

# APPENDIX A

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**STATE ENVIRONMENTAL QUALITY REVIEW ACT**  
**FINAL SCOPE**  
**Western Clifton Park Land Use Study**  
**&**  
**Generic Environmental Impact Statement (GEIS)**

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**Name of Action:** Western Clifton Park Land Use Study & GEIS

**SEQR Status:** Type 1

**Lead Agency:** Clifton Park Town Board

**I. DESCRIPTION OF PROPOSED PROJECT**

The proposed project will involve the evaluation of the cumulative impacts of potential future development within the western portion of the Town of Clifton Park on land use, infrastructure, and environmental issues. The evaluation process will begin with the identification of build-out based on current zoning. Potential impacts of the build-out scenario on the environment will be discussed with emphasis on key community issues: land use and vision, traffic, and fiscal implications. If significant impacts are identified as a result of the build-out evaluation, other land use alternatives will be explored through a land use study. The breadth of analysis will be limited by the Town's current vision for the Study Area and refined through additional community meetings. Build-out under current zoning will be used to evaluate overall impact. The preferred land use/development scenario is intended as mitigation for the current zoning and land use patterns. Build-out under the preferred scenario will also be identified and used to evaluate those issues that involve capacity to grow. Roadway improvement is an example of a capacity issue.

The Draft GEIS will include the following project description elements:

- A. Project Purpose and Need – A discussion of the goals and objectives for preparing the Draft GEIS, including a definition of the function and anticipated benefits of using the SEQR process to identify and plan for future development.
- B. Build-Out Analysis – Provides the results of the build-out and justification for the consideration of alternative development scenarios.
- C. Preferred Alternative – Presents the results of the planning study and an implementation strategy.

The purpose of the GEIS will be to evaluate the cumulative impacts of growth based on build-out of the study area and establish appropriate mitigation, including a plan that will address rural character. This plan will become the preferred growth scenario. This growth scenario may change as a result of the impact analysis based on the identification of thresholds or limitations that may warrant reconsideration of the magnitude or location of future growth. The limits identified in the GEIS through studies and evaluation will be expressed as thresholds for future development. Projects that meet these thresholds will be considered in compliance with the GEIS and associated Statement of Findings. Projects that exceed the thresholds (one or more) must undergo further SEQR review to identify the significance of the impact(s).

This Final Scope is prepared in accordance with 6NYCRR 617.8 and is available for public review. Copies of this scope have been submitted to all Involved Agencies and any Interested Agency requesting a copy.

The project area consists of approximately 13,900 acres of developed and undeveloped land located in the western portion of the Town of Clifton Park. Project area boundaries are illustrated on the attached location map.

## II. POTENTIAL IMPACTS AND MITIGATION

A Full Environmental Assessment Form (EAF) was prepared to determine the potential significance of the project impacts. Based on this initial analysis, the following scope is provided for consideration.

### A. Topography, Geology & Soils

Existing Conditions: Topography, geology and soils will be identified based on available mapping including USGS quadrangles, surficial and bedrock geology maps, and the Natural Resource Conservation Service soils survey for Saratoga County.

Potential Impact: Erosion and sedimentation are significant potential impacts that can be mitigated by standard erosion control practices and by respecting steep slopes and drainage courses.

Anticipated Information Necessary to Address the Impact: Soil survey data for Saratoga County will be sufficient to address the potential generic impacts of development projections and is currently available. No new information will be required.

Initial Identification of Mitigation Measures: The GEIS will identify typical temporary and permanent erosion control measures and will require that erosion and sedimentation control plans be developed for future projects.

### B. Water Resources

Existing Conditions: Surface water features will be identified using topographic mapping. New York State water quality classifications for surface waters will be identified. Aquifers will be identified using existing groundwater mapping.

Potential Impact: Future development may lead to increased runoff, erosion and sedimentation, and water quality impacts. Current stormwater management practices have increased the emphasis on water quality and may adequately mitigate future projects. Groundwater is an important source of potable water for the community. Aquifer protection will be an important consideration.

Anticipated Information Necessary to Address the Impact: Guidelines for the current State Pollutant Discharge Elimination System (SPDES) General Construction Permit are available and will be utilized to establish guidelines for future development. Mapped streams, lakes, and ponds and their associated floodplains will be identified on USGS topographic mapping and Flood Insurance Rate Maps (FIRM). State water quality

classifications will be identified from 6 NYCRR Part 863. Groundwater resources will be identified from available US Geological Survey aquifer mapping.

Initial Identification of Mitigation Measures: Stormwater management policies based on current SPDES regulations will be developed to mitigate impacts associated with runoff.

### **C. Ecology**

Existing Conditions: The project area will be investigated for the presence of threatened, endangered, rare, and special concern species through contact with the NYS Department of Environmental Conservation (NYSDEC) Natural Heritage Program. Other common species and their habitat (vegetative communities) will be generally identified by association with the general ecological communities within the Study Area. The potential presence of State and federal wetlands within the project area will be identified based on available wetland mapping.

Potential Impact: Build-out and to a lesser extent the preferred development scenario will reduce wildlife habitat and may result in wetland impacts.

Anticipated Information Necessary to Address the Impact: Ecological communities will be described generally using available mapping, primarily orthophoto quadrangles. Apart from a drive-through evaluation from existing roads, no field investigations will be conducted. Parameters for such investigation will be identified as part of the mitigation measures. The project area is not within a Critical Environmental Area. The potential presence of threatened and endangered species will be addressed through consultation with NYSDEC Natural Heritage Program and the U.S. Fish and Wildlife Service.

Initial Identification of Mitigation Measures: Mitigation for future development will include protocol for future site specific investigations to address site ecology, wetlands, and threatened and endangered species. Additionally, a new plan for the Study Area will focus on open space conservation and a reduction of development density. This is likely to benefit ecological communities and may provide opportunities to maintain or enhance existing habitat.

### **D. Land Use and Zoning**

Existing Conditions: Existing land use will be identified by site investigation and County land use mapping. This information will be refined through discussions with Town officials, visual inspection, and review of orthophoto mapping. Zoning and land use plans will be identified through contact with Town officials.

Potential Impact: An evaluation of build-out of the Study Area under current zoning and development patterns resulted in the identification of significant impacts to open space, agricultural uses, rural character, and the community's vision for this portion of Town.

Anticipated Information Necessary to Address the Impact: The build-out analysis required available Town GIS data and mapping accompanied by discussions with Town

officials and staff and some field analysis. The data was then modeled to identify buildable land area and development potential.

Initial Identification of Mitigation Measures: A planning study was conducted to refine a vision for the Study Area, evaluate development scenarios based on the vision, and propose a preferred development/land use scenario. This section of the DGEIS will focus on the benefits of the proposed land use and the zoning and other growth management tools that can help achieve the vision.

## **E. Agricultural Resources & Open Space**

Existing Conditions: Existing agricultural and open space data and mapping from the Town's open space plan will be incorporated into the GEIS.

Potential Impact: Build-out will significantly reduce the amount of open space and agricultural land within the Town. Without the tools in place, both regulatory and incentive-based, it will not be possible to conserve open space.

Anticipated Information Necessary to Address the Impact: The Town's open space plan will be incorporated into the GEIS and further refined to implement its recommendations. Additional information will be collected through one or more meetings with farmers and large land holders to identify possible methods for land preservation.

Initial Identification of Mitigation Measures: Mitigation will focus on opportunities to conserve open space through easements and will identify those methods (eg., incentive zoning, purchase of development rights) that are likely to work.

## **F. Recreational Resources & Pathways**

Existing Conditions: Existing recreational resources within the Town will be identified.

Potential Impact: Residential development within the Study Area may increase the need for recreational facilities and spaces.

Anticipated Information Necessary to Address the Impact: Contact with local officials will be made to identify the type and location of recreational facilities in the Town. Available information regarding the capacity and use of the facilities will also be collected.

Initial Identification of Mitigation Measures: The type and location of mitigation for increased development within the Study Area will depend on the magnitude and anticipated location of development under the Preferred Growth Scenario. Potential locations for new parks may be provided but no specific design will be presented for recreational facilities in the GEIS. Rather, recommendations might be made to facilitate future study or to incorporate recreational opportunities within future development projects. One recommendation might be for the Town to conduct a recreation survey to determine what the needs are of the community.

## **G. Visual Resources**

Existing Conditions: The visual/aesthetic character of the Study Area will be described. Visual resources are an important component of the rural character of the area.

Potential Impact: Visual resources are an important component of the rural character of the area. Development can have significant impacts on views. Even one home incorrectly located on a pastoral landscape can ruin that view and perhaps the character of the area. Additionally, improper lighting can impact enjoyment of an individuals surroundings as well as the night sky.

Anticipated Information Necessary to Address the Impact: Visual impacts will be addressed as a component of the Town's vision for the Study Area. Exemplary views may be presented to emphasize the need for development guidelines. Some field work may be necessary and would be incorporated into the field analysis for land use. A viewshed analysis will not be conducted.

Initial Identification of Mitigation Measures: Recommendations will be made to address procedures for the future evaluation of views on a site-by-site basis. Recommendations will be made to address ways in which site design can preserve important views.

## **H. Traffic**

Existing Conditions: Existing traffic data will be collected from State and County sources to generically evaluate the road network within the Study Area. Contact will also be made with the Capital District Transportation Committee to discuss the area, regional issues, and collect available data from CDTC's regional traffic model.

Potential Impact: Build-out is likely to have a significant impact on the road network. The impact may not be readily apparent from traditional performance measures such as volume-to-capacity ratios or level of service, since some rural roads have a high capacity for traffic. Rural character may be significantly impacted by high traffic volumes. The preferred growth scenario may also result in impacts to the road network at specific intersections that will require mitigation.

Anticipated Information Necessary to Address the Impact: General impact from build-out will require CDTC travel demand model data and the development of trip generation and distribution estimates based on anticipated land uses and the build-out potential. It is anticipated that the preferred growth scenario would concentrate development in specific areas where it may be necessary to evaluate existing and potential traffic in greater detail, especially if it is desirable to identify impact thresholds and specific mitigation requirements.

Initial Identification of Mitigation Measures: The type and location of mitigation for the preferred growth scenario will depend on the magnitude and anticipated location of development under the preferred growth scenario. The preferred growth scenario may in fact be an element of the traffic mitigation strategy by limiting development potential

and/or creating synergies for travel-mode choice. Other mitigation may include identification of specific improvements to the transportation infrastructure as well as providing guidelines for revised roadway standards and access management to reinforce roadway function and character.

## **I. Air Quality**

Existing Conditions: Existing air quality will be discussed based on regional information, which is limited at this time. There is no site specific or local air quality data available.

Potential Impact: Development within the Study Area with primarily residential uses based on current zoning is not likely to have an impact on regional air quality. However, continued development in a pattern of sprawl will continue to encourage vehicle use. Vehicle exhaust can have localized impacts due to excessive idling at busy intersections. Topographic conditions can also contribute to the localized concentration of pollutants. The removal of trees and other vegetation and replacement with impervious surfaces may also have an impact on the ability of the area to absorb and cleanse the air.

Anticipated Information Necessary to Address the Impact: There is no existing air quality data specific to the project area. It is not intended to conduct air quality modeling for this study. Rather, air quality will be discussed in more general terms since there are no major generators of air pollutants anticipated to be developed in the Study Area and there are no effective means of controlling vehicle use and the types of vehicles used at this time, other than land use controls discussed below.

Initial Identification of Mitigation Measures: The larger issue of controls on vehicle emissions will not be addressed in this GEIS due to the complexity of the issue. However, land use patterns can be changed to foster less vehicular use. Furthermore, a reduction in development potential (more open space under a vision of rural character) will likewise contribute to the mitigation of air pollution.

## **J. Noise**

Existing Conditions: A general discussion of existing noise based on land use within the Study Area will be discussed.

Potential Impact: Increased development will result in an increase in both ambient noise levels and short-duration noise levels. A major source of noise would be traffic. Construction noise would also occur. The duration and impact of this noise would depend on the location of the noise receptor and the magnitude of the project.

Anticipated Information Necessary to Address the Impact: It is not feasible to attempt to predict noise impacts. Noise will be addressed in general terms based on changes in land use.

Initial Identification of Mitigation Measures: Mitigation will be based on anticipated efforts to achieve the vision of rural character. Specific construction management measures, such as limitations to work hours, may be identified to address long-term construction.

## **K. Community Services**

Existing Conditions: Community services that may be impacted by potential future development within the project area will be identified along with their existing capacity to provide service.

Potential Impact: New development generally requires some level of service from the community. The primary community services that may be impacted by development in the Study Area include police protection, fire protection, emergency services, education, and solid waste management. Residential uses typically place higher demand on community services than other uses.

Anticipated Information Necessary to Address the Impact: Contact with the various service leaders will be necessary to identify the magnitude and significance of the potential impact.

Initial Identification of Mitigation Measures: The GEIS will attempt to identify current levels of service and anticipated impacts based on the preferred growth scenario. Control of both the magnitude and timing of growth may be an important tool to maintain current levels of service. The potential to identify service thresholds will allow the projection of major investments, which can also be modeled to determine the fiscal impacts.

## **L. Utilities**

Existing Conditions: The availability and location of water and sewer services will be identified.

Potential Impact: The extent to which water and sewer services are provided to the Study Area can have a significant impact on growth potential. Based on the Land Conservation Plan, water and sewer, as well as other utilities, may be concentrated in growth areas, such as hamlets. The implications of growth on the supply, treatment and distribution of water and the collection and treatment of sewer will be evaluated.

Anticipated Information Necessary to Address the Impact: Data on the location of existing service areas, distribution/collection infrastructure, and capacities will be collected from the Saratoga County Sewer District and the Town. Water demand will be estimated along with costs to provide infrastructure. At present, significant growth areas are not anticipated. Hamlet expansion and/or redevelopment may serve as growth areas in the future but will require further investigation beyond the scope of this study.

Initial Identification of Mitigation Measures: The potential for extension of utilities will be limited to water service. The anticipated density for the Study Area can accommodate

individual wells and septic systems. Opportunities for clustering for the preservation of open space down to lot sizes that would require water and sewer service would be investigated and paid for by the developer on a case by case basis. The potential to provide water to all existing and new development in the Study Area will be investigated to determine whether such an expansion is reasonable given the potential for significant reductions in both residential and commercial development density. A water main extension to the study area may be considered as an option for interconnections with other water districts and increased reliability.

#### **M. Cultural Resources**

Existing Conditions: A cultural resources investigation will be conducted for the Study Area. The analysis will include file searches, map review, and limited field analysis. The purpose of the analysis will be to identify known historic and pre-historic sites and to address the sensitivity for the discovery of cultural resources. Due to the size of the project area and the anticipated duration of build-out, the analysis will not serve as a complete Phase 1A. It will, however, provide a base for future site-specific Phase 1A surveys.

Potential Impact: Development projects may have the potential for disturbing and eliminating sites containing cultural resources. Such activity would be inconsistent with the NYS Historic Preservation Law.

Anticipated Information Necessary to Address the Impact: The Town Historian maintains information on the history and historic resources of the Town. Information applicable to the Study Area will be collected. Additionally, a qualified archaeologist will conduct a cultural resources investigation.

Initial Identification of Mitigation Measures: The GEIS will establish procedures for evaluating the potential future impact of development on a site-by-site basis.

#### **N. Fiscal Resources**

Existing Conditions: A fiscal model was developed for the Town to begin to address the implications of the Town's open space plan. The fiscal model is a useful planning tool that is used to compare the relative tax implications of various land use decisions (scenarios).

Potential Impact: Future development within the Study Area may have an impact on taxes based on an increased need for community services. Typically, the largest impact occurs to school taxes. The fiscal model can be used as part of the decision-making process to identify the Preferred Growth Scenario.

Anticipated Information Necessary to Address the Impact: The fiscal model will require modifications to address new development scenarios and changes in key input requirements.

Initial Identification of Mitigation Measures: Manipulation of land use and the magnitude of development are effective tools in managing fiscal impact. This will be the purpose of the model. Due to the level of effort involved in establishing input for each land use scenario, the number of scenarios will be limited to three for the purposes of this GEIS.

### III. REASONABLE ALTERNATIVES TO BE CONSIDERED

The following project alternatives will be discussed:

- A. Alternative Land-Use – The various land use scenarios evaluated in this GEIS/planning process to arrive at the Preferred Growth Scenario will be discussed in this section.
- B. No-Action Alternative – The No-Action Alternative will address the potential impact of development resulting from future growth under current zoning, current land use patterns, and without the benefit of specific growth management tools. This will be the build-out scenario.

### IV. OTHER GEIS COMPONENTS

- A. **Executive Summary** – Includes a brief description of the project and a summary of impacts, mitigation and alternatives.
- B. **Unavoidable Adverse Impacts that Cannot be Mitigated** – This section will summarize all the impacts for which mitigation is either not available/feasible or not sufficient to completely mitigate the impact. The potential significance of these impacts will also be discussed.
- C. **Growth-Inducing Impacts** – The entire GEIS will evaluate the potential future cumulative growth impacts of the Preferred Growth Scenario. This section will summarize the results of the environmental and planning analysis as provided in Section III.
- D. **Irreversible and Irretrievable Commitment of Resources** - Future development within the Study Area will consume local, regional, and perhaps national resources that may be permanently committed to the development. Land is an example of a commitment of a resource but is not necessarily irreversible and irretrievable. Energy consumption or the use of construction materials made from natural resources are typically irreversible and irretrievable resources.
- E. **Future SEQR Actions** - An important feature of a GEIS is the ability to approve future development actions without further SEQR action. To provide this feature, thresholds and other parameters relative to the use, extent and impact of development must be clearly explained within the GEIS. These thresholds will be revised as necessary as a result of public comment and will be finalized within the SEQR Findings Statement. Projects that exceed the parameters and thresholds for future actions, as ultimately defined in the Findings Statement, would require further SEQR review. This section of the GEIS will outline the draft parameters within which future actions can be approved without revisiting the SEQR process.

- F. References**
- G. Preliminary List of Appendices**
  - Draft and Final Scope
  - Correspondence
  - Zoning Code Excerpts
  - Traffic Data
  - Cultural Resources Investigation
  - Build-out Analysis
  - Land Conservation Plan

## **V. COMMENTS ON DRAFT SCOPE**

Comments received on the draft scope were primarily related to ecological resources and concerns over property rights. A proposal was received that recommended much more detailed habitat evaluation to not only identify State and federally listed threatened and endangered species but also to address other species that may be locally rare. A more detailed identification and evaluation of wetlands was also proposed. Alternative build-out scenarios were recommended to include higher open space conservation requirements. A comparison of fiscal impact of these scenarios was also recommended.

Some of the comments can be addressed through the establishment of the Land Conservation Plan. Build-out has been evaluated based on this plan and the fiscal implications will also be addressed in the DGEIS. The breadth of the proposed ecological study recommended above would certainly provide greater insight into the ecological diversity and health of the Study Area and may reveal significant habitat that would not otherwise be identified through this GEIS or normal site-specific development review processes. However, the Town's resources are limited and the Lead Agency (Town Board) has determined that those resources will be better spent on establishing a land conservation plan for the Study Area that will reduce density and help to preserve rural character. By default, this effort will provide benefit to the ecological communities by preserving more open space than would be possible under current zoning. Additionally, a conservation subdivision review approach will provide more opportunity to preserve important site features on a case by case basis.

Property rights are an important consideration with respect to the establishment of a new land use scenario and associated zoning. The DGEIS will provide discussion on the implications of the Land Conservation Plan on development potential. In general, most property within the study area is not served by water or sewer and therefore has far less development potential that what can be achieved by zoning if those utilities were in place. The Land Conservation Plan proposes similar density to that provided under the current R-2 and R-3 zoning districts that comprise the majority of land. It is recognized that the development "potential" within the R-1 district (assuming water and sewer can be provided) is reduced considerably by the base zoning recommended in the Land Conservation Plan. However, the plan also provides some incentives to increase density on a given parcel in exchange for preservation of lands elsewhere in the study area. This, combined with other flexibilities, is expected to allow a developer to propose some very creative projects that respect the character and resources of the area.

## **APPENDIX B**

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# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 9/28/04	Time: 11:30

Route To:	Acknowledge:	Date

Incoming	Outgoing	Returned	In Person
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**RE:**

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**NAME:** Lorraine, Superintendents Office

**FIRM:** Shenendehowa School District

**PHONE:** 881-0600

**NOTES:** The schools are near capacity but they're planning for future growth. Projects are underway to accommodate demands on facilities and resources. Communication and correspondence are frequent between the school district and town officials.

Sue Martin of the School District also indicated that the District would like to review the letter of July 13, 2004 with members of the administration and Town Board. She indicated it is somewhat difficult to give a reaction without a specific time period for the build out. She expects to respond further at the end of October after circulation of the letter.



**BY:** Charles Moore

**FILE:**  MAIN OFFICE FILES     PROJECT NOTE BOOK

# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 9/23/04	Time: 12:00


Route To:	Acknowledge:	Date

Incoming		Outgoing		Returned		In Person
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<b>RE:</b>

<b>NAME:</b> Captain Depass	<b>PHONE:</b> 383-5124
<b>FIRM:</b> NYS Police	

**NOTES:** There are 3 sergeants , 12 troopers 1 senior investigator and 5 investigators working out of the Clifton Park satellite office. There are no plans for a new station. They will respond to all calls received.

 CLOUGH HARBOUR & ASSOCIATES LLP	<b>BY:</b> Charles Moore
	<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input checked="" type="checkbox"/> PROJECT NOTE BOOK

# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 9/28/04	Time: 2:00


Route To:	Acknowledge:	Date

Incoming	Outgoing	Returned	In Person
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<b>RE:</b>

<b>NAME:</b> Mr. Schultz, Superintendent	<b>PHONE:</b> 384-1402
<b>FIRM:</b> Burnt Hill School District	

**NOTES:** Mr. Schultz requested the Study also look at potential growth specifically for the Burnt Hills/Ballston Lake School District within Clifton Park (how many potential students or how much development). Coincidentally, the Town Board is meeting tonight to discuss capacity issues. There are many large developments projected for the near future within the Town of Burnt Hills that will affect school enrollment. Presently they do not have a five year plan.

 CLOUGH HARBOUR & ASSOCIATES LLP	<b>BY:</b> Charles Moore
	<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input checked="" type="checkbox"/> PROJECT NOTE BOOK

# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 9/23/04	Time: 12:00


Route To:	Acknowledge:	Date

Incoming	Outgoing	Returned	In Person
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<b>RE:</b>

<b>NAME:</b>	<b>PHONE:</b> 371-3880
<b>FIRM:</b> Clifton Park Halfmoon Emergency Corp	

**NOTES:** There are approximately 37 paid paramedics give or take. Some are on military active duty. In addition, there are about 30-35 volunteers. They will respond to all calls received.

 CLOUGH HARBOUR & ASSOCIATES LLP	<b>BY:</b> Charles Moore
	<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input checked="" type="checkbox"/> PROJECT NOTE BOOK

# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 9/28/04	Time: 11:30

Route To:	Acknowledge:	Date


Incoming	Outgoing	Returned	In Person
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<b>RE:</b>

<b>NAME:</b> Lorraine, Superintendents Office	<b>PHONE:</b> 881-0600
<b>FIRM:</b> Shenendehowa School District	

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 CLOUGH HARBOUR & ASSOCIATES LLP	<b>BY:</b> Charles Moore
	<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input checked="" type="checkbox"/> PROJECT NOTE BOOK

**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, Region 5**

232 Hudson Street - P. O. Box 220, Warrensburg, New York 12885-0220

Phone: (518) 623-1281 • FAX: (518) 623-3603

Website: www.dec.state.ny.us



Erin M. Crotty  
Commissioner

November 4, 2003

Mr. Christopher R. Einstein, AICP  
Clough, Harbour & Associates, LLP  
P.O. Box 5269  
Albany, NY 12205-0269

**RE: LEAD AGENCY REQUEST**  
Western Clifton Park GEIS  
Clifton Park (T), Saratoga County

Dear Mr. Einstein,

The New York State Department of Environmental Conservation agrees that the Town of Clifton Park Planning Board should serve as lead agency for the Generic Environmental Impact Statement (GEIS) for the referenced Study Area, pursuant to the State Environmental Quality Review Act (SEQRA).

Based on the materials received with your October 28<sup>th</sup> letter, there are numerous state-regulated resources in the Study Area, as you well know. The Department supports the GEIS tool as a means for the Town to assess these resources in order to advance local land-use planning, and looks forward to working with the Town to provide any assistance necessary to accomplish this task.

Please direct all correspondence and questions to me at (518) 623-1285. Thank you.

Sincerely,

Marc S. Migliore  
Deputy Regional Permit Administrator

cc: Joseph Grasso / Clough, Harbour and Associates  
Mr. Jason Kemper, Director / Town of Clifton Park Department of Planning

**RECEIVED**

NOV 05 2003

Clough, Harbour & Associates LLP

New York State Department of Environmental Conservation  
**Division of Fish, Wildlife & Marine Resources**  
**New York Natural Heritage Program**  
625 Broadway, 5<sup>th</sup> floor, Albany, New York 12233-4757  
Phone: (518) 402-8935 • FAX: (518) 402-8925  
Website: [www.dec.state.ny](http://www.dec.state.ny).



November 2, 2003

John Greaves  
Clough, Harbour & Associates  
111 Winners Circle  
Albany, NY 12205

CHA #12803

Dear Mr. Greaves:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Western Clifton Park Generic Environmental Impact Statement, area as indicated on the map you provided, located in the Town of Clifton Park (western), Saratoga County.

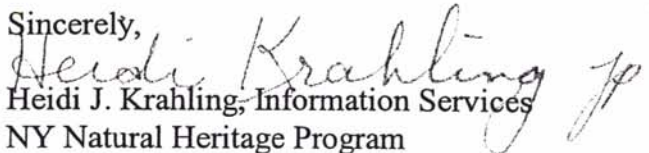
Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

The presence of rare species may result in this project requiring additional permits, permit conditions, or review. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

  
Heidi J. Krahling, Information Services  
NY Natural Heritage Program

Encs.

cc: Reg. 5, Wildlife Mgr

# Natural Heritage Report on Rare Species and Ecological Communities

Prepared 31 October 2003 by NY Natural Heritage Program, NYS DEC, Albany, New York

This report contains SENSITIVE information that should be treated in a sensitive manner -- Please see cover letter. Refer to the Users' Guide for explanations of codes, ranks, and fields. We do not always provide maps of locations of species most vulnerable to disturbance, nor of some records whose locations and/or extents are not precisely known or are too large to display.



County	Scientific Name, COMMON NAME, & Group Name	NY Legal Status, Heritage Ranks, & Federal Status	EO Rank & Last Seen	Detailed Location	General Habitat and Quality	Office Use
* ALBANY						
** COLONIE						
	<i>Routeloua curtipendula</i> SIDE-OATS GRAMA Vascular Plant	ENDANGERED G5 S1	F 1932-07-27	MOHAWK RIVER COLONIE Dry banks along Mohawk River. East of Niskayuna, Town of Colonie.	Dry banks of river. No plants were found when canoeing between Schenectady County line and Dunsbach Ferry.	4207377 M
* SARATOGA						
** CLIFTON PARK						
	<i>Lithospermum canescens</i> HOARY PUCCOON Vascular Plant	UNPROTECTED G5 SX	H NO DATE	JONESVILLE Jonesville. [check lupine locations].		4207387 M
	<i>Platanthera hookeri</i> HOOKER'S ORCHID Vascular Plant	ENDANGERED G5 S1	H 1902-06-18	REXFORD FLATS From Route 146 in Clifton Park, go south on Balltown Road to Rexford. Then, go east on River View Road to the golf course.	Woods.	4207377

## USERS GUIDE TO NY NATURAL HERITAGE DATA

**NATURAL HERITAGE PROGRAM:** The Natural Heritage Program is an ongoing, systematic, scientific inventory whose goal is to compile and maintain data on the rare plants and animals native to New York State, and significant ecological communities. The data provided in the report facilitate sound planning, conservation, and natural resource management and help to conserve the plants, animals and ecological communities that represent New York's natural heritage.

**DATA SENSITIVITY:** The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your in-house use and should not be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

**NATURAL HERITAGE REPORTS** (may contain any of the following types of data):

**COUNTY NAME:** County where the occurrence of a rare species or significant ecological community is located.

**TOWN NAME:** Town where the occurrence of a rare species or significant ecological community is located.

**USGS 7 1/2' TOPOGRAPHIC MAP:** Name of 7.5 minute US Geological Survey (USGS) quadrangle map (scale 1:24,000).

**SIZE (acres):** Approximate acres occupied by the rare species or significant ecological community at this location. A blank indicates unknown size.

**SCIENTIFIC NAME:** Scientific name of the occurrence of a rare species or significant ecological community.

**COMMON NAME:** Common name of the occurrence of a rare species or significant ecological community.

**ELEMENT TYPE:** Type of element (i.e. plant, animal, significant ecological community, other, etc.)

**LAST SEEN:** Year rare species or significant ecological community last observed extant at this location.

**EO RANK:** Comparative evaluation summarizing the quality, condition, viability and defensibility of this occurrence. Use with LAST SEEN.

A-E = Extant: A=excellent, B=good, C=marginal, D=poor, E=extant but with insufficient data to assign a rank of A - D.

F = Failed to find. Did not locate species, but habitat is still there and further field work is justified.

H = Historical. Historical occurrence without any recent field information.

X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.

? = Unknown.

Blank = Not assigned.

**NEW YORK STATE STATUS (animals):** Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E = Endangered Species: any species which meet one of the following criteria:

1) Any native species in imminent danger of extirpation or extinction in New York.

2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T = Threatened Species: any species which meet one of the following criteria:

1) Any native species likely to become an endangered species within the foreseeable future in NY.

2) Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC = Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environmental Conservation Law section 11-0535 (Endangered and Threatened Species).

P = Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U = Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.

G = Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law, many normally have an open season for at least part of the year, and are protected at other times.

**NEW YORK STATE STATUS (plants):** The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9-1503.

E = Endangered Species: listed species are those with:

1) 5 or fewer extant sites, or

2) fewer than 1,000 individuals, or

3) restricted to fewer than 4 U.S.G.S. 7 1/2 minute topographical maps, or

4) species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T = Threatened: listed species are those with:

1) 6 to fewer than 20 extant sites, or

2) 1,000 to fewer than 3,000 individuals, or

3) restricted to not less than 4 or more than 7 U.S.G.S. 7 and 1/2 minute topographical maps, or

4) listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R = Rare: listed species have:

1) 20 to 35 extant sites, or

2) 3,000 to 5,000 individuals statewide.

New York State Breeding Bird Atlas  
Breeding Species for Block Numbers:

5875C&D, 5975C, 5874A, B&D, 5974A&C, 5873B, 5973A

<u>Common Name</u>	<u>Scientific Name</u>	<u>Breeding Class</u>	<u>Year</u>	<u>New York Legal Status</u>	<u>Heritage State Rank</u>
American Bittern	<i>Botaurus lentiginosus</i>	S2	83	Protected-Special Concern	S4
Great Blue Heron	<i>Ardea herodias</i>	X1	85	Protected	S5
Green Heron	<i>Butorides virescens</i>	X1	85	Protected	S5
Canada Goose	<i>Branta canadensis</i>	FL	83	Game Species	S5
Wood Duck	<i>Aix sponsa</i>	ON	85	Game Species	S5
American Black Duck	<i>Anas rubripes</i>	X1	85	Game Species	S4
Mallard	<i>Anas platyrhynchos</i>	NE	83	Game Species	S5
Blue-winged Teal	<i>Anas discors</i>	NE	83	Game Species	S5
Turkey Vulture	<i>Cathartes aura</i>	X1	85	Protected	S4
Sharp-shinned Hawk	<i>Accipiter striatus</i>	X1	84	Protected-Special Concern	S4
Northern Goshawk	<i>Accipiter gentilis</i>	X1	84	Protected-Special Concern	S4
Red-shouldered Hawk	<i>Buteo lineatus</i>	X1	84	Protected-Special Concern	S4
Broad-winged Hawk	<i>Buteo platypterus</i>	FY	82	Protected	S5
Red-tailed Hawk	<i>Buteo jamaicensis</i>	NY	82	Protected	S5
American Kestrel	<i>Falco sparverius</i>	ON	82	Protected	S5
Ring-necked Pheasant	<i>Phasianus colchicus</i>	FL	84	Game Species	SE
Ruffed Grouse	<i>Bonasa umbellus</i>	D2	85	Game Species	S5
American Crow	<i>Corvus brachyrhynchos</i>	NE	83	Game Species	S5
Virginia Rail	<i>Rallus limicola</i>	X1	85	Game Species	S5
Sora	<i>Porzana carolina</i>	T2	85	Game Species	S4
Common Moorhen	<i>Gallinula chloropus</i>	T2	85	Game Species	S4
Killdeer	<i>Charadrius vociferus</i>	NE	84	Protected	S5
Spotted Sandpiper	<i>Actitis macularia</i>	X1	84	Protected	S5
American Woodcock	<i>Scolopax minor</i>	D2	85	Game Species	S5
Rock Dove	<i>Columba livia</i>	NY	84	Unprotected	SE
Mourning Dove	<i>Zenaidura macroura</i>	NY	82	Protected	S5
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	T2	82	Protected	S5
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	T2	82	Protected	S5
Eastern Screech-Owl	<i>Otus asio</i>	T2	82	Protected	S5
Great Horned Owl	<i>Bubo virginianus</i>	FL	84	Protected	S5
Barred Owl	<i>Strix varia</i>	T2	84	Protected	S5
Common Nighthawk	<i>Chordeiles minor</i>	T2	83	Protected-Special Concern	S4
Whip-poor-will	<i>Caprimulgus vociferus</i>	T2	81	Protected-Special Concern	S4
Chimney Swift	<i>Chaetura pelagica</i>	ON	82	Protected	S5
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	T2	81	Protected	S5
Belted Kingfisher	<i>Ceryle alcyon</i>	FY	83	Protected	S5
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	X1	84	Protected-Special Concern	S4

Note: For reports covering multiple blocks, only the record containing the most recent year for the highest level of breeding recorded for each species is shown.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Breeding Class</u>	<u>Year</u>	<u>New York Legal Status</u>	<u>Heritage State Rank</u>
Red-eyed Vireo	Vireo olivaceus	FL	84	Protected	S5
Blue-winged Warbler	Vermivora pinus	FY	85	Protected	S5
Yellow Warbler	Dendroica petechia	NE	82	Protected	S5
Chestnut-sided Warbler	Dendroica pensylvanica	FY	84	Protected	S5
Yellow-rumped Warbler	Dendroica coronata	X1	84	Protected	S5
Black-throated Green Warbler	Dendroica virens	X1	84	Protected	S5
Pine Warbler	Dendroica pinus	S2	84	Protected	S5
Black-and-white Warbler	Minotilta varia	FY	83	Protected	S5
American Redstart	Setophaga ruticilla	T2	85	Protected	S5
Ovenbird	Seiurus aurocapillus	T2	83	Protected	S5
Northern Waterthrush	Seiurus noveboracensis	D2	84	Protected	S5
Louisiana Waterthrush	Seiurus motacilla	DD	81	Protected	S5
Common Yellowthroat	Geothlypis trichas	FL	84	Protected	S5
Scarlet Tanager	Piranga olivacea	NY	82	Protected	S5
Northern Cardinal	Cardinalis cardinalis	NE	83	Protected	S5
Rose-breasted Grosbeak	Phenicurus ludovicianus	NY	82	Protected	S5
Indigo Bunting	Passerina cyanea	FL	83	Protected	S5
Eastern Towhee	Pipilo erythrophthalmus	NE	81	Protected	S5
Chipping Sparrow	Spizella passerina	NY	83	Protected	S5
Field Sparrow	Spizella pusilla	D2	83	Protected	S5
Vesper Sparrow	Poocetes gramineus	FY	80	Protected	S5
Savannah Sparrow	Passerculus sandwichensis	DD	81	Protected-Special Concern	S5
Grasshopper Sparrow	Ammodramus savaannarum	DD	81	Protected	S5
Song Sparrow	Melospiza melodia	T2	82	Protected-Special Concern	S4
Swamp Sparrow	Melospiza georgiana	NY	82	Protected	S5
White-throated Sparrow	Zonotrichia albicollis	FL	82	Protected	S5
Bobolink	Dolichonyx oryzivorus	X1	84	Protected	S5
Red-winged Blackbird	Agelaius phoeniceus	FL	83	Protected	S5
Eastern Meadowlark	Sturnella magna	NY	80	Protected	S5
Common Grackle	Sturnella magna	FL	82	Protected	S5
Brown-headed Cowbird	Quiscalus quiscula	NY	81	Protected	S5
Baltimore Oriole	Molothrus ater	NY	82	Protected	S5
Purple Finch	Icterus galbula	NY	83	Protected	S5
House Finch	Carpodacus purpureus	X1	83	Protected	S5
American Goldfinch	Carpodacus mexicanus	NY	84	Protected	S5
House Sparrow	Carduelis tristis	FY	84	Protected	SE
	Passer domesticus	NY	84	Protected	S5
			83	Unprotected	SE

Total Species: 115

Note: For reports covering multiple blocks, only the record containing the most recent year for the highest level of breeding recorded for each species is shown.

## NEW YORK STATE - BREEDING BIRD ATLAS REPORT

The enclosed data from the New York State Breeding Bird Atlas represents a cumulative effort from 1980-1985. These data are the result of on-site surveys within each block conducted by numerous volunteers. The intensity level and effort in data collecting varies throughout the State. Some blocks have been more thoroughly searched than others. For these reasons, we cannot provide a definitive statement concerning the absence of a breeding record for a species not listed in a block. We can only provide a listing of species known to be breeding or suspected of breeding in each block or set of blocks.

For each species listed, its breeding class code and year, its New York State Legal Status, and its Natural Heritage Program state rarity rank are provided. Explanations of these fields are as follows:

### BREEDING CLASS AND YEAR

Indicates the highest class of evidence used to document breeding in that block or set of blocks during the course of the Breeding Bird Atlas Survey, and the year this evidence was recorded. Breeding classes used, and their codes, are listed below, in descending order of breeding confirmation, from strongest evidence of confirmed breeding down to evidence of possible breeding.

	<u>CODE</u>	<u>DEFINITION OF BREEDING EVIDENCE</u>
Confirmed Breeding:		
	NY	Nest with young.
	NE	Identifiable nest and eggs, bird sitting on nest or eggs, identifiable eggshells found beneath nest, or identifiable dead nestling(s).
	FY	Adult(s) with food for young.
	FS	Adult carrying fecal sac.
	ON	Adult(s) entering or leaving nest site in circumstances indicating occupied nest.
	FL	Recently fledged young (including downy young of precocial species - waterfowl, shorebirds).
	FE	Female with egg in the oviduct.
	UN	Used nest found.
	DD	Distraction display or injury-feigning.
Probable Breeding:		
	B2	Nest building or excavation or a nest hole.
	N2	Visiting probable nest site. Nest building by wrens and woodpeckers.
	D2	Courtship and display, agitated behavior or anxiety calls from adults suggesting probable presence nearby of a nest or young; well-developed brood-patch or cloacal protuberance on trapped adult.
	T2	Bird (or pair) apparently holding territory.
	S2	Singing male present (or breeding calls heard) on more than one date in the same place.
	P2	Pair observed in suitable habitat in breeding season.

Continued on next page...

NY NATURAL HERITAGE PROGRAM STATE RARITY RANKS:

Each species has a state rank, which reflects its rarity within New York State, as determined by the NY Natural Heritage Program. These ranks carry no legal weight.

S1 = Typically 5 or fewer occurrences in New York State, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.

S2 = Typically 6 to 20 occurrences in New York State, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3 = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4 = Apparently secure in New York State.

S5 = Demonstrably secure in New York State.

SH = Historically known from New York State, but not seen in the past 15 years.

SX = Apparently extirpated from New York State.

SE = Exotic, not native to New York State

NR = Not ranked (e.g., hybrids)

Questions concerning these data may be addressed to:

New York Natural Heritage Program  
NYS DEC - Wildlife Resources Center  
700 Troy-Schenectady Road  
Latham, New York 12110-2400

Copies of the published book "The Atlas of Breeding Birds in New York State", Robert F. Andrie and Janet R. Carroll, Editors, may be purchased directly from Cornell University Press. Call phone number 1-800-666-2211 to order.



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

3817 Luker Road  
Cortland, NY 13045



November 4, 2003

Mr. Christopher R. Einstein, AICP  
Senior Planner  
Clough, Harbour & Associates LLP  
P.O. 5269  
Albany, NY 12205-0269

RECEIVED

NOV 10 2003

Clough, Harbour & Associates LLP

Dear Mr. Einstein:

This responds to your letter of October 20, 2003, requesting information on the presence of endangered or threatened species in the vicinity of the Western Clifton Park Study Area in the Town of Clifton Park, Saratoga County, New York.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Therefore, no further Endangered Species Act coordination or consultation with the U.S. Fish and Wildlife Service (Service) is required. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally listed and proposed endangered and threatened species in New York\* is available for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate New York State Department of Environmental Conservation regional office(s),\* and:

New York State Department of Environmental Conservation  
New York Natural Heritage Program Information Services  
625 Broadway  
Albany, NY 12233-4757  
(518) 402-8935

Since wetlands may be present, you are advised that National Wetlands Inventory (NWI) maps may or may not be available for the project area. However, while the NWI maps are reasonably

accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Copies of specific NWI maps can be obtained from:

Cornell Institute for Resource Information Systems  
302 Rice Hall  
Cornell University  
Ithaca, NY 14853  
(607) 255-4864

Work in certain waters of the United States, including wetlands, may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without recommending additional permit conditions, or recommend denial of the permit depending upon potential adverse impacts on fish and wildlife resources associated with project construction or implementation. The need for a Corps permit may be determined by contacting the appropriate Corps office(s).\*

If you require additional information or assistance please contact Michael Stoll at (607) 753-9334.

Sincerely,  
  
Acting For

David A. Stilwell  
Field Supervisor

\*Additional information referred to above may be found on our website at:  
<http://nyfo.fws.gov/es/esdesc.htm>.

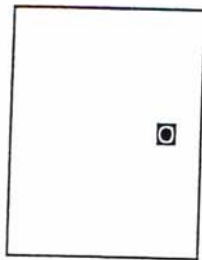
cc: NYSDEC, Ray Brook, NY (Environmental Permits)  
NYSDEC, Albany, NY (Natural Heritage Program)  
COE, New York, NY

U.S. Fish and Wildlife Service  
New York Field Office  
3817 Luker Road  
Cortland, NY 13045

To provide a timely response to future requests for endangered species comments in New York, please include the following in future inquiries:

1. A concise brief description of the project/action.
2. Name of the hamlet/village/city/town/county where the project/action occurs.
3. The latitude and longitude of the project/action, i.e.:  $42^{\circ} 13' 28''$  /  $76^{\circ} 56' 30''$ . If the project/action is linear, you may provide coordinates for both ends or just one near center.
4. A map showing the project/action location. Preferrably the map should be a U.S. Geological Survey quadrangle map (USGS Quad). You need only provide a copy of that portion where the project/action occurs. Please provide the name(s) of the USGS quadrangle.

If providing only a portion, indicate where the portion would be located on the full quadrangle, i.e.



Providing the information above will assist us in responding to your needs.

If you require additional information please contact Michael Stoll at (607) 753-9334.



New York State Office of Parks, Recreation and Historic Preservation  
Historic Preservation Field Services Bureau  
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

November 25, 2003

Christopher R. Einstein  
Clough, Harbour & Assoc  
III Winners Circle  
P.O. Box 5269  
Albany, New York 12205-0269

Re: SEQRA  
Western Clifton Park GEIS  
Clifton Park, Saratoga County  
03PR05326

Dear Mr. Einstein:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP) concerning your project's potential impact/effect upon historic and/or prehistoric cultural resources. Our staff has reviewed the documentation that you provided on your project. Preliminary comments and/or requests for additional information are noted on separate enclosures accompanying this letter. A determination of impact/effect will be provided only after ALL documentation requirements noted on any enclosures have been met. Any questions concerning our preliminary comments and/or requests for additional information should be directed to the appropriate staff person identified on each enclosure.

In cases where a state agency is involved in this undertaking, it is appropriate for that agency to determine whether consultation should take place with OPRHP under Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law. In addition, if there is any federal agency involvement, Advisory Council on Historic Preservation's regulations, "Protection of Historic and Cultural Properties" 36 CFR 800 requires that agency to initiate Section 106 consultation with the State Historic Preservation Officer (SHPO).

When responding, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont  
Director

RLP:cmp

**ARCHEOLOGY COMMENTS**  
**03PR05326**

Based on reported resources, there is an archeological site in or adjacent to your project area. Therefore the Office of Parks, Recreation and Historic Preservation (OPRHP) recommends that a Phase 1 archeological survey is warranted for all portions of the project to involve ground disturbance, unless substantial prior ground disturbance can be documented. If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition.

A Phase 1 survey is designed to determine the presence or absence of archeological sites or other cultural resources in the project's area of potential effect. The Phase 1 survey is divided into two progressive units of study including a Phase 1A sensitivity assessment and initial project area field inspection, and a Phase 1B subsurface testing program for the project area. The OPRHP can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the OPRHP.

Our office does not conduct cultural resources surveys. A 36 CFR 61 qualified archeologist should be retained to conduct the Phase 1 survey. Many archeological consulting firms advertise their availability in the yellow pages. The services of qualified archeologists can also be obtained by contacting local, regional, or statewide professional archeological organizations. Phase 1 surveys can be expected to vary in cost per mile of right-of-way or by the number of acres impacted. We encourage you to contact a number of consulting firms and compare examples of each firm's work to obtain the best product.

Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many sites have been identified in previously cultivated land.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before any archeological survey activities are conducted on State-owned land. If any portion of the project includes the lands of New York State you should contact the SED before initiating survey activities. The SED contact is Christina B. Rieth and she can be reached at (518) 402-5975. Section 233 permits are not required for projects on private lands.

If you have any questions concerning archeology, please contact Michael Schifferli at 518-237-8643. ext 3281

**BUILDINGS/STRUCTURES/DISTRICTS  
EVALUATION COMMENTS**

**PROJECT NUMBER 03PR05326**

**( Western Clifton Park GEIS/. /T/CLIFTON PARK )**

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- There are no properties listed in the State or National Register of Historic Places within or adjacent to your project site.
  - The following properties listed in the State/National Registers of Historic Places are located within or adjacent to your project area:  
Grooms Tavern Complex  
Vischer Ferry Historic District  
Rexford Aqueduct State Historic Site
  - Your project area has not been comprehensively surveyed for historic resources. If you would like the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) to comment regarding properties potentially eligible for inclusion in the State or National Register of Historic Places, please submit original photographs of structures over fifty years old within or adjacent to the project area and key them to a site map.
  - Other: If any state or federal agencies are involved in this project, further review may be required in accordance with section 14.09 of the New York State Parks, Recreation and Historic Preservation Law or Section 106 of the National Historic Preservation Act of 1966.
- 

If you have any questions concerning this information, please call Raymond Smith

**PLEASE BE SURE TO REFER TO THE PROJECT NUMBER NOTED ABOVE WHEN  
RESPONDING TO THIS REQUEST**

# Office of the Sheriff

COUNTY OF SARATOGA  
6010 COUNTY FARM ROAD  
BALLSTON SPA, NEW YORK 12020

September 1, 2004

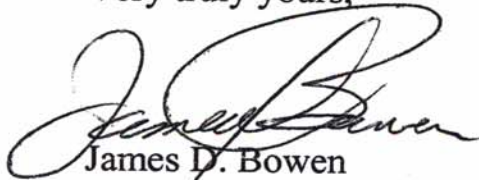
Charles Moore  
Environmental Planner  
Clough, Harbour & Associates LLP  
111 Winners Circle  
P.O. Box 5269  
Albany, NY 12205-0269

RE: Western Clifton Park Generic Environmental Impact Statement

Dear Mr. Moore:

I am in receipt of your letter in reference to the above matter. The Saratoga County Sheriff's Office will respond to all calls received.

Very truly yours,



James D. Bowen  
Sheriff

JDB/tlm

CORRESPONDENCE  
Project # 12803.1002.1106

RECEIVED

SEP 1 2004

SEP 1 2004

# CONVERSATION LOG

<b>PROJECT: CLIFTON PARK GEIS</b>	
Date: 8/9/04	Time:

Route To:	Acknowledge:	Date

	Incoming		Outgoing		Returned		In Person
--	----------	--	----------	--	----------	--	-----------

<b>RE:</b>

<b>NAME:</b> David Bowen
<b>FIRM:</b> Vischer Ferry Fire District

<b>PHONE:</b>

**NOTES:**

Mr. Bowen called to discuss the impacts of build out on the Vischer Ferry Fire District. He is also chair of the emergency Services Advisory Board. The fire district is prepared for the growth expected as discussed in the build out scenario. The only potential concern would arise if an industrial use were located in the area, which might lead to upgrade requirements regarding equipment to handle potential threats.



<b>BY:</b> Charles Moore
<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input type="checkbox"/> PROJECT NOTE BOOK

# Emergency Services Advisory Board

**David Bowen, Chair**  
**Allan Atwell**  
**Nancy Bellamy**  
**Daniel Bonesteel**  
**Jerry D'Amelia**  
**Larry Gates**  
**Randel Paquin**  
**John Ward**  
**Millicent Miller, Secretary**

Town of Clifton Park  
One Town Hall Plaza  
Clifton Park, New York 12065  
(518) 371-6651



Mr. Charles Moore  
Clough Harbour & Associates  
PO Box 5289  
Albany, New York 12205

July 15, 2004

You requested our input on the GEIS for the western portion of Clifton Park. Regardless of which growth scenario you use, the potential impact on the town's emergency services is the same. Our volume of calls would increase but not to an extent we cannot handle. If the characteristics of the area were to change to something out of the ordinary (industrial complex, mass housing, etc) then our ability to respond would need to be evaluated depending on the hazard. The town's planning process involves us early in any new projects so it should not be a problem.

Please let me know if you need any more information.

Sincerely,

David Bowen  
Chairman

CORRESPONDENCE

Project # \_\_\_\_\_

12803

cc: Sheryl Reed, Chief, Bureau of Fire Prevention

# CONVERSATION LOG

<b>PROJECT: 12803</b>	
Date: 11/11/03	Time: 10:00 am

Route To:	Acknowledge:	Date

X	Incoming		Outgoing		Returned		In Person
---	----------	--	----------	--	----------	--	-----------

<b>RE: Western Clifton Park</b>

<b>NAME:</b> John Ericson
<b>FIRM:</b> Rexford Fire District

<b>PHONE:</b> 365-7120

**NOTES:**

Mr. Ericson called to determine whether he was expected to respond to the lead agency request letter.

I told him that the fire district was identified as an interested agency and as such does not need to reply. I also indicated that any information regarding existing service issues/problems would be useful for the GEIS.

Mr. Ericson did not know of any problems at this time. He indicated support for attempts to control growth and maintain rural character within the Study Area.



<b>BY:</b> Chris Einstein
<b>FILE:</b> <input type="checkbox"/> MAIN OFFICE FILES <input type="checkbox"/> PROJECT NOTE BOOK

# Town of Clifton Park

One Town Hall Plaza  
Clifton Park, New York 12065  
(518) 371-6651  
FAX (518) 371-1136

Zoning Board of Appeals



December 2, 2003

Christopher R. Einstein, AICP  
Clough, Harbour & Associates LLP  
111 Winners Circle  
Albany, New York 12205-1735

Re: Western Clifton Park GEIS

Dear Mr. Einstein:

Thank you for the opportunity to review Part 1 of the Full Environmental Assessment Form for Western Clifton Park. I have no comments to offer at this time.

Very truly yours,

Dale R. Kelley, Chairman

Cc: J. Kemper  
J. Grasso  
D. Clemens  
L. Renzi

RECEIVED

DEC 08 2003

Clough, Harbour & Associates LI

# CONVERSATION LOG

<b>PROJECT: 11593</b>	
Date: 11/4/03	Time: 10:30 am

Route To:	Acknowledge:	Date

X	Incoming		Outgoing		Returned		In Person
---	----------	--	----------	--	----------	--	-----------

<b>RE: Western Clifton Park</b>

<b>NAME:</b> Paul Berlin
<b>FIRM:</b> West Crescent Fire District

<b>PHONE:</b> 365-7120
------------------------

**NOTES:**

Mr. Berlin called to let me know that the West Crescent Fire District is not within the Study Area for the referenced project.



**BY:** Chris Einstein

**FILE:**  MAIN OFFICE FILES  PROJECT NOTE BOOK

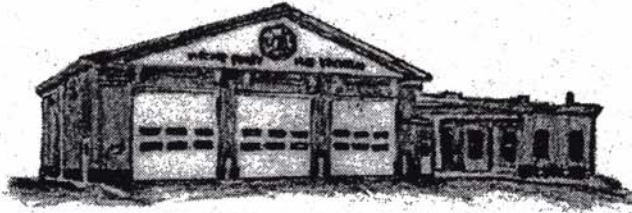
# Vischer Ferry Fire District

## Board of Fire Commissioners

360-A RIVERVIEW ROAD  
REXFORD, NEW YORK 12148  
TEL: (518) 371-3991  
FAX: (518) 371-7575

DAVID R. BOWEN  
PAUL W. LITTMAN  
NELSON E. PEAT  
M. JOHN WARD

GEORGE F. DONOHUE  
Chairman  
TRACEY L. McMAHON  
District Treasurer  
KARAN A. DONOHUE  
District Secretary



Christopher Einstein  
Clough, Harbour & Associates  
PO Box 5269  
Albany, N.Y. 12205-0269

Nov. 4, 2003

RE: Western Clifton Park GEIS  
CHA Project No. 12803

Chris,

We received your letter soliciting our comments on the above GEIS. I can address Section C, Question 11. We recently did a study for a 10-year plan in which we projected what our district would look like in 10 years and what we should be preparing for. We feel the greatest influence on growth in the western part of town will be the availability of water and sewer services. Assuming this happens and even if growth is 10-20% over the next 10 years, we anticipate no impact on our ability to provide fire and 1<sup>st</sup> responder EMS services. This assumes the character of that area remains as it is – residential in nature. The one thing that would impact us would be some kind of industrial growth that would cause us to obtain special apparatus we currently don't have.

I hope this is what you are looking for. If you need any more information, please call me at 371-3445.

Sincerely,

David Bowen  
Commissioner

**RECEIVED**

NOV 06 2003

Clough, Harbour & Associates LLP



Mary E. Brizzell  
Town Supervisor

**TOWN OF COLONIE**  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF LATHAM WATER  
347 Old Niskayuna Road  
Latham, New York 12110

Telephone: (518) 783-2750  
Fax: (518) 786-7320  
Website: [www.colonie.org/lathamwater](http://www.colonie.org/lathamwater)



John W. Frazer, Jr., P.E.  
Superintendent

October 31, 2003

Mr. Christopher R Einstein, AICP  
Senior Planner  
Clough, Harbour & Associates LLP  
III Winners Circle  
P O Box 5269  
Albany, New York 12205-0269

Re: **Western Clifton Park GEIS**

Dear Mr. Einstein:

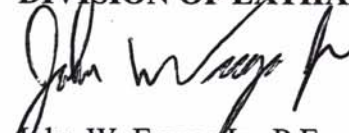
We are in receipt of your October 28, 2003 letter concerning the above referenced project. The Latham Water District concurs with the Town of Clifton Park's decision to take Lead Agency status.

We would appreciate to continue to be involved as an interested party in the project as it progresses.

Please call if there are any questions.

Sincerely,

**DIVISION OF LATHAM WATER**

  
John W. Frazer Jr., P.E.  
Superintendent

JWF/iha

**RECEIVED**

NOV 04 2003

Clough, Harbour & Associates LLP



## **SARATOGA COUNTY PLANNING BOARD**

TOM L. LEWIS  
CHAIRMAN

LAWRENCE D. BENTON  
DIRECTOR

October 30, 2003

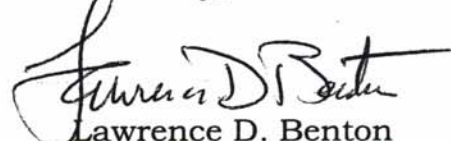
Christopher R. Einstein  
Clough Harbour Associates  
PO Box 5269, 111 Winners Circle  
Albany, NY 12205-0269

**Re: Western Clifton Park GEIS**

Dear Mr. Einstein:

In response to your "lead agency designation" letter of October 28, 2003. The County Planning Board concurs with the Town Board's intention to declare itself lead agency for preparation, review, and adoption of the above-referenced GEIS.

Sincerely,

  
Lawrence D. Benton  
Director

**RECEIVED**

OCT 31 2003

Clough, Harbour & Associates LLP



John L. Buono  
Chairman

**New York State Thruway Authority**  
**New York State Canal Corporation**

200 Southern Blvd., P.O. Box 22058, Albany, NY 12201-2058

[www.thruway.state.ny.us](http://www.thruway.state.ny.us)

November 7, 2003



Michael R. Fleischer  
Executive Director  
TDD/TTY 1-800-253-6244

Christopher R. Einstein, AICP  
Clough, Harbour & Associates LLP  
III Winners Circle  
P.O. Box 5269  
Albany, New York 12205-0269

**RE: SEQRA LEAD AGENCY CONCURRENCE**  
**WESTERN CLIFTON PARK GEIS**

Dear Mr. Einstein:

The New York State Canal Corporation (NYSCC) has received your letter and attachments dated October 28, 2003, which asks for our concurrence with the Town of Clifton Park to act as "Lead Agency" under the New York State Environmental Quality Review Act for the preparation of a GEIS to evaluate future development in the Town.

We have reviewed the information that was supplied with the letter and have no comments or objections at this time; we also concur with your request for lead agency status for this project. As an involved agency, this office wishes to continue to be advised and included in discussions on the development of your plan. Since the NYSCC has jurisdiction over all activities undertaken on Canal property, it is important that you continue to provide this office with the details of this project as they develop.

Please keep in mind that any project proposed on NYSCC property will require a permit. Please contact this office directly to discuss our permit issuance requirements. Should you have any questions, please feel free to contact me at (518) 471-5033. Thank you for the opportunity to provide input on your proposed project.

Sincerely yours,

Garret R. O'Connor, PLS  
Albany Division Canals  
Real Property Management

**RECEIVED**

NOV 10 2003

Clough, Harbour & Associates LLP

cc: Steven Sweeney, Division Canal Engineer  
Robert Romeo, Division Environmental Specialist



# APPENDIX C

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**WESTERN CLIFTON PARK**  
**LAND USE STUDY AND GENERIC ENVIRONMENTAL IMPACT STATEMENT**

**BUILD-OUT ANALYSIS**

**Introduction**

The intent of the Generic Environmental Impact Statement (GEIS) for the western portion of the Town (Study Area) is to evaluate the cumulative impacts of future development on land use/community character, the natural environment, infrastructure, and services. The GEIS is an excellent tool to look at the major issues of growth and to put the Town in a position to be proactive in guiding future development and maintaining a preferred level of service, so as to preserve a high quality of life for Town residents.

To begin to evaluate the impacts of growth, it is necessary to define or project a future development scenario. The process begins with the identification of the build-out potential for the Study Area. Build-out is defined as the maximum development potential of a study area based on pre-determined land use regulations and density. There are various levels of analysis that can be used to predict build-out, depending on the level of accuracy desired. However, the basic intent is to establish an overall order of magnitude of growth. There are numerous site-specific factors that can dictate development potential that are too detailed for planning purposes. Therefore, build-out is typically performed using readily available planning information.

Knowing the development potential for a study area, it is then possible to predict a growth scenario for a given time period based on past rates of development. A 10 or 20-year period is often used as the planning period. The problem with this in some communities is that growth rates may be highly variable. Low interest rates and a desirable location have sparked significant growth in the Capital District/Saratoga region over the past 3-4 years. Additionally, the potential for a major high-tech manufacturing facility in the region could have significant future residential and commercial growth implications. More importantly, having a limited planning period prevents the Town from understanding the long term impacts of development. Because of these issues, it was determined that it would be more appropriate to evaluate the impacts of complete build-out for the Study Area rather than trying to project growth over a given period of time.

The GEIS provides communities with the opportunity to evaluate a growth scenario and adjust that scenario as necessary in response to significant impacts that arise during the analysis. Clifton Park has been proactive in their management of growth through the preparation of GEIS' in other areas of the Town, revisions and updates to their comprehensive plan, preparation of trails and recreation studies, and the recent adoption of an open space plan. This work has emphasized the need to evaluate impacts in an area of the Town that is in transition. It has also led to a realization that the rural character of

Western Clifton Park is desirable yet vulnerable to suburbanization based on current zoning and land use patterns. Knowing this, the approach to this GEIS process is somewhat different than past studies in the community. Development of a preferred growth scenario that defines and preserves the rural character of Western Clifton Park has become the primary goal in establishing a basis for the evaluation of cumulative impacts.

The first question to answer is whether or not the Town's current land use regulations and other growth management tools are sufficient to achieve this goal. Therefore, the build-out analysis was conducted based on existing zoning and land use regulations. In addition, the build-out analysis assumes a continuation of recent trends of development within the Town of Clifton Park.

Following the build-out analysis, a general discussion of the impacts of the full build-out scenario is provided. Those issues deemed most important to the Town during the scoping process are discussed, including anticipated impacts on utilities, the traffic system, taxes, and the land use or character of the study area. This information is provided to assist the Town Board to determine whether existing zoning and land use regulations will provide an appropriate and responsible level of development that can be managed by acceptable mitigation measures. If so, the detailed evaluation of impacts and establishment of mitigation measures will proceed based on the final scoping document and the build-out scenario. If not, a land use study will be initiated that will help to define the appropriate growth pattern and density to serve as the preferred growth scenario.

### **Build-Out Methodology**

Using some of the latest advances in computer technology and capitalizing on the Town's extensive GIS database, a significantly more efficient and more accurate build-out analysis was conducted than has been possible for similar studies conducted in the past. CommunityViz, a GIS-based computer program, was utilized to calculate build-out based on a variety of data input tailored to the study area. Critical input to the model included the following:

- Existing Zoning
- Existing Development and Parcel Size
- Projected Level of Development (square feet of building per acre, number of lots per acre, etc.)
- Presence of Development Constraints

The following is a description of how each factor was applied in the build-out analysis:

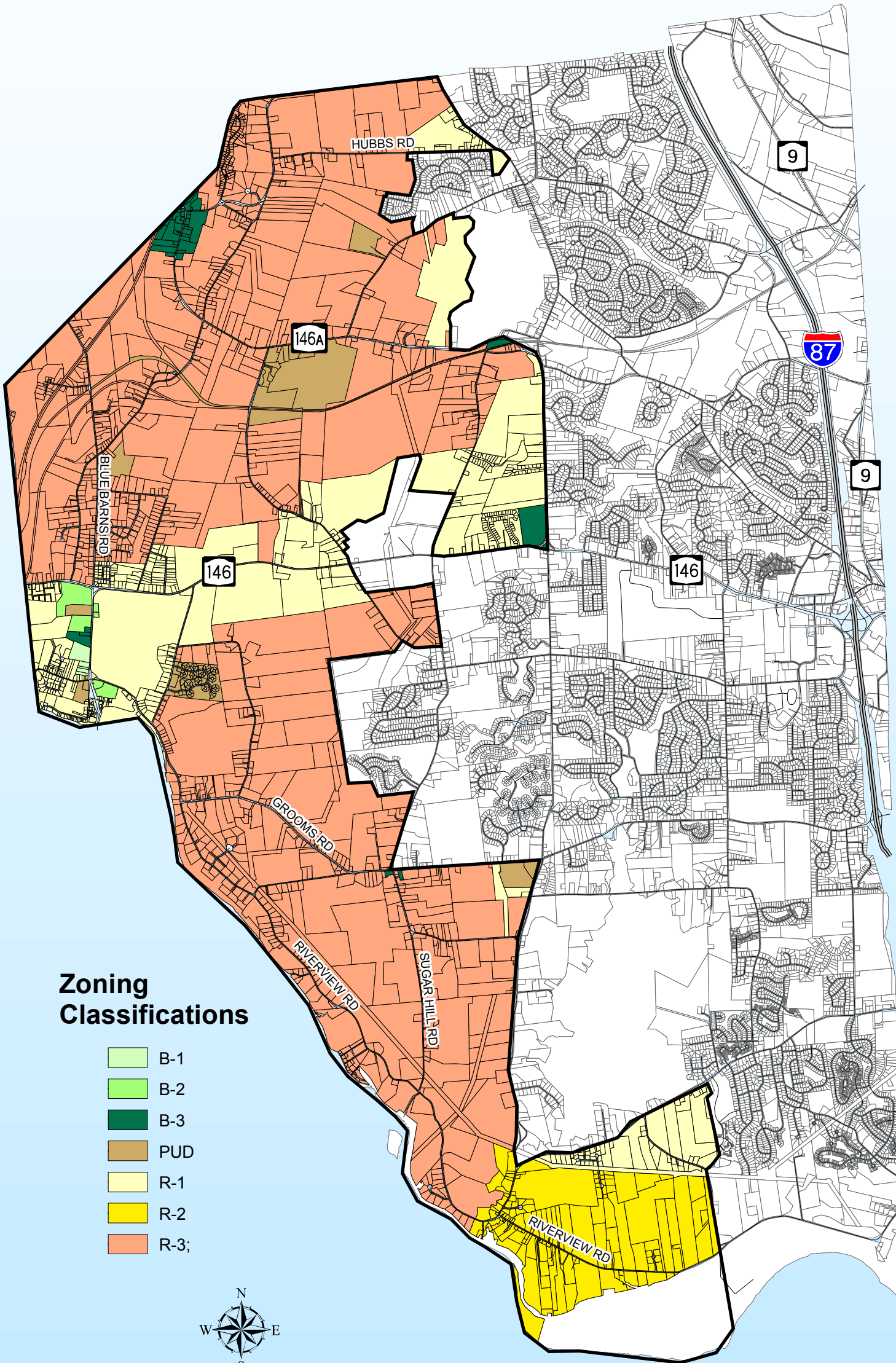
#### ***Existing Zoning***

It was first necessary to establish the existing zoning classifications that covered the study area and determine minimum lot size or maximum density allowed per the zoning regulations. The existing zoning districts (see attached Zoning Map) provide options for



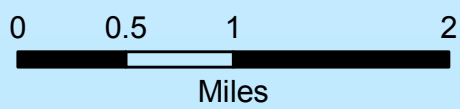
# Western Clifton Park

## Generic Environmental Impact Statement



### Zoning Classifications

- B-1
- B-2
- B-3
- PUD
- R-1
- R-2
- R-3;



Existing Zoning Map  
(Does Not Show LC - Land Conservation Overlay Zone)



the future use of the land. Zoning districts within the Study Area and allowable uses include:

- R-1 Residential – Intended primarily for suburban residential uses and to accommodate relatively dense residential development. Permitted uses generally include agriculture, single-family homes, and “cluster” style residential developments. Minimum lot size is 20,000 square feet (2.17 units per acre) with water and sewer, 40,000 square feet (1.09 units per acre) without water and sewer.
- R-2 Residential – Intended primarily for agricultural or exurban residential uses in an area with special or unique characteristics. Permitted uses are similar to R-1. Minimum lot size is 80,000 square feet (0.54 units per acre) with water and sewer, 100,000 square feet (0.44 units per acre) without water and sewer.
- R-3 Residential – Intended for agricultural or very low density residential uses that are appropriate with environmentally limiting conditions and that will protect the rural character of those areas. Permitted uses similar to R-1. Minimum lot size is 80,000 square feet (0.54 units per acre) with water and sewer, 100,000 square feet (0.44 units per acre) without water and sewer.
- B-1 Business Non-retail - Permitted uses generally include offices. Retail uses are not permitted. Maximum building size 4,800 square feet. Minimum 50% greenspace.
- B-2 Business Non-retail – Same uses as B-1. No maximum building size. Minimum 50% greenspace.
- B-3 Neighborhood Business – Permitted uses generally include small retail facilities and uses permitted in the residential and B-1 and B-2 zoning districts. Minimum 35% greenspace.
- PUD Planned Unit Development – Permitted uses and densities are dictated by site specific analysis and zoning amendment.

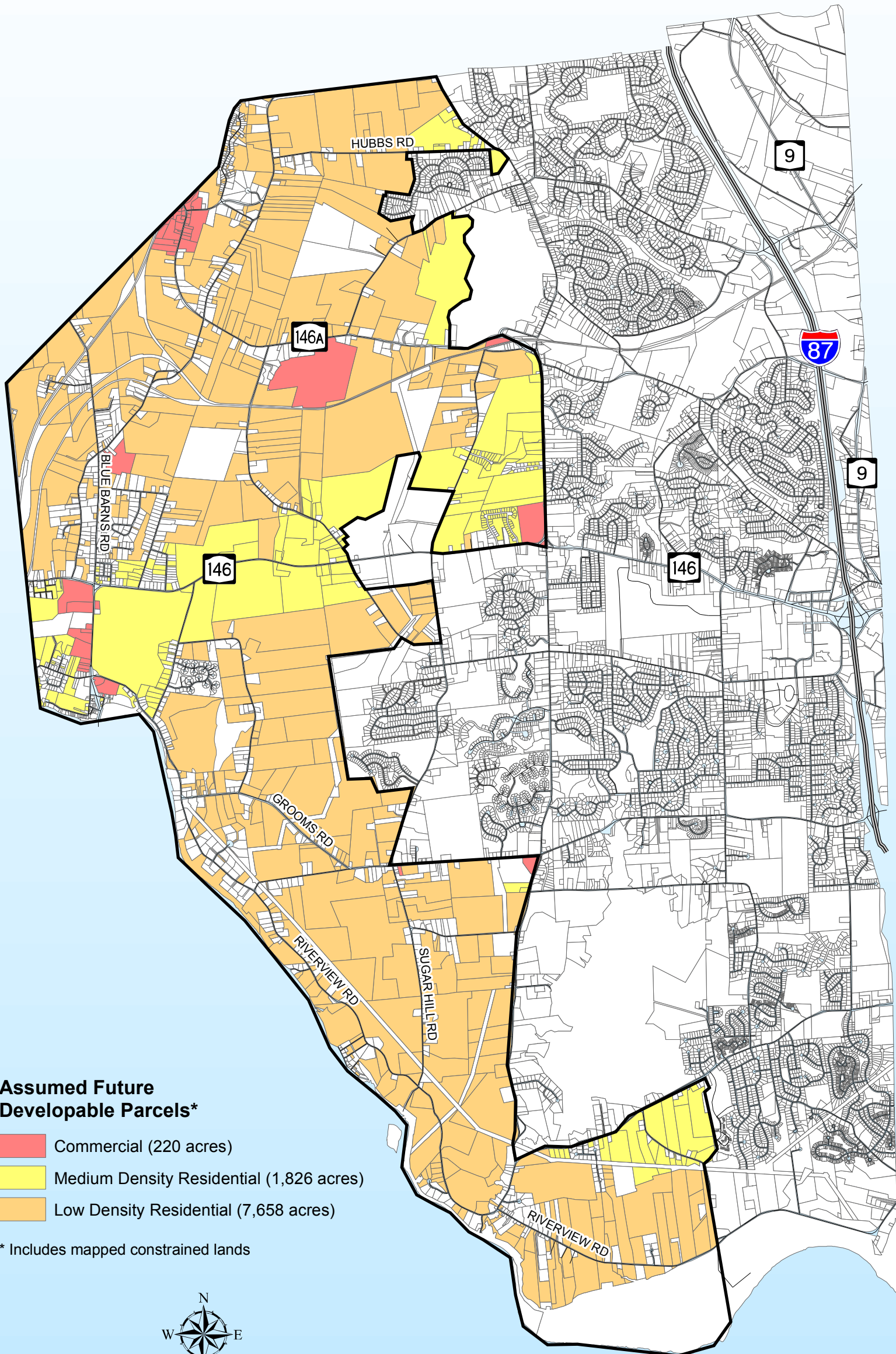
Typically, land that is left to private development will be developed with uses that will provide the best return on the investment. Since build-out is based on current zoning, uses that would involve rezoning, special permit, or a use variance were not considered. Therefore, for the residential zones, it is assumed that single-family homes will be developed. It is assumed that office uses will be developed in the B-1 and B-2 zones and an equal combination of office and retail will be developed in the B-3 zone. The actual approved development for each of the PUD’s was used for build-out of the PUD zoned parcels.





# Western Clifton Park

## Generic Environmental Impact Statement



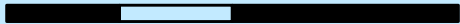
### Assumed Future Developable Parcels\*

- Commercial (220 acres)
- Medium Density Residential (1,826 acres)
- Low Density Residential (7,658 acres)

\* Includes mapped constrained lands



0 0.5 1 2



Miles

Assumed Future Developable Parcels



### **Existing Development and Parcel Size**

The first step in the process of identifying potentially developable land for build-out was to determine which parcels are currently developed and are unlikely to be developed further. This was accomplished by using land use classifications associated with tax mapping, parcel size data from the Town's GIS system, review of aerial and orthophoto mapping, and consultation with the Town's Planning Department. The parcels which were deemed to be already developed and of not sufficient size to be further developed were subtracted from the total parcel areas.

The following criteria were used to determine which parcels were of sufficient size to accommodate additional development:

- R-1 Residential – On average, lots less than three times the minimum lot size (1.4 acres) will not be further subdivided. Vacant lots less than 1.4 acres are still considered developable.
- R-2 Residential – On average, lots less than three times the minimum lot size (5.5 acres) will not be further subdivided. Vacant lots less than 5.5 acres are still considered developable.
- R-3 Residential – On average, lots less than three times the minimum lot size (5.5 acres) will not be further subdivided. Vacant lots less than 5.5 acres are still considered developable.

There are many commercial parcels within the Study Area that are developed with only a portion of the parcel being actually developed. Therefore, after parcel by parcel review, those developed parcels that are underutilized were considered developable, and adjusted to recognize the percentage of the parcel that is already developed.

Other uses removed from consideration as potentially developable included golf courses, dedicated open space, and approved but not constructed development projects.

The results of the potentially developable land analysis are shown in the table below and illustrated on the attached figure (Assumed Future Developable Parcels).

**Potentially Developable Parcels**

<b>Study Area</b>		<b>Potentially Developable Parcels</b>	
Total Area (acres)	Total No. Parcels	Area (acres)	Parcels
13,900	2,045	9,705	774

Of the potential developable parcels within the Study Area, the average lot size is 12.5 acres. It should be noted that the total acreage of the Study Area is less than the approximately 18,000 acres that was previously identified in the Draft Scope and other documentation. The current acreage was derived for a more detailed evaluation of the

Study Area and parcels. This figure (13,900 acres) will be used in all future documentation.

### ***Projected Level of Development***

The next step in determining the build-out is to determine typical development densities for each zoning district. The critical purpose of this step is to avoid overstating the build-out potential by not taking into consideration reductions caused by inefficiencies of lot layout, the need for right-of-ways for roads, stormwater management areas, greenspace, etc. The following assumptions were applied for each zoning district:

- **R-1 Residential:**
  - Any parcel with over five acres developable will be subdivided with a Town road and subdivided into 25,000 square foot average lots. All parcels assumed to have municipal water and sewer. Subtract 25% of developable parcel area for roads and stormwater management areas. Resultant development density is 1.3 units per developable acre.
  - All other previously identified developable lots less than five acres will be subdivided with 30,000 square foot average lots. Resultant development density is 1.5 units per developable acre.
  
- **R-2 Residential:**
  - Any parcel with over twenty acres developable will be subdivided with a Town road and 125,000 square foot average lots. Cluster density bonus not allowed per zoning. All parcels assumed to have municipal water but not sewer. Subtract 10% of developable parcel area for roads and stormwater management areas. Resultant development density is 0.3 units per acre.
  - All other previously identified developable lots less than twenty acres will be subdivided with 150,000 square foot average lots. Resultant development density is 0.3 units per acre.
  
- **R-3 Residential:**
  - Any parcel with over twenty acres developable will be subdivided with a Town road and minimum lot size lots. All parcels assumed to take advantage of cluster density bonus which allows 40,000 square foot lots per existing zoning. Subtract 20% of developable parcel area for roads and stormwater management areas. Resultant development density is 0.8 units per acre.
  - All other previously identified developable lots less than twenty acres will be subdivided with 150,000 square foot average lots. Resultant development density is 0.3 units per acre.
  
- **B-1 Business Non-retail and B-2 Business Non-retail:**
  - Parcels will be developed with 8,000 square feet of general office per developable acre.

- B-3 Business:
  - 50% of the acreage will be developed with general office at a density of 12,000 square feet per developable acre and 50% of the acreage will be developed with retail at a density of 5,000 square feet per developable acre.

### ***Development Constraints***

When designing a project for a given site there are many site conditions that have to be considered. Features such as wetlands, streams, floodplain, steep slopes, high groundwater, significant habitat, and archaeological resources, to name a few, may constrain design or require special site preparation. Specific site details are beyond the scope of the GEIS. Furthermore, the presence of constraints in many cases does not preclude their inclusion within development areas. Therefore, available mapping was used to generally identify major constraints. These constraints include State regulated wetlands and their associated “adjacent areas” (100-foot buffer), National Wetland Inventory (NWI) mapped wetlands, hydric (wet) soils, and 100-year floodplain (see attached Mapped Development Constraints). Of these, State wetlands, their buffers, and the 100-year floodplain comprise the Town’s LC-Land Conservation zoning district.

Under current federal regulations, some wetland areas identified on the NWI maps are not considered jurisdictional and, therefore, would be potentially developable. In addition, other mapped constraints such as the State wetland buffer and the 100-year floodplain can be incorporated into the open areas of lots, serving as usable backyards for example. With this in mind, it was determined that two scenarios should be run to provide a range of development potential. The first scenario used State regulated wetlands and 100-year floodplain as the only development constraint. This essentially reflects the Town’s LC zone, less the 100-foot buffer on the wetlands. The second scenario included all of the mapped constraints, including NWI wetlands, hydric soils, and the 100-foot State wetland buffer. The results are illustrated on the attached maps and reflected in the build-out results to follow.

### **Build-Out Results**

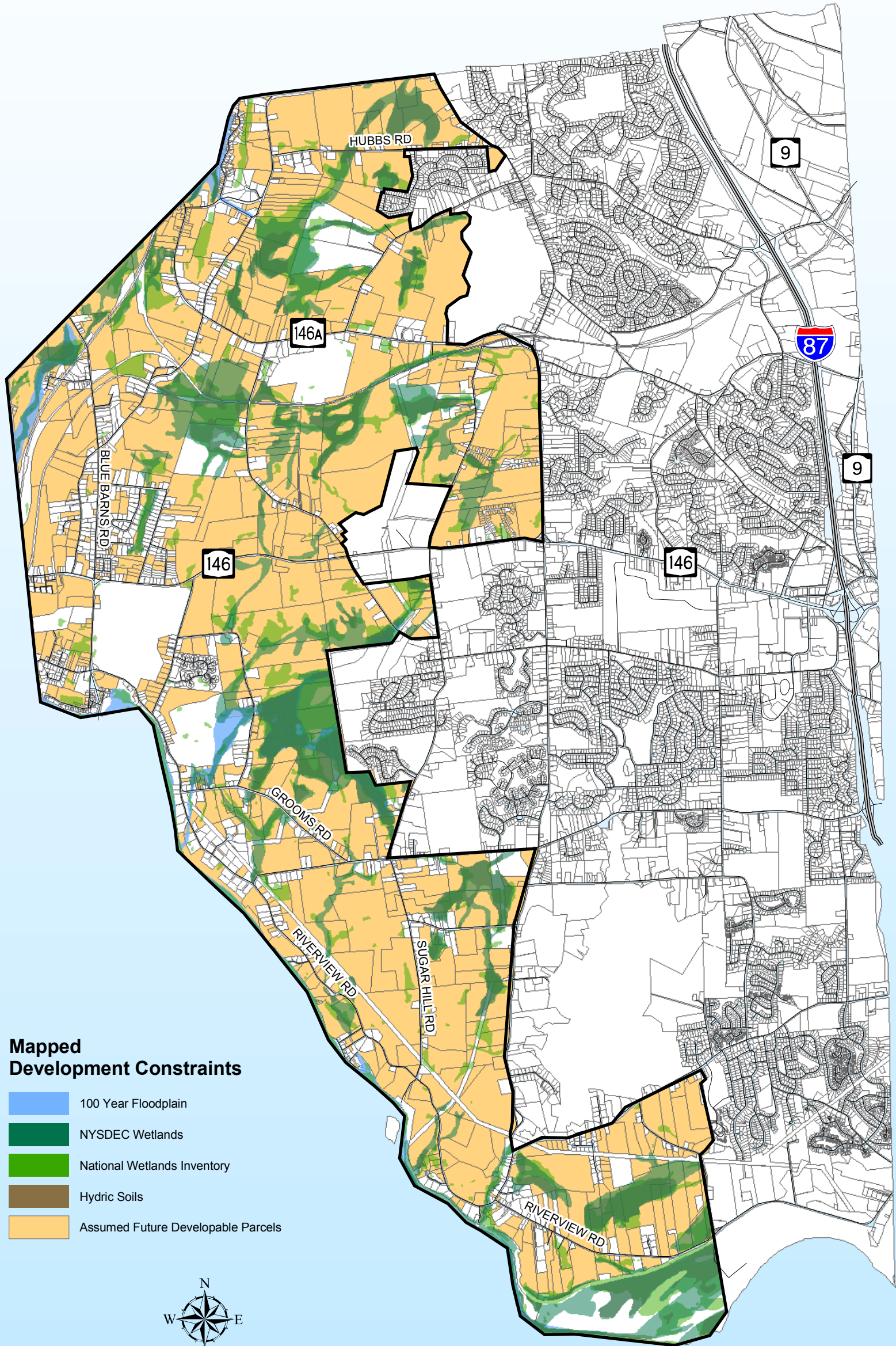
Based on the methodology and assumptions previously discussed, the anticipated range of build-out potential was identified. The following tables show the full build-out potential based on constraint scenarios. The first table is the build-out with all state wetlands (as currently mapped) and floodplains excluded from the developable land. The second table is the build-out with all mapped constraints excluded from the developable land. The purpose of providing both sets of data is to determine the likely range of full build-out and understand the effect federal wetlands and areas of hydric soils will have on the build-out data.





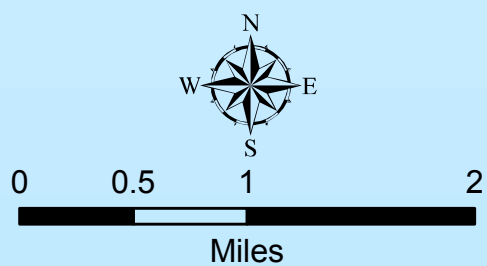
# Western Clifton Park

## Generic Environmental Impact Statement



### Mapped Development Constraints

-  100 Year Floodplain
-  NYSDEC Wetlands
-  National Wetlands Inventory
-  Hydric Soils
-  Assumed Future Developable Parcels



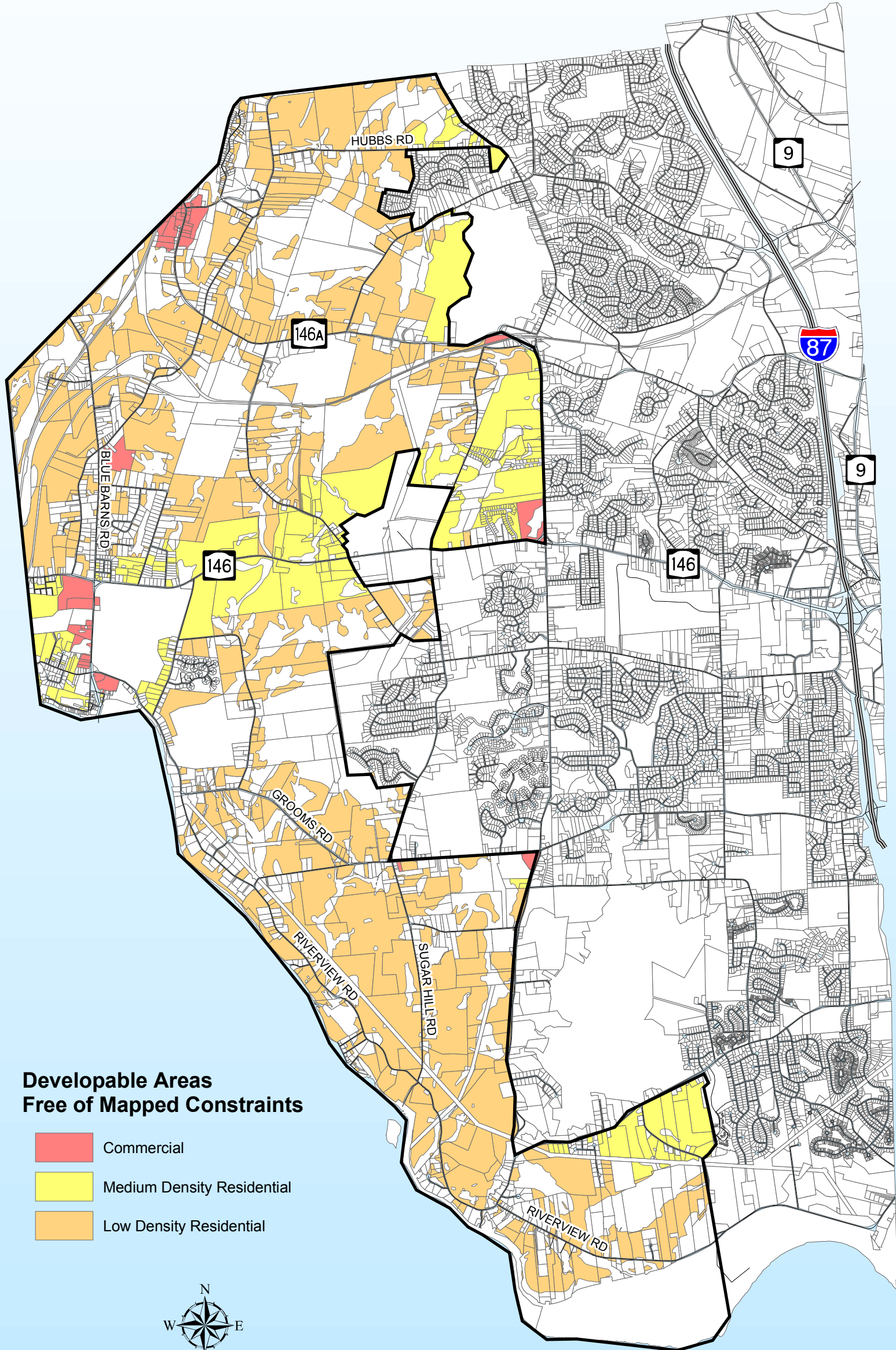
Mapped Development Constraints








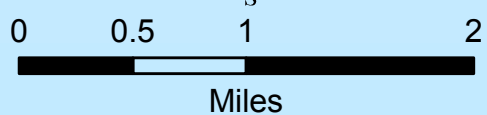
# Western Clifton Park

## Generic Environmental Impact Statement



### Developable Areas Free of Mapped Constraints

-  Commercial
-  Medium Density Residential
-  Low Density Residential



Assumed Future Developable Land  
(Excluding NWI Wetlands and Hydric  
Soils from Developable Land)



Full Build-Out #1 Based on Existing Zoning (excludes state wetlands and floodplains)				
Zoning	Developable Land (acres)	Development Potential		
		Office	Retail	Dwelling Units
B-1	17.57	105,363		--
B-2	50.67	359,293		--
B-3	345.17	2,053,985	703,958	--
<b>Subtotal Commercial</b>	<b>413.41</b>	<b>2,518,641</b>	<b>703,958</b>	<b>--</b>
R-1	1,693.12	--	--	2,251
R-2	543.94	--	--	163
R-3	5,050.27	--	--	2,865
<b>Subtotal Residential</b>	<b>7,287.33</b>	<b>--</b>	<b>--</b>	<b>5,279</b>
<b>Total</b>	<b>7,700.74</b>	<b>2,518,641</b>	<b>703,958</b>	<b>5,279</b>

Full Build-Out #2 Based on Existing Zoning (excludes state wetlands, floodplains, NWI (federal) wetlands and hydric soils)				
Zoning	Developable Land (acres)	Development Potential		
		Office	Retail	Dwelling Units
B-1	9.90	45,209		--
B-2	50.66	359,242		--
B-3	302.82	1,795,719	602,497	--
<b>Subtotal Commercial</b>	<b>363.38</b>	<b>2,200,170</b>	<b>602,497</b>	<b>--</b>
R-1	1,486.10	--	--	1,982
R-2	447.67	--	--	134
R-3	3,926.94	--	--	2,142
<b>Subtotal Residential</b>	<b>5,860.71</b>	<b>--</b>	<b>--</b>	<b>4,259</b>
<b>Total</b>	<b>6,224.09</b>	<b>2,200,170</b>	<b>602,497</b>	<b>4,259</b>

Using the CommunityViz program, the attached build-out graphics illustrate the two build-out scenarios from the tables above. For each scenario there is a graphic showing potential future development and another combining existing and potential future development.

