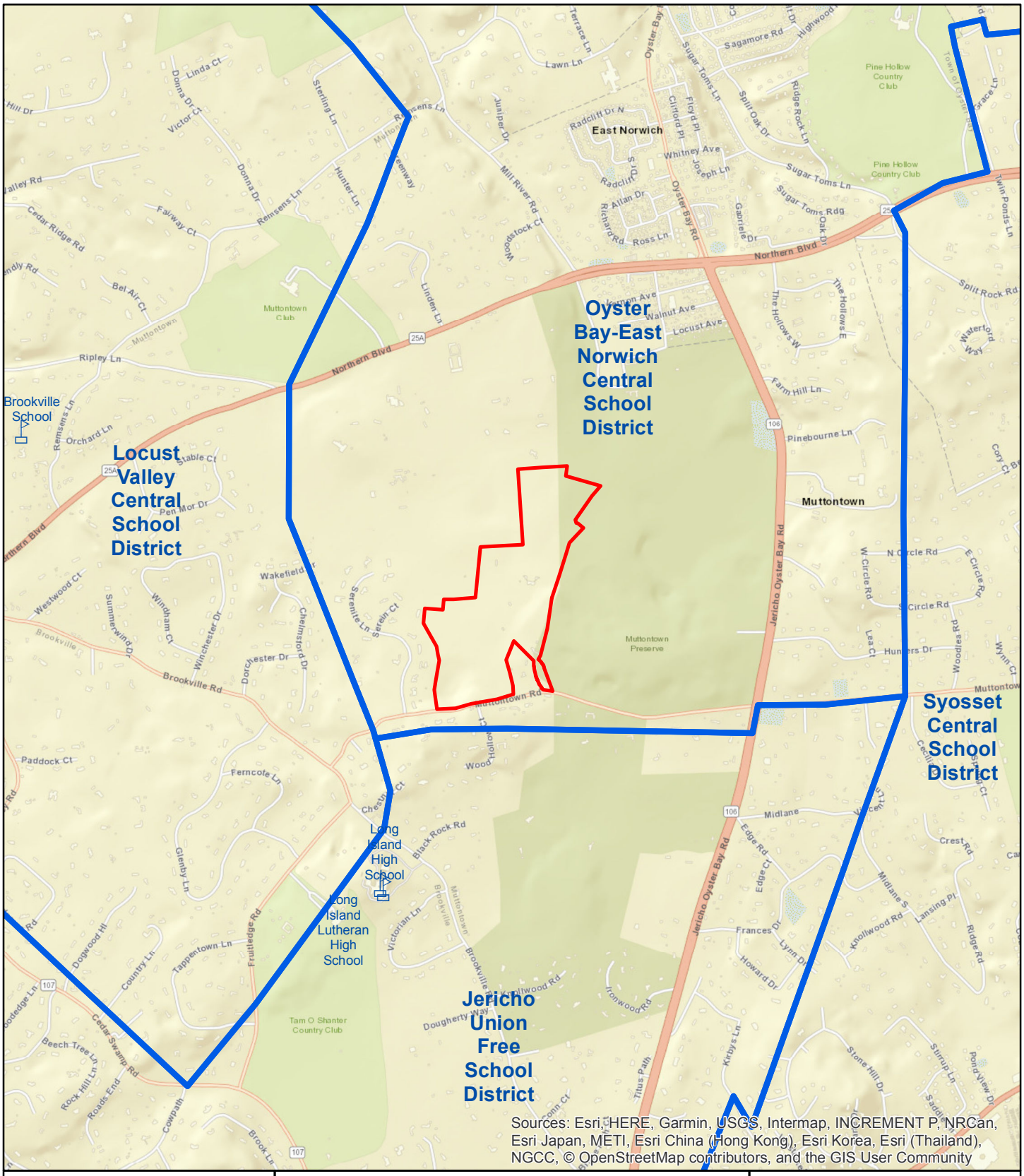

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FIGURE 3 - 6
COMMUNITY SERVICES MAP, EDUCATION