The following is a summary of the build-out analysis based on existing zoning:

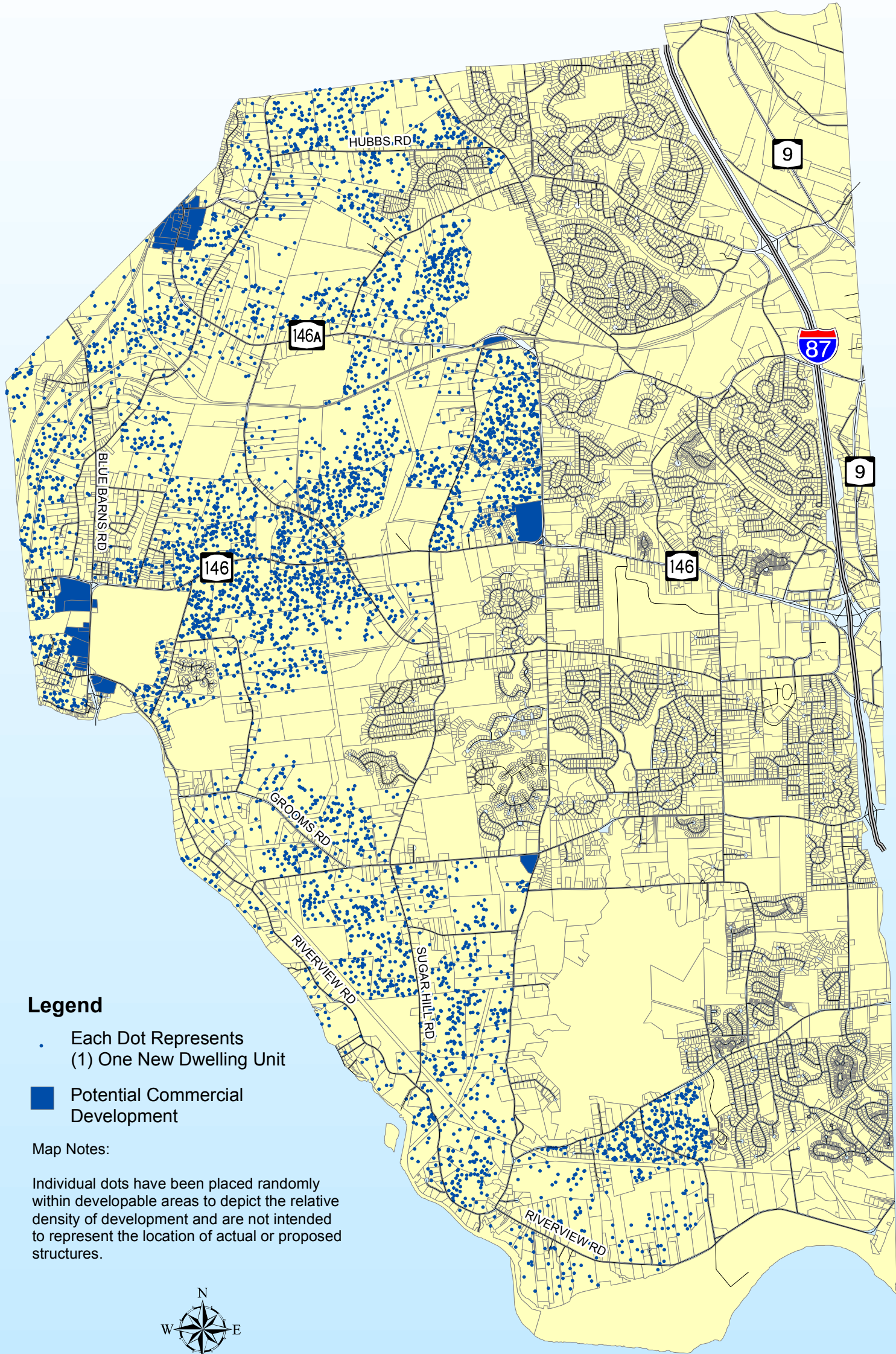
- Approximate area included within the GEIS Study Area: 13,900 acres
- Approximate area of potentially developable land: 6,200 – 7,700 acres
- Approximate number of homes that could be built: 4,200 – 5,300
- Approximate amount of office space that could be built: 2,200,000 – 2,500,000 s.f.
- Approximate amount of retail space that could be built: 600,000 – 700,000 s.f.

Draft



# Western Clifton Park

## Generic Environmental Impact Statement

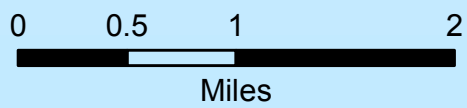


### Legend

- Each Dot Represents (1) One New Dwelling Unit
- Potential Commercial Development

### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



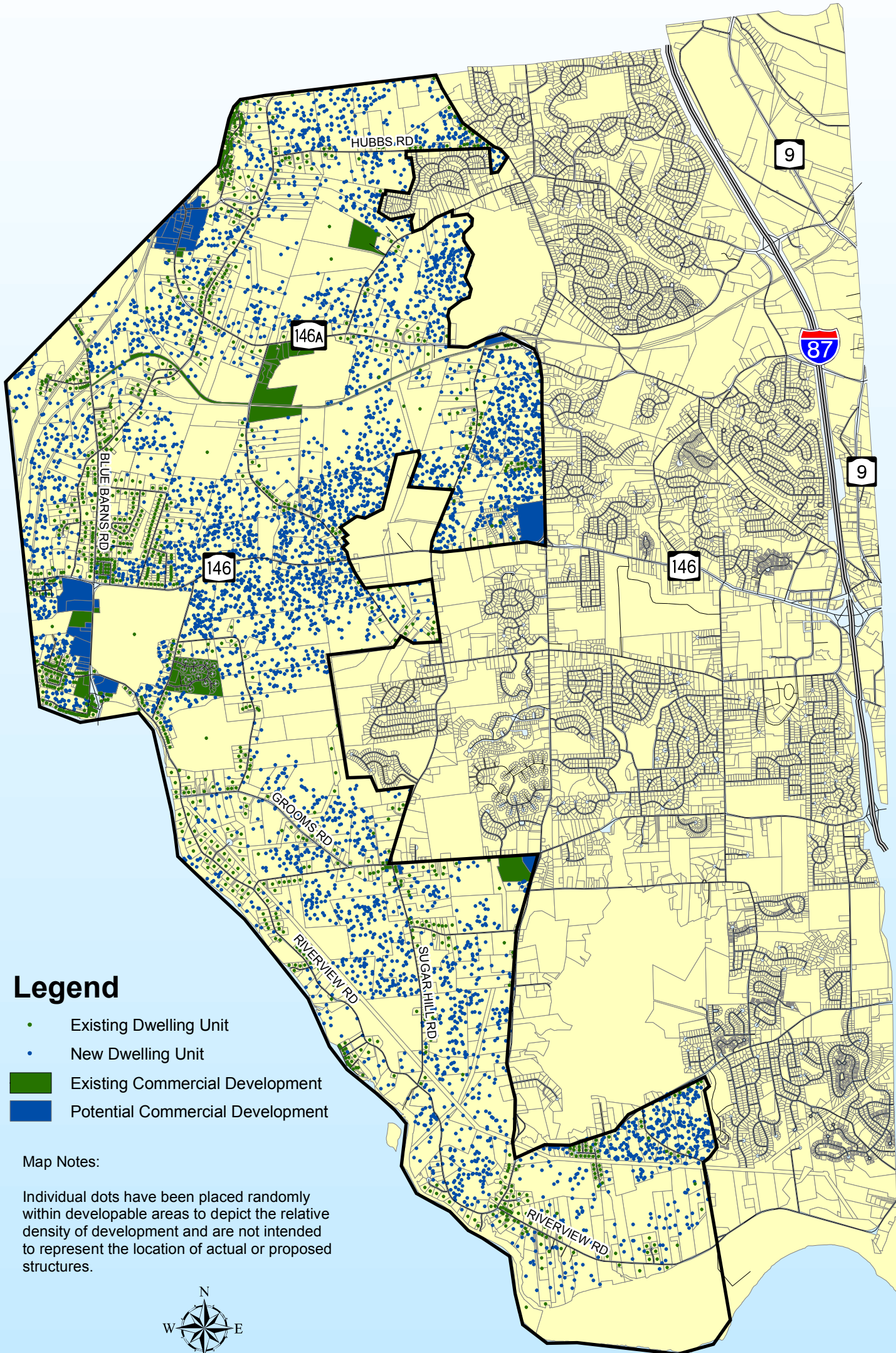
Potential Future Build-Out Based On Existing Zoning  
(Not Excluding NWI Wetlands and Hydric Soils from Developable Land)





# Western Clifton Park

## Generic Environmental Impact Statement

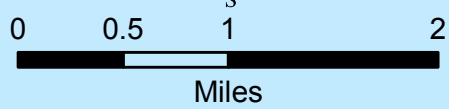


### Legend

- Existing Dwelling Unit
- New Dwelling Unit
- Existing Commercial Development
- Potential Commercial Development

#### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



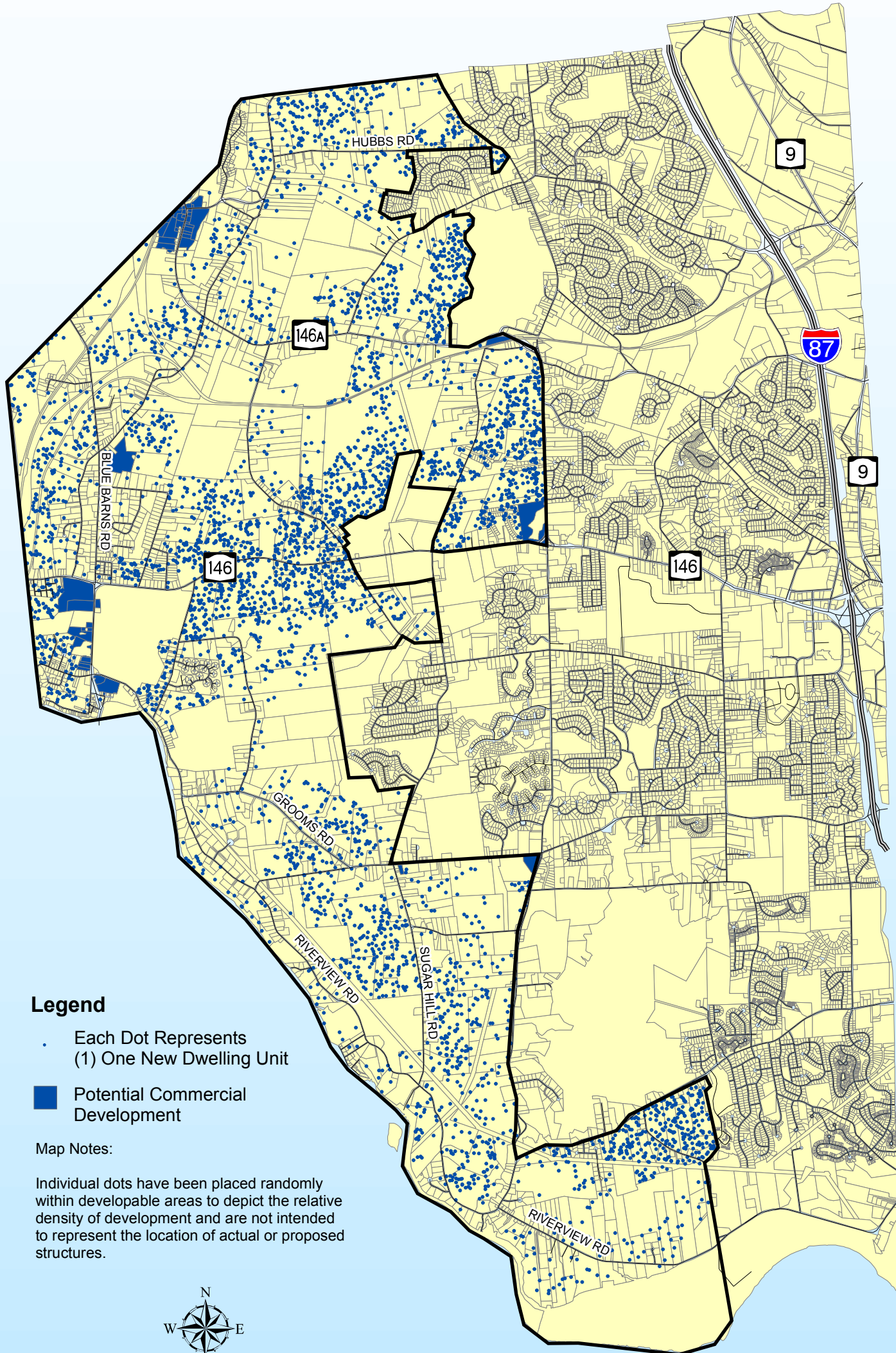
Existing Development & Potential Future Build-Out  
(Not Excluding NWI Wetlands and Hydric Soils from Developable Land)





# Western Clifton Park

## Generic Environmental Impact Statement

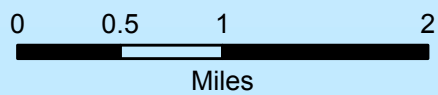


### Legend

- Each Dot Represents (1) One New Dwelling Unit
- Potential Commercial Development

### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



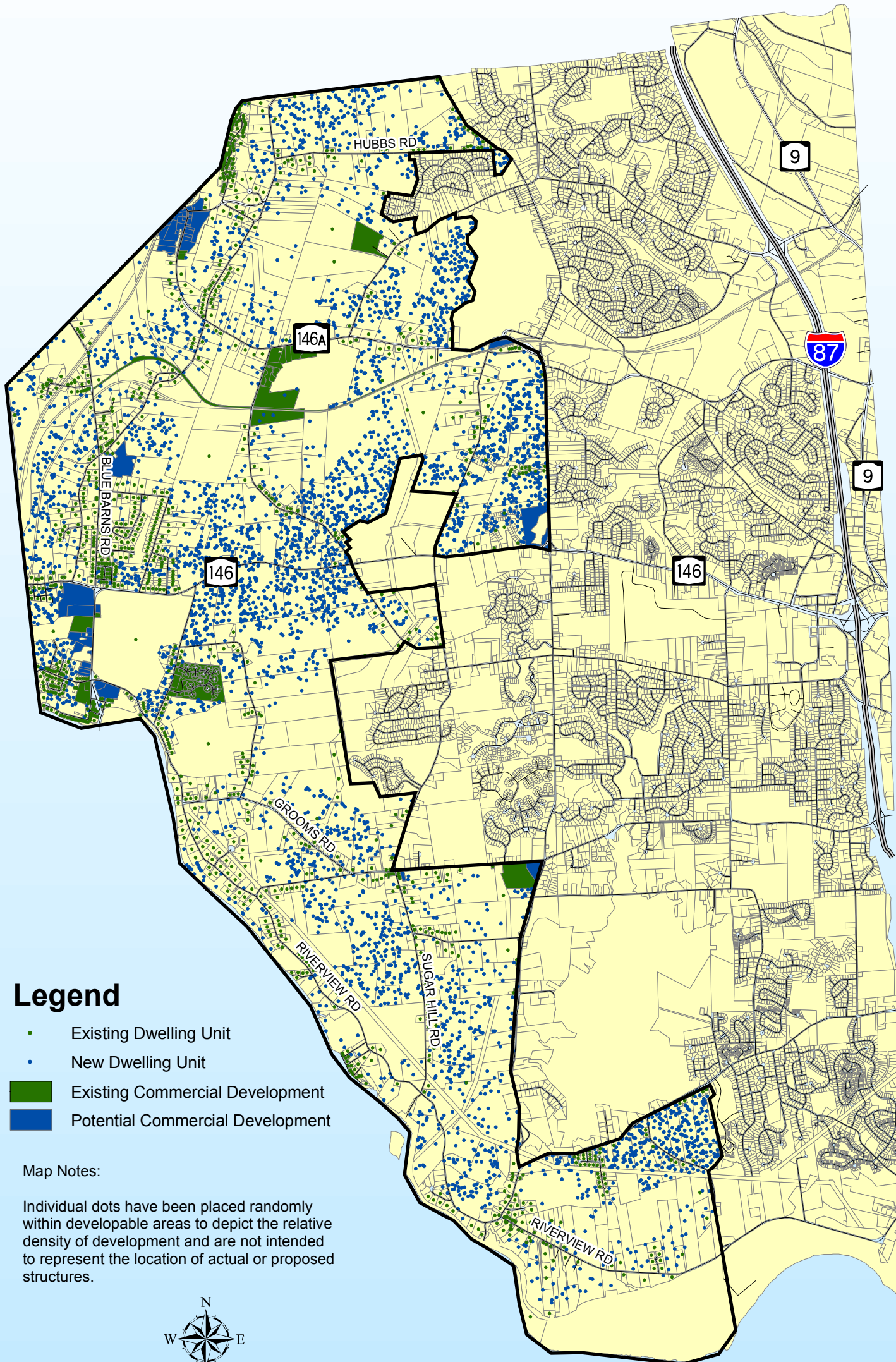
Potential Future Build-Out Based On Existing Zoning  
(Excluding NWI Wetlands and Hydric Soils from Developable Land)





# Western Clifton Park

## Generic Environmental Impact Statement

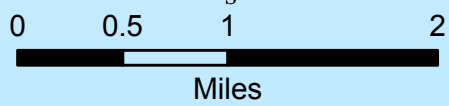


### Legend

- Existing Dwelling Unit
- New Dwelling Unit
- Existing Commercial Development
- Potential Commercial Development

#### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



Existing Development & Potential Future Build-Out  
(Excluding NWI Wetlands and Hydric Soils from Developable Land)



## **Potential Impacts of Current Zoning Build-Out**

Although it is intended to devote an entire Generic Environmental Impact Statement on the cumulative impacts of a build-out/growth scenario, it is possible and necessary to review some of the major issues of build-out under the Town's current zoning and land use regulations in order to determine whether or not these regulations will result in acceptable growth patterns and density. If acceptable, the current zoning build-out scenario will become the basis for detailed environmental review. If unacceptable, then further analysis is necessary to define a preferred growth scenario. This step in the process is essential so as not to exhaust time and resources only to realize that an entirely different approach is needed.

This level of review is intended to identify the major issues that can have significant impact on community character and quality of life. Therefore, the scope of this analysis is limited to utilities, traffic, fiscal resources, and land use.

### ***Utilities***

#### ***Water Supply***

Most of the GEIS study area is not served by municipal or community water supply systems. The Clifton Park Water Authority (CPWA), which provides municipal water supply to much of the eastern side of Clifton Park, does not have existing infrastructure in the study area. There are, however, some municipal systems within or adjacent to the study area including the Rexford Water District, the Miller Road Water District (proposed), the Ballston Lake Water District (proposed), the Appleton Road Water District (proposed), and the Corporate Commerce Zone Water District (currently under construction).

The Existing Water Supply Map shows the locations of the respective water systems within the Town of Clifton Park.

Options for water supply for future development within the study area include individual privately owned drilled wells on a parcel by parcel basis, creation of a new transportation corporation which would be responsible for ownership and maintenance of the respective system, or expansion of the service area of an existing municipal system. Advantages of municipal water supply include more stable water supply flow and pressures, improved water quality and availability of adequate fire flows for fire suppression.

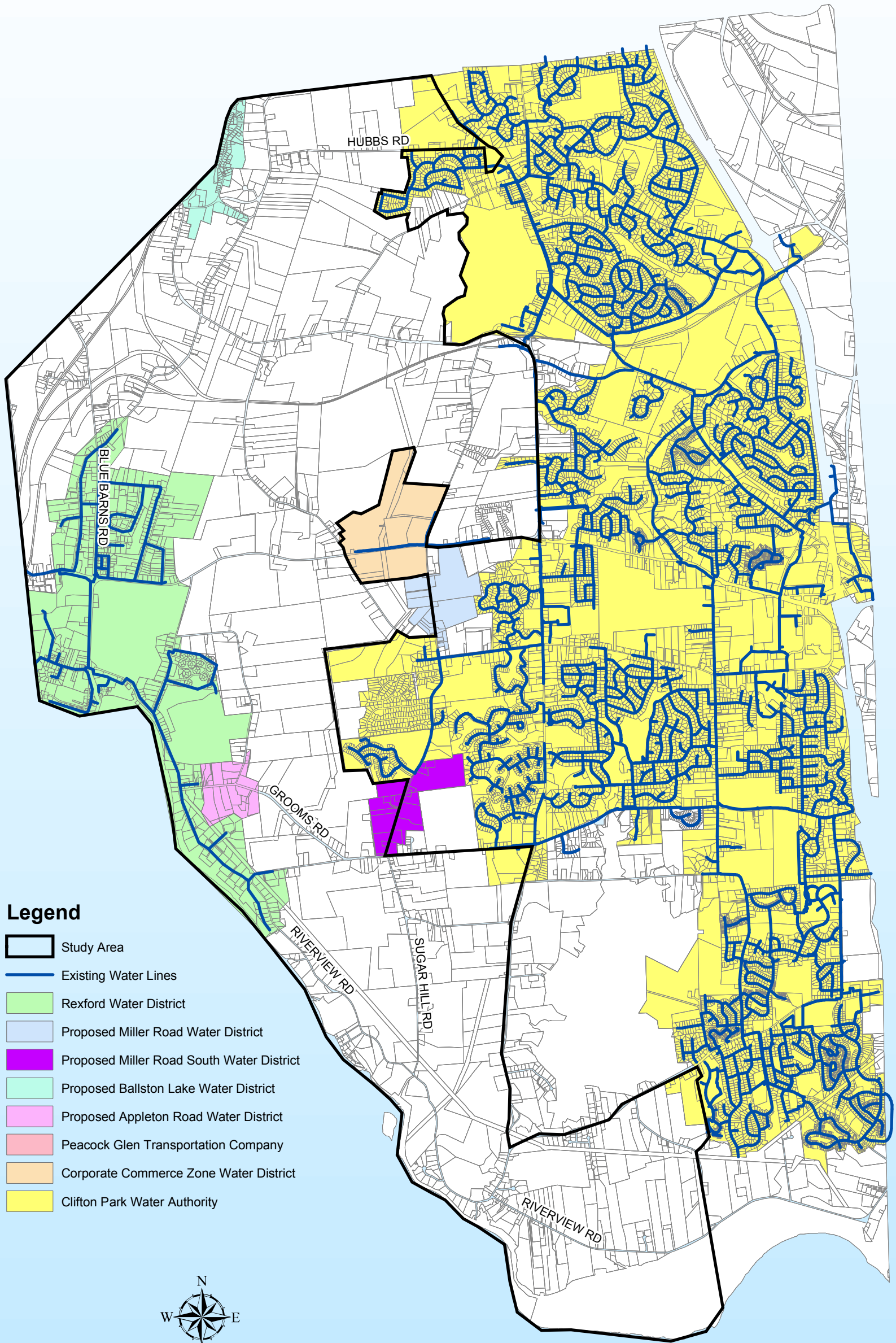
Assuming all new development within the study area was connected to a municipal water supply system; the anticipated additional average daily flow to serve the development would be 1.4 million gallons per day, not including the additional demand for irrigation systems. This also does not include the additional flow that would be required to serve existing development that would likely connect to provide improved service. With the exception of the CPWA, the existing smaller water districts within or adjacent to the





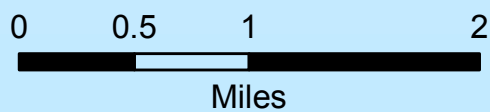
# Western Clifton Park

## Generic Environmental Impact Statement



### Legend

- Study Area
- Existing Water Lines
- Rexford Water District
- Proposed Miller Road Water District
- Proposed Miller Road South Water District
- Proposed Ballston Lake Water District
- Proposed Appleton Road Water District
- Peacock Glen Transportation Company
- Corporate Commerce Zone Water District
- Clifton Park Water Authority



Existing Water System



study area have not been designed to accommodate expansion. As such, significant improvements to the existing water supply infrastructure will be required to accommodate development within the study area including water source, storage, distribution and treatment.

### *Sanitary Sewer Service*

Most of the study area is not served by municipal or community sanitary sewer systems. Although the Saratoga County Sewer District (SCSD) collects and treats wastewater flows from most of the eastern portion of the Town, much of the study area is located outside the SCSD district boundary. The SCSD has indicated that there are no plans to extend the district boundary and future extensions are unlikely. The SCSD's policy regarding sewer service is that they will allow sanitary service to any property within the district boundary and will own and maintain any municipal sewer system within the boundary as long as it also owns everything it discharges to downstream. The SCSD will not own or maintain a sewer system that is outside the district boundary. Therefore, any community sewers outside the district boundary would need to be owned by a private transportation corporation or turned over to the Town for ownership and maintenance. Other sewer systems within or adjacent to the study area include the CK Sanitary Transportation Corporation that serves the Clifton Knolls and Country Knolls residential developments, the Corporate Commerce Zone Sewer District, which is currently under construction, the Old Nott Farm and Riverview Landing Sewer Districts which are small formerly private sewer systems that have been accepted by the Town for ownership and maintenance within the Study Area.

The Existing Sewer System Map shows the location of the sewer systems within the Town of Clifton Park.

Similar to the anticipated increased demand on water supply, full build-out of the study area will generate an average daily flow of approximately 1.4 million gallons per day of sewage. Options for treatment include use of on-site septic systems or treatment by a municipal treatment facility. The only treatment facility in the area with current capacity to treat this amount of sewage is the SCSD's treatment plant in Mechanicville. However, in order to transport the sewage to the treatment plant, construction of extensive sanitary sewer collection systems and significant upgrades to the County's existing collection system would be required.

## ***Traffic***

### *Current and Background Traffic*

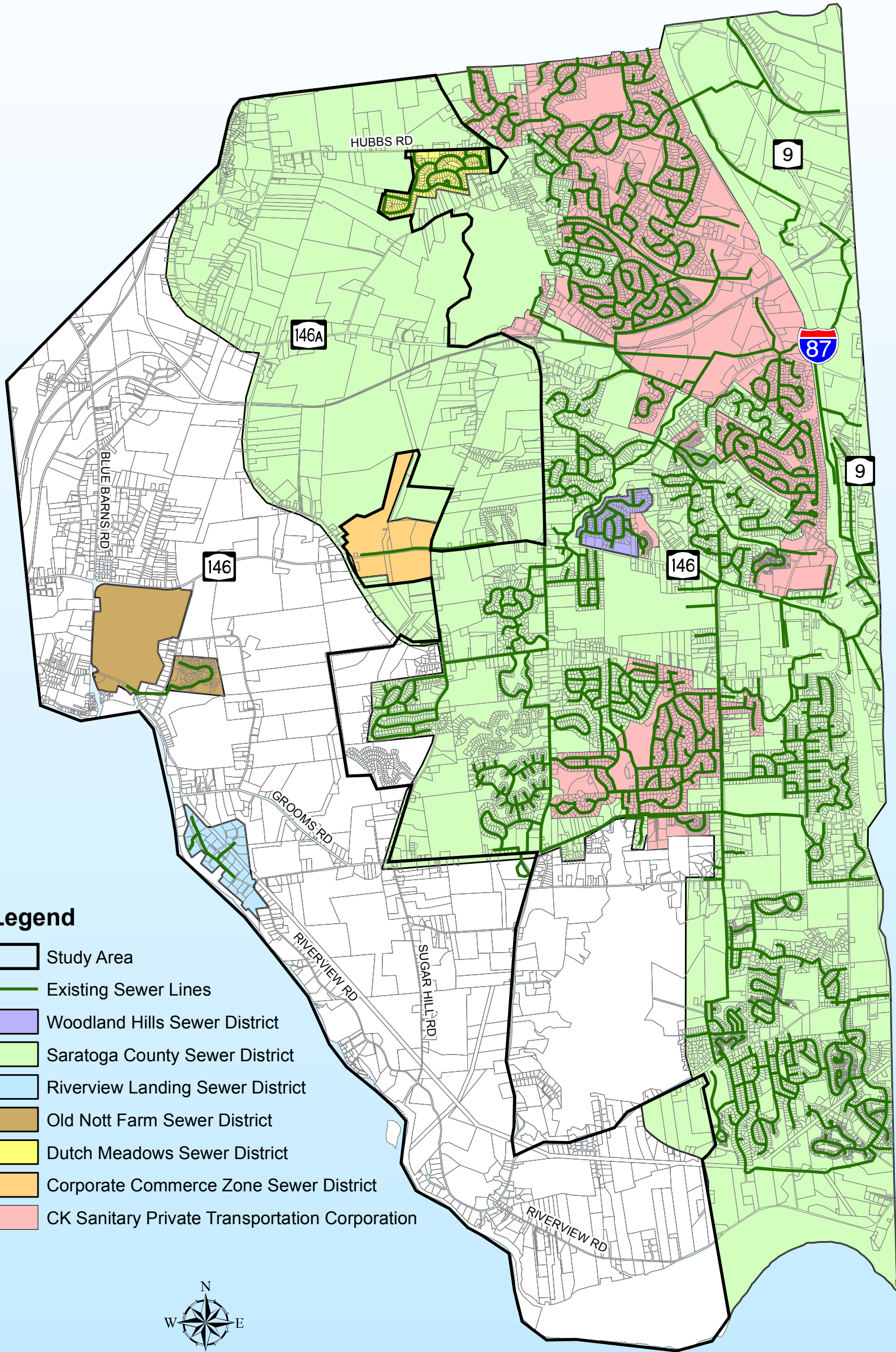
The current land uses within the Town of Clifton Park generate approximately 14,420 vehicle trips during the afternoon peak travel hour. This number is projected by the Capital District Transportation Committee to increase by approximately 55% by the year 2025, totaling more than 22,360 peak hour vehicle trips. The GEIS for the Corporate Commerce Zone on Route 146 completed in 2001 further identified the potential for an





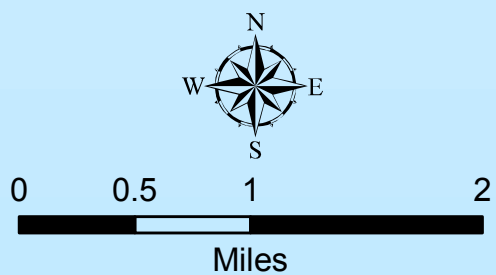
# Western Clifton Park

## Generic Environmental Impact Statement



### Legend

- Study Area
- Existing Sewer Lines
- Woodland Hills Sewer District
- Saratoga County Sewer District
- Riverview Landing Sewer District
- Old Nott Farm Sewer District
- Dutch Meadows Sewer District
- Corporate Commerce Zone Sewer District
- CK Sanitary Private Transportation Corporation



Existing Sewer System



additional 1,500 peak hour vehicle trips to be generated by the year 2025, or 23,860 peak hour vehicle trips. The Corporate Commerce Zone GEIS identified improvements to the transportation system to accommodate these projected traffic increases. These recommended improvements included the following:

- Widen NYS Route 146 between Route 146A and Tanner Road to provide a three-lane section and sidewalks or shared-use trail.
- Geometric and traffic control improvements at the intersection of Route 146 & Route 146A, the intersection of Route 146 and Tanner Road, and the intersection of Route 146 and Waite Road.
- Implementation of access management strategies to limit direct access to Route 146 from abutting properties and to create parallel collector roadways linking adjacent parcels.
- Continued local and regional progress in implementing the CDTC New Visions regional transportation plan which calls for Transportation Demand Management (TDM) actions, such as flexible work hours, increased transit and ridesharing, walking, bicycling and creating shorter trip length through proximity of activity centers, to reduce the trend of traffic growth.

These improvements are in addition to the following projects that are programmed in the current Transportation Improvement Program:

- Reconstruction and widening of the Rexford Bridge
- Widening of Balltown Road between River Road and Glenridge Road
- Reconstruction of Glenridge Road

It is also noted in the GEIS that this scope of improvements is based on a scenario of limited new development within the western part of the Town. Significant development in this area will likely require more extensive improvement of the transportation system.

#### *Existing Roadway System Serving the Study Area*

The transportation system within the study area includes the following network of State, County and local collector roadways:

State Routes:                   NYS Route 146  
                                      NYS Route 146A  
                                      Glenridge Road (Rte 914V)

County Routes:               CR 80 (Schauber Road)  
                                      CR 82 (Longkill Road/Main Street)  
                                      CR 91 (Grooms Road)  
                                      CR 110 (Blue Barns Road)

Local Collector Roads: Ashdown Road  
Bradt Road  
Hubbs Road  
MacElroy Road  
Miller Road  
Nott Road  
Riverview Road  
Sugar Hill Road  
Van Vranken Drive  
Waite Road

Average Daily Traffic (ADT) volumes for the State and County roadways within the study area are shown in Table 1. This information was obtained from the New York State Department of Transportation and the Saratoga County Department of Public Works.

**Table 1**  
**Average Daily Traffic Volumes**

Route	ADT
NYS Route 146: Rexford Bridge to Glenridge Rd	16,500
Glenridge Rd to Rte 146A	15,000
NYS Route 146A	8,000
Glenridge Road (914V)	9,500
CR 80 (Schauber Road)	4,000
CR 82 (Longkill Road/Main Street)	4,500
CR 91 (Grooms Road)	6,000
CR 110 (Blue Barns Road)	8,700

NYS Route 146 is a principal arterial and the primary east-west transportation corridor through the Town. This roadway carries the highest volume of traffic in the Town and provides important linkages to the Town's commercial district and to the region's principal north/south interstate expressway, I-87. East of the study area, NYS Route 146 carries approximately 30,000 vehicles per day. This difference in volume between the section of Route 146 within the study area (west of Route 146A) and the section east of Route 146A highlights the effect of current development patterns on traffic flow characteristics.

The local collector roadway system is comprised of two-lane roadways that have generally rural characteristics of narrow pavement and low traffic volume. These roadways generally carry fewer than 2,500 vehicles per day.



Views of local roads in Project Study Area

### Study Area Traffic Generation

Development within the western portion of the Town has the potential under current zoning to create approximately 2.5 million square feet of office space, 700,000 square feet of retail space and 5,300 single-family homes when built out. While it is unlikely that this build-out condition will occur by 2025, evaluation of the traffic generated by this build-out potential is beneficial in understanding the implications of current land-use zoning on the Town's transportation system.

The traffic generated by the potential build-out of the study area was estimated using data reported in the seventh edition of the Institute of Transportation Engineers' *Trip Generation* informational report. This data indicates that build-out of the western area of the Town will generate 11,100 new peak hour vehicle trips. Table 2 summarizes the daily and peak-hour trips generated by build-out of the study area.

<b>Table 2</b>				
<b>Summary of Study Area Trip Generation</b>				
<b>Based on Current Zoning</b>				
<b>Land Use</b>			<b>Daily Trips</b>	<b>PM Peak Hour Trips</b>
Office	2,500,000	sq. ft.	27,000	3,700
Retail	700,000	sq. ft.	22,500	2,000
Residential	5,300	dwelling units	50,700	5,400
<b>TOTAL</b>			<b>100,700</b>	<b>11,100</b>

This estimate includes a 25% allowance for pass-by and linked trips within the Town associated with the retail element. With this build-out, it is estimated that nearly 35,000 vehicle trips will be generated within the Town during the peak hour, or nearly 2.5 times the current level of travel.

## Travel Patterns

It is anticipated that future travel patterns in the Town will be comparable to existing travel, with most peak-hour travel oriented to the I-87 (Northway) corridor. However, a minor pattern shift is anticipated by CDTC to occur to the north and west as a result of increased residential and commercial development in the towns of Malta, Burnt Hills, Niskayuna and Glenville through the long range planning period to the year 2025.

## Potential Traffic Impacts

Increased vehicular travel resulting from new development in the study area can be expected to have a significant impact on the Town's transportation system.

As an illustration, it is estimated that traffic volume on the section of Route 146 in the study area will be comparable to the 30,000 vehicles per day that are on Route 146 in the eastern section of town as a result of development build-out. Traffic volumes at key intersections, such as the intersection of Route 146, Route 146A and Vischer Ferry Road, and the intersection of Route 146, Glenridge Road and Blue Barns Road are also estimated to reach the order of magnitude of volumes that occur now at the intersection of Route 146 and Clifton Country Road. Peak hour congestion on local collector roads can also be anticipated as a result of the traffic generated by new development. These impacts to the existing transportation system will require a comprehensive program for creating and managing additional roadway capacity to accommodate the increased demand. This program of improvements should include strategies to create a sustainable transportation system that defines and maintains the functional integrity of the arterial, collector and local street components of the system and that promotes multimodal (i.e., pedestrian, bicycle and transit) accessibility and circulation.



*Existing traffic congestion on a Clifton Park collector road*

The impacts of development in this study area can also be expected to have an impact on the regional transportation system, particularly on the roadways connecting the Town to the interstate highway system at Exits 8, 8A, 9 and 10. Mitigation of these impacts may include additional infrastructure improvement and Travel Demand Management strategies to reduce the volumes of peak hour vehicle travel.

Funding for transportation improvements to meet the build-out demand may also be a challenge. Funding priorities of the Regional Transportation Plan, as described in CDTC's *New Visions*, are directed to transportation investments that encourage residential and commercial development to locate within a defined Capital District Urban Service Area. The intent of this principle is to maximize the effectiveness of the transportation system and to promote the efficient use of land and existing infrastructure. The study area is generally outside this defined Urban Service Area, which would mean that transportation improvements required to support new development in this area is likely to receive lower funding priority within the regional transportation budget.

### ***Fiscal Impact***

A review of the potential impact of the build out of the western part of town was conducted using the fiscal model developed as part of the town's open space plan. The model compares relative net costs of future land use patterns. Model inputs were updated to reflect recent budgets and real property assessment data from the Town of Clifton Park and Shenendehowa School District.

The model uses cost and revenue data from current budget documents. Changes to the property tax base include increases in residential and commercial development in the study area. New homes were estimated at an average of \$370,000 in the R2 and R3 zoning districts and an average of \$220,000 for the R1 zoning district. New commercial development was estimated ranging in value (land and buildings) for an average of \$200,000 per acre in the B-3 zoning district to \$150,000 per acre in the B-1 and B-2 zoning districts. Using figures from the U. S. Census and the Capital District Regional Planning Commission, there are 2.6 persons on average per household with one school-age child per household on average (noting that some will have more, some less or none).

The results of the fiscal impact analysis of the build out of this portion of town noted a relative potential 50 percent increase in overall value of the tax base of the town (increasing from about \$2.064 billion to approximately \$3.0 billion). The number of school-aged children was estimated to increase by about 4,000 new students. School taxes were projected to increase relative to current taxes by approximately 12 percent. The net costs of town services were projected to remain relatively stable.

Factors outside of the model which may have an impact on these findings include potential relative changes to the town's share of county sales tax revenues, continued growth of communities outside of the Study Area, and changes to the state aid formula for schools, among others.

## ***Land Use Impacts***

### *Existing Conditions: Land Use and Community Character*

Historically, Clifton Park was a farming landscape and a rural, more predominantly natural setting of woodlands, wetlands and wildlife habitat, punctuated by rural roads and regional crossroads. The settling of the town was influenced by the agricultural economy and settlement patterns of farm families across the landscape. The evolution of transportation technologies also greatly influenced land use patterns. The opening of the Erie Canal in 1827, the development of the railroad network, and less than 50 years ago, the creation of the New York State Northway connecting the Capital District and the New York State Thruway system up to Canada – have all contributed to the growth and development of Clifton Park.

The western lands of Clifton Park today are best characterized as exhibiting a predominantly rural character of visible, rolling farm fields and pastures, punctuated by farm houses and barns; individual houses along driveways off the local streets and county and state roads; and a few residential subdivisions, including planned unit developments such as Old Nott Farm.

The Town of Clifton Park has a rich agricultural heritage from its earliest settlement to modern times. As the dominant land use and industry up until about 1950, farming shaped the land and culture of Clifton Park. Today, active farms and orchards and open farmlands of pastures and fields remain significant landscape features intermittent throughout the western lands. Riverview Road, Sugar Hill Road, Appleton Road, Ashdown Road, Blue Barns Road, Hubbs Road, Tanner Road, Waite Road and Route 146 are a few of the key roads offering an agricultural landscape setting. The core of active farming is in the southern part of the study area from the Grooms Road corridor south to the river.

The historically developed areas in the western half of the town have been centered on the hamlets of Rexford, Vischer Ferry, and Grooms Corner. Grooms Corner is an historic crossroads with houses, civic buildings, and businesses close to the intersection of Grooms Road, Miller Road and Sugar Hill Road – in the heart of the southern half of the western lands. Historic Grooms Tavern at Grooms Corner was the site of the first town meeting of the Town of Clifton Park in 1828, more than 175 years ago, and is the focus of a preservation initiative by a partnership between the Town of Clifton Park and the Friends of Grooms Tavern.

In the northern part of town, the historic hamlets of Jonesville and Elnora are located just outside the study area, with distinctive “main street” character amidst residential subdivisions, a golf course, and otherwise rural countryside character and agricultural lands along Hubbs Road and MacElroy Road. The hamlet of Ballston Lake is another

settlement of residences and businesses in the furthest northwest corner of the town and study area.

In the western part of town, outside of the historic hamlets, most development to date has been of agricultural or rural residential patterns: farmstead with barns and fields and single-family homes located intermittently along rural roads and county and state roads. More recently, a few residential subdivisions have been created in the western lands.

This part of town has several roads with high scenic value. Riverview Road follows the Mohawk River and the historic Erie Canal (built in 1827) with some spectacular views towards Niskayuna to the south. The scenic beauty and tremendous history of this Riverview Road corridor earned it recent designation as part of the Mohawk Towpath Scenic Byway. The community recognized that there is a network of scenic roadways throughout the western lands as part of an open space inventory in 1998 that identified: Riverview Road, Grooms Road, Appleton Road, Nott Road, Waite Road, the western core of Route 146 in the study area, Sugar Hill Road, Ray Road, Vischer Ferry Road, Crescent Road, Van Vranken Road, Ballston Lake Road, Eastside Drive and Schaubert Road. In addition, the town's Trails Advisory Committee has created a scenic tour in and around Rexford – the Rexford Ramble – for pedestrians, bicyclists and motor traffic -- that includes the hamlet of Rexford, Nott Road, Riverview Road, Grooms Road, Droms Road, Sugar Hill Road, Vischer Ferry Road, Crescent Road, and along the Erie Canal Towpath in the Vischer Ferry Nature and Historic Preserve. The Vischer Ferry Nature and Historic Preserve is more than 400 acres at the southern end of town along the Mohawk River – a state-owned but town-managed preserve of ecological and historical importance. It is designated by the National Audubon Society as an Important Bird Area.

Amidst this scenic, rural landscape, a pattern of large estate homes on large parcels is a growing trend along Riverview Road.

In addition to bicycling, walking, canoeing, kayaking and skiing in the Study Area, other active recreational uses include the Eagle Crest Golf Course in the northern part of town, and Riverview Country Club and Edison Club Golf Course in Rexford. The Town of Clifton Park owns park lands at Veterans Park on MacElroy Road.

In addition to the permanently protected Vischer Ferry Nature and Historic Preserve, several private parcels are under permanent conservation easements held by Saratoga PLAN (formerly the Land Trust of the Saratoga Region). Areas of conservation subdivisions have also been donated to the town and are permanently protected from future development.

As the eastern half of town reaches close to build-out, the pressure on the Study Area to supply land for additional development is increasing. Further, commercial development is on the rise along Route 146 where zoning allows, as the traffic growth and use of this highway continues to increase. Water and sewer is being extended to the Corporate Commerce development on Route 146 – bringing this infrastructure closer to the rural, western lands. Route 146 through Rexford is an important regional connection from

Schenectady and Niskayuna into Clifton Park and from Clifton Park to other points in Saratoga County. The Rexford Bridge on Route 146 is a heavily traveled crossing of the Mohawk River for regional commuters.

Other features in the Study Area include railroad lines and major utilities. In the southern part of the study area, in a pattern somewhat parallel to the Mohawk River and Riverview Road, are major electric utility power lines (Niagara Mohawk-National Grid) that cut swaths through agricultural land and orchards, woodlands and wetlands. A dam and hydroelectric power plant is located on the river just south of Riverview Road and its intersection with Sugar Hill Road.

#### *Potential Impacts to Land Use and Community Character in the Western Lands*

The study area is currently experiencing growth along the Route 146 corridor and all along the eastern part of town. This growth is anticipated to continue to spread into the Study Area. The corridor of lands along Route 146 and Route 146A is zoned for R-1 residential development, while the remainder of the study area is currently zoned for R-3 residential. An area along Crescent Road just northeast of the hamlet of Vischer Ferry is zoned for R-2 residential development.

An important influence on the future character of the western lands is the Corporate Commerce zone and future development on Route 146 adjacent to the study area. The study area wraps around the Corporate Commerce area. Additionally, the build-out scenario assumes that sewer will be available within the current sewer district boundary that extends along Route 146 into the Study Area.

Residential subdivisions are already under construction within the Study Area that were underway before the temporary moratorium was adopted.

A few locations in the study area are zoned for B-1, B-2, and B-3 commercial development, namely the Route 146 corridor centered in Rexford due south of the intersection with Blue Barns Road, at the intersection of Route 146 and Route 146A, and in the hamlet of Ballston Lake. Commercial growth is already proposed along 146 in Rexford – in proposals submitted prior to the moratorium. A few other individual parcels are zoned commercial in the study area.

While some of the farmlands in town are in active agricultural districts, receive agricultural assessments, and are even enrolled in the town's temporary agricultural easement or open space easement program, it is anticipated that some of the existing farmlands will be developed in the future. The build-out scenario assumes that all of these lands (minus constraints) will be developed.

Where water and sewer is not accessible, conventional low-density patterns of 2- to 3-acre lots would be anticipated for the R-3 zone.



**ACTIVE FARMLAND AND ORCHARDS IN THE WESTERN LANDS:** a photo taken from an airplane in November 2003 of an active farm in the study area along the east side of Sugar Hill Road. Four homes are visible set back off the road with long driveways. A group of barns including a farm market stand are centered in the photo. Farm roads traverse and provide access to the orchards. The site is on

uplands with no significant development constraints and is relatively flat topography. This farm has been one of the several host venues for the Town of Clifton Park's Annual Farm Fest activities held each fall.



**POTENTIAL BUILD-OUT IMPACT OF R-3 ZONING AS CONVENTIONAL DEVELOPMENT:** a simulation of active farmland developed in R-3 zoning as a conventional residential development. This is an illustration of one approach to how development of this farmland off of Sugar Hill Road could occur under current zoning under the build-out of the western lands. Over time, trees and landscaping would likely help create a more

established residential neighborhood character in this subdivision similar to some of the older, more mature landscaped subdivisions in the eastern part of town. However, the permanent loss of agricultural lands, the loss of open fields and their contribution to the scenic, rural character, as well as the loss of the

farm's contribution to the local economy in terms of farm sales, jobs and agri-tourism would occur as a result of residential development.



**TYPICAL R-1 ZONING - CONVENTIONAL RESIDENTIAL DEVELOPMENT:** Above is an example of R-1 zoning in the eastern part of town – along Vischer Ferry Road. This type of pattern is possible with access to water and sewer.

The most important potentially significant adverse impacts of a built-out landscape of conventional or cluster residential development are the loss of the rural character, loss of the agricultural working landscape, and the loss of the scenic qualities of the western lands. Individual site plans may be created that protect open space in a cluster subdivision, and better master planning may result in more connected open space between adjacent cluster subdivisions. However, large-scale imprinting of the western lands with wholesale residential patterns will result in the cumulative impact of the loss of the rural community character.

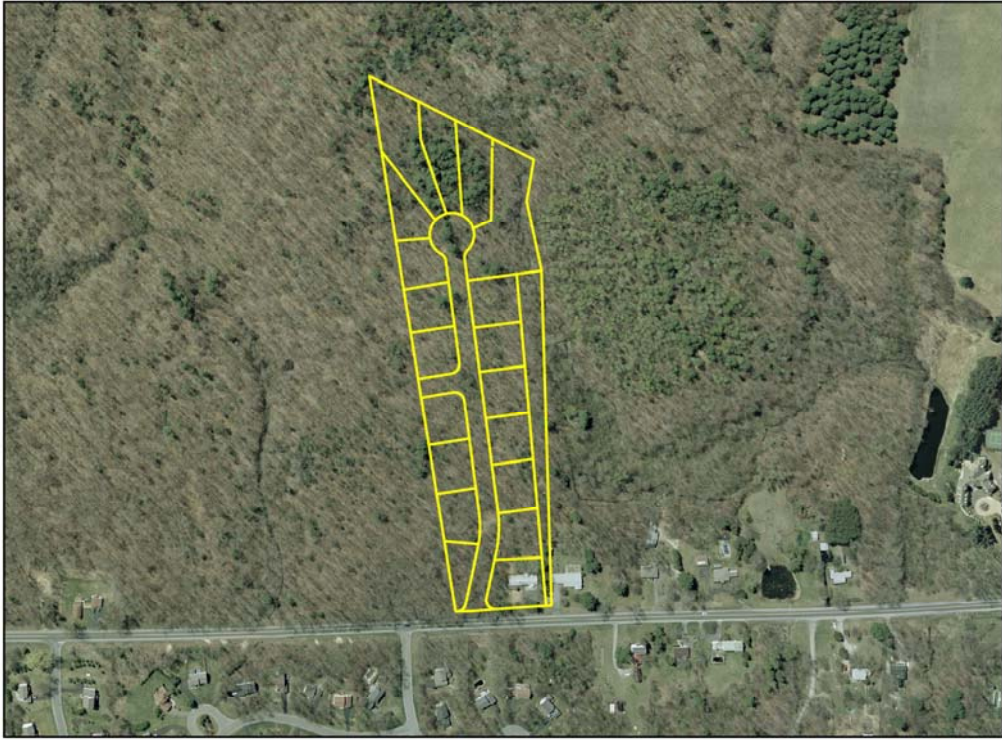
Residential subdivisions will permanently convert agricultural crop fields, pastures and orchards to non-agricultural uses. Loss of active farmlands and orchards will result in a loss of the contributions of the agricultural economy of sales taxes, local jobs, of farm market outlets, and the agri-tourism economy.



**WESTERN LANDS IN PATH OF GROWTH:** This aerial photo shot from an airplane in November 2003 is the view looking west towards Miller Road in the foreground and the Peacock Glen development in the center. The top half of the photo shows a portion of the Study Area – still predominantly rural, wooded, and agricultural fields – that face increasing development pressure as the eastern part of town reaches build-out.

The change in character of the Study Area can also be portrayed through street-level photos. The following images provide examples of what can be expected at build-out when driving down what are currently rural roads. Not only will the character of these roads change as a result of increased traffic and associated roadway improvements, the views of farm fields and wooded lands will also change to suburban residential. The examples provided include the Emerson subdivision on Vischer Ferry Road within the Study Area and The Oaks, also on Vischer Ferry Road, but outside the Study Area. The Emerson subdivision was carved into a wooded area while much of the frontage of The Oaks was farm field.

It is interesting to note that The Oaks is a cluster subdivision, which is intended to preserve more open space. However, unless more emphasis is placed on views from the road corridor, such clusters do little to preserve the rural setting.



**EMERSON SUBDIVISION:** Aerial view of site and lot layout prior to construction.



**EMERSON SUBDIVISION:** View of the developed site from the entrance.



**THE OAKS CLUSTER SUBDIVISION:**  
View along Vischer Ferry Road. Note that despite being a cluster subdivision, its appearance from the road resembles a typical suburban residential subdivision.

Draft



# APPENDIX D

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**WESTERN CLIFTON PARK**  
**LAND USE STUDY AND GENERIC ENVIRONMENTAL IMPACT STATEMENT**

**PROPOSED LAND CONSERVATION PLAN RECOMMENDATIONS –**  
**DRAFT (6/25/04)**

**I. Introduction & Plan Summary**

Over the past several months the project team has evaluated the issues facing Western Clifton Park by inventorying resources, identify growth potential (build-out analysis), and gathering feedback from Town officials and the public. Now, with a firm understanding of the vision for the Study Area and the concerns related to the impacts of future growth under current zoning, recommendations are provided to achieve goals for density, land use, community character, and quality of life. This report provides information on the process of plan development, existing conditions within the Study Area, the vision, and plan recommendations.

The primary directive issued by the Clifton Park Town Board as a result of the Build-Out Analysis was to reduce the growth potential within the Study Area, preserve rural character, and respect the property rights and investment of the Town's farming community and other large landowners. This sentiment was echoed during a community workshop held to gather input on community resources and a vision for the western part of town.

To achieve the Town's directive, a Land Conservation Plan has been developed that combines zoning recommendations with a permanent easement program. The basic elements of the plan are as follows:

- Rezone all residentially zoned lands in the Study Area to Conservation Residential (CR). This new zone would establish an average density for the Study Area of 1 home per 3 developable acres. All projects in this zone must be designed as conservation subdivisions, a refined form of clustering that protects important natural and cultural resources and is based on specific adopted design guidelines. This new zone will also include the opportunity to increase the development potential of a given site in exchange for the purchase of development rights on a designated open space parcel.
- Rezone the residential portion of Rexford to Hamlet Residential (HR) to preserve the character of this area.
- Rezone all existing commercially zoned areas to Hamlet Mixed Use (HM) to promote uses more in tune with the rural character of the Study Area. Reduce underlying development density to a maximum of 4,000 gross square feet of office space per developable acre or 2,000 gross square feet of retail space per developable acre.

- Conduct design workshops for the potential infill and enhancement of existing hamlets (particularly Rexford and Jonesville) to better understand growth potential and land use issues.
- Establish a purchase of development rights (PDR) program and funding mechanisms to permanently protect agricultural and open space resources in accordance with the Town's Open Space Plan and subsequent refinements to mapping provided herein.

The following provides greater detail on the planning process and recommendations. This is a preliminary level of analysis that will be refined as the process of preparing the draft Generic Environmental Impact Statement (DGEIS) continues. Although design parameters may change with more detailed analysis and further public scrutiny, the primary intent of this plan is to establish an appropriate growth and conservation scenario that can be used to evaluate technical impact issues such as traffic, schools, water service, etc.

## **II. Planning Process**

The primary purpose of undergoing a study of Western Clifton Park is to identify the potential cumulative impacts of future build-out and proactively plan and mitigate. The need for and level of planning necessary to address this area was dependent on the outcome of the build-out analysis. Therefore, build-out analysis was the first major step in the study.

### ***A. Build-Out***

A build-out analysis was conducted based on current zoning. The analysis identified the development potential for residential and commercial uses within the Study Area. Available mapping was used to identify development constraints, which were excluded from the potential developable area. Density was defined by the Town Zoning Code and refined by current development practices. The results are summarized below:

- Approximate area included within the GEIS Study Area: 13,900 acres
- Approximate area of potentially developable land: 6,200 – 7,700 acres
- Approximate number of homes that could be built: 4,200 – 5,300
- Approximate amount of office space that could be built: 2,200,000 – 2,500,000 s.f.
- Approximate amount of retail space that could be built: 600,000 – 700,000 s.f.

These results were then analyzed for the effect on major community issues that can have significant impact on community character and quality of life. Therefore, the scope of this analysis was limited to land use, traffic, fiscal resources, and utilities.

Details of the impact to community resources are provided in the Build-Out Analysis. Overall, it can be stated that build-out under current zoning would have significant impacts on each of the major issues, translating into the loss of rural character and degradation of quality of life.

## ***B. Feedback***

The build-out analysis was presented to the Town Board and the community on February 11, 2004. The intent was to inform the Board and the public of the results of the analysis and to begin an informal opportunity for feedback. The Town Board was presented with the question: Is build-out under current zoning acceptable and, if not, what issues require the greatest attention?

Over the course of several weeks, the Clifton Park Town Board developed thoughts and provided guidance as to how the process should proceed. The Board questioned the project team about various scenarios to understand the sensitivity of the build-out model. Some residents and community groups also provided input through letters and other communications.

The question was answered very clearly. Build-out, under current zoning and land use regulations, is not an acceptable growth scenario for the Study Area. Rural character is very important and all the impacts require attention. Therefore, planning/mitigation efforts need to focus on a reduction of the potential build-out density and address the preservation of rural character. It is important to note that a reduction in density does not automatically translate into preservation of rural character.

This portion of the process was important to confirm the general vision for the Study Area and to scope the effort necessary to address the issues and develop a plan.

## ***C. Community Outreach***

With a clear directive to follow, the project team is proceeding with efforts to create a land use plan that will reduce density, preserve character and quality of life, appropriately locate some level of growth, and respect the property rights and investment of the farming community and other large landowners.

This is a complicated task that should not be conducted without community input. Therefore, a community workshop was held on May 12, 2004. The purpose of the workshop was to confirm the resources within the Study Area that are considered important by residents, identify the appropriate means of protecting those resources, and begin discussion of where growth could take place and how it should look. The resources for the workshop included a landscape analysis map, base mapping, and the Build-Out Analysis results.

Approximately 150 people attended and participated in small groups to facilitate discussion. There were many excellent suggestions. As each table presented their viewpoints, it became obvious that the overwhelming concern is the preservation of rural character. Those present from the farming community and other large landowners also expressed the desire to preserve the rural way of life with the caveat that open space and rural character are not free. They were concerned that their property equity not be lost.

The participants were challenged with guiding where future development should be located. It was difficult for many to envision a place where development would be appropriate, despite the fact that most understood that the outcome of this process would not be a no-growth policy. The difficulty might be in the current patterns of development elsewhere in the community and throughout the Capital District/Saratoga region. Perhaps they envisioned a standard half-acre lot subdivision or the typical strip commercial development that in their minds does not fit into the character of Western Clifton Park. Clearly, site design/layout should be an essential component of the future land use plan.

A summary of the issues discussed at the community workshop is attached for reference.

The community workshop provided an important opportunity for education and dialog. The information gleaned from this process was used to refine the resource mapping, develop a more detailed vision, and provide the basis for identifying specific recommendations that are intended to reduce density and preserve character.

#### ***D. Resource Refinement***

The Land Resources maps (Figure 1-3) are a refinement of the Open Space Concept Plan contained within the Town's Open Space Plan (Behan Planning Associates LLC and Town of Clifton Park Open Space Committee, January 2003). Refinements include the identification of important lands for protection by parcel, priority parcels, scenic corridors and important vistas. The plan also includes major wetlands and publicly owned open space. The Draft Generic Environmental Impact Statement will provide greater detail on these resources in accordance with the Final Scoping Document.

### **III. Land Conservation Plan**

#### ***A. Issues***

The Study Area is currently experiencing growth along the Route 146 corridor and all along the eastern part of town. This growth is anticipated to continue to spread into the Study Area. While some of the farmlands in town are in agricultural districts, receive agricultural assessments, and are even enrolled in the town's temporary agricultural easement or open space easement program, it is anticipated that some of the existing farmlands will be developed in the future.

The most important potentially significant adverse impacts of built-out with conventional or cluster residential development are the loss of the rural character, loss of the agricultural working landscape, and the loss of the scenic qualities of Western Clifton Park.

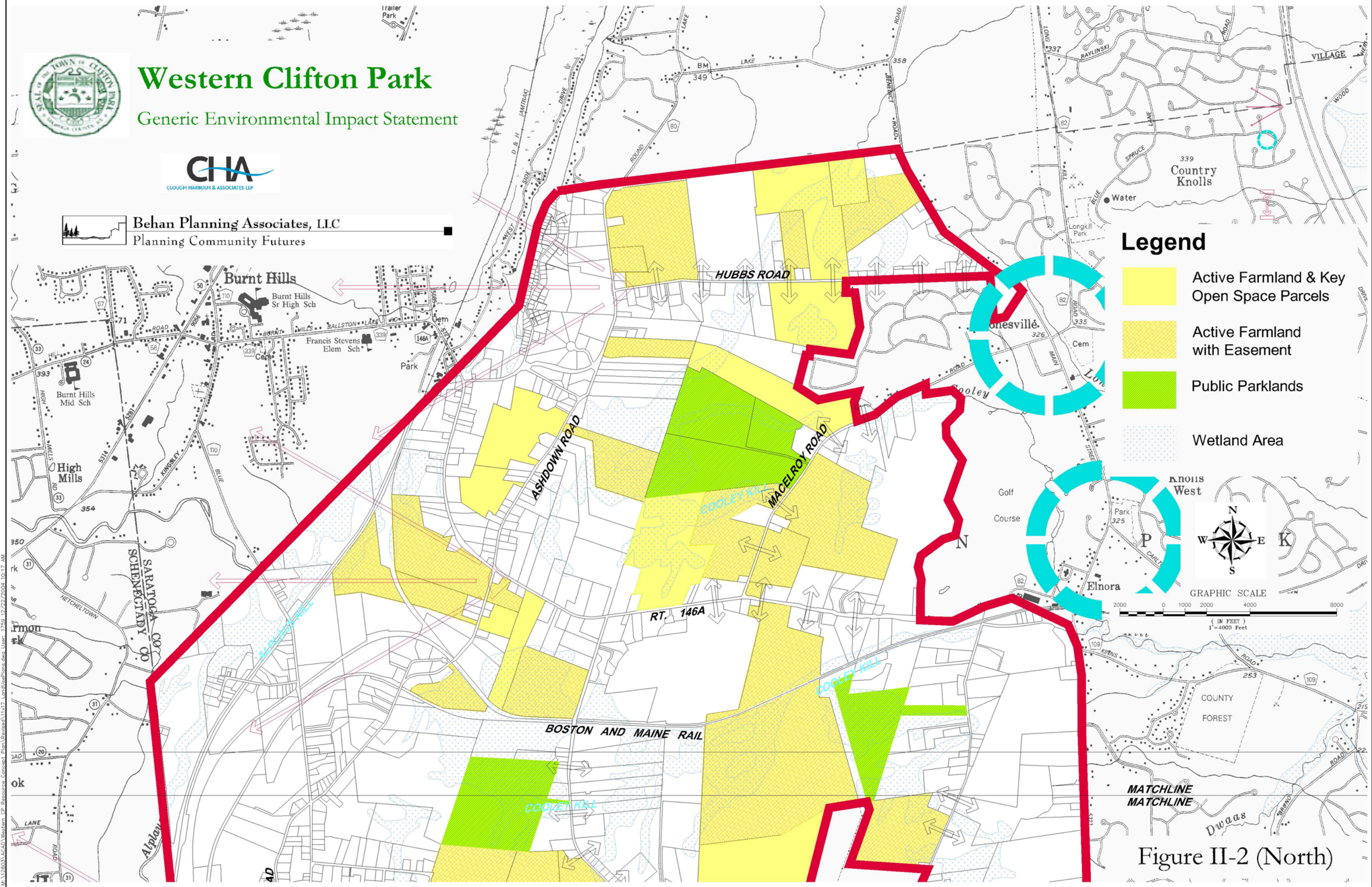


# Western Clifton Park

## Generic Environmental Impact Statement



Behan Planning Associates, LLC  
Planning Community Futures



### Legend

- Active Farmland & Key Open Space Parcels
- Active Farmland with Easement
- Public Parklands
- Wetland Area

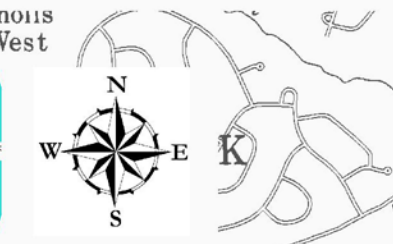


Figure II-2 (North)

File: M:\2003\ACAD\Western\_CPA\_Resources\_Concept\_Plan\Revised\11177\_LandUsePlan.dwg User: 1759 12/22/2004 10:17 AM



MATCHLINE  
MATCHLINE



# Western Clifton Park

Generic Environmental Impact Statement



Behan Planning Associates, LLC  
Planning Community Futures

**LEGEND**

- ACTIVE FARMLAND & KEY OPEN SPACE PARCELS
- ACTIVE FARMLAND WITH EASEMENT
- DISTANT VIEW
- HAMLET AREA
- PUBLIC PARKS
- ROUTE 146 CORRIDOR
- VIEWS FROM RURAL ROAD
- WETLAND AREA



GRAPHIC SCALE  
2000 0 1000 2000 4000 8000  
( IN FEET )  
1"=4000 Feet

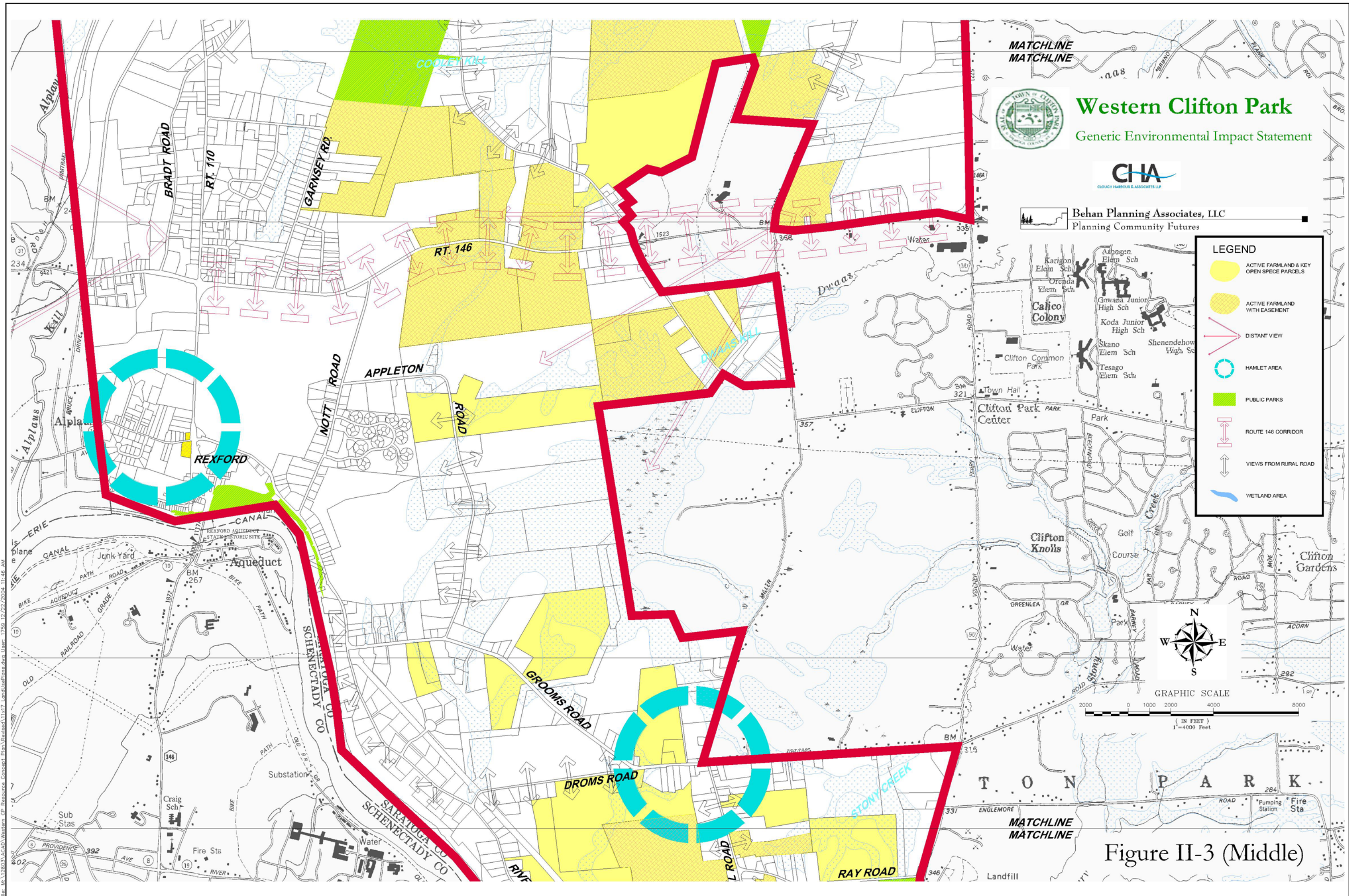


Figure II-3 (Middle)

File: M:\2003\ACAD\Western\_CP\_Resource\_Concept\_Plan\Render\11-17\_LandUsePlan.dwg User: L759 12/27/2004 11:46 AM







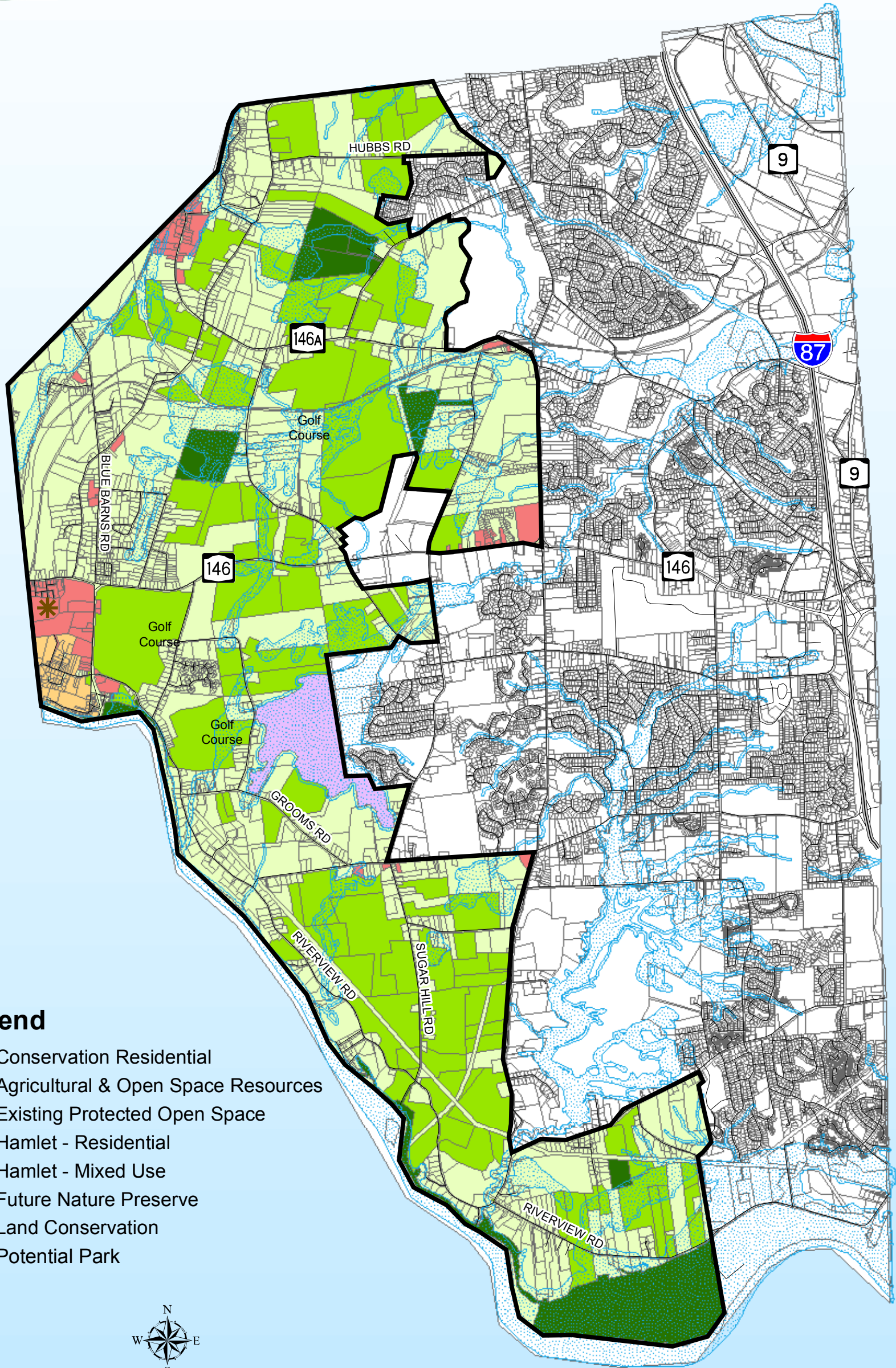


# Western Clifton Park

## Generic Environmental Impact Statement



Behan Planning Associates, LLC  
Planning Community Futures



### Legend

- Conservation Residential
- Agricultural & Open Space Resources
- Existing Protected Open Space
- Hamlet - Residential
- Hamlet - Mixed Use
- Future Nature Preserve
- Land Conservation
- \* Potential Park



Figure II-5: Land Conservation Plan



Residential subdivisions will permanently convert agricultural crop fields, pastures and orchards to non-agricultural uses. Loss of active farmlands and orchards will result in a loss of the contributions of the agricultural economy of sales taxes, local jobs, of farm market outlets, and the agri-tourism economy.

## **B. Vision**

The results of research and public input into the process to date have been synthesized into a statement that attempts to express how the community visualizes the future landscape of Western Clifton Park.

***Western Clifton Park will continue to exhibit its historic rural character, a cherished town-wide amenity, by providing for focused development of residential and mixed use hamlets in balance with conserved open space. The area will continue to consist of a countryside setting north of the Mohawk River Scenic Byway of permanently protected, working farms and orchards, open lands and wildlife habitat, historic hamlets, enhanced hamlets and similar focused areas of settlement, and low density residential, each separated and surrounded by radiating open space and habitat and linked by pathways. Commercial uses shall focus on neighborhood-scale businesses and offices primarily serving Western Clifton Park. Natural buffers shall exist between working agricultural lands, residential neighborhoods, and commercial areas.***

Implementation of this vision statement will require a number of growth management tools working together in an action plan.

## **C. Plan Approach**

There are two primary issues associated with the build-out that form the basis of the plan approach: density and rural character. Development density drives many of the impacts that the community will face, including increased traffic and fiscal impact. Although density will certainly impact character, there are some planning concepts that deal with character but do not necessarily reduce density. It is also important to note that reduction of density does not necessarily lead to preservation of land use character. Therefore, the proposed mitigation for build-out under current zoning is a plan for rezoning, with the implementation of design guidelines, and the establishment of permanent conservation easements. The recommendations to follow are illustrated on Figure 4, Land Conservation Plan.

### Rezoning

#### *Residential Zoning*

- All current residentially zoned lands within the Town should be rezoned to Conservation Residential (CR). This would be a new zoning district that would establish an average density of 1 unit per 3 developable acres, similar to the current R-2 and R-3 zoning that comprises the majority of land within the Study Area. Density is preferred over minimum lot size as the measure of compliance

since it offers the opportunity for flexibility in design and eliminates the loophole of using constrained lands to meet minimum lot size requirements.

- All projects should be designed as conservation subdivisions, a refined form of clustering to protect a site's valuable natural and cultural resources (See glossary of planning terms for a complete definition of the conservation subdivision process). All subdivisions should provide a minimum of 50 percent open space.
- The minimum 50% open space conservation area for a conservation subdivision will set aside the area of constrained lands (not developable) and also include other meaningful, accessible open space, such as scenic corridors, scenic vistas, etc. as defined in new conservation criteria language in the amended zoning code. Additionally, the open space conservation area will exclude any house lots or driveways, subdivision roads, and stormwater management areas, and rather be dedicated for passive recreation or nature preserve area and/or potentially some limited active recreation use for the neighborhood it serves.
- The subdivision and design requirements for the CR zone will be determined by residential development guidelines. These guidelines will be presented in the DGEIS and refined through the SEQR process. The intent, however, is to conserve those important natural and cultural resources that have been identified in the Town's Open Space Plan and through this process.
- Projects should not be constrained by bulk regulations that establish setbacks and lot sizes. The development guidelines will provide appropriate information and guidance for the Planning Board and applicant to design a good project. Flexibility is important in the process of conserving resources.
- The CR zone should also provide for the purchase of development rights of an off-site parcel with an increase in density on a given project parcel. This growth management tool will not increase or decrease density within the overall Study Area. It could be effective in helping to preserve the character of important open space areas illustrated on Figure 4. The applicant would negotiate the purchase of development rights from a designated parcel and could transfer that density to the project parcel. The maximum density of the project (receiving) parcel would be dictated by the development potential of the preservation (sending) parcel and the need to maintain 50 percent open space on the project parcel. This is referred to as amenity zoning. The community would benefit from the purchase of development rights of an important open space parcel or some other important amenity in exchange for allowing the developer to get a higher yield of development for a specific project.
- The Rexford Hamlet was identified as a potential area for growth that is consistent with the character of the existing developed portions of the hamlet. Undeveloped residentially zoned land should be rezoned to Hamlet Residential (HR). This area should develop in a manner consistent with the current hamlet as identified through hamlet design guidelines that would be developed from a concept plan for the area. The guidelines would address pedestrian facilities and amenities, grid patterns of development, street design, character, and aesthetics. In addition, a recreational component would be required. Uses would be limited to single-family housing and related neighborhood uses such as churches and

small schools. Density for this zone should be the same as the proposed CR zone, which is 1 dwelling unit per 3 developable acres.

- Future zoning and development guidelines for Rexford should be based on a community-derived land use concept plan. To achieve this, a neighborhood design charrette/public workshop in Rexford is recommended.

#### *Commercial Zoning*

- Existing commercial areas within the Town should be rezoned to Hamlet Mixed Uses (HM). The intent of this new zoning district is to provide for uses that are more in harmony with the character of the Study Area. This new zone would require hamlet scale/pedestrian friendly office and commercial development with opportunities for mixed residential uses, such as upper story apartments and higher density single family homes.
- The underlying density for the HM zone would be 4,000 gross square feet of office space per acre or 2,000 gross square feet of retail space per acre. This reduction in density is necessary to address the traffic implications of commercial development, as preliminarily expressed in the Build-Out Analysis.
- Commercial development guidelines should be prepared.
- The incentive for the HM zone is to allow the applicant to achieve a density commensurate with a hamlet setting. Open space is less important although a recreational component may be appropriate if residential uses are included. The transfer of density from identified open space parcels would be equated to vehicle trips.

#### *Historic Hamlets*

- The Grooms Corners and Vischer Ferry hamlets should not be expanded. There is limited area available at Grooms Corners without impacting active farmland. Additionally, it would be difficult to provide any substantial increase in density at Vischer Ferry without impacting the historic character of this area.

#### *Rural Road Corridors*

- Place a setback and access management overlay zone on all of the Town's collector roads. The purpose of this overlay will be to preserve the integrity of the collector and its primary function, to safely and efficiently accommodate traffic, as well as to contribute to the preservation of rural character. Regulations for the overlay district should address the following:
  - ❖ Require common access drives for minor residential subdivisions. Subdivision regulations should be amended to require a flag lot subdivision for up to four lots (minor subdivision). A single access drive would serve all four lots. Sufficient ROW should also be required along the access road corridor so as to allow the drive to be widened to serve as a Town road, should the interior of the subject parcel be developed. Siting of the lots and other design parameters that would address rural character would be based on the previously proposed underlying zone.

- ❖ Lots that front on existing roads should not be permitted in future major subdivisions. All lots in the subdivision should front on the internal subdivision road system.
- ❖ Development of a trail or sidewalk in accordance with a pathways plan or the provision of sufficient ROW for a trail or sidewalk if no plan has been established.
- Scenic and rural character corridors identified on Figure 1 should be protected to the greatest extent practicable by buffering these roads from development with a minimum 500 foot setback. Important viewsheds identified in the Town's Open Space Plan and illustrated on Figure 1 should be preserved. The development guidelines should address how development will be designed to preserve the view(s).

#### Permanent Conservation Easements

- The Town should establish a program and funding mechanisms for the permanent protection of important open space parcels. These parcels have been identified on Figure 4 and are a refinement of the Town's Open Space Plan. The highest priority parcels are those that are actively farmed. The highest priority area is the southern portion of the Study Area where there is the largest number of contiguous farm operations.
- The two forms of permanent protection that will help to lower the development potential of the overall Study Area are permanent easements established through the purchase of development rights (PDR - see glossary of planning terms) and fee acquisition of properties with subsequent protective easement. The former option allows the land to remain in private ownership (thus remain on the tax rolls) and the current use to continue (e.g., farming). The latter would most likely be used in a case where the Town has a specific open space use for the parcel.
- If development rights are purchased, the landowner will be allowed to continue farming the land and may further develop the land with farm uses that are essential to the farming operation. The land owner will not be permitted to subdivide the land for residential or other non-farm uses with the exception of one lot to be appropriately located so as not to impact, natural, cultural or agricultural resources. A list of allowable uses under the permanent easement is included in Appendix B.
- The Town should consider the use of a program to purchase the development rights of parcels within the Study Area and relocating them to appropriate areas outside the Study Area. Two areas have been identified that may present opportunities for infill. They include the existing hamlet of Jonesville and the Vischer Ferry/Grooms Road intersection. Both areas have access to municipal water and sewer service and there is potentially developable land present. There may be other areas within the Town that could also serve as receiving areas. The intent of this study is to provide the framework for evaluating these areas and establishing procedures. In most cases, the area in question will require further study to determine its development potential and to properly design for this development so that it is an amenity to the community and not just an area of

increased density. Rexford and Jonesville are two existing hamlets that may be able to accept further development but not without an evaluation of how the area currently functions and what can be done to improve such critical issues as walkability, circulation, aesthetics, and historic context. A hamlet design charrette should be considered by the Town to involve residents of these areas in the planning process. The Western Clifton Park GEIS will identify some of the potential hamlet areas (existing and new) to collect preliminary feedback from the public. The process for hamlet evaluation is discussed later in these recommendations.

#### **IV. Revised Build-Out Projections**

Based on the recommendations to control density, the build-out for the Town was re-evaluated. The base constraint to define potentially developable land is the Town's Land Conservation (LC) zone that includes state-regulated wetland w/ 100 foot buffer, streams, and the 100-year floodplain. Thus the following apply to all scenarios.

- Approximate area included within the GEIS Study Area: 13,900 acres
- Approximate area of potentially developable land: 7,700 acres

The Land Conservation Plan was evaluated in two stages. The first stage identifies build-out potential based on the proposed new zoning only. The reason for this is that the proposed permanent conservation easement recommendations are voluntary and therefore there are no guarantees as to how much of the land will be permanently protected.

##### Land Conservation Scenario – New Zoning Only

- Approximate number of homes that could be built: 2,500
- Approximate amount of office space that could be built: 715,000 s.f.
- Approximate amount of retail space that could be built: 125,000 s.f.

##### Land Conservation Scenario – New Zoning & Permanent Easement Program

- Approximate number of homes that could be built: 1,400
- Approximate amount of office space that could be built: 715,000 s.f.
- Approximate amount of retail space that could be built: 125,000 s.f.

The Land Conservation Plan would significantly reduce the growth potential within the Study Area. The zoning recommendations alone cut the residential growth potential approximately in half with similar significant reductions in commercial development. Further reductions in density would be beneficial to rural character, traffic and fiscal issues, as well as many other environmental and cultural resources. The results of the combined plan on growth potential present a worthy goal. Furthermore, without the permanent conservation easement program there would likely be a loss of farming and impact to rural character by large-scale imprinting of the Study Area with residential development, despite design criteria.

Figures 5, 6 and 7 illustrate the various growth scenarios. The maps were created through the CommunityViz model in which dots are randomly placed on developable portions of parcels based on the specified densities. Figure 5 shows build-out under existing zoning and was presented in the Build-Out Analysis report. Figure 6 illustrates the implications of the proposed Conservation Residential (CR) zone. When compared with Figure 5, there does not appear to be much difference at first glance. However, two very important points can be made from this comparison. First, by focusing on the Route 146 and 146A corridors, it becomes apparent that the density of dots is much less on Figure 6. Therefore, the primary density reduction associated with the CR zone scenario comes from those lands currently zoned R-1. The remaining R-2 and R-3 zoned properties would not see a significant reduction in development potential under the CR zone since the existing and proposed densities are similar.

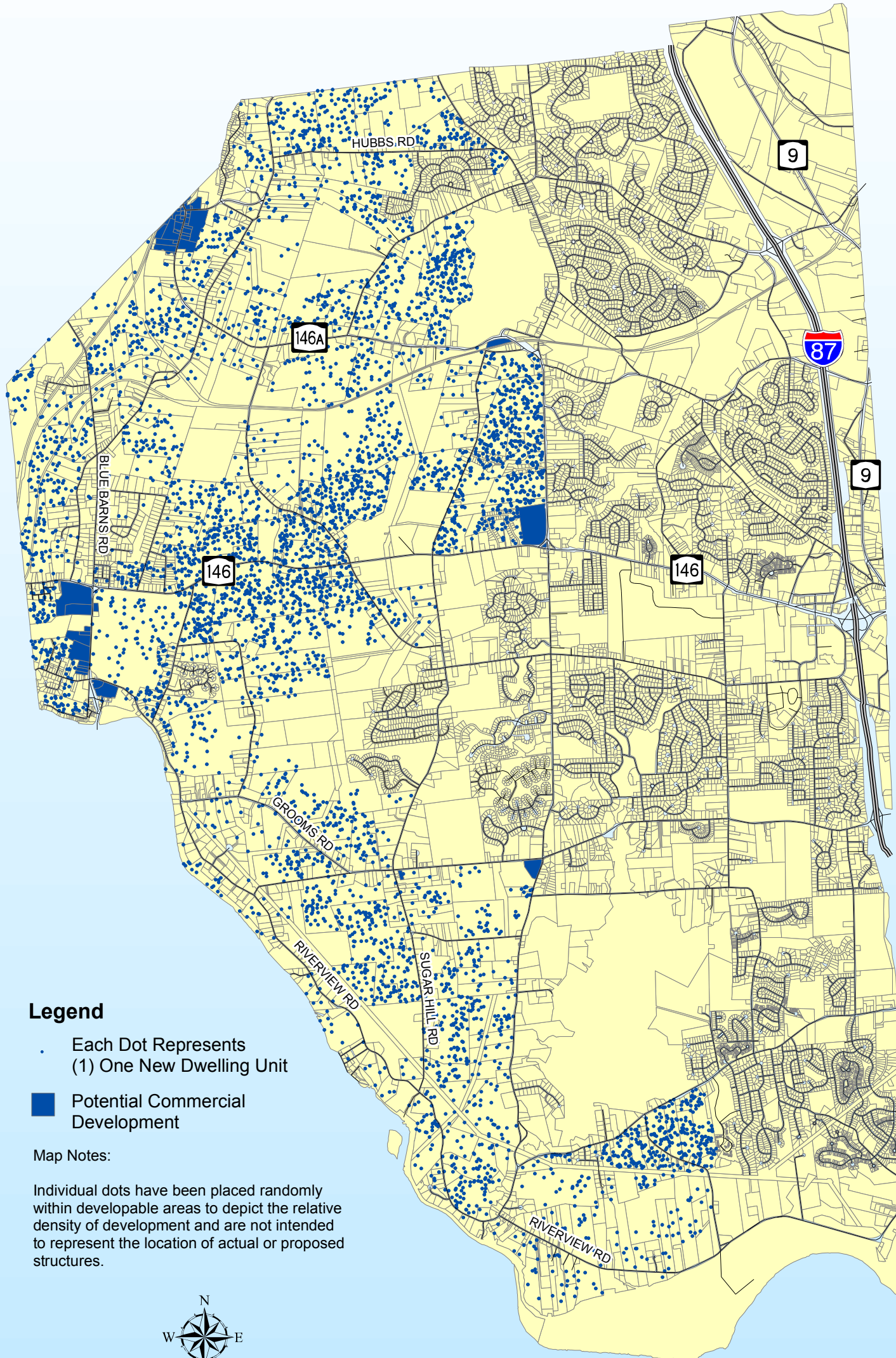
The second point relates to rural character. Without design elements such as conservation subdivisions and a permanent easement program, the end result of the CR zone at build-out would not achieve the goals of preserving rural character. Houses would dot the entire Study Area and although certainly less dense than the eastern portion of Town, rural character would be lost.

Figure 7 illustrates the impact of a very successful permanent easement program. Besides the further reduction in density, larger open areas along rural road corridors would be maintained. This would be the ultimate desired state for the Study Area, complemented by well designed and functional hamlets. However, it is recognized that purchase of all open space parcels (identified on Figure 4) is an admirable but perhaps unrealistic goal. For the purposes of identifying an appropriate growth scenario for the Study Area to begin technical analysis for the GEIS, it is recommended that the target density becomes that associated with implementation of the CR zone and preservation of half of the open space parcels. This will provide a significant reduction in density. This does not suggest that the Town should not strive for the ultimate goal of achieving permanent easements on all the identified parcels. Rather, it presents a more reasonable scenario to address such issues as traffic and water supply.



# Western Clifton Park

## Generic Environmental Impact Statement

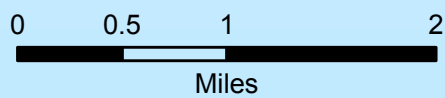


### Legend

- Each Dot Represents (1) One New Dwelling Unit
- Potential Commercial Development

#### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



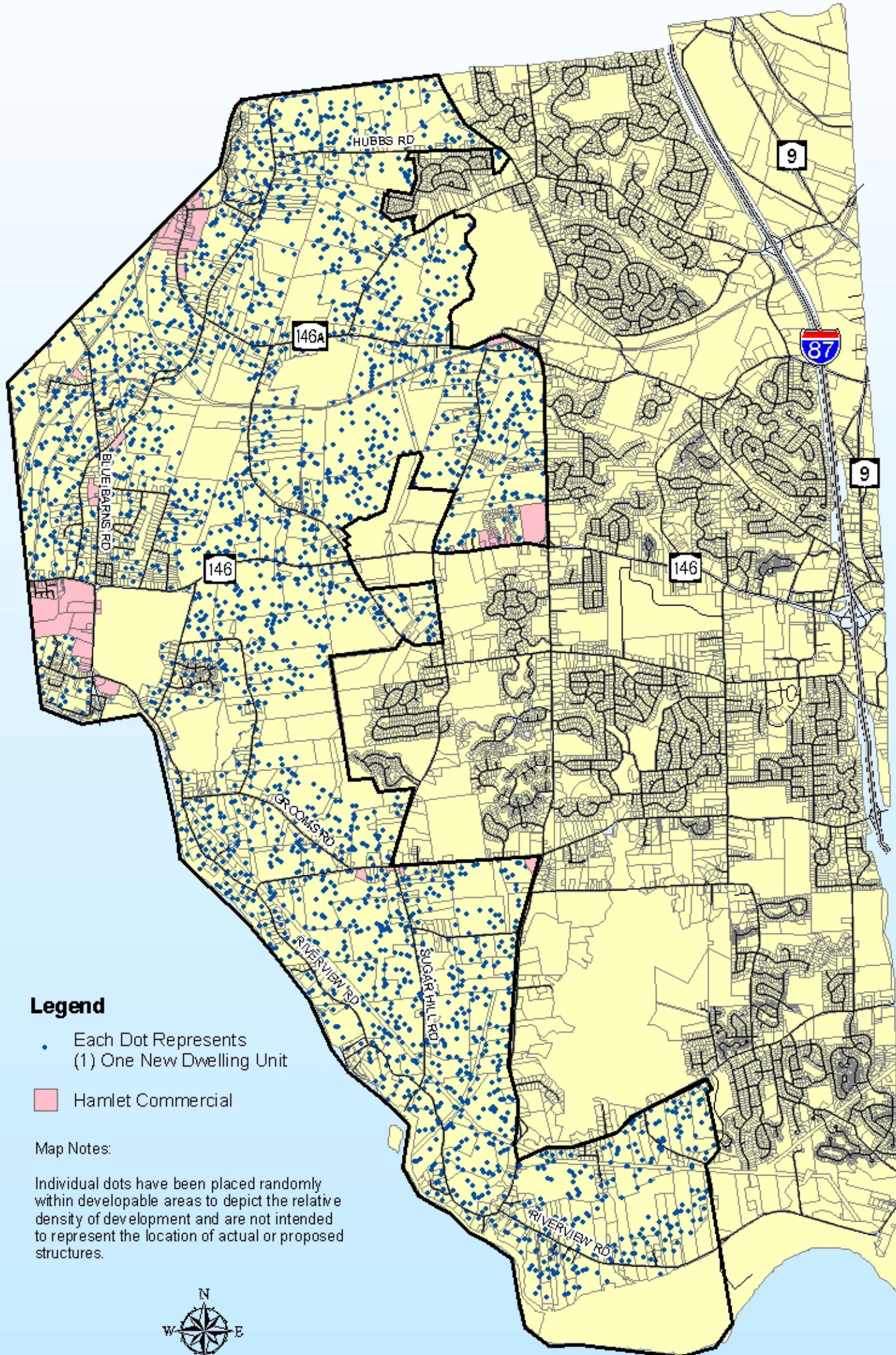
Potential Future Build-Out Based On Existing Zoning  
(Not Excluding NWI Wetlands and Hydric Soils from Developable Land)





# Western Clifton Park

## Generic Environmental Impact Statement

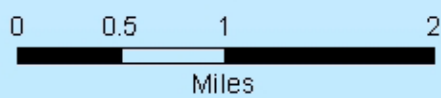


### Legend

- Each Dot Represents  
(1) One New Dwelling Unit
- Hamlet Commercial

### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



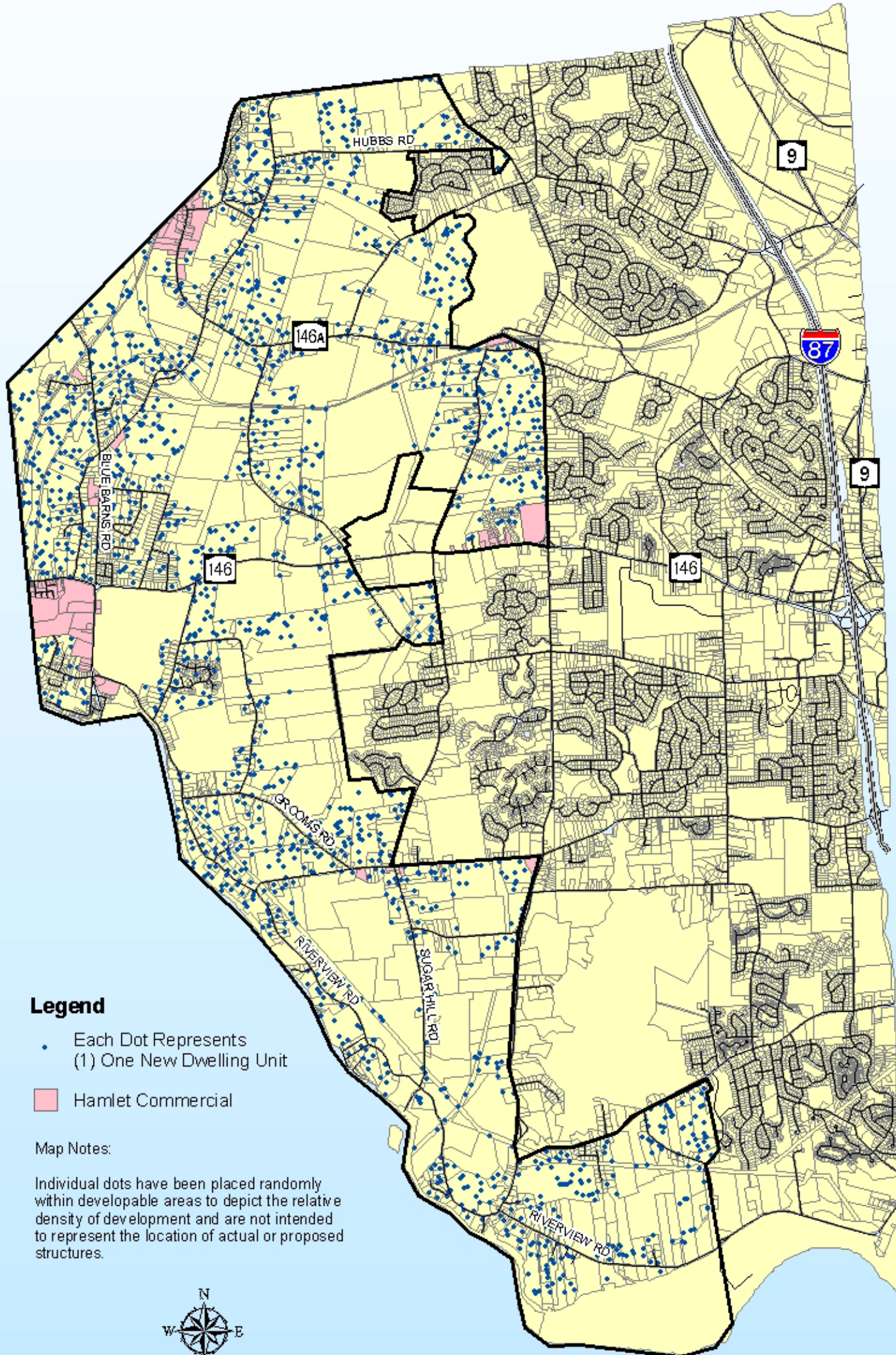
Potential Future Build-Out - Land Conservation Plan  
(CR Zoning Only)





# Western Clifton Park

## Generic Environmental Impact Statement

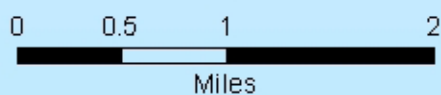


### Legend

- Each Dot Represents  
(1) One New Dwelling Unit
- Hamlet Commercial

### Map Notes:

Individual dots have been placed randomly within developable areas to depict the relative density of development and are not intended to represent the location of actual or proposed structures.