Source: Village of Muttontown GIS
Scale: 1 inch = 2,000 feet

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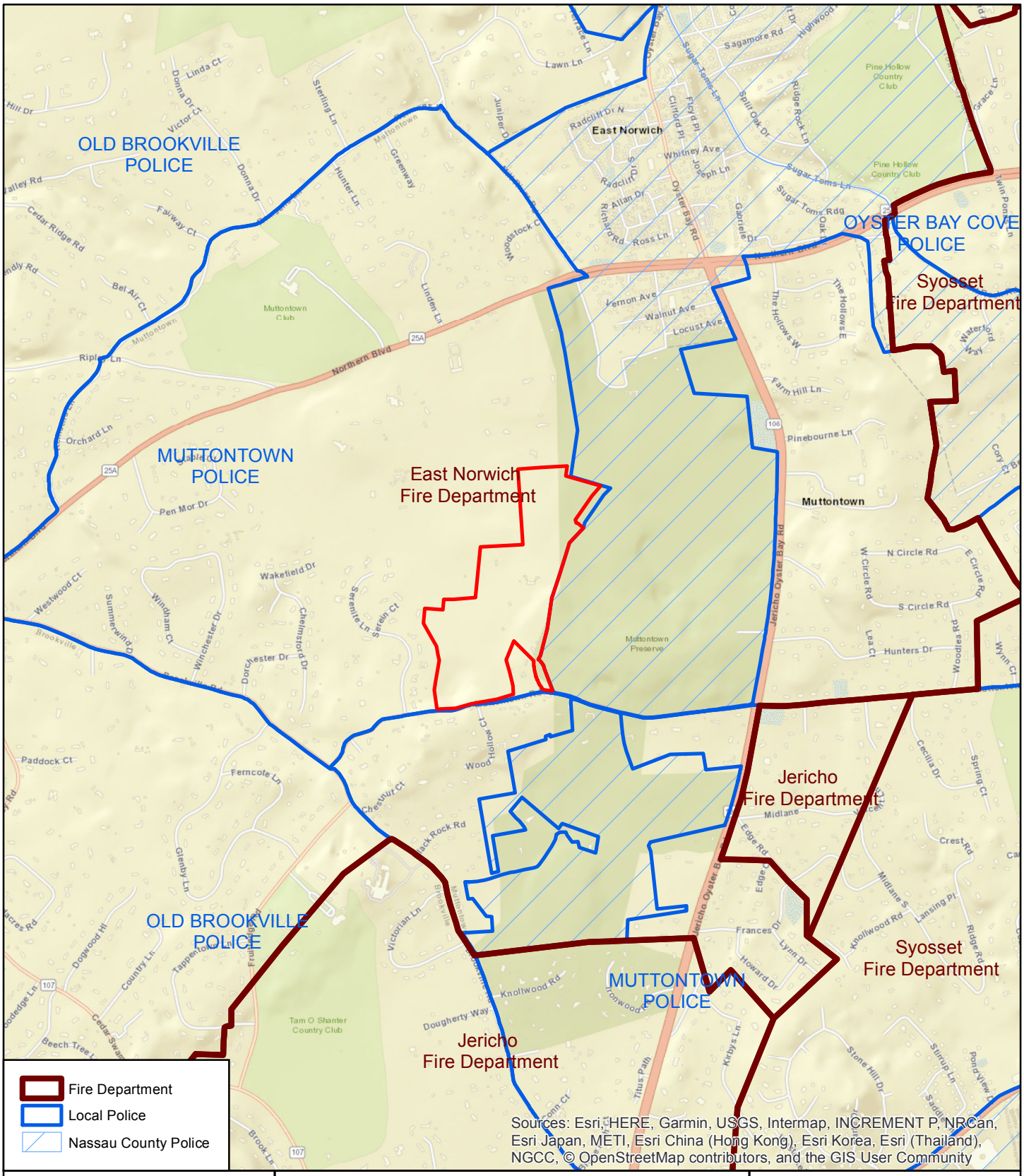

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FIGURE 3 - 7
COMMUNITY SERVICES MAP, PUBLIC SAFETY

Source: Village of Muttontown GIS
Scale: 1 inch = 2,000 feet

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