Potential Future Build-Out - Land Conservation Plan  
(CR Zoning and Easements)



# APPENDIX E

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# **Ecological Communities Evaluation**

Clough, Harbour and Associates (CHA) performed an evaluation of the Western Clifton Park study area to provide a description of the vegetative communities possibly occurring within the study area, as well as wildlife species likely to occur within each community.

The investigation of the natural resources of the study area primarily involved a review of relevant literature and mapping to identify natural and cultural communities as well as potentially occurring wildlife species within each community of the study area. Field investigation was limited to roadside visual inspections of general vegetative communities. The information contained in this DGEIS will provide the field biologist with the background information suitable to conducted site specific investigations as warranted.

## ***Literature Review***

Documents containing information relative to the occurrence and characteristics of cultural and natural communities within and immediately adjacent to the study area were reviewed prior to the initiation of fieldwork.

The classification of natural communities anticipated to occur within the study area was derived from resource review and identified according to the New York State Natural Heritage Program (NHP) and United States Fish and Wildlife Service (FWS).

“Ecological Communities of New York State” (Edinger, 2002) was used to identify the community types within the study area. This is the guiding document for identification of vegetative communities within New York State, which is used by the New York State Department of Environmental Conservation (NYSDEC) and the Natural Heritage Program (NHP). The document also provides a brief list of vegetative and wildlife species encountered within each community type. These vegetative community descriptions are subject to variation depending on regional locale and usually require site-specific descriptions.

Orthophotoquadrangles taken from the National Aerial Photography Program, 1999, were reviewed for indications of land use trends, identification of vegetative community types and identification of other pertinent features within the study area. Review of these photographs indicates that the study area is typified by a mixture of natural and cultural open field, shrubland and forested terrestrial (upland) and palustrine (wetland) communities as well as developed and agricultural lands. Land use of the developed portions of the study area is largely of an agricultural and residential nature with minimal commercial development. Areas that have not been developed either residentially or commercially and that are not in use for agricultural purposes are comprised of natural terrestrial and palustrine communities.

The Soil Survey of Saratoga County, New York (2004) was reviewed for indications of soil types and locations within the study area. The study area is located on sheets 21, 22, 25 and 26 of the Soil Survey.

The United States Department of the Interior, Fish and Wildlife Service National Wetlands Inventory (NWI) Maps (Schenectady, Niskayuna, Burnt Hills, and Round Lake Quadrangles) were reviewed for information pertaining to other wetlands within the study area that may be federally regulated.

The NYSDEC Freshwater Wetland maps (Niskayuna, Schenectady, Burnt Hills and Round Lake Quadrangles) of the study area were reviewed for indication of NYSDEC regulated freshwater wetlands within the study area. These maps indicated that several freshwater wetlands regulated by NYSDEC occur scattered throughout the study area. Wetlands are discussed in greater detail in a subsection to follow.

Several NYSDEC regulated streams occur within the study area. These waterbodies are identified and classified in DGEIS Section III.B of this report.

The species lists and distribution maps provided in the New York State Amphibian and Reptile Atlas Project (1990-1999) were reviewed for information pertaining to reptile and amphibian species potentially occurring within the study area. The Amphibian & Reptile Atlas Project (Herp Atlas) was a ten year survey that was designed to document the geographic distribution of New York State's herpetofauna (reptiles and amphibians). The unit of measurement for collecting atlas data is the USGS 7.5 minute topographic

quadrangle. This database provides species distribution lists, according to each 7.5 minute topographic quadrangle, of all of the approximately 70 reptile and amphibian species known to occur within New York State.

Information pertaining to bird species known to occur or have the potential to occur within the study area was obtained from the New York State Breeding Bird Atlas' (1980-1985 and 2000-2004). The Breeding Bird Atlas is a comprehensive, statewide survey that will reveal the current distribution of breeding birds in New York. For the purposes of this survey the state has been divided into ten regions based upon the "Kingbird" reporting regions for the Federation of New York State Bird Clubs. These regions are further broken down into 5 x 5 kilometer (km) survey blocks with a total of 5,335 survey blocks in the entire state. The study area is composed of survey block numbers 5873B, 5874A, 5874B, 5874D, 5875D, 5973A, 5974A, 5974C and 5975C which were reviewed for this study.

***Existing Community Types & Associated Wildlife***

The literature search revealed that there are a number of community types that are likely to occur within the study area. For the purposes of this analysis, the existing features have been generalized as “Agricultural Land,” “Developed Land,” and “Natural Communities.” These communities are illustrated on Figure 1-3 - General Ecological Communities Map. In addition, Table 1 identifies the land area within each of these general communities.

**Table 1  
Vegetative Cover Type**

<b>Cover Type</b>	<b>Area (Acres)</b>
<b>Agricultural Land</b>	3,648
<b>Developed Land</b>	3,073
<b>Natural Land</b>	7,179
<b>Total</b>	<b>13,900</b>

## *Agricultural Land*

The “Agricultural Land” designation represents land that has been manipulated and maintained by human activities primarily for the purposes of growing crops and raising animals. Vegetation of such land predominantly consists of species that have been planted for future harvest. For the purposes of this report cultural lands (culturally influenced communities), as described by Edinger, have been used to describe “Agricultural Land” because of the role that human influence plays on the community structure and species composition. These communities as described by Edinger include *cropland row crop*, *cropland field crop*, *pastureland*, *orchard*, *hardwood plantation*, *pine plantation*, *spruce/fir plantation* and *conifer plantation*. It should be noted that the “Agricultural Areas” illustrated on Figures 1-3 were indicated as such because the predominant land use of that specific area is of an agricultural nature; however, these areas may contain portions of residential land and/or natural communities.

*Cropland row crop* and *cropland field crop* are areas that have been planted for future harvest of crops such as corn, potatoes, soybeans, alfalfa, wheat, timothy and oats. *Pastureland*, *orchard*, *hardwood plantation*, *pine plantation*, *spruce/fir plantation* and *conifer plantation* are areas that have been manipulated to provide a specific crop or to provide wildlife habitat. *Pastureland* is designated to allow livestock to freely roam and graze while maintaining the vegetative community structure. The latter communities are all planted and maintained by human activities for the future harvest of a commodity crop or to provide wildlife habitat. Each of these communities is likely to have naturally occurring herbaceous species growing around the periphery of the planted and maintained areas. In addition, these communities are typically surrounded by naturally-occurring and human-influenced (planted) vegetated barriers.

Naturally occurring herbaceous species are common to the periphery of “Agricultural Land” and in this geographic locale usually include species such as boxelder (*Acer negundo*), goldenrods (*Solidago sp.*), ragweed (*Ambrosia artemisiifolia*), Japanese knotweed (*Polygonum cuspidatum*), smartweeds (*Polygonum pennsylvanicum*, *P. hydropiper*), nettles (*Urtica sp.*) and other common weeds and herbs.

Wind barriers are usually typified by planted and naturally occurring trees such as oaks (*Quercus alba*, *Q. bicolor*, *Q. macrocarpa*, *Q. palustris*, *Q. rubra* and *Q. velutina*),

maples (*Acer rubrum*, *A. saccharinum*, *A. saccharum*), cottonwood (*Populus deltoides*), boxelder, willow (*Salix alba*, *S. alba tristis*, *S. nigra*.), quaking aspen (*Populus tremuloides*) and sycamore (*Platanus occidentalis*). Shrub layers of the wind barriers are usually moderately dense and typically include tatarian honeysuckle (*Lonicera tatarica*), rugosa rose (*Rosa rugosa*), blackberry (*Rubus alleghaniensis*.), raspberry (*Rubus idaeus*), dogwood (*Cornus stolonifera*, *C. amomum*, *C. racemosa*, *C. florida*), staghorn sumac (*Rhus typhina*) and saplings of the tree species present. Herbaceous species include grasses and forbs common to the area.

Vegetative wind barriers that have been purposely planted are usually planted with various spruce (*Picea sp.*) and pine (*Pinus sp.*) trees. These planted barriers usually contain little to no herbaceous or shrub species due to the high level of shading provided by these species.

*Orchards* and tree farms are areas planted with desired tree species with planned future harvest of either the whole tree or a fruit produced by the tree. Typically, in this area of New York, tree farms produce Christmas trees or trees sold for ornamental landscaping and orchards produce apples.

A variety of wildlife species are typically found utilizing agricultural land due to the abundance of food sources in these areas. Planted crops attract everything from insects to large herbivorous mammals that graze on the planted crops and naturally occurring herbaceous species surrounding the planted areas. *Orchards* provide excellent food and nesting opportunities for a variety of species. A characteristic opportunity associated with *orchards* is providing nesting cavities for birds such as New York State's designated bird, the eastern bluebird (*Sialia sialis*). Tree farms also provide valuable nesting and foraging habitat for many wildlife species. In turn, predators are attracted to these areas due to the abundance of prey species.

In addition to the major communities associated with "Agricultural Land", minor communities may occur as a result of the structures that are present in these areas. *Interior of barn/agricultural building* is a community described by Edinger that occurs as a result of the construction of buildings associated with agricultural lands. This community provides shelter and foraging opportunities for a variety of wildlife species such as bats, cats, rodents and birds as well as the original intent to provide shelter for livestock.

Appendix E provides a list of wildlife species which have the potential to occur in these communities.

### **Developed Land**

The “Developed Land” designation indicates areas that have been manipulated and maintained for the construction of businesses and residential homes and their maintained lawn and landscaped areas. In western Clifton Park, the majority of “Developed Land” is residential with some commercial properties occurring at certain major intersections. Areas of “Agricultural Land” and “Natural communities” may occur intermingled within the mapped areas of “Developed Land” but with a lower combined percentage of the area. The best descriptions of “Developed Land” as it occurs in the study area, according to Edinger, are *mowed lawn* and *mowed lawn with trees*, which are both classified as cultural communities by Edinger. In addition to the major communities associated with “Developed Land”, minor communities occur as a result of the structures that are present in these areas. Such communities, as described by Edinger, include *rural structure exterior* and *interior of non-agricultural building*.

Edinger describes *mowed lawn with trees* as residential, recreational or commercial land in which the groundcover is dominated by clipped grasses and forbs and is shaded by at least 30% cover of trees. Ornamental and native shrubs occur randomly throughout these areas, usually with less than 50% cover. *Mowed lawn*, as described by Edinger, is similar to *mowed lawn with trees* but with less than 30% cover of trees.

These community types, as they occur within the study area, match the descriptions provided by Edinger. These areas are maintained lawns with scattered trees and shrubs and are most closely associated with residential properties but also occur in association with commercial properties. Typical trees occurring in these communities include sugar maple (*Acer saccharum*), silver maple (*Acer saccharinum*), Norway maple (*Acer platanoides*), red oak (*Quercus rubra*), black oak (*Quercus nigra*), paper birch (*Betula papyrifera*), gray birch (*Betula populifolia*), white pine (*Pinus strobus*) and Norway spruce (*Picea abies*). Shrubs typically include common ornamentals such as Canada yew (*Taxus canadensis*) and Japanese yew (*Taxus cuspidata*) with naturally occurring native shrubs such as dogwood, tatarian honeysuckle and willow (*Salix alba* and *S. nigra*) usually occurring along the periphery of the mowed areas in transitional areas associated

with changes in community type. Herbaceous species generally include introduced grasses, common dandelion (*Taraxacum officinale*), English plantain (*Plantago lanceolata*), northern bedstraw (*Galium boreale*), red clover (*Trifolium pratense*) and white clover (*Trifolium repens*).

A variety of wildlife species occupy residential lands and associated buildings due to an abundance of nesting and denning sites as well as a variety of food sources in close proximity. Ornamental shrubs and mature trees provide excellent nesting, foraging and cover opportunities for numerous songbirds, raptors and mammals. The availability of food in these areas due to bird feeders, berry-producing shrubs and garbage also helps to attract wildlife. Characteristic wildlife species of *mowed lawn with trees* as described by Edinger include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*) and mockingbird (*Mimus polyglottos*). Characteristic wildlife species of *mowed lawn* as described by Edinger include American robin, killdeer (*Charadrius vociferus*) and the state listed threatened species upland sandpiper (*Bartramia longicauda*).

*Rural structure exterior* includes the exterior surfaces of buildings associated with rural or sparsely populated areas. These introduced surfaces may become vegetated with species such as vascular plants, mosses, terrestrial algae and lichens. These structures are also known to provide nesting opportunities for native birds such as American robin and barn swallow (*Hirundo rustica*) and a variety of other native and exotic bird species as well as insects. Bats are known to use nooks and crannies for roosting sites.

*Interior of non-agricultural building* includes areas intended for human living, work and storage space and a wildlife association includes the use of chimneys for nesting sites by chimney swifts (*Chaetura pelagica*).

A list of wildlife species that have the potential to occur in this community type is attached.

### **Natural Land**

“Natural Land” is land that is predominantly undisturbed by human influence and is in a natural state or land that has been previously altered but has since been allowed to naturally revegetate. The “Natural Land” communities are areas of open field, shrubland and forested terrestrial and palustrine vegetative communities.

**Natural terrestrial communities** are composed of vegetation adapted for life in the upland portions of the study area. Based on resource review, a general understanding of the study area and limited field reconnaissance, natural terrestrial communities identified or which are likely to occur within the study area as described by Edinger (2002) include *riverside sand/gravel bar*, *successional old field*, *successional shrubland*, *successional northern hardwoods*, *successional southern hardwoods*, *Appalachian oak-hickory forest*, *beech-maple mesic forest*, *hemlock-northern hardwood forest* and *pine-northern hardwood forest*.

*Riverside sand/gravel bar* communities occur along or within river channels. This meadow community is likely to be found in association with the Mohawk River or the larger streams of the Study area and the abundance of vegetation is dependant on the deposition rates of sand and gravel. Edinger lists characteristic vegetative species as sandbar willow (*Salix exigua*), sand-cherry (*Prunus pumila*), dogbane (*Apocynum cannabinum*), switchgrass (*Panicum virgatum*) and poison ivy (*Toxicodendron radicans*).

Wildlife likely to be associated with the *Riverside sand/gravel bar* communities of the Study area include waterfowl, songbirds, various shorebirds and water birds, American toad (*Bufo americanus*), Fowlers toad (*Bufo fowleri*), raccoon (*Procyon lotor*) and other scavenging mammals.

Edinger describes *successional old field* as a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming and development), and then abandoned. Characteristic vegetation in this community, as it occurs in the Study area, is likely to include wild carrot (*Daucus carota*), orchard grass (*Dactylis glomerata*), Canada goldenrod (*Solidago canadensis*), burdock (*Arctium minus*), narrow-leaf plantain (*Plantago lanceolata*), thistle (*Cirsium arvense*), timothy (*Phleum pratense*), broome sedge (*Andropogon virginicus*), redtop (*Agrostis gigantea*), red fescue (*Festuca rubra*), and mullein (*Verbascum thapsus*). Shrubs are typically found scattered randomly throughout this community but they occupy less than 50 percent cover. Characteristic shrubs include tatarian honeysuckle (*Lonicera tatarica*), staghorn sumac (*Rhus typhina*), gray dogwood (*Cornus foemina*), rugosa rose (*Rosa rugosa*) and blackberry (*Rubus alleghaniensis*).

Numerous wildlife species are likely to occupy this community type due to the abundance of food sources in the form of berry and seed-producing shrubs and herbs, insects and the animals that are attracted to these food sources. Songbirds such as American goldfinch (*Carduelis tristis*) and bobolink (*Dolichonyx oryzivorus*) and rare species such as northern harrier (*Circus cyaneus*), eastern meadowlark (*Sturnella magna*) and Vesper sparrow (*Pooecetes gramineus*) have the potential to occupy this community type. Other wildlife that may be present includes eastern garter snake (*Thamnophis sirtalis*), white-tailed deer (*Odocoileus virginianus*), woodchuck (*Marmota monax*), eastern cottontail (*Sylvilagus floridanus*), meadow jumping mouse (*Zapus hudsonius*) and coyote (*Canis latrans*).

*Successional shrubland* is a community that occurs on previously cleared land and is composed of at least 50 percent cover by shrubs. This community type is found scattered throughout the Study area and shrubs present typically include gray dogwood, rugosa rose, blackberry, tatarian honeysuckle, buckthorn (*Rhamnus cathartica*), staghorn sumac and saplings of the tree species present in the adjacent forested communities. The variety and density of herbaceous species is dependant on the density of shrub cover. In areas of dense shrub cover the herbaceous layer is usually sparse and species include mosses, sedges (*Carex sp.*) common to upland areas, grasses, Virginia strawberry (*Fragaria virginiana*) and horsetail (*Equisetum arvense*). In areas of less dense shrub cover, the herbaceous layer is more developed and species are characteristic of the successional old field communities.

Wildlife likely to occupy *successional shrublands* is vast. Most shrubs produce berries which are a critical food source for songbirds, game birds and numerous mammals. Songbirds such as black-capped chickadee (*Poecile atricapillus*), common yellowthroat (*Geothlypis trichas*), black-and-white warbler (*Mniotilta varia*), chestnut-sided warbler (*Dendroica pensylvanica*) and eastern towhee (*Pipilo erythrophthalmus*) represent a fraction of the songbird species that utilize *successional shrubland* for breeding, nesting and foraging purposes. Other species likely to occur in this community include game birds such as wild turkey (*Meleagris gallopavo*) and ruffed grouse (*Bonasa umbellus*), mammals such as white-tailed deer, raccoon and various rodents and reptiles such as common garter snake (*Thamnophis sirtalis*).

*Successional northern hardwoods* is described by Edinger as a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Tree species in this geographic locale are likely to include quaking aspen (*Populus tremuloides*), big-tooth aspen (*Populus grandidentata*), paper birch (*Betula papyrifera*), gray birch (*Betula populifolia*), pin cherry (*Prunus pensylvanica*), black cherry (*Prunus serotina*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), staghorn sumac and American elm (*Ulmus americana*). The shrub layer is usually dominated by saplings and shrubs of the trees present, honeysuckle, blackberry, rugosa rose and buckthorn.

Edinger describes characteristic birds as chestnut-sided warbler, Nashville warbler (*Vermivora ruficapilla*) in young forests with aspen and birch seedlings, and yellow-bellied sapsucker (*Sphyrapicus varius*) in mature aspen forests. Ruffed grouse and wild turkey are likely to be observed in this community foraging for aspen seeds and insects.

*Successional southern hardwoods* is also described by Edinger as a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. The vegetative species composition differentiates this community from the *successional northern hardwoods* community. Dominant species include American elm, slippery elm (*Ulmus rubra*), white ash, red maple, boxelder (*Acer negundo*), silver maple, sassafras (*Sassafras albidum*), gray birch, hawthorns (*Crataegus spp.*), eastern red cedar (*Juniperus virginiana*), choke cherry (*Prunus virginiana*), black locust (*Robinia pseudoacacia*), tree-of-heaven (*Ailanthus altissima*) and buckthorn.

Wildlife likely to occupy this community includes chestnut-sided warbler, American robin, gray catbird (*Dumatella carolinensis*) and gray squirrel.

*Appalachian oak-hickory forest* is described by Edinger as a hardwood forest that occurs on well-drained sites, usually on ridgetops, upper slopes or south- and west-facing slopes. The soil structure is usually loams or sandy loams and dominant trees include red oak, black oak and white oak (*Quercus alba*). Occurring in lesser numbers are pignut hickory (*Carya glabra*), shagbark hickory (*Carya ovata*) and sweet pignut hickory (*Carya ovalis*) as well as white ash, red maple and eastern hop hornbeam (*Ostrya virginiana*). The subcanopy is dominated by saplings and tall shrubs such as shadbush (*Amelanchier arborea*), witch hazel (*Hamamelis virginiana*), flowering dogwood (*Cornus florida*) and choke cherry. The understory is generally comprised of low shrubs including maple-leaf

viburnum (*Viburnum acerifolium*), red raspberry (*Rubus idaeus*) and gray dogwood. A variety of herbs comprise the herbaceous layer and typical species may include false Solomon's seal (*Smilacina racemosa*), Pennsylvania sedge (*Carex pennsylvanica*) and hepatica (*Hepatica americana*).

Wildlife possibly occurring includes red-bellied woodpecker (*Melanerpes carolinus*), wild turkey, gray squirrel and the NYS listed special concern species, whip-poor-will (*Caprimulgus vociferus*).

*Beech-maple mesic forest* occurs on uplands in the Study area. This community type, as it occurs in this geographic locale, is dominated by American beech (*Fagus grandifolia*) and sugar maple. Eastern hemlock (*Tsuga canadensis*), yellow birch (*Betula alleghaniensis*), American elm and red maple typically occur as codominants in the transitional areas between this community and wetland areas, primarily hemlock-northern hardwood swamp and red maple-hardwood swamp communities. Eastern hop-hornbeam saplings and trees occur in the subcanopy and shrub layer. The sparse shrub layer generally consists of young saplings of the trees present, hobblebush (*Viburnum lantanoides*), American hornbeam, striped maple (*Acer pennsylvanicum*) and witch-hazel. Groundcover is minimal and is generally comprised of species such as Christmas fern, lady fern (*Athyrium filix-femina*), round-lobed hepatica and Canada mayflower. Edinger lists a number of rare or exploitably vulnerable species such as purple trillium (*Trillium erectum*), painted trillium (*Trillium undulatum*) and Christmas fern as occurring in this community.

Wildlife likely to occur, as described by Edinger, include American redstart (*Setophaga ruticilla*), red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapillus*), black-throated blue warbler (*Dendroica caerulescens*), least flycatcher (*Empidonax minimus*), Acadian flycatcher (*Empidonax virescens*), and red bellied woodpecker (*Melanerpes carolinus*). Other species that are common to this community are American toad, Fowlers toad, spotted salamander (*Ambystoma maculatum*) and eastern garter snake. Wood turtle (*Clemmys insculpta*), eastern box turtle (*Terrapene c. carolina*), Jefferson salamander complex (*Ambystoma jeffersonianum x laterale*), northern goshawk (*Accipiter gentilis*), Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*) are all NYS special concern species that have the potential to nest or occur in this community.

*Hemlock-northern hardwood forest* is a mixed forest community comprised of eastern hemlock trees with codominant species including one to three of the following: yellow birch, black birch, red oak, basswood (*Tilia americana*), sugar maple, red maple, American beech or American elm. Edinger states that the dominance of hemlock in any one stand is variable and may range from dominant to as little as 20 percent of the cover. The sapling and shrub layer is usually sparse and may include striped maple, saplings of the canopy species, hobblebush, raspberry and maple-leaf viburnum. The groundcover is generally sparse and may include Canada mayflower (*Maianthemum canadense*), Christmas fern (*Polystichum acrostichoides*), purple trillium (*Trillium erectum*), large white trillium (*Trillium grandiflorum*), trout lily (*Erythronium americanum*), Indian pipe (*Monotropa uniflora*) as well as a variety of other species described by Edinger. Numerous rare or exploitably vulnerable vegetative species are identified as occurring in this community.

Wildlife species likely to occur in this community include songbirds such as black-capped chickadee, golden-crowned kinglet (*Regulus satrapa*), black-throated green warbler (*Dendroica virens*) and Acadian flycatcher (*Empidonax virescens*), game birds such as wild turkey and ruffed grouse and common mammals such as porcupine (*Erethizon dorsatum*), white-tailed deer and red squirrel (*Tamiasciurus hudsonicus*).

Edinger describes *pine-northern hardwood forest* as dominated by white pine and red pine (*Pinus resinosa*) with scattered occurrences of quaking aspen, paper birch, yellow birch, balsam fir (*Abies balsamea*), red maple and red spruce (*Picea rubens*) trees which are never common in this community. The shrub layer may be composed of blueberries (*Vaccinium angustifolium*, *V. myrtilloides*), wild raisin (*Viburnum cassinoides*), shadbush (*Amalanchier canadensis*) and sheep laurel (*Kalmia angustifolia*). A variety of herbaceous species are likely to be found and may include but are not limited to wintergreen (*Gaultheria procumbens*), bracken fern (*Pteridium aquilinum*), Canada mayflower (*Maianthemum canadense*) and the NYS exploitably vulnerable star flower (*Trientalis borealis*) and painted trillium (*Trillium undulatum*).

Edinger lists pileated woodpecker (*Drycopus pileatus*) as a common associate of this community as well as pine warbler (*Dendroica pinus*) as possibly occurring in stands with mature, well-spaced pines.

**Natural palustrine communities** are composed of vegetation adapted for life in the wetlands of the study area. Based on resource review, a general understanding of the study area and limited field reconnaissance, natural palustrine communities identified or which are likely to occur within the study area as described by Edinger (2002) include *shallow emergent marsh, deep emergent marsh, shrub swamp, sedge meadow, floodplain forest, red maple-hardwood swamp, vernal pool* and *hemlock-hardwood swamp*.

The *shallow emergent marsh* communities of the study area are herbaceous species dominated wetlands that occur on mineral soils with water depths likely to range from 1” to 3.0’ during flood stages. By mid to late summer the water is likely to drop and the substrate may be exposed. These wetlands are dominated by herbaceous species with shrubs possibly occurring but at less than 50 percent cover. Herbaceous species common to the shallow emergent marsh communities of the Study area are likely to include purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), cattail (*Typha latifolia*), narrow leaf goldenrod (*Solidago graminifolia*), swamp milkweed (*Asclepias incarnata*), soft rush (*Juncus effusus*), Canada rush (*Juncus canadensis*), green bulrush (*Scirpus atrovirens*), wool grass (*Scirpus cyperinus*), fox sedge (*Carex vulpinoidea*), bristlebract sedge (*Carex tribuloides*), skunk cabbage (*Symplocarpus foetidus*), reed canary grass (*Phalaris arundinacea*), jewelweed (*Impatiens capensis*), boneset (*Eupatorium perfoliatum*) and moneywort (*Lysimachia nummularia*). Shrubs typically occurring in these areas include gray dogwood, silky dogwood (*Cornus amomum*), speckled alder (*Alnus rugosa*), arrowwood (*Viburnum dentatum*), buckthorn, white willow (*Salix alba*), black willow (*Salix nigra*) and green ash, red maple and silver maple saplings.

Edinger lists frogs such as American toad, northern spring peeper (*Pseudacris c. crucifer*), green frog (*Rana clamitans melanota*), and wood frog (*Rana sylvatica*); and salamanders such as northern redback salamander (*Plethodon c. cinereus*) as likely to occur in this community. Birds possibly occurring include game birds such as wild turkey, mallard (*Anas platyrhynchos*), wood duck (*Aix sponsa*) and Canada goose (*Branta canadensis*); and songbirds such as red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), common yellowthroat and eastern kingbird (*Tyrannus tyrannus*). The NYS listed special concern species American bittern (*Botaurus lentiginosus*) and the NYS listed threatened species least bittern (*Ixobrychus exilis*) may also occupy shallow emergent marsh communities that remain ponded throughout the year. Spotted turtle (*Clemmys guttata*), a NYS listed special concern

species, is known to occur in marshy meadows. The NYS listed threatened, northern harrier (*Circus cyaneus*), is known to occupy this habitat type where it hunts for meadow vole (*Microtus pennsylvanicus*), its preferred prey.

*Deep emergent marsh* communities are described by Edinger as a marsh community that occurs on mineral soils or fine-grained organic soils (muck or well-decomposed peat); the substrate is flooded by waters that are not subject to violent wave action. Water depths can range from 6 in to 6.6 ft (15 cm to 2 m); water levels may fluctuate seasonally, but the substrate is rarely dry, and there is usually standing water in the fall. Edinger lists common plants as cattails (*Typha angustifolia*, *T. latifolia*), wild rice (*Zizania aquatica*), bur-weeds (*Sparganium eurycarpum*, *S. androcladum*), pickerel weed (*Pontederia cordata*), bulrushes (*Scirpus tabernaemontani*, *S. fluviatilis*, *S. heterochaetus*, *S. acutus*, *S. pungens*, *S. americanus*), arrowhead (*Sagittaria latifolia*), arrowleaf (*Peltandra virginica*), rice cutgrass (*Leersia oryzoides*), bayonet rush (*Juncus militaris*), water horsetail (*Equisetum fluviatile*) and bluejoint grass (*Calamagrostis canadensis*). The most abundant floating-leaved aquatic plants are fragrant water lily (*Nymphaea odorata*), duckweeds (*Lemna minor*, *L. trisulca*), pondweeds (*Potamogeton natans*, *P. epihydrus*, *P. friesii*, *P. oakesianus*, *P. crispus*, *P. pusillus*, *P. zosteriformis*, *P. strictifolius*) and a variety of other species which are listed in Appendix E.

Edinger lists red-winged blackbird, marsh wren, bullfrog (*Rana catesbeiana*) and painted turtle (*Chrysemys picta*) as well as rare species such as American bittern (*Botaurus lentiginosus*), Virginia rail (*Rallus limicola*), and piedbilled grebe (*Podilymbus podiceps*) as inhabiting this community type.

*Shrub swamp* in this geographic locale usually occur on mineral soils or muck and are dominated by shrub species including gray dogwood, silky dogwood, red osier dogwood (*Cornus racemosa*), speckled alder, black willow, and/or white willow. Red maple, American elm, swamp white oak (*Quercus bicolor*) and green ash saplings are also likely to occur. The herbaceous layer may contain skunk cabbage (*Symplocarpus foetidus*), various sedges (*Carex stricta*, *C. tribuloides*, *C. vulpinoudea*) and rushes (*Juncus canadensis*, *J. effuses*), mosses, jewelweed, dewberry (*Rubus hispidus*) and moneywort (*Lysimachia nummularia*) as well as a variety of other species as described by Edinger.

Wildlife possibly occurring in this community, as described by Edinger, include common yellowthroat (*Geothlypis trichas*) and yellow warbler (*Dendroica petechia*); and rare

species such as American bittern, alder flycatcher (*Empidonax alnorum*), willow flycatcher (*Empidonax trallii*) and Lincoln's sparrow (*Passerella lincolnii*). Numerous other species may be observed and may include northern water snake (*Nerodia sipedon*), eastern garter snake, bullfrog, green frog, snapping turtle (*Chelydra serpentina*), painted turtle, raccoon, white-tailed deer and coyote (*Canis latrans*).

Edinger describes *sedge meadow* as a wet meadow community that has organic soils (muck or fibrous peat). Soils are permanently saturated and seasonally flooded; there is usually little peat accumulation in the substrate, but must have deep enough peat (usually at least 20 cm) to be treated as a peatland, otherwise it may be classified as a mineral soil wetland such as shallow emergent marsh. The vegetative species composition is typically dominated (at least 50 percent cover) by peat and tussock forming sedges of the *Carex* family such as tussock sedge (*Carex stricta*). Codominant species may include bluejoint grass (*Calamagrostis canadensis*) and other sedges. Shrubs such as meadow sweet (*Spiraea alba* var. *latifolia*, *S. tomentosa*), leatherleaf (*Chamaedaphne calyculata*), sweet gale (*Myrica gale*), and alder may be present but with sparse occurrences. A detailed description of this community type and its vegetative species composition as well as a description of where the community usually occurs is located in Appendix E.

Wildlife likely to occur in *sedge meadow* communities include a variety of songbirds common to open, meadow-like communities, such as sparrows, and most common reptiles and amphibians. Spotted turtle (*Clemmys guttata*), a NYS listed special concern species, is known to occur in marshy meadows and may occur in this community type.

*Floodplain forest* communities occur in low-lying areas immediately adjacent to and directly influenced by stream and river channels. The lower areas are annually flooded in spring and the higher areas are irregularly flooded. Some flooding may occur again in late summer or early autumn. Braided drainage channels, drift lines, sediment sorting and sediment deposits are some of the main indicators that these areas receive water flow during storm events.

This forested community is dominated by hardwoods such as sycamore (*Platanus occidentalis*), cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), hickories (*Carya cordiformis*, *C. ovata*, *C. lacinosa*), boxelder, ashes (*Fraxinus americana*, *F. pennsylvanica*, *F. nigra*) and a variety of other species as described by Edinger. Common shrubs include honeysuckle (*Lonicera tatarica*), American hornbeam,

dogwoods (*Cornus stolonifera*, *C. amomum*, *C. racemosa*) and spicebush (*Lindera benzoin*). Herbs may include but are not limited to wood nettle (*Laportea canadensis*), false nettle (*Boehmeria cylindrica*), jewelweeds (*Impatiens capensis*, *I. pallida*), moneywort (*Lysimachia nummularia*), sensitive fern (*Onoclea sensibilis*), garlic mustard (*Alliaria petiolata*), white snakeroot (*Eupatorium rugosum*), lizard's tail (*Saururus cernuus*) and jumpseed (*Polygonum virginianum*). An extensive list of plants that occur in this community is provided with Edinger's description of the community and is located in Appendix E.

Edinger describes characteristic birds as yellow-throated vireo (*Vireo flavifrons*), tufted titmouse (*Parus bicolor*), red-bellied woodpecker (*Melanerpes carolinus*) and pileated woodpecker (*Dryocopus pileatus*).

*Red maple-hardwood swamp* is a forested community that occurs in poorly drained depressions and is typically dominated by red maple with codominants such as green ash, silver maple, yellow birch, American elm and swamp white oak. The shrub layer within these communities ranges from sparse to dense and may be dominated by saplings of the dominant tree species along with shrubs such as winterberry (*Ilex verticillata*), spicebush, red osier, silky and gray dogwood, highbush blueberry (*Vaccinium corymbosum*), speckled alder, white and black willow and common blackberry. Characteristic herbaceous species include skunk cabbage (*Symplocarpus foetidus*), sedges, rushes, moss, a variety of ferns, jewelweed, dewberry, tussock sedge and false nettle (*Boehmeria cylindrica*). An extensive list of plants that occur in this community is provided with Edinger's description of the community and is located in Appendix E.

Wildlife listed by Edinger includes wood duck, American black duck (*Anas rubripes*), northern waterthrush (*Seiurus noveboracensis*), beaver (*Castor canadensis*), river otter (*Lutra canadensis*) and mink (*Mustela vison*). Red-shouldered hawk (*Buteo lineatus*), Cooper's hawk, wood turtle (*Clemmys insculpta*), eastern box turtle (*Terrapene c. carolina*) are all listed as species of special concern in NYS and are known to occur in this community type. Common species likely to occur include barred owl (*Strix varia*), raccoon and white-tailed deer.

Edinger describes *vernal pool* habitat as an aquatic community of one or more associated intermittently to ephemerally ponded, small, shallow depressions typically within an upland forest, but also within various palustrine and other terrestrial communities. Vernal

pools are typically flooded in spring or after a heavy rainfall, but are usually dry during summer. The New York State Natural Heritage Program (NHP) currently ranks the vernal pool community as G4 S3/S4. The G4 rank indicates that the community is apparently secure globally, although it may be quite rare in parts of its range, especially at the periphery of its range. The S3/S4 ranking indicates that the number of occurrences of this community varies from a limited acreage to a relatively stable amount of acreage.

This community includes a diverse group of invertebrates and amphibians that depend upon temporary pools as breeding habitat. Vernal pools cannot support fish populations, therefore the threat of fish predation on amphibian eggs and invertebrate larvae is absent and species vulnerable to this form of predation are preferential breeders. Characteristic animals of vernal pools, which are listed by Edinger include species of amphibians, reptiles, crustaceans, mollusks, annelids, and insects. According to Edinger, Colburn (Colburn, 1997) defines vernal pool species as being either obligate species dependant upon vernal pools for survival, or facultative species capable of making use of vernal pools but not dependent on them and able to reproduce elsewhere.

While common species such as the mallard and wood duck will make use of these small seasonal impoundments, they are habitat generalists capable of exploiting other aquatic and semi-aquatic sites. Vernal pools are the home to certain obligate species such as the spotted salamander (*Ambystoma maculatum*), blue-spotted salamander (*A. laterale*), Jefferson's salamander (*A. jeffersonianum*), marbled salamander (*A. opacum*) and wood frog (*Rana sylvatica*). Fairy shrimp (Anostraca) are obligate vernal pool crustaceans, with *Eubranchipus* spp. being the most common. The state-listed special concern species, spotted turtle is likely to use this community. Edinger's description of this community type, which is provided in DGEIS Appendix E, provides a list of state and/or federal-listed endangered, threatened or special concern fauna listed as possibly occurring in this community.

Edinger describes *hemlock-hardwood swamp* as a mixed swamp that occurs on mineral soils and deep muck in depressions which receive groundwater discharge. The canopy is usually dense which prevents the shrub and herbaceous layers from becoming diversified and well developed. The canopy is dominated by eastern hemlock trees with yellow birch, red maple, American elm, American hornbeam, white pine and/or green ash trees and saplings codominating or occurring in lower numbers. Shrubs may include highbush blueberry sweet pepperbush (*Clethra alnifolia*), winterberry and others listed by Edinger.

Herbaceous cover ranges from sparse (under closed canopies) to thick (under open canopies) and common species may include skunk cabbage, lady fern, royal fern (*Osmunda regalis*), jumpseed, clearweed (*Pilea pumila*), bladder sedge (*Carex intumescens*), sensitive fern, jewelweed, tussock sedge (*Carex stricta*) and sphagnum moss (*Sphagnum sp.*).

Common wildlife encountered may include wood frog (*Rana sylvatica*), American toad, gray treefrog (*Hyla versicolor*), common garter snake, black-capped chickadee, tufted titmouse, pine siskin (*Carduelis pinus*), red crossbill (*Loxia curvirostra*), porcupine and white-footed mouse (*Peromyscus leucopus*).

**Cultural palustrine communities** consist of wetlands that have been created or modified and sometimes maintained by human activities in such a way that the soil properties, hydrology or biological composition are that of an unnatural state and different than what occurred naturally. Based on resource review, a general understanding of the study area and limited field reconnaissance, cultural palustrine communities identified or which are likely to occur within the study area as described by Edinger (2002) include *reedgrass/purple loosestrife marsh* and *water recharge basin*.

Edinger describes *reedgrass/purple loosestrife marsh* as a marsh that has been disturbed by draining, filling, road salts, etc. in which reedgrass (*Phragmites australis*) or purple loosestrife (*Lythrum salicaria*) has become dominant. This community is common along highways and railroads. Reedgrass/purple loosestrife marshes are likely to be found throughout the Study area in areas of recent disturbance such as highways, roadways and human influences/manipulated drainage areas. Purple loosestrife and reedgrass dominate these areas with other herbaceous species such as fox sedge, bristlebract sedge, soft rush, sensitive fern, jewelweed and cattail occurring in lower numbers usually around the edges of the wetland. Some areas may consist of relatively monotypic stands of common reed with few other species present.

Wildlife species likely to be encountered in this community include red-winged blackbird, northern leopard frog, green frog, common garter snake, muskrat (*Ondatra zibethicus*), white-tailed deer and meadow vole.

*Water recharge basin* is described by Edinger as the aquatic community of a constructed depression near a road or development that receives runoff from paved surfaces and

allows the water to percolate through to the groundwater, thereby recharging the groundwater. These basins are intermittently flooded during periods of heavy precipitation.

Waterfowl such as Canada goose and mallard are likely utilize this habitat while it is flooded after storm events. Recharge basins that are flooded for durations long enough during the spring may attract certain reptile and amphibian species listed as characteristic vernal pool breeders because of the similarity of hydrology characteristics of this community and vernal pools.

### ***Rare, Threatened & Endangered Species***

Letters of inquiry were sent to the NYSDEC Natural Heritage Program (NHP), and the United States Fish and Wildlife Service for information regarding the known occurrence of any rare, state-listed or federally-listed animals or plants, significant natural communities, or other significant habitats within or adjacent to the study area.

A response letter from the New York Natural Heritage Program, dated November 2, 2003, indicated three vegetative species either occurring or likely to occur within the study area. These include side-oats grama (*Bouteloua curtipendula*), hoary puccoon (*Lithospermum canescens*) and hooker's orchid (*Platanthera hookeri*).

Side-oats grama is a vascular plant listed as endangered by the NHP. The species is listed with a ranking of G5, S1, indicating that it is globally secure but critically imperiled in New York State because it is either extremely rare or extremely vulnerable to extirpation from New York State due to biological factors. The species was documented in 1932 on the dry banks along the Mohawk River, east of Niskayuna in the Town of Colonie. Habitat of this species in the eastern states includes dry woods and dry open areas where it flowers from August through September.

Hoary puccoon is a vascular plant listed as unprotected by the NHP. The species is listed with a rank of G5, SX, indicating that the species is secure globally but apparently extirpated from New York State with a very low probability of rediscovery. The NHP record of the species is from Jonesville and indicates to check lupine locations. Habitat of the species includes dry or sandy soils in prairies or open woods where it flowers from

April to June. A field survey for the species in its known habitat should be conducted to determine or exclude its presence in the study area.

Hooker's orchid is a vascular plant listed as endangered by the NHP. The species is listed with a rank of G5, S1, indicating that it is globally secure but critically imperiled in New York State because it is either extremely rare or extremely vulnerable to extirpation from New York State due to biological factors. The NHP documented occurrence of the species is from 1902 in the Rexford Flats area in the vicinity of the golf course located on River View Road. Hooker's orchid is a woodland species that flowers from June through July.

A response letter from the FWS, dated November 04, 2003, indicated that except for transient individuals, no federally-listed or proposed endangered or threatened species under FWS jurisdiction are known to exist in the study area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended; 16U.S.C. 1531 et seq.).

It should be noted that with the exception of the request letters to NHP and FWS, the Study area was not evaluated for the presence of rare, threatened or endangered fish or invertebrates. The list of mammals occurring in New York State, as well as the response letters from NHP and FWS, were reviewed to determine if any rare mammals have the potential to occur within the Study area. Upon review, it is believed that with the exception of rare occurrences of transient individuals, no rare mammals are likely to occur within the Study area.

"Ecological Communities of New York State" (Edinger, 2002) was used to identify the community types possibly occurring within the study area. This is the guiding document for the identification of vegetative communities within New York State, which is used by the New York State Department of Environmental Conservation (NYSDEC) and the Natural Heritage Program (NHP). The document provides a general list of vegetation and wildlife encountered within each community type. Some of these lists contain vegetative species listed by the New York State NHP as endangered, threatened, rare or exploitably vulnerable under the Environmental Conservation Law §9-1503. Some lists also contain wildlife species listed by the NHP as endangered, threatened or species of special concern.

Species lists and distribution maps provided in the New York State Amphibian and Reptile Atlas Project (1990-1999) were reviewed for information pertaining to reptile and amphibian species potentially occurring within the study area. This database provides species distribution lists, according to each 7.5 minute topographic quadrangle, of all of the approximately 70 reptile and amphibian species known to occur within New York State.

The Study area occurs in the Schenectady, Burnt Hills, Niskayuna and Round Lake Quadrangles. Species information for each quadrangle was reviewed to identify species that have the potential to occur within the Study area. This information was further analyzed by identifying habitat requirements of each species to determine if a species could be excluded due to the lack of its known habitat within the Study area. According to this information four herpetofaunal special concern species and no threatened or endangered species have been previously identified within the Study area.

Special concern species identified include eastern hognose snake (*Heterodon platirhinos*), wood turtle (*Clemmys insculpta*), eastern box turtle (*Terrapene c. carolina*) and spotted turtle (*Clemmys guttata*). A brief description of the habitat requirements of each species is provided below.

**Eastern hognose snake** habitat includes nearly all types of terrestrial habitats, from open pine or deciduous woodlands to old fields, meadows and pastures. The species has a preference for habitats with sandy, well drained soils but is sometimes found along wetland edges (Harding, 2000).

**Wood turtle** habitat includes woodlands, alder thickets, swamps, wet meadows and fields within or near floodplains and sandy-bottomed streams and rivers or streams with partially rocky or silty beds (Harding, 2000).

**Eastern box turtle** habitat includes deciduous or mixed woodlands, especially those with sandy soils and adjacent thickets, old fields, pastures, vegetated dunes, marshes and bog edges. Access to water is an important factor in the species utilization of an area (Harding, 2000).

**Spotted turtle** habitat includes shallow ponds, wet meadows, tamarack swamps, bogs, fens, marsh channels, sphagnum seepages, temporary ponds and slow streams. They prefer habitats with clear, shallow water with a mud or muck bottom and ample aquatic and emergent vegetation (Harding, 2000).

In addition to this a list was made of species that were documented in the Quadrangles surrounding the Quadrangles of the Study area to identify species that have the potential to occur within the Study area due to their documented occurrences nearby. This was done to show that although the species were not previously identified within the Quadrangles of the Study area, they have been identified nearby and could potentially occur in the Study area. According to this list two additional herpetofaunal species of special concern, Jefferson salamander (*Ambystoma jeffersonianum*) and blue-spotted salamander (*Ambystoma laterale*), were identified as having the potential to occur within the Study area. A brief description of the habitat requirements of each species is provided below.

**Jefferson salamander** habitat includes relatively undisturbed deciduous woodlands and the species is most common in moist, well-drained upland forest. They usually avoid lowland areas prone to flooding. The species breeds in preferably fishless ponds and vernal pools within and adjacent to the woodlands in which they occur (Harding, 2000).

**Blue-spotted salamander** habitat includes deciduous and coniferous forests, from moist bottomlands to dry uplands and can occur in a variety of places such as open fields and suburban backyards. Like Jefferson salamander, they depend on nearby preferably fishless ponds and vernal pools for breeding (Harding, 2000).

Information pertaining to bird species known to occur within the breeding blocks of the study area was obtained from the New York State Breeding Bird Atlas' (1980-1985 and 2000-2004) list of species for survey blocks 5873B, 5874A, 5874B, 5874D, 5875D, 5973A, 5974A, 5974C and 5975C. These lists were reviewed to identify any rare, threatened or endangered species that have been previously identified within the Study area or its immediate surrounding areas. According to these lists, no endangered species; one threatened species and ten species of special concern have been previously identified within the Study area or in its immediate surrounding areas.

The threatened species previously identified within the Study area is least bittern (*Ixobrychus exilis*). Species of special concern previously identified within the Study area include sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), common nighthawk (*Chordeiles minor*), whip-poor-will (*Caprimulgus vociferus*), horned lark (*Eremophila alpestris*), grasshopper sparrow (*Ammodramus savannarum*), vesper sparrow (*Pooecetes gramineus*), American bittern (*Botaurus lentiginosus*), red-shouldered hawk (*Buteo lineatus*) and northern goshawk (*Accipiter gentilis*).

**Least bittern** habitat includes cattail and sedge marshes, salt marshes and other areas with emergent vegetation. In upstate New York it prefers open-canopy wetlands, particularly cattail marshes (Andrle, 1988).

**Sharp-shinned hawk breeding** habitat includes a variety of mixed and coniferous woodlands. Heavily forested and extensive tracts provide optimal habitat and all breeding habitats must contain conifers to serve as nest trees (Andrle, 1988).

**Cooper's hawk** nesting habitat includes wooded bottomlands, hemlock-northern hardwood forests, oak-northern hardwood forests, spruce-fir northern hardwood forests and elm-red maple hardwood forests (Andrle, 1988).

**Common nighthawk** natural nesting habitat includes barren ground in open areas but since the decline of that habitat type it has adapted to nesting on rooftops in cities, towns and villages. They may also nest on open barren rocks or bare gravelly soil of pastures, beaches, old fields, also on ground in vineyards, corn and potato fields, and gardens (Andrle, 1988).

**Whip-poor-will** habitat includes white pine and oak-northern hardwood forests, aspen-gray birch-paper birch forests and the species most often occurs in woods with scattered or adjacent fields or open areas rather than in unbroken tracts of forest. The species has a preference in upstate New York for the drier oak-hickory forests over beech-maple woods (Andrle, 1988).

**Horned lark** is a species of fields and prairies. It occurs only in open areas with bare ground or short grass. In New York the species inhabits airports, golf courses, fields, pastures, sandy beaches and dunes, and barren wastes (Andrle, 1988).

**Grasshopper sparrow** primary habitats include grain cropland and pastureland and it will inhabit successional old fields (Andrle, 1988).

**Vesper sparrow** inhabits open, grassy fields, preferring pastureland and cropland, either with row crops or field crops but with sparse cover of weeds and grasses. It is also known to inhabit plowed fields and dusty roadsides (Andrle, 1988).

**American bittern** preferred nesting habitat includes cattail-bulrush marshes and it also nests in sedge meadows, beaver ponds, meadows, kettle-hole bogs, alder thickets and shrub swamps (Andrle, 1988).

**Red-shouldered hawk** uses a variety of woodland habitats including lower wetlands and mesic upland forests. Nearby openings such as pastures, fallow fields and wood edges are usually present and nesting habitat is usually close to some form of surface water (Andrle, 1988).

**Northern goshawk** habitat includes dense, mature, continuous forest, either coniferous or mixed. Nesting trees are usually near a small break in the forest such as a logging road (Andrle, 1988).

## Ecological Community Descriptions

According to:

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors), 2002. *Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review)*. New York Natural Heritage Program, New York State Department of Environmental Conservation. Albany, NY.

### AGRICULTURAL LAND

**Cropland/row crops:** an agricultural field planted in row crops such as corn, potatoes, and soybeans. This community includes vegetable gardens in residential areas.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Cropland/field crops:** an agricultural field planted in field crops such as alfalfa, wheat, timothy, and oats. This community includes hayfields that are rotated to pasture.

Characteristic birds include grasshopper sparrow (*Ammodramus savannarum*), vesper sparrow (*Pooecetes gramineus*), bobolink (*Dolichonyx oryzivorus*), mourning dove (*Zenaida macroura*), and upland sandpiper (*Bartramia longicauda*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Pastureland:** agricultural land permanently maintained (or recently abandoned) as a pasture area for livestock.

Characteristic birds include grasshopper sparrow (*Ammodramus savannarum*), vesper sparrow (*Pooecetes gramineus*), horned lark (*Eremophila alpestris*), killdeer (*Charadrius vociferus*), and upland sandpiper (*Bartramia longicauda*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Orchard:** a stand of cultivated fruit trees (such as apples, cherries, peaches, pears, etc.), often with grasses as a groundcover. An orchard may be currently under cultivation or recently abandoned. Staghorn sumac (*Rhus typhina*), goldenrods (*Solidago* spp.), and poison ivy (*Toxicodendron radicans*) may be common in abandoned orchards.

Characteristic birds include American robin (*Turdus migratorius*), eastern kingbird (*Tyrannus tyrannus*), mourning dove (*Zenaida macroura*), and in mature orchards with a minimum dbh of 10 in (about 25 cm), yellow-bellied sapsucker (*Sphyrapicus varius*).

*Distribution:* throughout New York State at low elevations.

*Rank:* G5 S5 Revised: 1990

**Hardwood plantation:** a stand of commercial hardwood species planted for the cultivation and harvest of timber products. These plantations are usually monocultures: more than 90% of the canopy cover consists of one species. Species typically planted in New York are: black cherry (*Prunus serotina*), red oak

(*Quercus rubra*), white oak (*Q. alba*), black walnut (*Juglans nigra*), hybrid poplars (*Populus* spp.), and black locust (*Robinia pseudo-acacia*).

*Distribution:* throughout New York State.

*Rank:* G5 S3 Revised: 1990

**Pine plantation:** a stand of pines planted for the cultivation and harvest of timber products, or to provide wildlife habitat, soil erosion control, windbreaks, or landscaping. These plantations may be monocultures with more than 90% of the canopy cover consisting of one species, or they may be mixed stands with two or more codominant species (in which case more than 50% of the cover consists of one or more species of pine). Pines that are typically planted in New York include white pine (*Pinus strobus*), red pine (*P. resinosa*), Scotch pine (*P. sylvestris*), pitch pine (*P. rigida*), and jack pine (*P. banksiana*). Groundlayer vegetation is usually sparse, apparently because of the dense accumulation of leaf litter. Speedwell (*Veronica officinalis*) is a characteristic groundlayer plant. More data on this community are needed.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Spruce/fir plantation:** a stand of softwoods planted for the cultivation and harvest of timber products, or to provide wildlife habitat, soil erosion control, windbreaks, or landscaping. These plantations may be monocultures with more than 90% of the canopy cover consisting of one species, or they may be mixed stands with two or more codominant species (in which case more than 50% of the cover consists of one or more species of spruce or fir). Softwoods that are typically planted in New York include Norway spruce (*Picea abies*), white spruce (*P. glauca*), balsam fir (*Abies balsamea*), and Douglas fir (*Pseudotsuga menziesii*). Groundlayer vegetation is usually sparse, apparently because of the dense accumulation of leaf litter. Speedwell (*Veronica officinalis*) is a characteristic groundlayer plant.

A characteristic bird is golden-crowned kinglet (*Regulus satrapa*). More data on this community are needed.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Conifer plantation:** a stand of softwoods planted for the cultivation and harvest of timber products, or to provide wildlife habitat, soil erosion control, windbreaks, or landscaping. This is a broadly defined community that excludes stands in which pine, spruce, or fir are dominant, although they may be present at low densities. These plantations may be monocultures, or they may be mixed stands with two or more codominant species. Softwoods that are typically planted in these plantations include European larch (*Larix decidua*), Japanese larch (*Larix kaempferi*), and northern white cedar (*Thuja occidentalis*). Groundlayer vegetation is usually sparse, apparently because of the dense accumulation of leaf litter. Speedwell (*Veronica officinalis*) is a characteristic groundlayer plant. More data on this community are needed.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

## DEVELOPED LAND

**Mowed lawn:** residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing.

Characteristic birds include American robin (*Turdus migratorius*), upland sandpiper (*Bartramia longicauda*), and killdeer (*Charadrius vociferus*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Mowed lawn with trees:** residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and it is shaded by at least 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing.

Characteristic animals include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zenaidura macroura*), and mockingbird (*Mimus polyglottos*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Rural structure exterior:** the exterior surfaces of metal, wood, or concrete structures (such as commercial buildings, barns, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in a rural or sparsely populated suburban area. These sites may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks.

Nooks and crannies may provide nesting habitat for birds and insects, and roosting sites for bats. Characteristic birds include American robin (*Turdus migratorius*) on porches or under shelter, barn swallow (*Hirundo rustica*) under shelter, and exotic birds such as rock dove (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Interior of barn/agricultural building:** the interior spaces of a barn or other agricultural building which provides shelter for livestock or storage space for agricultural products (hay, straw, silage, etc.).

Characteristic animals besides the livestock are small rodents, bats, cats, native and exotic birds such as barn swallow (*Hirundo rustica*) and rock dove (*Columba livia*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

## NATURAL LAND

### Natural Terrestrial Communities

**Riverside sand/gravel bar:** a meadow community that occurs on sand and gravel bars deposited within, or adjacent to, a river channel. The community may be very sparsely vegetated, depending on the rates of deposition and erosion of the sand or gravel. Characteristic species include sandbar willow (*Salix exigua*), sand-cherry (*Prunus pumila*), dogbane (*Apocynum cannabinum*), switchgrass (*Panicum virgatum*), and poison ivy (*Toxicodendron radicans*). More data on this community are needed.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

*Examples:* Ausable River, Clinton County; Deer River Gorge, Lewis County; Upper Schroon River, Essex County.

*Sources:* NYNHP field surveys.

**Successional old field:** a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development), and then abandoned. 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 (*Agropyron repens*), smooth brome (*Bromus inermis*), sweet vernal grass (*Anthoxanthum odoratum*), orchard grass (*Dactylis glomerata*), common chickweed (*Cerastium arvense*), common evening primrose (*Oenothera biennis*), oldfield cinquefoil (*Potentilla simplex*), calico aster (*Aster lateriflorus*), New England aster (*Aster novae-angliae*), wild strawberry (*Fragaria virginiana*), Queen-Anne'slace (*Daucus corota*), ragweed (*Ambrosia artemisiifolia*), hawkweeds (*Hieracium* spp.), dandelion (*Taraxacum officinale*), and ox-tongue (*Picris hieracioides*). Shrubs may be present, but collectively they have less than 50% cover in the community. Characteristic shrubs include gray dogwood (*Cornus foemina* ssp. *racemosa*), silky dogwood (*Cornus amomum*), arrowwood (*Viburnum recognitum*), raspberries (*Rubus* spp.), sumac (*Rhus typhina*, *R. glabra*), and eastern red cedar (*Juniperus virginiana*).

A characteristic bird is the field sparrow (*Spizella pusilla*). This is a relatively short-lived community that succeeds to a shrubland, woodland, or forest community.

*Distribution:* throughout New York State.

*Rank:* G4 S4 *Revised:* 1990

*Example:* Chippewa Creek Plains, St. Lawrence County; Finger Lakes National Forest, Schuyler County.

*Sources:* Mellinger and McNaughton 1975; NYNHP field surveys.

**Successional shrubland:** a shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or otherwise disturbed. This community has at least 50% cover of shrubs. Characteristic shrubs include gray dogwood (*Cornus foemina* ssp. *racemosa*), eastern red cedar (*Juniperus virginiana*), raspberries (*Rubus* spp.), hawthorne (*Crataegus* spp.), serviceberries (*Amelanchier* spp.), choke-cherry (*Prunus virginiana*), wild plum (*Prunus americana*), sumac (*Rhus glabra*, *R. typhina*), nanny-berry (*Viburnum lentago*), arrowwood (*Viburnum recognitum*), and multiflora rose (*Rosa multiflora*).

Birds that may be found in successional shrublands brown thrasher, blue-winged warbler, golden-winged warbler, chestnut-sided warbler, yellow-breasted chat, eastern towhee, field sparrow, song sparrow, and indigo bunting (Levine 1998).

*Distribution:* throughout New York State.

*Rank:* G4 S4 *Revised:* 1990

*Example:* Chippewa Creek Plains, St. Lawrence County; Finger Lakes National Forest, Schuyler County.

*Source:* NYNHP field surveys.

**Successional northern hardwoods:** a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: quaking aspen (*Populus tremuloides*), bigtooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*), or gray birch (*B. populifolia*), pin cherry (*Prunus pensylvanica*), black cherry (*P. serotina*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), with lesser amounts of white ash (*Fraxinus americana*), green ash (*F. pensylvanica*), and American elm (*Ulmus americana*). Northern indicators include aspens, birches, and pin cherry. This is a broadly defined community and several seral and regional variants are known.

Characteristic birds include chestnut-sided warbler (*Dendroica pensylvanica*), Nashville warbler (*Vermivora ruficapilla*) in young forests with aspen and birch seedlings, and yellow-bellied sapsucker (*Sphyrapicus varius*) in mature aspen forests.

*Distribution:* throughout upstate New York north of the Coastal Lowlands ecozone.

*Rank:* G5 S5 *Revised:* 2001

*Example:* Chase Lake Sandplain, Lewis County.

*Source:* Mellinger and McNaughton 1975; NYNHP field surveys..

**Successional southern hardwoods:** a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: American elm (*Ulmus americana*), slippery elm (*U. rubra*), white ash (*Fraxinus americana*), red maple (*Acer rubrum*), box elder

(*Acer negundo*), silver maple (*A. saccharinum*), sassafras (*Sassafras albidum*), gray birch (*Betula populifolia*), hawthorns (*Crataegus* spp.), eastern red cedar (*Juniperus virginiana*), and choke-cherry (*Prunus virginiana*). Certain introduced species are commonly found in successional forests, including black locust (*Robinia pseudo-acacia*), tree-of-heaven (*Ailanthus altissima*), and buckthorn (*Rhamnus cathartica*). Any of these may be dominant or codominant in a successional southern hardwood forest. Southern indicators include American elm, white ash, red maple, box elder, choke-cherry, and sassafras. This is a broadly defined community and several seral and regional variants are known.

A characteristic bird is chestnut-sided warbler (*Dendroica pensylvanica*).

*Distribution:* primarily in the southern half of New York, south of the Adirondacks.

*Rank:* G5 S5 *Revised:* 2001

*Example:* Chippewa Creek Plains, St. Lawrence County.

*Sources:* Eyre 1980; NYNHP field surveys.

**Appalachian oak-hickory forest:** a hardwood forest that occurs on well-drained sites, usually on ridgetops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several regional and edaphic variants. The dominant trees include one or more of the following oaks: red oak (*Quercus rubra*), white oak (*Q. alba*), and black oak (*Q. velutina*). Mixed with the oaks, usually at lower densities, are one or more of the following hickories: pignut (*Carya glabra*), shagbark (*C. ovata*), and sweet pignut (*C. ovalis*). Common associates are white ash (*Fraxinus americana*), red maple (*Acer rubrum*), and Eastern hop hornbeam (*Ostrya virginiana*). There is typically a subcanopy stratum of small trees and tall shrubs including flowering dogwood (*Cornus florida*), witch hazel (*Hamamelis virginiana*), shadbush (*Amelanchier arborea*), and choke cherry (*Prunus virginiana*). Common low shrubs include maple-leaf viburnum (*Viburnum acerifolium*), blueberries (*Vaccinium angustifolium*, *V. pallidum*), red raspberry (*Rubus idaeus*), gray dogwood (*Cornus foemina* ssp. *racemosa*), and beaked hazelnut (*Corylus cornuta*). The shrublayer and groundlayer flora may be diverse. Characteristic groundlayer herbs are wild sarsaparilla (*Aralia nudicaulis*), false Solomon's seal (*Smilacina racemosa*), Pennsylvania sedge (*Carex pensylvanica*), tick-trefoil (*Desmodium glutinosum*, *D. paniculatum*), black cohosh (*Cimicifuga racemosa*), rattlesnake root (*Prenanthes alba*), white goldenrod (*Solidago bicolor*), and hepatica (*Hepatica americana*).

Characteristic animals include red-bellied woodpecker (*Melanerpes carolinus*), whip-poor-will (*Caprimulgus vociferus*), and wild turkey (*Meleagris gallopavo*).

*Distribution:* throughout upstate New York north of the Coastal Lowlands ecozone; most common south of the Adirondacks ecozone.

*Rank:* G4G5 S4 *Revised:* 1990

*Examples:* Bristol Hills, Ontario County; Finger Lakes National Forest, Schuyler County; Storm King Mountain, Orange County; Long Eddy, Delaware County.

*Sources:* McIntosh 1972; Ross 1958; NYNHP field surveys.

**Beech-maple mesic forest:** a hardwood forest with sugar maple (*Acer saccharum*) and beech (*Fagus grandifolia*) codominant. This is a broadly defined community type with several regional and edaphic variants. These forests occur on moist, well-drained, usually acid soils. Common associates are yellow birch (*Betula alleghaniensis*), white ash (*Fraxinus americana*), eastern hop hornbeam (*Ostrya virginiana*), and red maple (*Acer rubrum*). There are relatively few shrubs and herbs. Characteristic small trees or tall shrubs are hobblebush (*Viburnum lantanoides*), American hornbeam (*Carpinus caroliniana*), striped maple (*Acer pensylvanicum*), witch hazel (*Hamamelis virginiana*), and alternate-leaved dogwood (*Cornus alternifolia*). Dominant groundlayer species are star flower (*Trientalis borealis*), common wood-sorrel (*Oxalis montana*), Canada mayflower (*Maianthemum canadense*), painted trillium (*Trillium undulatum*), purple trillium (*T. erectum*), shining clubmoss (*Lycopodium lucidulum*) and intermediate wood fern (*Dryopteris intermedia*). Associated herbs include Christmas fern (*Polystichum acrostichoides*), jack-in-the-pulpit (*Arisaema triphyllum*) and false Solomon's seal (*Smilacina racemosa*). There are many spring ephemerals which bloom before the canopy trees leaf out. Typically there is also an abundance of tree seedlings, especially of sugar maple; beech and sugar maple saplings are often the most abundant "shrubs"

and small trees. Hemlock (*Tsuga canadensis*) may be present at a low density. In the Adirondacks a few red spruce (*Picea rubens*) may also be present.

Characteristic birds include American redstart (*Setophaga ruticilla*), red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapillus*), black-throated blue warbler (*Dendroica caerulescens*), least flycatcher (*Empidonax minimus*), Acadian flycatcher (*Empidonax virescens*), and red-bellied woodpecker (*Melanerpes carolinus*). Within extensive areas of beech-maple mesic forest, there are often associated small patches of hemlock-northern hardwood forest in steep ravines and gullies where hemlock is locally dominant.

*Distribution:* throughout New York State.

*Rank:* G4 S4 Revised: 2001

*Examples:* Five Ponds Wilderness Area, Herkimer and Hamilton Counties; West Canada Lakes Wilderness Area, Herkimer and Hamilton Counties; Central Tug Hill Forest, Lewis and Oswego Counties; Slide Mountain, Sullivan and Ulster Counties.

*Sources:* Eyre 1980; Gordon 1940; Heimbürger 1934; Holmes et al. 1986; Leopold et al. 1988; McIntosh 1972; Shanks 1966; NYNHP field surveys.

**Hemlock-northern hardwood forest:** a mixed forest that typically occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps. In any one stand, hemlock (*Tsuga canadensis*) is codominant with any one to three of the following: beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), red maple (*A. rubrum*), black cherry (*Prunus serotina*), white pine (*Pinus strobus*), yellow birch (*Betula alleghaniensis*), black birch (*B. lenta*), red oak (*Quercus rubra*), and basswood (*Tilia americana*). The relative cover of hemlock is quite variable, ranging from nearly pure stands in some steep ravines to as little as 20% of the canopy cover. Striped maple (*Acer pensylvanicum*) is often prominent as a mid-story tree. The shrublayer may be sparse; characteristic shrubs are hobblebush (*Viburnum lantanoides*), mapleleaf viburnum (*Viburnum acerifolium*), and raspberries (*Rubus* spp.). In some ravines, especially in the southern part of the state, rosebay (*Rhododendron maximum*) forms a dense subcanopy or tall shrublayer. Canopy cover can be quite dense, resulting in low light intensities on the forest floor and hence a relatively sparse groundlayer. Characteristic groundlayer plants are Indian cucumber-root (*Medeola virginiana*), Canada mayflower (*Maianthemum canadense*), shining clubmoss (*Lycopodium lucidulum*), common wood fern (*Dryopteris intermedia*), mountain wood fern (*Dryopteris campyloptera*), christmas fern (*Polystichum acrostichoides*), star flower (*Trientalis borealis*), bellwort (*Uvularia sessilifolia*), common wood-sorrel (*Oxalis acetosella*), partridge berry (*Mitchella repens*), foamflower (*Tiarella cordifolia*), round-leaf violet (*Viola rotundifolia*), twisted stalk (*Streptopus roseus*), purple trillium (*Trillium erectum*), and the moss *Leucobryum glaucum*. In forests that have beech as a codominant, beech-drops (*Epifagus virginiana*) is a common herb.

Characteristic birds include wild turkey (*Meleagris gallopavo*), pileated woodpecker (*Dryocopus pileatus*), golden-crowned kinglet (*Regulus satrapa*), blackthroated green warbler (*Dendroica virens*), and Acadian flycatcher (*Empidonax virescens*). This is a broadly defined and very widespread community, with many regional and edaphic variants. For example, in the Hudson Valley, hemlock is sometimes codominant with red oak; in the Adirondacks, yellow birch and sugar maple are sometimes codominant, with a relatively small number of hemlocks as well as a few red spruce (*Picea rubens*). More data on the shrublayer and groundlayer composition are needed before these regional variants can be distinguished as separate types.

*Distribution:* throughout New York State.

*Rank:* G4G5 S4 Revised: 1990

*Examples:* Ampersand Mountain, Franklin County; Five Ponds Wilderness Area, Herkimer and Hamilton Counties; Slide Mountain, Sullivan and Ulster Counties; Big Basin in Allegany State Park, Cattaraugus County;

*Sources:* Eyre 1980; Heimbürger 1934; Leopold et al. 1988; McIntosh 1972; McVaugh 1958; Ross 1958; Shanks 1966; NYNHP field surveys.

**Pine-northern hardwood forest:** a mixed forest that occurs on gravelly outwash plains, delta sands, eskers, and dry lake sands in the Adirondacks. The dominant trees are white pine (*Pinus strobus*) and red

pine (*P. resinosa*); these are mixed with scattered paper birch (*Betula papyrifera*) and quaking aspen (*Populus tremuloides*). In some stands there is an admixture of other northern hardwoods and conifers such as yellow birch (*Betula alleghaniensis*), red maple (*Acer rubrum*), balsam fir (*Abies balsamea*), and red spruce (*Picea rubens*); these are never common in a pinenorthern hardwood forest. Characteristic shrubs are blueberries (*Vaccinium angustifolium*, *V. myrtilloides*), sheep laurel (*Kalmia angustifolia*), wild raisin (*Viburnum cassinoides*), and shadbush (*Amelanchier canadensis*). Characteristic herbs are bracken fern (*Pteridium aquilinum*), wintergreen (*Gaultheria procumbens*), trailing arbutus (*Epigaea repens*), cow-wheat (*Melampyrum lineare*), Canada mayflower (*Maianthemum canadense*), bunchberry (*Cornus canadensis*), star flower (*Trientalis borealis*), bluebeads (*Clintonia borealis*), painted trillium (*Trillium undulatum*), spreading ricegrass (*Oryzopsis asperifolia*), and Pennsylvania sedge (*Carex pensylvanica*). Mosses and lichens may be common to abundant, especially the mosses *Pleurozium schreberi*, *Brachythecium* spp., and *Dicranum polysetum*.

Characteristic animals include pine warbler (*Dendroica pinus*) in mature, well-spaced pines, pileated woodpecker (*Drycopus pileatus*). More data are needed on characteristic animals.

*Distribution:* throughout upstate New York, north of the Coastal Lowlands ecozone, more common to the north.

*Rank:* G4 S4 Revised: 1990

*Examples:* Five Ponds Wilderness Area, Herkimer and Hamilton Counties; Black Brook Forest, Clinton and Essex Counties; Pine Orchard, Hamilton County.

*Sources:* Eyre 1980; Heimburger 1934; Roman 1980; NYNHP field surveys.

## **Natural Palustrine Communities**

**Shallow emergent marsh:** a marsh meadow community that occurs on mineral soil or deep muck soils (rather than true peat), that are permanently saturated and seasonally flooded. This marsh is better drained than a deep emergent marsh; water depths may range from 6 in to 3.3 ft (15 cm to 1 m) during flood stages, but the water level usually drops by mid to late summer and the substrate is exposed during an average year. Most abundant herbaceous plants include bluejoint grass (*Calamagrostis canadensis*), cattails (*Typha latifolia*, *T. angustifolia*, *T. x glauca*), sedges (*Carex* spp.), marsh fern (*Thelypteris palustris*), manna grasses (*Glyceria pallida*, *G. canadensis*), spikerushes (*Eleocharis smalliana*, *E. obtusa*), bulrushes (*Scirpus cyperinus*, *S. tabernaemontani*, *S. atrovirens*), threeway sedge (*Dulichium arundinaceum*), sweetflag (*Acorus americanus*), tall meadow-rue (*Thalictrum pubescens*), marsh St. John's-wort (*Triadenum virginicum*), arrowhead (*Sagittaria latifolia*), goldenrods (*Solidago rugosa*, *S. gigantea*), eupatoriums (*Eupatorium maculatum*, *E. perfoliatum*), smartweeds (*Polygonum coccineum*, *P. amphibium*, *P. hydropiperoides*), marsh bedstraw (*Galium palustre*), jewelweed (*Impatiens capensis*), loosestrifes (*Lysimachia thyrsoiflora*, *L. terrestris*, *L. ciliata*). Frequently in degraded examples reed canary grass (*Phalaris arundinacea*) and/or purple loosestrife (*Lythrum salicaria*) may become abundant. Sedges (*Carex* spp.) may be abundant in shallow emergent marshes, but are not usually dominant. Marshes must have less than 50% cover of peat and tussock-forming sedges such as tussock sedges (*Carex stricta*), otherwise it may be classified as a sedge meadow. Characteristic shallow emergent marsh sedges include *Carex stricta*, *C. lacustris*, *C. lurida*, *C. hystricina*, *C. alata*, *C. vulpinoidea*, *C. comosa*, *C. utriculata*, *C. scoparia*, *C. gynandra*, *C. stipata*, and *C. crinita*. Other plants characteristic of shallow emergent marshes (most frequent listed first) include blue flag iris (*Iris versicolor*), sensitive fern (*Onoclea sensibilis*), common skullcap (*Scutellaria galericulata*), beggarticks (*Bidens* spp.), water-horehounds (*Lycopus uniflorus*, *L. americanus*), bur-weeds (*Sparganium americanum*, *S. eurycarpum*), swamp milkweed (*Asclepias incarnata*), water-hemlock (*Cicuta bulbifera*), asters (*Aster umbellatus*, *A. puniceus*), marsh bellflower (*Campanula aparinoides*), water purslane (*Ludwigia palustris*), royal and cinnamon ferns (*Osmunda regalis*, *O. cinnamomea*), marsh cinquefoil (*Potentilla palustris*), rushes (*Juncus effusus*, *J. canadensis*), arrowleaf (*Peltandra virginica*), purple-stem angelica (*Angelica atropurpurea*), water docks (*Rumex orbiculatus*, *R. verticillatus*), turtlehead (*Chelone glabra*), waterparsnip (*Sium suave*), and cardinal flower (*Lobelia cardinalis*). Shallow emergent marshes may have scattered shrubs including rough alder (*Alnus incana* ssp. *rugosa*), water willow (*Decodon verticillatus*), shrubby dogwoods (*Cornus amomum*, *C. sericea*), willows (*Salix* spp.), meadow sweet (*Spiraea alba* var. *latifolia*), and buttonbush (*Cephalanthus occidentalis*). Areas with greater than 50% shrub cover are classified as shrub swamps.

Amphibians that may be found in shallow emergent marshes include frogs such as eastern American toad (*Bufo a. americanus*), northern spring peeper (*Pseudoacris c. crucifer*), green frog (*Rana clamitans melanota*), and wood frog (*Rana sylvatica*); and salamanders such as northern redback salamander (*Plethodon c. cinereus*) (Hunsinger 1999). Birds that may be found include red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), and common yellowthroat (*Geothlypis trichas*) (Levine 1998). Shallow emergent marshes typically occur in lake basins and along streams often intergrading with deep emergent marshes, shrub swamps and sedge meadows, and they may occur together in a complex mosaic in a large wetland.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 2001

*Examples:* South Branch Grass River Colton, St. Lawrence County; West Branch Oswagatchie River Diana, Lewis County; East Branch Fish Creek, Lewis County; Jordan River, St. Lawrence/Franklin Counties; Lakeview Marshes, Jefferson County.

*Sources:* Bray 1915; Gilman 1976; Hotchkiss 1932; Hunsinger 1999; Levine 1998; Metzler and Tiner 1992; Tiner 1985; NYNHP field surveys.

**Deep emergent marsh:** a marsh community that occurs on mineral soils or fine-grained organic soils (muck or well-decomposed peat); the substrate is flooded by waters that are not subject to violent wave action. Water depths can range from 6 in to 6.6 ft (15 cm to 2 m); water levels may fluctuate seasonally, but the substrate is rarely dry, and there is usually standing water in the fall. The most abundant emergent aquatic plants are cattails (*Typha angustifolia*, *T. latifolia*), wild rice (*Zizania aquatica*), bur-weeds (*Sparganium eurycarpum*, *S. androcladum*), pickerel weed (*Pontederia cordata*), bulrushes (*Scirpus tabernaemontani*, *S. fluviatilis*, *S. heterochaetus*, *S. acutus*, *S. pungens*, *S. americanus*), arrowhead (*Sagittaria latifolia*), arrowleaf (*Peltandra virginica*), rice cutgrass (*Leersia oryzoides*), bayonet rush (*Juncus militaris*), water horsetail (*Equisetum fluviatile*) and bluejoint grass (*Calamagrostis canadensis*). The most abundant floating-leaved aquatic plants are fragrant water lily (*Nymphaea odorata*), duckweeds (*Lemna minor*, *L. trisulca*), pondweeds (*Potamogeton natans*, *P. epihydrus*, *P. friesii*, *P. oakesianus*, *P. crispus*, *P. pusillus*, *P. zosteriformis*, *P. strictifolius*), spatterdock (*Nuphar variegata*), frog's-bit (*Hydrocharis morus-ranae*), watermeal (*Wolffia* spp.), water-shield (*Brasenia schreberi*), and water-chestnut (*Trapa natans*). The most abundant submerged aquatic plants are pondweeds (*Potamogeton richardsonii*, *P. amplifolius*, *P. spirillus*, *P. crispus*, *P. zosteriformis*), coontail (*Ceratophyllum demersum*), chara (*Chara globularis*), water milfoils (*Myriophyllum spicatum*, *M. sibiricum*), pipewort (*Eriocaulon aquaticum*), tapegrass (*Vallisneria americana*), liverwort (*Riccia fluitans*), naiad (*Najas flexilis*), water lobelia (*Lobelia dortmanna*), waterweed (*Elodea canadensis*), water stargrass (*Heteranthera dubia*), and bladderworts (*Utricularia vulgaris*, *U. intermedia*).

Animals that may be found in deep emergent marshes include red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), bullfrog (*Rana catesbeiana*), and painted turtle (*Chrysemys picta*). Rare species in some deep emergent marshes include American bittern (*Botaurus lentiginosus*), Virginia rail (*Rallus limicola*), and piedbilled grebe (*Podilymbus podiceps*). Marshes that have been disturbed are frequently dominated by aggressive weedy species such as purple loosestrife (*Lythrum salicaria*) and reedgrass (*Phragmites australis*). Deep emergent marshes also occur in excavations that contain standing water (e.g., roadside ditches, gravel pits).

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 2001

*Examples:* Lake Champlain South Basin, Washington County; Lake Lila, Hamilton County; Chippewa Creek Marsh, St. Lawrence County; Upper and Lower Lakes, St. Lawrence County, Big Bay Swamp, Oswego County..

*Sources:* Bray 1915; Cowardin 1979; Gilman 1976; NYNHP field surveys.

**Shrub swamp:** an inland wetland dominated by tall shrubs that occurs along the shore of a lake or river, in a wet depression or valley not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community. The substrate is usually mineral soil or muck. This is a very broadly

defined type that includes several distinct communities and many intermediates. Shrub swamps are very common and quite variable. They may be codominated by a mixture of species, or have a single dominant shrub species. In northern New York many shrub swamps are dominated by alder (*Alnus incana* ssp. *rugosa*); these swamps are sometimes called *alder thickets*. A swamp dominated by red osier dogwood (*Cornus sericea*), silky dogwood (*C. amomum*), and willows (*Salix* spp.) may be called a *shrub carr*. Along the shores of some lakes and ponds there is a distinct zone dominated by water-willows (*Decodon verticillatus*) and/or butonbush (*Cephalanthus occidentalis*) which can sometimes fill a shallow basin. Characteristic shrubs that are common in these and other types of shrub swamps include meadow-sweet (*Spiraea alba* var. *latifolia*), steeple-bush (*Spiraea tomentosa*), gray dogwood (*Cornus foemina* ssp. *racemosa*), swamp azalea (*Rhododendron viscosum*), highbush blueberry (*Vaccinium corymbosum*), maleberry (*Lyonia ligustrina*), smooth alder (*Alnus serrulata*), spicebush (*Lindera benzoin*), willows (*Salix bebbiana*, *S. discolor*, *S. lucida*, *S. petiolaris*), wild raisin (*Viburnum cassinoides*), and arrowwood (*Viburnum recognitum*). More documentation and research is needed to distinguish the different types of shrub swamps in New York.

Birds that may be found in shrub swamps include common species such as common yellowthroat (*Geothlypis trichas*); and rare species such as American bittern (*Botaurus lentiginosus*), alder flycatcher (*Empidonax alnorum*), willow flycatcher (*E. trallii*), and Lincoln's sparrow (*Passerella lincolni*) (Levine 1998).

*Distribution:* throughout New York State.

*Rank:* G5 S5 *Revised:* 2001

*Examples:* West Branch Oswagatchie River Diana, Lewis County; West Branch Sacandaga River, Hamilton County; Jordan River, St. Lawrence/Franklin Counties, Shingle Shanty Brook, Hamilton County, East Branch Fish Creek, Lewis County.

*Sources:* Bray 1915; Levine 1998; McVaugh 1958; Metzler and Tiner 1992; Shanks 1966; Tiner 1985; NYNHP field surveys.

**Sedge meadow:** a wet meadow community that has organic soils (muck or fibrous peat). Soils are permanently saturated and seasonally flooded; there is usually little peat accumulation in the substrate, but must have deep enough peat (usually at least 20 cm) to be treated as a peatland, otherwise it may be classified as a mineral soil wetland such as shallow emergent marsh. Peats are usually fibrous, not sphagnous, and are usually underlain by deep muck. The dominant herbs must be members of the sedge family (Cyperaceae), typically of the genus *Carex*. Sedge meadows are dominated by peat and tussock forming sedges such as tussock-sedge (*Carex stricta*), with at least 50% cover. They are often codominated by bluejoint grass (*Calamagrostis canadensis*) with less than 50% cover, and other sedges (*Carex* spp., including *C. utriculata*, *C. vesicaria*, and *C. canescens*). Other frequently occurring plants with low percent cover include marsh cinquefoil (*Potentilla palustris*), sensitive fern (*Onoclea sensibilis*) manna grasses (*Glyceria* spp., *G. canadensis*), swamp loosestrife (*Lysimachia terrestris*), hairgrass (*Agrostis scabra*), marsh St. John's-wort (*Triadenum virginicum*), water horsetail (*Equisetum fluviatile*), tall meadow-rue (*Thalictrum pubescens*), spike rushes (*Eleocharis acicularis*, *E. obtusa*), sweetflag (*Acorus americanus*), spotted joe-pye-weed (*Eupatorium maculatum*), purple-stem angelica (*Angelica purpurea*), three-way sedge (*Dulichium arundinaceum*), and bulrushes (*Scirpus* spp.). Sparse shrubs may be present, such as meadow sweet (*Spiraea alba* var. *latifolia*, *S. tomentosa*), leatherleaf (*Chamaedaphne calyculata*), sweet gale (*Myrica gale*), and alder (*Alnus* spp.). More data on this community are needed. Sedge meadows typically occur along streams and near the inlets and outlets of lakes and ponds; they also occur in lake basins as a zone near the upland edge of a shallow emergent marsh. A sedge meadow does not form a floating mat, instead it is covered with water during flooding. When water levels are low, there is little or no open water.

*Distribution:* common in the Adirondacks, and sparsely scattered throughout upstate New York, north of the Coastal Lowlands ecozone.

*Rank:* G5 S4 *Revised:* 2001

*Examples:* Dutchess Meadows, Dutchess County; West Branch Sacandaga River, Hamilton County; Poestenkill Headwaters, Rensselaer County; Mad River Swamp, Lewis County.

*Sources:* Jeglum 1974; McVaugh 1958, NYNHP field surveys.

**Floodplain forest:** a hardwood forest that occurs on mineral soils on low terraces of river floodplains and river deltas. These sites are characterized by their flood regime; low areas are annually flooded in spring, and high areas are flooded irregularly. Some sites may be quite dry by late summer, whereas other sites may be flooded again in late summer or early autumn (these floods are caused by heavy precipitation associated with tropical storms). This is a broadly defined community; floodplain forests are quite variable and may be very diverse. The most abundant trees include silver maple (*Acer saccharinum*), ashes (*Fraxinus pensylvanica*, *F. nigra*, *F. americana*), cottonwood (*Populus deltoides*), red maple (*Acer rubrum*), box elder (*Acer negundo*), elms (*Ulmus americana*, *U. rubra*), hickories (*Caryacordiformis*, *C. ovata*, *C. laciniosa*), butternut and black walnut (*Juglans cinerea*, *J. nigra*), sycamore (*Platanus occidentalis*), oaks (*Quercus bicolor*, *Q. palustris*), and river birch (*Betula nigra*). Other less frequently occurring trees include hackberry (*Celtis occidentalis*), tulip tree (*Liriodendron tulipifera*), basswood (*Tilia americana*), and sugar maple (*Acer saccharum*). Introduced trees, such as white willow (*Salix alba*) and black locust (*Robinia pseudo-acacia*), have become established in some floodplain forests. The most abundant shrubs include spicebush (*Lindera benzoin*), ironwood (*Carpinus carolinianus*), bladdernut (*Staphylea trifoliata*), speckled alder (*Alnus incana* spp. *rugosa*), dogwoods (*Cornus sericea*, *C. foemina* spp. *racemosa*, *C. amomum*), viburnums (*Viburnum cassinoides*, *V. prunifolium*, *V. dentatum*, *V. lentago*), and sapling canopy trees. Invasive exotic shrubs that may be locally abundant include shrub honeysuckles (*Lonicera tatarica*, *L. morrowii*), and multiflora rose (*Rosa multiflora*). Other less frequently occurring shrubs include meadowsweet (*Spiraea alba* var. *latifolia*) and winterberry (*Ilex verticillata*). The most abundant vines include poison ivy (*Toxicodendron radicans*), wild grapes (*Vitis riparia*, *Vitis* spp.), Virginia creeper (*Parthenocissus quinquefolia*), virgin's bower (*Clematis virginiana*), and less frequently, moonseed (*Menispermum canadense*). Vines may form a dense liana in tree canopy and/or dominate the groundcover. The most abundant herbs include sensitive fern (*Onoclea sensibilis*), jewelweeds (*Impatiens capensis*, *I. pallida*), ostrich fern (*Matteuccia struthiopteris*), white snakeroot (*Eupatorium rugosum*), wood nettle (*Laportea canadensis*), false nettle (*Boehmeria cylindrica*), goldenrods (*Solidago gigantea*, *S. canadensis*, *Solidago* spp.), lizard's tail (*Saururus cernuus*), and jumpseed (*Polygonum virginianum*). Invasive exotic herbs that may be locally abundant include moneywort (*Lysimachia nummularia*), garlic mustard (*Alliaria petiolata*), dame's rockets (*Hesperis matronalis*), and stilt grass (*Microstegium vimineum*). Other less frequently occurring herbs include skunk cabbage (*Symplocarpus foetidus*), enchanter's nightshade (*Circaea lutetiana* ssp. *canadensis*), bluejoint grass (*Calamagrostis canadensis*), white avens (*Geum canadense*), clearweed (*Pilea pumila*), jack-in-the-pulpit (*Arisaema triphyllum*), rice cutgrass (*Leersia oryzoides*), sedges (*Carex lacustris*, *C. intumescens*, *C. lupulina*), and many others.

Characteristic birds include yellow-throated vireo (*Vireo flavifrons*), tufted titmouse (*Parus bicolor*), redbellied woodpecker (*Melanerpes carolinus*), and pileated woodpecker (*Dryocopus pileatus*). The composition of the forest apparently changes in relation to flood frequency and elevation of floodplain terraces along larger rivers. Neighboring states recognize several floodplain forest variants based on dominant plants, flood regime, and topographic position (Fike 1999, Kearsley 1999, Sorenson et al. 1998). The composition of floodplain forests in New York State has not been studied in sufficient detail to characterize compositional variations and how they correlate with flood regime and terrace elevation.

*Distribution:* throughout upstate New York, north of the Coastal Lowlands ecozone.

*Rank:* G3G4 S2S3 Revised: 2001

*Examples:* Raquette River, Franklin County; Howland Island, Cayuga County; Catskill Creek, Greene County; Doyles Islands, Delaware County; South Bay Creek Wetlands, Washington County.

*Sources:* Barrett and Enser 1997; Bechtel and Sperduto 1998; Fike 1999; Gordon 1940; Kearsley 1999; Metzler and Damman 1985; Nichols et al. 2000; Sorenson et al. 1998; Veneman and Tiner 1990; NYNHP field surveys.

**Red maple-hardwood swamp:** a hardwood swamp that occurs in poorly drained depressions, usually on inorganic soils. This is a broadly defined community with many regional and edaphic variants. 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 pensylvanica*, *F. nigra*, and *F. americana*), elms (*Ulmus americana* and *U. rubra*), yellow birch (*Betula alleghaniensis*), and swamp white oak (*Quercus bicolor*). Other trees with low percent cover include butternut (*Juglans cinerea*), bitternut hickory (*Carya cordiformis*), black

gum (*Nyssa sylvatica*), ironwood (*Carpinus carolinianus*), 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 recognitum*, and *V. cassinoides*), highbush blueberry (*Vaccinium corymbosum*), common elderberry (*Sambucus 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 richer (higher pH) examples. 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.

Examples of wetland fauna that occur in the glaciated northeast red maple-hardwood swamps include wood duck (*Aix sponsa*), American black duck (*Anas rubripes*), northern waterthrush (*Seiurus noveboracensis*), beaver (*Castor canadensis*), river otter (*Lutra canadensis*), and mink (*Mustela vison*). These swamps provide breeding habitat for many wetland-dependent species, such as spring peeper (*Pseudacris crucifer*), American toad (*Bufo americanus*), wood frog (*Rana sylvatica*), and spotted salamander (*Ambystoma maculatum*) (Golet et al. 1993). More data on characteristic animals, especially invertebrates, are needed.

*Distribution:* throughout New York State.

*Rank:* G5 S4S5 Revised: 2001

*Example:* Great Swamp Pawling, Dutchess County; Deer Creek Marsh, Oswego County; Toad Harbor Swamp; Oswego County; Orange Lake, Orange/Ulster County; Joralemon Woods, Albany County.

*Sources:* Cain and Penfound 1939; Golet et al. 1993; McVaugh 1958.

**Vernal pool:** an aquatic community of one or more associated intermittently to ephemerally ponded, small, shallow depressions typically within an *upland* forest, but also within various palustrine and other terrestrial communities. 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. Substrate is typically dense leaf litter over hydric soils. Substrate type 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 natural isolated basins, floodplain basins, in-stream basins, swamp pools, and marsh pools (Barbour 1999). 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 animals of vernal pools include species of amphibians, reptiles, crustaceans, mollusks, annelids, and insects. Vernal pool species can be categorized as either *obligate* (species that depend upon vernal pool habitat for their survival), or *facultative* (species that are often found in vernal pools, but are not dependent on them and can successfully reproduce elsewhere) (Colburn 1997). Obligatory vernal pool amphibians include spotted salamander (*Ambystoma maculatum*), blue-spotted salamander (*A. laterale*), Jeffersons salamander (*A. jeffersonianum*), marbled salamander (*A. opacum*) and wood frog (*Rana sylvatica*). Fairy shrimp (Anostraca) are obligatory vernal pool crustaceans, with *Eubranchipus* spp. being the most common. Facultative vernal pool amphibians include fourtoed salamander (*Hemidactylium scutatum*), red-spotted newt (*Notophthalmus viridescens*), spring peeper (*Pseudacris crucifer*), gray tree frog (*Hyla versicolor*), green frog (*Rana clamitans*), American toad (*Bufo americanus*), and Fowlers toad (*B. woodhousei 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* sp., *Musculium* sp., and *Pisidium* sp.) and aquatic amphibious snails (*Physa* sp., *Lymnaea* sp., and *Helisoma* sp.). Facultative vernal pool insects include water scorpions (Zygoptera), predacious diving beetles (Dytiscidae), whirligig beetles (Gyrinidae), dobsonflies (Corydalidae), caddisflies

(Trichoptera), dragonflies (Anisoptera), damselflies (Zygoptera), mosquitoes (Cuculidae), springtails (Collembola) and water striders (*Gerris* sp.). Leeches (Hirudinea) are a facultative vernal pool annelid. Plants are predominantly hydrophytic, 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 mannagrass (*Glyceria* sp.), spikerush (*Eleocharis acicularis*), water purslane (*Ludwigia palustris*), naiad (*Najas* sp.), duckweed (*Lemna minor*), and waterhemlock (*Cicuta maculata*). Characteristic bryophytes may include *Brachythecium rivulare*, *Calliargon* sp. And *Sphagnum* spp. A characteristic rare plant of examples on the coastal plain may be featherfoil (*Hottonia inflata*). Five to seven ecoregional variants (including Northern Appalachian, Great Lakes, Lower New England, Alleghany Plateau and North Atlantic Coast types) are suspected to differ in characteristic and dominant vascular plants, amphibians and invertebrates, as well as water chemistry, water temperature, substrate type, and surrounding forest type. More data on regional variants are needed.

*Distribution:* throughout New York State.

*Rank:* G4 S3S4 Revised: 2001

*Examples:* River Road North Creek, Warren County; Shawangunk Mountains, Ulster County; Perigo Hill, Rensselaer County.

*Sources:* Barbour, S. 1999; Colburn, E.A. 1997; Huth and Smiley 1981; Swain and Kearsley 2000; Williams 2001; NYNHP field surveys.

**Hemlock-hardwood swamp:** a mixed swamp that occurs on mineral soils and deep muck in depressions which receive groundwater discharge, typically in areas where the aquifer is a basic or acidic substrate. These swamps usually have a fairly closed canopy (70 to 90% cover), sparse shrublayer, and low species diversity. The tree canopy is typically dominated by hemlock (*Tsuga canadensis*), and co-dominated by yellow birch (*Betula alleghaniensis*), and red maple (*Acer rubrum*). Other less frequently occurring tree include white pine (*Pinus strobus*), black gum (*Nyssa sylvatica*), and green ash (*Fraxinus pennsylvanica*). Characteristic shrubs include saplings of canopy trees plus highbush blueberry (*Vaccinium corymbosum*) often dominant, with great rhododendron (*Rhododendron maximum*) and sweet pepperbush (*Clethra alnifolia*) becoming more common in Lower Hudson Valley examples. Other less frequently occurring shrubs include various viburnums (*Viburnum cassinoides*, *V. lentago*, and *V. lanatanoides*), winterberry (*Ilex verticillata*), and mountain holly (*Nemopanthus mucronatus*). Characteristic herbs are cinnamon fern (*Osmunda cinnamomea*) and sensitive fern (*Onoclea sensibilis*). Groundcover may also be fairly sparse. Other less frequently occurring herbs include sedges (*Carex trisperma*, *C. folliculata*, and *C. bromoides*), goldthread (*Coptis trifolia*), Canada mayflower (*Maianthemum canadense*), mountain sorrel (*Oxalis montana*), foamflower (*Tiarella cordifolia*), and sarsparilla (*Aralia nudicaulis*). This is a common and widespread swamp community. Some occurrences are very small (1 to 2 acres). Water levels in these swamps typically fluctuate seasonally: they may be flooded in spring and relatively dry by late summer.

*Distribution:* throughout upstate New York, north of the Coastal Lowlands ecozone.

*Rank:* G4G5 S4 Revised: 2001

*Examples:* Tamarack Swamp Delaware, Sullivan County; Protection Bog, Wyoming/Erie Counties; Vly Swamp, Ulster County; Tamarack Swamp Boylston, Oswego County; Harriman, Rockland County.

*Sources:* Bray 1915; McVaugh 1958; NYNHP field surveys.

## **Cultural Palustrine Communities**

**Reedgrass/purple loosestrife marsh:** a marsh that has been disturbed by draining, filling, road salts, etc. in which reedgrass (*Phragmites australis*) or purple loosestrife (*Lythrum salicaria*) has become dominant. This community is common along highways and railroads.

*Distribution:* throughout New York State.

*Rank:* G5 S5 Revised: 1990

**Water recharge basin:** the aquatic community of a constructed depression near a road or development that receives runoff from paved surfaces and allows the water to percolate through to the groundwater, thereby recharging the groundwater. These basins are intermittently flooded during periods of heavy precipitation.

On Long Island some of these are important as breeding habitat for amphibians such as tiger salamander (*Ambystoma tigrinum*).

*Distribution:* throughout New York State.

*Rank:* G5 S5 *Revised:* 1990

<b>Reptile and Amphibian Species Identified Within the Schenectady, Burnt Hills, Niskayuna and Round Lake Quadrangles According to the NYS Amphibian and Reptile Atlas Project</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>NY Legal Status</b>
<b>Salamanders</b>		
Jefferson Salamander Complex	<i>Ambystoma jeffersonianum x laterale</i>	Unprotected
Spotted Salamander	<i>Ambystoma maculatum</i>	Unprotected
Red-spotted Newt	<i>Notophthalmus v. viridescens</i>	Unprotected
Northern Redback Salamander	<i>Plethodon c. cinereus</i>	Unprotected
Northern Two-lined Salamander	<i>Eurycea bislineata</i>	Unprotected
<b>Toads and Frogs</b>		
Eastern American Toad	<i>Bufo a. americanus</i>	Game Species
Gray Treefrog	<i>Hyla versicolor</i>	Game Species
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>	Game Species
Bullfrog	<i>Rana catesbeiana</i>	Game Species
Green Frog	<i>Rana clamitans melanota</i>	Game Species
Wood Frog	<i>Rana sylvatica</i>	Game Species
Northern Leopard Frog	<i>Rana pipiens</i>	Game Species
Pickerel Frog	<i>Rana palustris</i>	Game Species
<b>Snakes</b>		
Northern Water Snake	<i>Nerodia s. sipedon</i>	Unprotected
Common Garter Snake	<i>Thamnophis sirtalis</i>	Unprotected
Eastern Milk Snake	<i>Lampropeltis t. triangulum</i>	Unprotected
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	Special Concern
Smooth Green Snake	<i>Liochlorophis vernalis</i>	Unprotected
<b>Turtles</b>		
Common Snapping Turtle	<i>Chelydra s. serpentina</i>	Unprotected
Wood Turtle	<i>Clemmys insculpta</i>	Special Concern
Eastern Box Turtle	<i>Terrapene c. carolina</i>	Special Concern
Red-eared Slider	<i>Trachemys scripta elegans</i>	Unprotected
Spotted Turtle	<i>Clemmys guttata</i>	Special Concern
Painted Turtle	<i>Chrysemys picta</i>	Unprotected
<b>Data Source:</b> New York State Amphibian and Reptile Atlas Project 1990-1999		
<b>Survey Blocks:</b> Burnt Hills Quadrangle, Niskayuna Quadrangle, Round Lake Quadrangle & Schenectady Quadrangle		
<b>State Definitions</b>		
<p><b>E Endangered Species</b> are determined by the New York State Department of Environmental Conservation (DEC) to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are fully protected under New York State ECL 11-0535.</p> <p><b>T Threatened Species</b> are determined by the DEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are fully protected under the New York State ECL 11-0535.</p> <p><b>SC Special Concern Species</b> are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.</p> <p><b>GS, GN Game</b> species are defined as “big game”, “small game” or “game bird” species in ECL 11-0103. <b>GS</b> indicates that there are seasons set for the species when they may be legally hunted.</p> <p><b>GN</b> indicates that, while classified under the law as a game species, there are no seasons set and the species may not be hunted or taken at any time in New York.</p> <p>Un <b>Unprotected</b> means that the species may be taken at any time without limit. However, a license to take may be required.</p>		

<b>Reptile and Amphibian Species Known to Occur Within the Quadrangles Surrounding the Schenectady, Burnt Hills, Niskayuna and Round Lake Quadrangles According to the NYS Amphibian and Reptile Atlas Project</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>NY Legal Status</b>
<b>Salamanders</b>		
Common Mudpuppy	<i>Necturus maculosus</i>	Unprotected
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Special Concern
Blue-spotted Salamander	<i>Ambystoma laterale</i>	Special Concern
Northern Dusky Salamander	<i>Desmognathus fuscus</i>	Unprotected
Allegheny Dusky Salamander	<i>Desmognathus ochrophaeus</i>	Unprotected
Northern Slimy Salamander	<i>Plethodon glutinosus</i>	Unprotected
Four-toed Salamander	<i>Hemidactylum scutatum</i>	Unprotected
Northern Spring Salamander	<i>Gyrinophilus p. porphyriticus</i>	Unprotected
Northern Red Salamander	<i>Pseudotriton r. ruber</i>	Unprotected
<b>Toads and Frogs</b>		
Fowler's Toad	<i>Bufo fowleri</i>	Game Species
Mink Frog	<i>Rana septentrionalis</i>	Game Species
<b>Snakes</b>		
Northern Brown Snake	<i>Storeria d. dekayi</i>	Unprotected
Northern Redbelly Snake	<i>Storeria o. occipitamaculata</i>	Unprotected
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>	Unprotected
Northern Ringneck Snake	<i>Diadophis punctatus edwardsii</i>	Unprotected
Northern Black Racer	<i>Coluber c. constrictor</i>	Unprotected
Black Rat Snake	<i>Elaphe o. obsoleta</i>	Unprotected
<b>Turtles</b>		
Common Musk Turtle	<i>Sternotherus odoratus</i>	Unprotected
Common Map Turtle	<i>Graptemys geographica</i>	Unprotected
<b>Data Source:</b> New York State Amphibian and Reptile Atlas Project 1990-1999		
<b>Survey Blocks:</b> The Quadrangles surrounding and nearby the Burnt Hills Quadrangle, Niskayuna Quadrangle, Round Lake Quadrangle & Schenectady Quadrangle		
<b>State Definitions</b>		
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<b>Bird Species Known to Occur Within the Survey Blocks of the Study Area According to the New York State Breeding Bird Atlas 1980-1985 and 2000-2004</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>NY Legal Status</b>
Canada Goose	<i>Branta canadensis</i>	Game Species
Downy Woodpecker	<i>Picoides pubescens</i>	Protected
Northern Flicker	<i>Colaptes auratus</i>	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Protected
Warbling Vireo	<i>Vireo gilvus</i>	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	Protected
Barn Swallow	<i>Hirundo rustica</i>	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	Protected
House Wren	<i>Troglodytes aedon</i>	Protected
Eastern Bluebird	<i>Sialia sialis</i>	Protected
Veery	<i>Catharus fuscescens</i>	Protected
Wood Thrush	<i>Hylocichla mustelina</i>	Protected
American Robin	<i>Turdus migratorius</i>	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	Protected
European Starling	<i>Sturnus vulgaris</i>	Unprotected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Protected
Yellow Warbler	<i>Dendroica petechia</i>	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	Protected
Song Sparrow	<i>Melospiza melodia</i>	Protected
Indigo Bunting	<i>Passerina cyanea</i>	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Protected
Eastern Meadowlark	<i>Sturnella magna</i>	Protected
Common Grackle	<i>Quiscalus quiscula</i>	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	Protected
Baltimore Oriole	<i>Icterus galbula</i>	Protected
American Goldfinch	<i>Carduelis tristis</i>	Protected
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Protected
Great Blue Heron	<i>Ardea herodias</i>	Protected
Green Heron	<i>Butorides virescens</i>	Protected
Wood Duck	<i>Aix sponsa</i>	Game Species
Mallard	<i>Anas platyrhynchos</i>	Game Species
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Protected-Special Concern
Cooper's Hawk	<i>Accipiter cooperii</i>	Protected-Special Concern
Broad-winged Hawk	<i>Buteo platypterus</i>	Protected
American Coot	<i>Fulica americana</i>	Game Species
Killdeer	<i>Charadrius vociferus</i>	Protected
Spotted Sandpiper	<i>Actitis macularia</i>	Protected
American Woodcock	<i>Scolopax minor</i>	Game Species

Mourning Dove	<i>Zenaida macroura</i>	Protected
Great Horned Owl	<i>Bubo virginianus</i>	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Protected
Belted Kingfisher	<i>Ceryle alcyon</i>	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	Protected
Willow Flycatcher	<i>Empidonax traillii</i>	Protected
Blue Jay	<i>Cyanocitta cristata</i>	Protected
American Crow	<i>Corvus brachyrhynchos</i>	Game Species
Black-capped Chickadee	<i>Poecile atricapillus</i>	Protected
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Protected
Marsh Wren	<i>Cistothorus palustris</i>	Protected
Hermit Thrush	<i>Catharus guttatus</i>	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Protected
Ovenbird	<i>Seiurus aurocapilla</i>	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	Protected
Chipping Sparrow	<i>Spizella passerina</i>	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	Protected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Protected
House Finch	<i>Carpodacus mexicanus</i>	Protected
American Kestrel	<i>Falco sparverius</i>	Protected
Ruffed Grouse	<i>Bonasa umbellus</i>	Game Species
Rock Dove	<i>Columba livia</i>	Unprotected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Protected
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Protected
Eastern Screech-Owl	<i>Megascops asio</i>	Protected
Barred Owl	<i>Strix varia</i>	Protected
Common Nighthawk	<i>Chordeiles minor</i>	Protected-Special Concern
Whip-poor-will	<i>Caprimulgus vociferus</i>	Protected-Special Concern
Chimney Swift	<i>Chaetura pelagica</i>	Protected
Least Flycatcher	<i>Empidonax minimus</i>	Protected
Yellow-throated Vireo	<i>Vireo flavifrons</i>	Protected
Horned Lark	<i>Eremophila alpestris</i>	Protected-Special Concern
Purple Martin	<i>Progne subis</i>	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Protected
Carolina Wren	<i>Thryothorus ludovicianus</i>	Protected
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	Protected
Northern Mockingbird	<i>Mimus polyglottos</i>	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	Protected
American Redstart	<i>Setophaga ruticilla</i>	Protected

Northern Waterthrush	<i>Seiurus noveboracensis</i>	Protected
Louisiana Waterthrush	<i>Seiurus motacilla</i>	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Protected
Field Sparrow	<i>Spizella pusilla</i>	Protected
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Protected
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Protected-Special Concern
Swamp Sparrow	<i>Melospiza georgiana</i>	Protected
Purple Finch	<i>Carpodacus purpureus</i>	Protected
House Sparrow	<i>Passer domesticus</i>	Unprotected
Wild Turkey	<i>Meleagris gallopavo</i>	Game Species
Bank Swallow	<i>Riparia riparia</i>	Protected
Alder Flycatcher	<i>Empidonax alnorum</i>	Protected
Blue-winged Warbler	<i>Vermivora pinus</i>	Protected
Vesper Sparrow	<i>Poocetes gramineus</i>	Protected-Special Concern
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Protected
Brown Creeper	<i>Certhia americana</i>	Protected
American Bittern	<i>Botaurus lentiginosus</i>	Protected-Special Concern
Least Bittern	<i>Ixobrychus exilis</i>	Threatened
American Black Duck	<i>Anas rubripes</i>	Game Species
Red-shouldered Hawk	<i>Buteo lineatus</i>	Protected-Special Concern
Sora	<i>Porzana carolina</i>	Game Species
Common Moorhen	<i>Gallinula chloropus</i>	Game Species
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	Protected
Orchard Oriole	<i>Icterus spurius</i>	Protected
Turkey Vulture	<i>Cathartes aura</i>	Protected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Protected
Blue-winged Teal	<i>Anas discors</i>	Game Species
Northern Goshawk	<i>Accipiter gentilis</i>	Protected-Special Concern
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	Protected
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Game Species
Virginia Rail	<i>Rallus limicola</i>	Game Species
Pine Warbler	<i>Dendroica pinus</i>	Protected

**Total # Species = 122**

**Data Source:** New York State Breeding Bird Atlas 1980-1985 and 2000-2004

**Survey Blocks:** 5873B, 5874A, 5874B, 5874D, 5875D, 5973A, 5974A, 5974C & 5975C

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State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.

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**GS** indicates that there are seasons set for the species when they may be legally hunted.

**GN** indicates that, while classified under the law as a game species, there are no seasons set and the species may not be hunted or taken at any time in New York.

**PB Protected Birds** are defined in ECL 11-0103 as all wild birds except those named as unprotected.

Some of these birds, such as waterfowl and gallinaceous birds, are also listed as game species with seasons set, while others may not be taken at any time.

Un **Unprotected** means that the species may be taken at any time without limit. However, a license to take may be required.

<b>MAMMALS OF NEW YORK STATE</b>			
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>LEGAL STATUS</b>	
		<b>FEDERAL</b>	<b>STATE</b>
<b>Marsupials</b>			
Virginia Opossum	<i>Didelphis virginiana</i>	Un	GS
<b>Shrews and Moles</b>			
Masked Shrew	<i>Sorex cinereus</i>	Un	Un
Water Shrew	<i>Sorex palustris</i>	Un	Un
Smoky Shrew	<i>Sorex fumeus</i>	Un	Un
Long-tailed Shrew	<i>Sorex dispar</i>	Un	Un
Pygmy Shrew	<i>Sorex hoyi</i>	Un	Un
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	Un	Un
Least Shrew	<i>Cryptotis parva</i>	Un	Un
Hairy-tailed Mole	<i>Parascalops breweri</i>	Un	Un
Eastern Mole	<i>Scalopus aquaticus</i>	Un	Un
Star-nosed Mole	<i>Condylura cristata</i>	Un	Un
<b>Bats</b>			
Little Brown Bat	<i>Myotis lucifugus</i>	Un	Un
Keen's Bat	<i>Myotis septentrionalis</i>	Un	Un
Indiana Bat	<i>Myotis sodalis</i>	E	E
Small-footed Bat	<i>Myotis leibii</i>	Un	Un-SC
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Un	Un
Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	Un	Un
Big Brown Bat	<i>Eptesicus fuscus</i>	Un	Un
Red Bat	<i>Lasiurus borealis</i>	Un	Un
Hoary Bat	<i>Lasiurus cinereus</i>	Un	Un
<b>Canids</b>			
Coyote	<i>Canis latrans</i>	Un	GS
Red Fox	<i>Vulpes vulpes</i>	Un	GS
Gray Fox	<i>Urocyon cinereoargenteus</i>	Un	GS
<b>Bear</b>			
Black Bear	<i>Ursus americanus</i>	Un-CA2	GS
<b>Raccoon</b>			
Raccoon	<i>Procyon lotor</i>	Un	GS
<b>Mustelids</b>			
Marten	<i>Martes americana</i>	Un	GS
Fisher	<i>Martes pennanti</i>	Un	GS
Ermine	<i>Mustela erminea</i>	Un	GS

Long-tailed Weasel	<i>Mustela frenata</i>	Un	GS
Mink	<i>Mustela vison</i>	Un	GS
Striped Skunk	<i>Mephitis mephitis</i>	Un	GS
River Otter	<i>Lontra canadensis</i>	Un-CA2	GS
<b>Felids</b>			
Bobcat	<i>Lynx rufus</i>	Un-CA2	GS
<b>Ungulates</b>			
White-tailed Deer	<i>Odocoileus virginianus</i>	Un	GS
Moose	<i>Alces alces</i>	Un	GN
<b>Rodents</b>			
Eastern Chipmunk	<i>Tamias striatus</i>	Un	Un
Woodchuck	<i>Marmota monax</i>	Un	Un
Gray Squirrel	<i>Sciurus carolinensis</i>	Un	GS
Fox Squirrel	<i>Sciurus niger</i>	Un	GS
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Un	Un
Southern Flying Squirrel	<i>Glaucomys volans</i>	Un	Un
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	Un	Un
Beaver	<i>Castor canadensis</i>	Un	GS
Deer Mouse	<i>Peromyscus maniculatus</i>	Un	Un
White-footed Mouse	<i>Peromyscus leucopus</i>	Un	Un
Alleghany Woodrat	<i>Neotoma magister</i>	Un	E
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Un	Un
Meadow Vole	<i>Microtus pennsylvanicus</i>	Un	Un
Rock Vole	<i>Microtus chrotorrhinus</i>	Un	Un
Pine Vole	<i>Pitymys pinetorum</i>	Un	Un
Muskrat	<i>Ondatra zibethicus</i>	Un	GS
Southern Bog Lemming	<i>Synaptomys cooperi</i>	Un	Un
Black Rat	<i>Rattus rattus</i>	Un	Un
Norway Rat	<i>Rattus norvegicus</i>	Un	Un
House Mouse	<i>Mus musculus</i>	Un	Un
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	Un	Un
Woodland Jumping Mouse	<i>Napaeozapus insignis</i>	Un	Un
Porcupine	<i>Erethizon dorsatum</i>	Un	Un

<b>Rabbits and Hares</b>			
Eastern Cottontail	<i>Sylvilagus floridanus</i>	Un	GS
Varying Hare	<i>Lepus americanus</i>	Un	GS
<b>RARELY ENCOUNTERED SPECIES</b>			
Least Weasel	<i>Mustela nivalis</i>	Un	GS
Canada Lynx	<i>Lynx canadensis</i>	T-CA2	GN-T
<b>Federal Definitions</b>			
<p>E <b>Endangered Species</b> are determined by the U. S. Department of the Interior to be in danger of extinction throughout all or a significant portion of their range, as defined in the Endangered Species Act of 1973, and as amended. All such species are fully protected, including their habitat.</p> <p>T <b>Threatened Species</b> are determined by the U. S. Department of the Interior as likely to become endangered within the foreseeable future throughout all or a significant portion of their range, as defined in the Endangered Species Act of 1973, and as amended. All such species are fully protected.</p> <p>Un <b>Unprotected</b> under Federal law.</p> <p>CA1,CA2,CA3 Indicates species listed in Appendices 1 or 2 under the <b>Convention on International Trade in Endangered Species (CITES)</b>, whose purpose is to protect certain species of flora and fauna against overexploitation in international trade. CITES lists species in three categories (appendices). Appendix 1 includes species threatened with extinction. Appendix 2 includes those species not currently endangered but which may become so if unrestricted trade occurs. Appendix 3 includes species identified by a country as needing protection. The listing herein is based upon the 16 April 1997 amendment, which can also be found on web site <a href="http://international.fws.gov/cites/cites.html">http://international.fws.gov/cites/cites.html</a>.</p>			
<b>State Definitions</b>			
<p>E <b>Endangered Species</b> are determined by the New York State Department of Environmental Conservation (DEC) to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are fully protected under New York State ECL 11-0535.</p> <p>T <b>Threatened Species</b> are determined by the DEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are fully protected under the New York State ECL 11-0535.</p> <p>SC <b>Special Concern Species</b> are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.</p> <p>GS, GN <b>Game</b> species are defined as “big game”, “small game” or “game bird” species in ECL 11-0103. In the checklist,</p> <p><b>GS</b> indicates that there are seasons set for the species when they may be legally hunted.</p> <p><b>GN</b> indicates that, while classified under the law as a game species, there are no seasons set and the species may not be hunted or taken at any time in New York.</p> <p><b>PB Protected Birds</b> are defined in ECL 11-0103 as all wild birds except those named as unprotected. Some of these birds, such as waterfowl and gallinaceous birds, are also listed as game species with seasons set, while others may not be taken at any time.</p> <p>Un <b>Unprotected</b> means that the species may be taken at any time without limit. However, a license to take may be required.</p> <p><b>SR Special Regulations</b> - This designation is used for two species: diamondback terrapin is protected under ECL 11-0311, where DEC can adopt regulations restricting destruction, disturbance or taking of a species after petition by ten or more citizens on behalf of that species. Protection for harbor seal comes via specific inclusion in ECL 11-0107.</p>			

# APPENDIX F

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**Draft**

# **Western Clifton Park Design Guidelines**

*Prepared for the:*

**Western Clifton Park Draft GEIS**  
for Clough, Harbour and Associates, LLP  
and the **Town of Clifton Park**

*November 2004*



**Behan Planning Associates, LLC**  
Planning Community Futures

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# **Western Clifton Park Design Guidelines**

***Draft***

**November 2004**

**Town of Clifton Park**

*Prepared by:*

**Behan Planning Associates, LLC**

6 Lake Avenue, Suite 200  
Saratoga Springs, NY 12866



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# **I. Introduction**

The Western Clifton Park Design Guidelines provide direct, concise guidance on identifying what are the important open space resources to conserve in Western Clifton Park as a key first step in the process of designing site plans, subdivision layouts, roads and access, landscape design in Western Clifton Park. The design guidelines start with an overview of the major conservation concepts for this area of the Town of Clifton Park, and then focus in on site specific considerations depending upon where an applicant is proposing change in the landscape: whether it is in a former field, woodland area, or if change is proposed within or near an existing hamlet settlement area. The design guidelines include design principles outlining how to design for development within the applicable setting.

The overall theme is clear: for applicants to identify and demonstrate a clear understanding of the unique resources of any site within its context in Western Clifton Park and strive to conserve and design with the uniqueness of the natural landscape, the working agricultural landscape or the unique hamlet setting of the hamlets of Rexford, Vischer Ferry, Grooms Corners, Jonesville, Elnora, and Ballston Lake.

Specifically, the design guidelines show how to conserve open space and design the layout of permanent open space, how to locate and layout new residential development and other development amidst the rural, scenic landscape, and finally, how to blend in new growth in any hamlet setting.

## **Purpose**

The overall purpose of these design guidelines is to address the way conservation occurs as part of a development project, and how new development is designed within Western Clifton Park. Applying these design guidelines will help the planning board and developers accomplish the town's vision and goals for Western Clifton Park. This includes limiting the adverse impacts of growth on the environment, water quality, wildlife habitats, and other natural resources, maintaining active farm areas and prime farm soils, protecting town-identified open space resources, and designing new structures, neighborhoods, and hamlets to be consistent with the rural character of area. All development within western Clifton Park should contribute to the area's unique sense of place and where possible, reinforce the historic characteristics of Clifton Park's hamlets and existing settlements.

In coordination and cooperation with other programs and efforts, these guidelines are intended to accomplish the town's overall vision for western Clifton Park.

The Town of Clifton Park Open Space Plan 2003 outlined a vision for resource protection town-wide that has applicable ideas for Western Clifton Park, and is summarized by four major themes that should be considered in the conceptualization of conservation and development in Western Clifton Park. The major themes as applicable for Western Clifton Park are:

1. Conserve the distinctive, scenic landscape character visible to the public including cultural and historic resources
2. Protect active farmland and working landscapes
3. Preserve water, watersheds and significant ecological areas for water quality and wildlife habitat
4. Provide for future park and trail opportunities.

## **Applicability and Use**

The Western Clifton Park Design Guidelines are intended to assist the planning board, applicants and the public in the design and review of development within Western Clifton Park, and the Conservation Residential (CR) the Hamlet Mixed-Use (HM,), and the Hamlet Residential (HR) districts.

Unless otherwise noted, all development projects within Western Clifton Park must continue to adhere to all applicable zoning, site plan, and subdivision regulations and procedures required by the town.

As previously discussed, these guidelines are intended to assist the town, developers, and the community in planning, layout, and review of development projects within Western Clifton Park. In order to assist this process, these guidelines are divided into the following three chapters:

- 1: Designing for the Rural, Scenic Landscape Character of Western Clifton Park
- 2: Conservation Design
- 3: Hamlet Design

## **II. Designing for the Rural, Scenic Landscape Character of Western Clifton Park**

The following principles and design guidelines apply to development within the entire western Clifton Park area. In addition to applicable Town of Clifton Park zoning and land use regulations, the Planning Board shall base its approval decisions for all applications within the Conservation Residential (CR), Hamlet Residential (HR), and Hamlet Mixed-Use (HM) districts on how the applicant meets the following criteria.

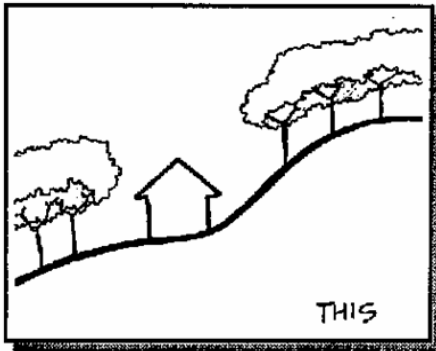
New development should build off of the traditional design, character, and unique qualities of rural Clifton Park. Each development should identify sensitive natural, cultural, historic, and scenic features. These resources should remain free of development and their removal or disruption should be minimized to the greatest extent possible. New construction should show consideration for local history, including architecture, farming and early economic activity, landmarks and historic sites, and other features that connect the town to its past. For example, wooded areas, mature trees, rolling hills, historic features, streams, and other unique site characteristics should be celebrated and integrated into site design. The visual impacts of urban design and development features in the rural landscape should be minimized.

### **Criteria for Designing in Western Clifton Park:**

- A. Conserve the scenic, rural landscape character – the unique setting of Western Clifton Park
- B. Protect farms and prime farmland: focusing on the core agricultural areas of Western Clifton Park.
- C. Buffer and protect the existing permanently protected open space resources
- D. Conserve and protect the town-identified open space, natural and cultural resources that are priorities for future conservation
- E. Conserve, buffer and design with respect to the hamlet settlement patterns
- F. Preserve natural water features, watersheds and support connected water habitats
- G. Protect natural landforms and create connected open lands habitat
- H. Conserve woodland areas and create connected woodlands habitats
- I. Connect people to the special resources
- J. Protect dark, night-time skies for the whole community

## A. Conserve the scenic, rural landscape character – the unique setting of Western Clifton Park

The scenic resources of open fields and areas, punctuated by farms and farm buildings, woodlands and natural setting, should be conserved to maintain the quality of the rural character of western Clifton Park. By designing with an eye to conserve the town's remaining scenic resources to the extent practicable, the whole community will retain its scenic values and connection to the rural past. Open space and natural areas should be designed to maintain the integrity and character of existing roads and maximize visibility for persons passing the site wherever possible.



The site layout of new development in the countryside should protect public views of the countryside landscapes, particularly the views along roadsides. Scenic resources should be documented and evaluated for careful consideration prior to establishing conservation areas and locating new development. Placing any new development in a location that will minimize impact to the specific scenic resources of an open landscape is the key criteria. There are a range of ways to accommodate how new development can blend into the landscape setting, and there may be no perfect solution when

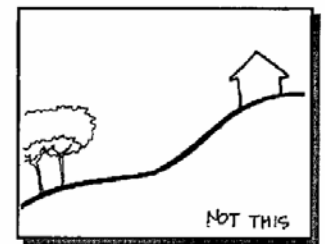
choices need to be made. However, every effort should be made to respect the unique scenic

qualities of the natural and cultural setting that offer the scenic qualities and to design in a respectful relationship to them.

Instead of protecting scenic resources as being viewed as “in the way” of development, these features should be viewed as the cornerstones and focal points and “given, fixed” conditions of any design process.



*Unacceptable design: note how the homes in the background stick out over the ridgeline.*



## B. Protect farms and farmland: focusing on the core agricultural areas



Overall, protect as intact as many as possible of the active, working farms in Western Clifton Park throughout the Western Clifton Park. As a priority, concentrate on protecting large acreages of contiguous, farms. See the Western Clifton Park GEIS Land Conservation Plan and the Town of Clifton Park Open Space Plan Vision for the town-identified working farms. Riverview Orchards, shown to the left, is an active farm along Riverview Road, and is part of the agricultural core of working farms in Western Clifton Park that should be protected and buffered from development.

Overall, protect farmland, working farms, fallow open fields and habitats, and agricultural heritage. All effort should be made to limit the impact of development on productive farmland soils that are currently in

production or are high quality soils that could be converted into production. Provide adequate buffer to agricultural operations and farm buildings and structures used for production. In particular, avoid locating new homes near existing farms and farmlands, buffer residential uses from active farms, and avoid fragmentation of core agricultural areas.



## **C. Buffer and protect the existing permanently protected open space resources**

The Town of Clifton Park is home to many important open space resources, as identified in the Town of Clifton Park Open Space Plan 2003. Some of these open space resources are permanently protected. These resources should be identified in relationship to any proposed development.



**Erie Canal, Vischer Ferry Nature and Historic Preserve**



**Grooms Tavern, Grooms Corners**



**Mohawk Valley Grange, Sugar Hill Road, Grooms Corners**

**D. Conserve and protect the town-identified open space, natural and cultural resources that are priorities for *future* conservation**

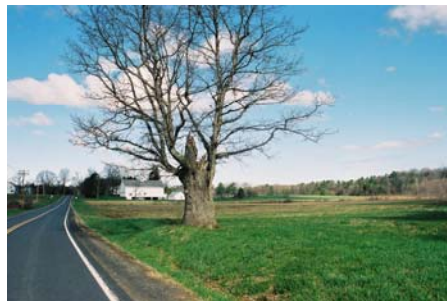
Through public planning processes, the town has identified agricultural and open space lands within western Clifton Park for permanent protection from development. Development projects, particularly those located within the CR zoning district should contribute to the network of town-wide, permanently protected open space areas and habitat corridors, both within large parcels of land and among parcels throughout the town in accordance with the open space vision and criteria set forth in the Clifton Park Open Space Plan, the Clifton Park Comprehensive Plan, and the Western Clifton Park GEIS.



**Active Orchards and Active Farmland**



**Scenic open fields**



**Scenic rural landscape views**



**Historic resources**

**E. Conserve, buffer and design with respect to the hamlet settlement patterns**

The early, existing settlements of Rexford, Vischer Ferry, Grooms Corners, Jonesville, Elnora, and Ballston Lake are special places in Western Clifton Park. These settlements, also referred to as hamlets, contribute to the unique character of Western Clifton Park. Development proposed in or near these hamlets should carefully consider this context in any site planning and subdivision design.



Hamlet of Vischer Ferry



Hamlet of Grooms Corners

## F. Preserve natural water features, watershed and water habitats and connections

### Protect Water Resources and Wetland Habitats



**Headwaters of the Dwaas Kill, near Waite Road**

Western Clifton Park enjoys numerous streams, ponds, wetlands, waterfront along Ballston Lake and extensive waterfront along the Mohawk River. Every effort should be made to protect the naturally-occurring waterbodies and natural drainage conditions, and natural wetlands in Western Clifton Park to protect both the water quality and quantity, and to maintain natural habitats.

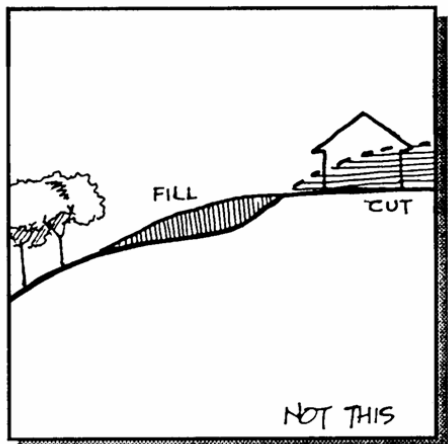
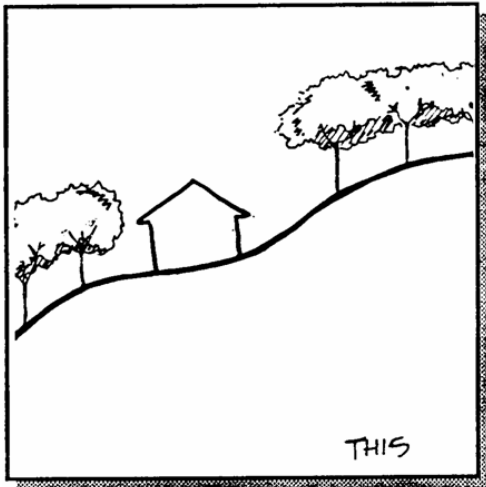
The impact of new development on water resources and quality should be minimized through a variety of measures including but not limited to:



**Riverview Road along the Mohawk River**

- Natural drainage ways, contours and landforms should be respected and disturbance to these areas should be minimized.
- Buffers and setbacks from water resources such as streams, wetlands, ponds, floodways, and aquifer recharge areas.
- Water quality and stormwater management systems that are compatible to the site and modeled upon naturally occurring systems. Low Impact Development (LID) alternatives should be investigated and implemented to the fullest extent possible.

## G. Preserve natural landforms and create connected open lands habitat



### Design with nature during site layout

- Design context-sensitive roads.
- Building and home sites shall conserve the landscape in its natural state, insofar as practicable.
- The orientation of individual building sites shall be such as to maintain maximum natural topography and cover. Buildings should fit into the landscape and should not protrude over hilltops or ridges or be sited in the middle of open fields.
- Development should minimize cut and fill, utilize gentle grading and avoid abrupt grade transitions.
- Any grade changes shall be in keeping with the general appearance of neighboring developed areas.
- Utilize sensitive construction practices and erosion control (limit soil erosion and disturbance)
- Buildings should not be located in open fields. Structures should be placed at the edges of fields along more heavily vegetated areas.



*Unacceptable design: These homes are sited in the middle of an open field, destroying rural character and rendering the land unusable for farming. The open space does not contribute to the rural quality of the area.*

## H. Conserve Clifton Park's woodland and wildlife habitats

Leave large areas of intact woodlands and wildlife habitat. New development should avoid fragmentation of wooded areas and habitat corridors. Efforts should be made to maintain the integrity of these areas as well as connections to surrounding, off-site woodland and wildlife habitat resources. Existing mature trees should be maintained (clear cutting is prohibited) and species selected for planting should be appropriate for this region and microclimate of the setting, preferably native species vegetation. Avoid the introduction of invasive species.



Acceptable low-density rural development in a woodland, forested area.,



*Unacceptable design: in this example, large homes are scattered throughout a wooded area. The result is a fragmented woodland.*



*Acceptable design: This home is sited at the edge of the woodland and blends into the site. As a result, views to and from the site are not harmed and rural character is maintained.*

# I. Connect people to the special resources

Create pedestrian paths and trails designed to match the character of the setting. Off-road paths are appropriate in a conservation subdivision in and around a permanent open space area. A different type of pedestrian path or sidewalk may be more appropriate in a hamlet setting if a sidewalk exists to connect to.

Likewise, utilize context sensitive roadway design, in order to maintain the special resources (whether it is the open, rural landscape, or the historic portion of a hamlet).

- Streets should be designed based on their function and the character of the area.
- Streets should be designed to maintain and preserve natural topography, significant landmarks, and trees; to minimize cut and fill; and to preserve and enhance views and vistas on or off the subject parcel.
- Road design should reflect the context and characteristics of the area. The use of narrow roads, similar to existing country routes, is encouraged.
- In more dense areas, utilize street trees to provide shade and separate the roadway from pedestrians.
- Minimize the number of curb cuts on existing roads and utilize shared driveways, linked/shared parking where possible.



*Unacceptable design: pavement widths typical of suburban neighborhoods are inappropriate within western Clifton Park.*

## **J. Protect dark, night-time skies for the whole community**

### **Ensure that utilities and lighting are appropriate for the setting**

Public and private utilities and lighting should be carefully sited so as not to detract from the rural qualities of western Clifton Park. In general, new development should consider the following:

- Locate utilities underground to the furthest extent possible. All above ground utility boxes and similar facilities should be clustered and screened with landscaping.
- Lighting should be appropriate to the rural setting. For example, do not “over light” (too many lights or lights that are too bright), always include full shielding to eliminate glare, and outside of hamlet areas minimize lighting to preserve nighttime, dark skies and avoid regularly spaced lighting.

## **III. Conservation Design**

The following design guidelines are required for development proposals within the Conservation Residential (CR) zoning district. The CR district is designed to support the economic viability of farming, and to preserve as many of the operating farms as possible by supporting conservation of the agricultural and rural resources and lands. The district also serves to accommodate low-density residential uses appropriate in scale and intensity, and in a balance with the natural resources and agricultural resources for this rural area of the community.

The primary component of the CR district is utilization of a conservation-design approach to subdivision development and site layout. The conservation approach requires new development to focus *primarily* on the conservation of natural resources while providing landowners with site design flexibility, such as the use of relatively small minimum lot sizes. It is intended that these concepts work together to encourage a high standard of new development. For example, the flexibility in lot sizes and dimensional standards for individual home sites allows for the conservation of open space and other community amenities while encouraging site layout creativity.

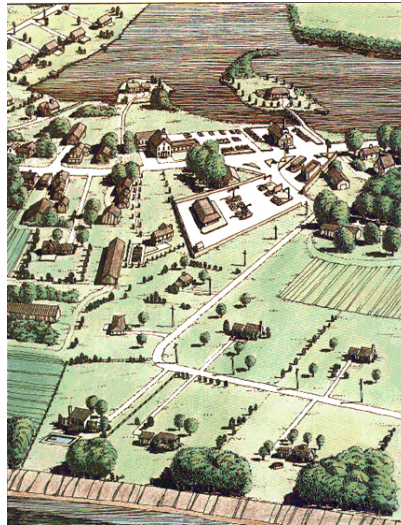
The following section is designed specifically to assist the planning board, applicants and the public in planning, site layout, and review of development projects within the Town of Clifton Park's Conservation Residential zoning district. No application for consideration by the Planning Board under Section (number), CR shall be approved without demonstrating compliance with these guidelines and standards.

**A Conservation Subdivision example** is shown below in these illustrations.

(© Copyright 1995-1996 Center for Rural Massachusetts, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst)



*Existing farm area.*



*Same area after conventional, suburban-style development.*



*Same area with appropriately scaled and sited development (same number of units).*

# **Conservation Design Layout:**

## ***Criteria and Design Process for Establishing the Permanent Open Space and Siting Development on a Parcel***

The following text outlines the procedures for conducting a conservation-based design and layout for site plans and subdivision plans in the Conservation Residential zoning district. All proposed development projects within the CR district must adhere to the density, land use, and other standards set forth within § (CR zoning district). Once the allowed base density is determined, the applicant shall utilize the following design and development guidelines for site planning and design of the subject parcel. The conservation design layout procedure is as a four-step process designed to assist the applicant, the planning board and the public in preparing and analyzing the materials for site plan and subdivision applications within the Conservation Residential (CR) zoning district.

The conservation design layout's four-step resource analysis procedure is as follows:

1. Develop an existing resources and site analysis plan of the natural, cultural, and scenic features.
2. Conduct a conservation analysis and develop the conservation concepts.
3. Demonstrate a proposed layout of the development concept that works with and complements the conservation concepts.
4. Prepare a summary preliminary plan that shows the synthesized conservation and development concepts. This step shows the proposed layout of the permanent open space and the development area.

The purpose of conducting such a resource analysis is for the applicant to demonstrate significant application and incorporation of the community resource values for Western Clifton Park as developed and presented in the Town of Clifton Park Open Space Plan, the Town of Clifton Park Comprehensive Plan, and the Western Clifton Park GEIS.

### **Step I.      **Develop an Existing Resources and Site Analysis Plan of the Natural, Cultural, and Scenic Features.****

A conservation analysis shall be conducted by the applicant and submitted to the Planning Board to show and describe constrained lands, the lands of conservation value, and identify comprehensive resources and unique site features. The analysis will include: the preparation of inventory maps and narrative to describe the site's natural, cultural, and historical resources, scenic views, and other special and unique features; and an analysis of each feature's conservation value.

The purpose of this step is to analyze the unique features of the subject parcel. An Existing Resources and Site Analysis Plan shall be prepared by the applicant to provide the applicant and the Planning Board with a comprehensive analysis of existing conditions including the natural, cultural and scenic resources, both on the site in detail as set forth below and describe in more general manner land uses, road systems, and natural and cultural resources within 500 feet of the perimeter of the proposed development site. The applicant and the planning board must identify the existing site conditions and conduct a site analysis to understand the unique landscape features of

the parcel and the relationship of the parcel to the adjoining lands as a basis for advancing any proposed permanent open space and proposed development area concepts for the Planning Board to consider.

The Existing Conditions and Site Analysis process shall include analyses of physical and environmental resources, forest resources, agricultural resources, historic and cultural resources, and potential as passive and recreational resources. The analysis may take the form of several maps and layers of data presented in a meaningful way to the Planning Board for its review and decision-making in conjunction with the applicant.

The following resources must be mapped and illustrated for the review of the Planning Board:

- a. All contiguous land owned or under option by the owner and/or applicant.
- b. Contour lines at a minimum of two-foot intervals to United State Geological Survey datum within the parcel.
- c. Slopes in excess of 20% or more, measured over a 50-foot horizontal distance.
- d. Ridgelines, hills, geologic formations including but not limited to rock outcrops and other important land features based on available published information or more detailed data obtained by the applicant
- e. Watershed boundaries shall be identified.
- f. Groundwater aquifers and/or recharge areas as mapped on the town's Official Aquifer Protection Map.
- g. Lakes, ponds, regulated streams, streams, and natural drainage swales
- h. Field delineation and survey of both NYS Department of Environmental Conservation Freshwater Wetlands and their associated 100-foot Adjacent Areas, and federal jurisdictional wetlands as regulated by the U.S. Army Corps of Engineers.
- i. Watercourses, streams and other drainage corridors as classified pursuant to the New York State Department of Environmental Conservation Stream Classification System and as mapped on the Town of Clifton Park's Official Stream Protection Map.
- j. The Town of Clifton Park land conservation (L-C) zones.
- k. Flood hazard areas (from a Federal Emergency Management Agency (FEMA) flood insurance rate map, or site-specific flood elevation determination data if none is available otherwise through FEMA.
- l. Vegetative cover conditions on the property according to general cover type, including cultivated land, permanent grass land, old field, hedgerow, significant forest areas, woodlands, wetlands, isolated trees or small groups of trees with a caliper in excess of 12 inches, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, age and condition.
- m. Any designated Critical Environmental Area, and other important unique environmental areas.
- n. Habitat areas of rare, threatened or endangered species.
- o. Agricultural lands: active farmland within a New York State certified agricultural district in Saratoga County, lands within 500 feet of a New York State certified agricultural district, or soils classified as soils of Statewide Significance and Prime Farm soils as mapped by the U.S. Department of Agriculture, Natural Resources Conservation Service in the Saratoga County Soil Survey.

- p. Lands and parcels enrolled in the Town of Clifton Park's term open space, agricultural, or historic resources **term conservation easement** program.
- q. Lands identified along scenic road corridors as defined in the Town of Clifton Park Open Space Plan, Town of Clifton Park Comprehensive Plan, and the Town of Clifton Park Western Lands GEIS.
- r. As located on the site, the location and dimensions of all existing and proposed utilities and utility right-of-ways, existing streets, paved and unpaved roads and paths, buildings, agricultural barns, silos and any other agricultural structures, utilities, remains of buildings and structures, stonewalls, fences, and other man-made improvements.
- s. Historic resources. Locations of all historically significant sites, or structures on the site and on any abutting site within 500 feet of the site's property boundary, including but not limited to those sites and parcels identified as locally important historic resources in the Town of Clifton Park Open Space Plan, the Town of Clifton Park Comprehensive Plan and the Town of Clifton Park Western Lands GEIS, and according to the New York State Office of Parks, Recreation and Historic Resources, State Historic Preservation Office that tracks sites, buildings and parcels identified with state register or federal register historic designation.
- t. A viewshed analysis showing the location and extent of views into the property from public roads and from navigable waterways, public parks, public forests, other public lands, lands with term conservation easements, and lands with permanent conservation easements.
- u. Proximity to nearest hamlet or other existing or proposed neighborhood.
- v. Trails: existing and potential trails, bikeways and pedestrian that are in public use or are proposed conceptually in the Town of Clifton Park Open Space Plan, or specifically on the Town of Clifton Park Town-wide Trails Master Plan Map, on the Mohawk Towpath Scenic Byway, or other routes of town, state, federal, or Saratoga County significance.
- w. Recreation. Lakes, ponds, active public parks, town park district lands, or other town, county, state recreational areas, or opportunities or sites designated in the Town of Clifton Park's Comprehensive Plan.
- x. All other boundaries of environmental or other areas to be left undisturbed and/or protected through deed restrictions, conservation easements or other agreements and encumbrances of property which are or have been filed of record with the Saratoga County Clerk's Office shall be shown on the plan.

## **Step 2. Conservation Analysis and Prioritizing of Conservation Concepts.**

Taking the conservation site analysis data prepared in Step 1, the applicant should carefully review the Western Clifton Park Design Guidelines: Chapter 2. "Designing for the Rural, Scenic Landscape Character of Western Clifton Park to understand the town's conservation priorities. In consultation with the Planning Board, the applicant shall apply these conservation principles to the proposed site and identify the site-specific conservation priorities and potential conservation areas.

Once the site analysis has been accomplished and reviewed with the Planning Board, the applicant may develop concepts for prioritizing what of the existing resources should be

conserved and for what proposed future conservation use. Only after this step has been taken may the concepts for development be factored in to the site layout.

Below are the key conservation principles for Western Clifton Park to assist in prioritizing conservation concepts within the CR district:

- Conserve the scenic, rural landscape character – the unique setting of this parcel as it contributes to the unique setting of Western Clifton Park. Conduct creative site planning that maintains residential and pastures and rural character allowing for direct visual access to open land, woodlots, farms, scenic views, etc.
- Protect farms and agricultural lands and uses; protect the core agricultural areas of Western Clifton Park; protect prime farm soils
- Permanent protection of larger contiguous areas of significant open space resources which are visible to the general public including farmlands, woodlands, and other ecological and natural wildlife habitats and corridors.
- Buffer and protect existing protected open space resources: [Design that respects and buffers existing term conservation easements, permanent conservation easements and other permanently protected lands and resources, such as not but not limited to the Grooms Tavern Site, the Vischer Ferry Historic and Nature Preserve including the remains of the Erie Canal, the Mohawk Towpath Scenic Byway]
- Conserve and protect the town-identified open space, natural and cultural resources that are priorities for future conservation,
- Conserve and design with respect to the existing hamlet settlement patterns, existing neighborhoods and existing residences. Buffer existing residences and public views from new development.
- Preserve natural water features, watersheds and provide for connected water habitats
- Protect natural landforms and conserve open lands habitat
- Conserve woodland areas and connected woodlands habitats
- Support the restoration and adaptive reuse of previously developed landscapes, including the adaptive reuse of farm structures that preserves the agricultural setting and uses such as the farmstead and barns and surrounding fields.
- Connect people to the special resources. Provide trail connections within neighborhoods and link to regional paths.
- Protect dark, night-time skies for the whole community.

### **Step 3. Development Concept.**

Once the proposed conservation lands have been identified in Step 1, and prioritized in Step 2, this Step 3 is to identify the area for development (primarily within the unconstrained land and protective of the priority conservation area(s)) the remaining land area of the site may be focused on for siting the access, circulation for streets and pedestrian paths, and locating the proposed number of residential units and other development.

### **Step 4. Summary Preliminary Plan of Development and Conservation Concepts.**

The proposed subdivision application must follow applicable subdivision regulations as outlined in \_\_\_\_ regarding the submission, timing, review process, etc. This step shows the proposed layout of the permanent open space and the development area. This step involves formalizing the “drawing in” of the lot lines and the preparation on a plan meeting requirements for concept submission pursuant to Chapter 179 of the town code, Subdivision of Land.

## IV. Hamlet Design

The following design guidelines are **provided** **designed** to assist the planning board, applicant and public during review of building and zoning applications within the Hamlet Mixed Use (HM) and Hamlet Residential (HR) Districts. Specifically, the Planning Board shall use this section of the design guidelines to review all projects within the HM and HR districts required to comply with the town's site plan approval process.

### Application Process

All development projects within the HR and HM districts must adhere to the density, land use, and other standards set forth within § (HR and HM zoning districts reference). Once the allowed base density is determined, the applicant shall utilize the following design and development guidelines for site planning and design of the subject parcel.

### Hamlet Guiding Principles

The hamlet design guidelines further elaborate on the goals and objectives of the HM and HR districts and provide guidance on broad issues such as overall hamlet design, concepts for infill and integrating new development into existing hamlet areas as well as specific standards regarding pedestrian amenities, site layout and design, and architecture and architectural treatments. The broad principles/**recommendations**, discussed within this section, are as follows:

- A. Enhance existing, unique, traditional hamlet settlement patterns within western Clifton Park**
- B. Restore, conserve and enhance the “sense of place” of the hamlet of Rexford through complementary, compact, new development, infill development and redevelopment layout and design**
- C. Foster pedestrian-friendly, walkable environments**
- D. Utilize area master planning, and site plan layouts and architectural styles consistent with the form of traditional hamlet of Rexford**
- E. Support connections within the hamlet of Rexford and vicinity both within the hamlet and outside of the hamlet.**

# Enhance existing, unique, traditional hamlet settlement patterns within western Clifton Park

Western Clifton Park’s traditional hamlet settlement pattern is a special unique characteristic that ties the town to its historic roots. These small nodes of development, surrounded by working agriculture, woodlands, and natural areas, make up pleasant, walkable neighborhoods, and special places to live and work. The HR and HM districts are designed to celebrate and enhance this traditional development pattern. All design and planning features – for example, site layout, architectural design, and the design and character of streets – should respect and enhance what is already considered special to the community.

- New construction should reinforce the traditional characteristics of Clifton Park’s historic hamlets and settlement patterns. Development should respect historic buildings, maintain a scale that is appropriate for the setting, protect and reuse existing buildings to the extent feasible, be of historically compatible architectural character, and generally build upon the existing framework of street networks, lot patterns, and streetscape and landscaping.



- New construction should creatively reflect elements of traditionally styled local architecture, appear as a comprehensive sequence in size and shape, be compatible with adjacent buildings and positively contribute to the overall organization and architectural theme of the hamlets of western Clifton Park.



# Restore, conserve and enhance the “sense of place” of the hamlet of Rexford through complementary, compact, new development, infill development and redevelopment layout and design

## Compact Design and Infill

Rexford’s unique “sense of place” is arguably most closely related to its compact design – for example, lot sizes are generally smaller than what is found in most of today’s suburban neighborhoods. Compact design is one of the primary elements of creating walkable, close-knit communities and keeping development from spreading throughout the rural countryside (both the HM and HR districts include an amenity zoning provision which allows for the transfer of development from conservation areas into the hamlet).



*Traditional hamlets include features that encourage walking such as sidewalks, benches, and street trees, as well as a mix of civic, residential, and commercial uses along a main street or small center.*

- **Compact design** is essential to achieving many of the hamlet district goals including walkability, protection of sensitive natural resources, and enhancement of the hamlet’s identity. Small lot sizes (6,000 square feet for residential) are allowed to encourage the continuation of Rexford’s existing development pattern.
- **Infill** that respects the traditional hamlet style is encouraged through the subdivision of existing parcels to create new development opportunities, reuse of existing structures, or demolitions and reconstructions of buildings that do not contribute to the character of the hamlet.
- In mixed-use areas, infill may also occur through the **conversion of residential structures** to commercial operations. The primary focus of infill development should be along main streets or the surrounding area to create a continuity of development in the hamlet.



*This commercial parcel in Rexford may provide an opportunity for redevelopment to contribute to a mixed use hamlet in the future.*

## Civic Areas

Another primary component of “sense of place” is the incorporation of public or civic spaces and buildings. Whether the resource provides for casual community gathering or for formal meetings and functions, these places can serve as focal points and contribute to the hamlet’s identity and special characteristics. Some of the various types of civic resources that should be included in hamlet development are discussed below:

**Focal Buildings:** Existing and future institutional buildings, private or public, can be focal points and features of an existing or new hamlet area. These buildings punctuate the neighborhood landscape by providing distinction to the place, as well as serving as a community social function. The scale of such a civic building should be appropriate with the surrounding built environment context.

Commons, squares, parks, and plazas within the hamlet should be focal points of the hamlet’s center and incorporated into surrounding residential neighborhoods. These resources provide breaks from development and pleasant places to gather, sit and relax.



*This church in the Hamlet of Vischer Ferry serves as visual interest as well as social function.*

- **Commons or squares** of anywhere between 10,000 to 60,000 square feet in size should be **considered incorporated into** the hamlet. The common should be located in a prominent location such as the core area and should be framed by surrounding structures.

- Smaller **neighborhood greens** should be distributed throughout the hamlet’s residential areas so that no lot is further away than a 5-minute walk. To accomplish this, it is likely that a series of greens serving small neighborhoods will be dispersed throughout the hamlet.



*A cluster of homes organized around a small neighborhood green. The buildings provide a frame for the public space while the small park provides a small recreation and gathering area.*

- **Public plazas** are open spaces designed for public use that are “framed” by surrounding buildings and/or streets. The primary functions for plazas within the hamlet districts are to encourage social interaction within developed areas and contribute to the public realm and overall livability of the hamlet. Plazas are generally located within dense areas of the hamlet, are between 500 and 1,000 square feet in size, and should include some or all of the following: areas to sit and relax; opportunities for entertainment (e.g., music performances); amenities to encourage public use (e.g., game tables, information kiosks, open air

cafes, etc.); incorporation of natural elements; management system to ensure for proper maintenance and upkeep of the public space.

## Foster pedestrian-friendly, walkable environments

All development within the HR and HM districts should contribute to and enhance the pedestrian environment.

- Development should **create pedestrian-friendly environments** within Clifton Park's hamlet zones by considering ways to incorporate and provide for non-motorized travel.

Buildings and streets should be designed in a way typical of traditional villages and hamlets to create an attractive and engaging streetscape and public realm and encourage pedestrian and bicycle uses.



New development should include streetscape improvements to encourage safe pedestrian usage and enhance overall "walkability" of the hamlet.

- New construction should contribute to a **pedestrian circulation system** that minimizes conflicts with motorized vehicles. Streets should be bordered by sidewalks and/or a trail system that connects the hamlet with publicly-accessible open space, parks or common areas. Bicycle circulation shall be accommodated on streets or dedicated bicycle paths. Vehicular and pedestrian movement shall be separated through streetscape and traffic calming mechanisms.

- Sidewalks shall be built to acceptable town standards and shall incorporate universal access standards for handicapped individuals where appropriate and necessary.



- Provisions shall be made for bicycle storage within the commercial and mixed-use areas (e.g., bike rack, etc.)

*Dedicated bicycle paths should be used to connect residential and commercial areas and bring the public into open space*

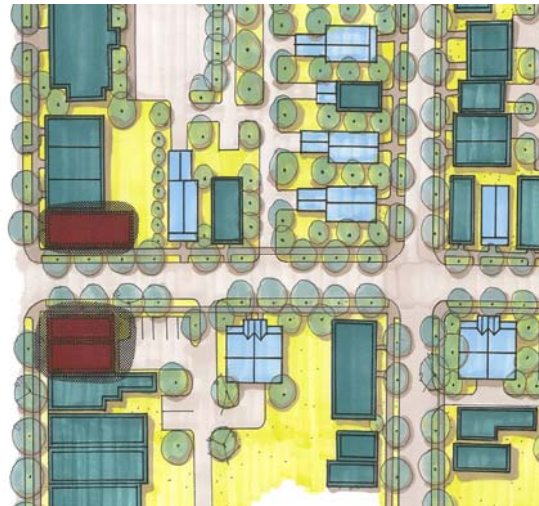
## Utilize area master planning, and site plan layouts and architectural styles consistent with the form of traditional hamlet of Rexford

Another key component of design within the HR and HM districts is consistency with traditional forms. This consistency relates to the whole of project design including but not limited to the layout of streets, placement of parking areas, and architecture. Development, particularly within the hamlet of Rexford, should follow a master planning approach where concepts of consistency with surrounding features and the traditional form of the hamlet are considered.

### Circulation system: layout and character

The overall hamlet circulation system should allow for a variety of travel modes, provide adequate traffic capacity and connected pedestrian and bicycle routes, and promote safe and efficient mobility through the hamlet. Overall, the system should include links between residential, commercial, public spaces and plazas, and surrounding open space areas.

- Where new streets are established, roads should make up an “interconnected pattern” of small blocks in a grid or modified grid system to diffuse traffic, and shorten walking distances. Block lengths should generally be between 200 and 600 feet in length and include “stub streets” as needed. Further, the orientation of streets should enhance the visual impact of common open spaces and prominent buildings
- All new streets should be designed based on their function and the character of the area. Often, narrower street widths than found in conventional developments are preferred. Narrow streets, even at a minimum of 9' wide, can still accommodate cars, service and emergency vehicles and also have the ability to slow traffic, and encourage walking.



*Recommended pattern: this image shows a system of interconnected streets with use of rear alleys and sidewalks.*

## Streets and Streetscapes

Streets should serve as public space to foster community interaction and balance the needs of pedestrians, bicyclists and motor vehicles. In general, street and streetscape design should consider the following:

- Design travel lanes for motor vehicle use to minimize conflicts with pedestrians and bicycles
- Align intersections for clear visual observation
- Avoid long, uninterrupted segments of straight streets.
- Incorporate curves into street design to slow traffic
- Utilize crosswalks, curb bulb-outs, appropriate signage, lighting, pedestrian crossing signals, and traffic lights to enhance pedestrian realm.
- Utilize changes in pavement materials, texture, color and pattern, especially at crosswalks
- Utilize curbs, on street parking, on all streets to separate pedestrian areas from traveled automobile lanes.
- Utilize street trees and planted medians



*The building awnings, the building signage, the street trees, the ground sign, the parked bikes, the seasonal, outdoor seating, the flags, the front porch in the background, all contribute to a streetscape experience pleasing to the eye and a stimulating experience for the pedestrian. Note the sidewalks are not that wide, and all the features contribute to an intimate, rich streetscape.*

## Parking, storage, and service areas

Within Clifton Park's hamlet districts, automobile parking areas should be secondary to buildings and the pedestrian circulation system. All parking lots, garages, service entries, storage, maintenance, loading, and refuse collection areas should be located at the rear or sides of buildings and screened from public view. If located at the side, screening shall be provided through the use of landscaping or decorative walls or fences. In addition:

- Parking areas behind commercial structures should be linked via a pedestrian and vehicular access network.
- Shared access and parking can be used to minimize excess parking within the hamlet.
- Entrances and exits to parking lots should be consolidated and shared.
- All large parking lots shall incorporate elements such as islands with planting and crosswalks to break up the mass and space of the lot and to provide for safe pedestrian navigation.
- Parallel on-street parking should be provided.
- Rear alleys are encouraged to provide additional parking and access to structures and to house public utilities and other public service functions (e.g., trash pick-up).



*Shared parking for the commercial building is on the side of the building which houses a restaurant, and several types of small-scale retail shops. The front of the building provides a focus for public space and pedestrians.*



*Crosswalks, plantings, and pedestrian-scaled lighting can help make parking areas more attractive and pleasant*

### Street lighting

Appropriate lighting is essential to creating a pleasant pedestrian environment. All light installations should be sensitive to the context of the hamlet and fit-in to the character of the area.

- **Street lighting should be provided along all streets.** In general, more, smaller lights as opposed to fewer, high-intensity lights should be used and all exterior lighting fixtures shall be directed downward to reduce glare onto adjacent properties and streets.
- **Pedestrian-level lighting** should be on fixtures not exceeding 15 feet in height. Lighting fixtures for parking lots should be between 15 and 25 feet in height (should not exceed 30'). Parking and circulation lighting fixtures should include a cutoff type of luminaire to prevent spillage of direct light above the fixture.



*Example of acceptable street lighting for the hamlet.*

## Architectural Considerations

Development within Clifton Park's hamlet districts should employ a variety of building types, sizes, designs, and construction materials to enable individual buildings to have unique distinctive character. However, this variety should be complementary in character to the hamlet's setting and Clifton Park. New construction should creatively reflect elements of traditionally styled local architecture, appear as a comprehensive sequence in size and shape, be compatible with adjacent buildings and positively contribute to the overall organization and architectural theme of the hamlet and not detract from it.



- Buildings should be designed at a **human scale** and all buildings ~~shall~~**should** be organized and designed in such a way that the front of the structure addresses and enhances the public realm.

- **The recognizable house entrance should be the prominent feature** of the front of parcels and lots.

- o Garages should be side loaded or when facing the street, located behind the front building face of the principal structure (for attached garages), completely behind the structure (detached garages).



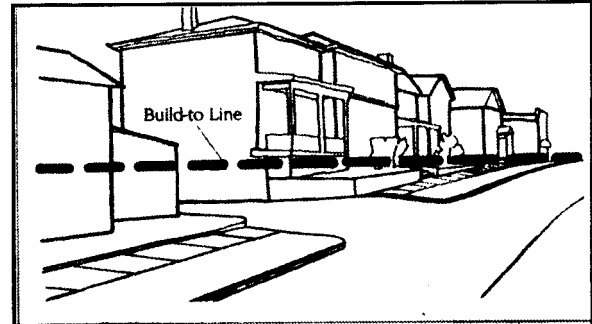
- Furthermore, all design of new and rehabilitated structures should consider the following:

- Ensure that doorways, windows, and other openings in the facade of a building are proportioned to reflect pedestrian scale and movement, and to encourage interest at the street level.



*A variety of building types with consistent features (build-to line, similar height). These homes also present a pleasant face to the public through windows, porches and front doors – enhancing the public realm and pedestrian experience.*

- Avoid massive, uniform, block structures and long, monotonous, uninterrupted walls or roof planes.
  - Utilize porches, patios, and balconies to introduce a transition from the structure to the street.
- **Buildings should be located close to the sidewalk** along the street to form a strong architectural and visual group by complementing each other. Consistently locate buildings within the hamlet along the build-to line to create a continuous streetscape.



*Structures located close to the street along a consistent "build-to" line create a continuous streetscape.*

- Building height, design, scale and mass should be **compatible with the neighborhood context**. Two-story buildings are preferred within the HR district, two to three-story buildings are preferred in the HM district. The relative portion and size of design elements in a structure, such as windows and bays, should be kept consistent throughout the design, and in keeping with the proportion, general scale and mass of adjacent structures.

- Facades should use architectural features and details to **articulate a building's façade**. Buildings greater than one story should clearly delineate the boundary between each floor of the structure through belt courses, cornice lines, or similar architectural detailing.



*The awning on this structure helps to delineate the first story from upper floors. The building also presents a pleasant public face and provides visual interest.*

- Facades should attempt to coordinate/complement the relative heights of elements, rhythms or bay systems of adjacent buildings as they are expressed on the facade with adjacent buildings.
- The **amount of fenestration** (windows and doors) in a facade should be consistent with the amount of fenestration in adjacent buildings and should remain sympathetic to the buildings in the vicinity and respond to the historic local architectural styles.

- At street level, the **ground floor facade** and, in particular, the entry should have the highest amount of fenestration and depth, should be open and inviting, and should have large display windows to glance into.

- **Roofs** for new development should consider and incorporate as many of the following standards as possible :

- Peaked roofs are generally preferred to flat roofs.
- Extensive use of very steep, or flat or very low pitched roofs should be avoided.

- Where flat roofs are used, they should be capped by a structural expression of the facade, not a fake roof front.

- Sloping roofs should be broken up by the use of dormers and gables to give the facade more visual prominence.

- Creative use of gables, dormers, and other roof line elements to highlight entrances and bring a sense of architectural distinction are encouraged.



- Longer buildings should provide fluctuations in the roofline, which are designed to break up the facade, and make entryways more prominent.
- Antennas, satellite dishes, air handling units and other mechanical equipment placed on a roof should not be visible from the street.

## Building materials and colors

**Finish materials and colors** should harmonize with the materials and colors of the adjacent buildings and positively contribute to the overall theme of the Hamlet. The use of constants between the main color theme and an accent color are recommended (e.g., dark vs. light); however, the number of colors used should be kept to a minimum.

Additional material and color concepts **that should** be incorporated into building design are:

- Subtle accents in the plane of the facade, created through the use of secondary materials such as rough textured materials or decoration (such as brickwork patterns), are encouraged but should not be used as primary theme.
- Wood or cement clapboard and brick or stone are the preferred material for new construction.
- In commercial areas, materials such as bricks, stone and cement or wood clapboard which are smaller in scale should be used in pedestrian areas instead of metal or glass panels.





# APPENDIX G

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*Draft: November 11, 2004*

# Proposed New Zoning Definitions

[To support the proposed new Town of Clifton Park zoning codes: Conservation Residential (CR); the Hamlet Residential (HR); the Hamlet Mixed-Use (HM); and the Open Space Incentive Zoning]

## **Definitions.**

**BASE DENSITY:** Measurement of the capacity of a parcel or parcels to support the creation of lots or development sites as expressed in dwelling units (lots) per acre which is calculated by subtraction of the constrained land acreage from the total acreage of the parcel(s).

**BENEFIT AREA:** General vicinity of the Permanent Open Space.

**COMPREHENSIVE PLAN:** The 2003 Town of Clifton Park Comprehensive Plan Update.

**CONSERVATION-BASED DESIGN:** An approach to land conservation and development planning and design that emphasizes the protection of important natural and cultural resources as a way to preserve these resources to the maximum extent practicable as land becomes developed.

**CONSERVATION SITE:** a parcel or parcels that will be the location for the establishment of a community benefit of Permanent Open Space through this section of the Town of Clifton Park zoning ordinance. The Permanent Open Space may be accomplished on a conservation site through either outright fee simple land purchase/donation or purchase/donation of development rights. Proof of perpetuity is required to be documented in writing to the Town of Clifton Park Town Board.

**CONSTRAINED LAND:** A parcel's acreage that includes surface water bodies, NYS DEC regulated freshwater wetlands, federally-regulated wetlands, 100-year floodplains, floodways, and lands with slopes 20% or greater (measured over a 50-foot horizontal distance).

**INCENTIVE SITE:** All or part of a parcel or parcels that will be allowed an increase in density through this section of the Town of Clifton Park zoning ordinance

**INCENTIVE ZONING:** The system by which specific incentives are granted, pursuant to § 261-b of the Town Law and the provisions of this chapter, on condition that specific physical, social or cultural benefits or amenities would inure to the community.

**LOW IMPACT DEVELOPMENT:** Including the protection of soil and water resources as part of development projects, such as provision for vegetative buffers along drainage courses.

**OPEN SPACE PLAN:** the Clifton Park Open Space Plan 2003

**PARCEL:** Any tax parcel, contiguous tax parcels under single ownership or contiguous tax parcels proposed to be developed as a unit. For the purposes of this section, each tax parcel shall be identified on the tax map of the Town of Clifton Park dated November 1, 2004, and single ownership shall be determined by deed as filed on November 1, 2004.

**PERMANENT OPEN SPACE:** The area within a parcel that is established for conservation of natural and cultural resources in perpetuity.

**REVIEW:** A preliminary, nonbinding review by the Town Board of an application for use of incentive zoning to determine the merits of applying the incentive zoning concept to a particular project.

**SEQRA:** The State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law, as amended, and the regulations promulgated hereunder.

**UNCONSTRAINED LAND:** A parcel's remaining acreage after constrained land is subtracted. Unconstrained land shall be the basis for calculating maximum allowable density.

**WESTERN CLIFTON PARK:** the area of Clifton Park consisting of the study area as described in the Western Clifton Park GEIS, and as comprised of the following zoning districts: Conservation Residential (CR), Hamlet Mixed-Use (HM), and Hamlet Residential (HR) zoning districts.

*Draft: November 12, 2004*

# **Conservation Residential (CR) District**

## **Proposed for the Town of Clifton Park, NY**

### **Purpose and Objectives.**

The district is established to provide and maintain land area to promote and support ongoing open space and agricultural uses and activities to sustain the rural character of this predominantly natural, agricultural and low-intensity residential setting. The purpose of the Conservation Residential (CR) Zoning District is to protect and enhance the rural character, the natural and scenic qualities of open space, the agricultural heritage, while providing for well-planned new development that complements the traditional settlement pattern, and protects the health, safety, economic base and quality of life in western Clifton Park for all of its residents.

Objectives:

1. New development should complement and harmonize with the traditional, open, rural, wooded, agricultural, natural and environmental resources, low-intensity residential and hamlet landscapes, agricultural lands and working landscapes, and scenic views and resources as valued by the community in Western Clifton Park.
2. The district includes lands and resources that the community supports for permanent conservation and protection as agricultural lands and open space lands identified in the public planning process of the Clifton Park Open Space Plan, the Clifton Park Comprehensive Plan, and the Western Clifton Park GEIS. Development projects in this district should contribute to the network of town-wide, permanently protected open space areas and habitat corridors, both within large parcels of land and among parcels throughout the town in accordance with the open space vision and criteria set forth in the Clifton Park Open Space Plan, the Clifton Park Comprehensive Plan, and the Western Clifton Park GEIS. Thus, these agricultural and open space lands would be included as town-wide priorities for conservation including the application of open space amenity zoning initiatives.
3. Development should be sited and laid out using conservation-based design and low-impact design in support of creative solutions to minimize impacts to open space lands and agricultural lands.
4. Development should support uses compatible with surrounding land uses and to provide and design for adequate buffering of adjoining properties, particularly between agricultural and residential uses.

## **Applicability.**

This Conservation Residential zoning district applies to all parcels as shown located within the bounds of said district on the Town of Clifton Park Zoning Map.

No parcel as shown on the tax map of the Town of Clifton Park an in existence as of November 1, 2004 may be changed or reconfigured for the purposes of avoiding the provisions of this chapter of the zoning code.

## **Permitted Uses.**

Planned Unit Development Districts are not permitted in the Conservation Residential District.

### ***Allowable on Unconstrained Land:***

The following uses are the permitted, principal uses within the CR district except within the Permanent Open Space:

#### **Agricultural and Forestry Uses**

- Farm Operations,
- Any form of agriculture or horticulture, provided that such operations are consistent with §150 and 308 of the Agriculture and Markets Law of the State of New York, including the storage, processing and sale of farm products except for as noted.
- The keeping of livestock or poultry, such as hogs, cows, horses, goats or chickens with a lot of a minimum of five acres.
- Commercial greenhouses only with a minimum of five acres.
- Roadside stands or other structures for the sale of farm products with a minimum of five acres. Such facilities shall be consistent with the customary activities and operations normally associated with a farm.
- Forestry uses for timber harvesting. No clear cutting.
- Commercial greenhouses only with a minimum of five acres.
- Odors, noises, and agricultural implements or chemicals associated with approved best-agricultural-environmental management practices shall be permissible.

#### **Residential Uses**

- One-family dwelling and its accessory buildings

#### **Open Space Uses**

- Open space land
- Conservation easements: permanent easements and term easements for agricultural, historic, or open space conservation

#### **Recreation Uses**

- Passive recreation
- Active recreation if the lands are municipally owned
- Off-road pedestrian and bicycle trails and paths

#### **Utility and Other Types of Potentially Necessary Uses for CR District**

- Public utility structures
- Emergency service facilities if and only as long as these facilities are under contract to the Town of Clifton Park to provide general health services to the town

- Radio installations, amateur (HAMs) as defined in §208-95A.
- All other telecommunication towers on shared sites as defined in §208-95B

### **Allowable on the Permanent Open Space.**

Within the CR district, the following uses are the permitted, principal uses allowed on any lands designated as Permanent Open Space. When the principal uses of preserving the open space or a part thereof is the protection/buffering of natural resources such as freshwater wetlands, aquifers, steep slopes, mature forests, wildlife habitats or stream corridors, open space uses shall be limited to those which are no more intensive than passive recreation for that approximate portion of open space which warrants protection/buffering.

#### **Agricultural and Forestry Uses**

- Any form of agriculture or horticulture, provided that such operations are consistent with §150 and 308 of the Agriculture and Markets Law of the State of New York, including the storage, processing and sale of farm products except for as noted
- Lands reserved for agricultural purposes but not in active production. Such lands may be required to be maintained using best agricultural / environmental management practices.
- The keeping of livestock or poultry, such as hogs, cows, horses, goats or chickens with a lot of a minimum of five acres.
- Forestry uses for timber harvesting. No clear cutting.
- Odors, noises, and agricultural implements or chemicals associated with approved best-agricultural-environmental management practices shall be permissible.

#### **Nature Preserve Uses**

- Conservation of water, plant, or wildlife habitat
- Nature preserve, wildlife habitat, open space lands for no active human use
- Off-road pedestrian and bicycle trails and paths

#### **Park Uses**

- Passive recreation area
- Active recreation area if lands are municipally-owned, dedicated public active recreation fields; (no active recreation facility buildings)
- Off-road, multi-use pedestrian and bicycle trails and pathways, accessible for disabled, otherwise non-motorized uses, located within the development and creating connections (or leaving opportunities for connections) to existing or proposed pathways or trails in the Clifton Park Open Space Plan and the Clifton Park Trails Master Plan.
- Public building for environmental educational uses, restrooms, visitors center, with a maximum of a 2,000 square feet building footprint.

### **Special Use Permit Approval Required.**

#### **Agricultural Uses**

- Temporary uses and structures, pursuant to Section 208.96
- Large concerts, festivals, events with potential to attract more than 1,000 people in one day
- Commercial stable;

- Commercial greenhouses on less than 5 acres
- Animal clinic/veterinary clinic/office/animal hospital
- Tack shop
- Private, public building open to the public for agricultural education purposes, restrooms, visitors center, with a maximum of a 2,000 square feet building footprint.

### **Residential Uses**

- Dwelling, Two-family attached or semi-detached

### **Other Uses**

- Roadside sales, non-agricultural, under the provisions of Section 208-100
- Home occupation
- Bed-and-breakfast facilities.
- Day-care as home occupation, for children or for adult day-care.
- Excavation and removal of stone, sand and gravel.
- Accessory use of a building for non-agricultural uses

### **Community/Institutional Uses**

- School
- Church or other place of worship
- Cemeteries

### **Utilities**

- Electrical substation, gas district governor station, telephone exchange or other public utility building, structure or use, except a business office, storage yard, or repair shop, and subject to the provisions of §208-79E(2).
- Storage of liquefied petroleum (LP) gas in excess of 1,100 gallons.
- Telecommunication facilities

## Standards.

The following minimum standards shall apply to all parcels in the CR district.

1. **Base Density.** The maximum allowable dwelling units that may be built within the CR district shall be a calculated based on the acreage of unconstrained land included in the development parcel(s). The base density of the parcel (the maximum allowable number of units) is the result of dividing the unconstrained land acreage by maximum development density set forth herein. Applicants may round down fractional units of 0.5 or less, and round up fractional units greater than 0.5.
2. **Development options:**
  - a. Development on less than 10 acres. A parcel consisting of less than 10 acres may be developed at a maximum density of one dwelling unit per three acres of unconstrained land. A parcel which is less than three acres but larger than 20,000 feet may be developed with one dwelling unit.
  - b. Development on 10 acres or more. A parcel consisting of 10 acres or more may be developed at a density of one residential dwelling unit per 10 acres provided there is at least one acre of unconstrained land available to accommodate a residential use including any required well and septic system. In lieu of development at said density, such parcel may be developed at a density not to exceed 0.33 units per acre of unconstrained land provided 50 percent of the area of the development site is designated as permanent open space pursuant to the other conditions set forth herein. For example, if an applicant owns a 70-acre parcel, and 10 acres are identified as constrained, the maximum allowable density with a 50 percent open space set aside 20 dwelling units. This example is calculated as follows: 70 acres minus 10 constrained acres equals 60 acres of unconstrained land. This 60 acres multiplied by 0.33 results in a maximum allowable base density of 20 units. These 20 units must be placed on the unconstrained 60-acre portion of the site in this example.
  - c. A one time single-lot exception is allowed, meaning a subdivision of one parcel as it existed as of January 1, 2005 into a maximum of two lots to be used for single family residential purposes only shall not be required to follow the conservation approach, although it is highly encouraged to be protective of the natural and cultural resources of the community. This shall only be permitted for parcels greater than ten acres and shall only be allowed if the both newly created lots will be initially owned by family members, at the discretion of the Planning Board. The newly created lot shall be a minimum of two acres and all principal buildings shall have a minimum setback of fifty feet from all property lines.
3. **Minimum permanent open space (land area).**
  - a. Where permanent open space is proposed, it must include a minimum of 25% of the unconstrained land of the parcel.
  - b. For any permanent open space, the fee simple title to the permanent open space may be held privately, but for all permanent open space, the area shall be designated on the site and subdivision plat as applicable and shall be so designated on the zoning map of the Town of Clifton Park.

- c. Permanent open space may be held in private ownership, or if proposed for public ownership, shall be dedicated to the Town of Clifton Park. (See section on proof of preservation in perpetuity of permanent open space.
4. **Conservation-based development design.**
    - a. Development of any parcels in the CR district shall comply with the requirements of this code (Conservation Design Layout) along with the development guidelines in the, "Western Clifton Park Design Guidelines" attached hereto by reference.
  5. **The minimum land area (lot size) per dwelling.**
    - a. With municipal water and sewer: 10,000 square feet
    - b. With municipal sewer only: 20,000 square feet
    - c. With municipal water only: 30,000 square feet
    - d. With no municipal water and sewer: 40,000 square feet
  6. **Minimum floor area:** 960 square feet for a dwelling unit.
  7. **Minimum width of lot at front building line:** 80 feet
  8. **Minimum front yard as is applicable to road character** except as required per Section 208-98:
    - a. A local traffic, subdivision road: 25 feet
    - b. All other town or county roads: 75 feet
    - c. A state highway: 125 feet.
  9. **Minimum rear yards:** 25 feet
  10. **Minimum side yards, each:** 10 feet.
  11. **Maximum permitted height:** For each foot the height of a building or other structure exceeds 35 feet, the width of each side yard shall be increased by one foot.
  12. **Minimum distance for environmental features consisting of Land Conservation (LC) Zoning District conservation lands, floodplains:** no residential dwelling units or on-site wastewater disposal systems, shall be located within the bounds of these environmental features. No residential dwelling or wastewater disposal system shall be placed within 50 feet of a wetland meeting federal jurisdictional requirements.

# Conservation Design Layout

## Criteria and Design Process for Establishing the Permanent Open Space and Siting Development on a Parcel

The following text outlines the procedures for conducting a conservation-based design and layout for site plans and subdivision plans in the Conservation Residential zoning district. The conservation design layout procedure is as a four-step process designed to assist the applicant, the planning board and the public in preparing and analyzing the materials for site plan and subdivision applications within the Conservation Residential (CR) zoning district.

The conservation design layout's four-step resource analysis procedure is as follows:

1. Develop an existing resources and site analysis plan of the natural, cultural, and scenic features.
2. Conduct a conservation analysis and develop the conservation concepts.
3. Demonstrate a proposed layout of the development concept that works with and complements the conservation concepts.
4. Prepare a summary preliminary plan that shows the synthesized conservation and development concepts.

The purpose of conducting such a resource analysis is for the applicant to demonstrate significant application and incorporation of the community resource values for Western Clifton Park as developed and presented in the Town of Clifton Park Open Space Plan, the Town of Clifton Park Comprehensive Plan, the Western Clifton Park GEIS.

### **Step 1. Develop an Existing Resources and Site Analysis Plan of the Natural, Cultural, and Scenic Features.**

The purpose of this step is to analyze the unique features of the subject parcel. An Existing Resources and Site Analysis Plan shall be prepared by the applicant to provide the applicant and the Planning Board with a comprehensive analysis of existing conditions including the natural, cultural and scenic resources, both on the site in detail as set forth below and describe in more general manner land uses, road systems, and natural and cultural resources within 500 feet of the perimeter of the proposed development site. The applicant and the planning board must identify the existing site conditions and conduct a site analysis to understand the unique landscape features of the parcel and the relationship of the parcel to the adjoining lands as a basis for advancing any proposed permanent open space and proposed development area concepts for the Planning Board to consider.

The Existing Conditions and Site Analysis process shall include analyses of physical and environmental resources, forest resources, agricultural resources, historic and cultural resources, and potential as passive and recreational resources. The analysis may take the form of several maps and layers of data presented in a meaningful way to the Planning Board for its review and decision-making in conjunction with the applicant.

The following resources must be mapped and illustrated for the review of the Planning Board:

- a. All contiguous land owned or under option by the owner and/or applicant.
- b. Contour lines at a minimum of two-foot intervals to United State Geological Survey datum within the parcel.
- c. Slopes in excess of 20% or more, measured over a 50-foot horizontal distance.
- d. Ridgelines, hills, geologic formations including but not limited to rock outcrops and other important land features based on available published information or more detailed data obtained by the applicant
- e. Watershed boundaries shall be identified.
- f. Groundwater aquifers and/or recharge areas as mapped on the town's Official Aquifer Protection Map.
- g. Lakes, ponds, regulated streams, streams, and natural drainage swales
- h. Field delineation and survey of both NYS Department of Environmental Conservation Freshwater Wetlands and their associated 100-foot Adjacent Areas, and federal jurisdictional wetlands as regulated by the U.S. Army Corps of Engineers.
- i. Watercourses, streams and other drainage corridors as classified pursuant to the New York State Department of Environmental Conservation Stream Classification System and as mapped on the Town of Clifton Park's Official Stream Protection Map.
- j. The Town of Clifton Park land conservation (L-C) zones.
- k. Flood hazard areas (from a Federal Emergency Management Agency (FEMA) flood insurance rate map, or site-specific flood elevation determination data if none is available otherwise through FEMA.
- l. Vegetative cover conditions on the property according to general cover type, including cultivated land, permanent grass land, old field, hedgerow, significant forest areas, woodlands, wetlands, isolated trees or small groups of trees with a caliper in excess of 12 inches, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, age and condition.
- m. Any designated Critical Environmental Area, and other important unique environmental areas.
- n. Habitat areas of rare, threatened or endangered species.
- o. Agricultural lands: active farmland within a New York State certified agricultural district in Saratoga County, lands within 500 feet of a New York State certified agricultural district, or soils classified as soils of Statewide Significance and Prime Farm soils as mapped by the U.S. Department of Agriculture, Natural Resources Conservation Service in the Saratoga County Soil Survey.
- p. Lands and parcels enrolled in the Town of Clifton Park's term open space, agricultural, or historic resources **term conservation easement** program.
- q. Lands identified along scenic road corridors as defined in the Town of Clifton Park Open Space Plan, Town of Clifton Park Comprehensive Plan, and the Town of Clifton Park Western Lands GEIS.
- r. As located on the site, the location and dimensions of all existing and proposed utilities and utility right-of-ways, existing streets, paved and unpaved roads and paths, buildings, agricultural barns, silos and any other

- agricultural structures, utilities, remains of buildings and structures, stonewalls, fences, and other man-made improvements.
- s. Historic resources. Locations of all historically significant sites, or structures on the site and on any abutting site within 500 feet of the site's property boundary, including but not limited to those sites and parcels identified as locally important historic resources in the Town of Clifton Park Open Space Plan, the Town of Clifton Park Comprehensive Plan and the Town of Clifton Park Western Lands GEIS, and according to the New York State Office of Parks, Recreation and Historic Resources, State Historic Preservation Office that tracks sites, buildings and parcels identified with state register or federal register historic designation.
  - t. A viewshed analysis showing the location and extent of views into the property from public roads and from navigable waterways, public parks, public forests, other public lands, lands with term conservation easements, and lands with permanent conservation easements.
  - u. Proximity to nearest hamlet or other existing or proposed neighborhood.
  - v. Trails: existing and potential trails, bikeways and pedestrian that are in public use or are proposed conceptually in the Town of Clifton Park Open Space Plan, or specifically on the Town of Clifton Park Town-wide Trails Master Plan Map, on the Mohawk Towpath Scenic Byway, or other routes of town, state, federal, or Saratoga County significance.
  - w. Recreation. Lakes, ponds, active public parks, town park district lands, or other town, county, state recreational areas, or opportunities or sites designated in the Town of Clifton Park's Comprehensive Plan.
  - x. All other boundaries of environmental or other areas to be left undisturbed and/or protected through deed restrictions, conservation easements or other agreements and encumbrances of property which are or have been filed of record with the Saratoga County Clerk's Office shall be shown on the plan.

## **Step 2. Conservation Analysis and Prioritizing of Conservation Concepts.**

Once the site analysis has been accomplished and reviewed with the Planning Board, the applicant may develop concepts for prioritizing what of the existing resources should be conserved and for what proposed future conservation use. Only after this step has been taken may the concepts for development be factored in to the site layout.

Below are the key conservation principles for Western Clifton Park to assist in prioritizing conservation concepts within the CR district:

- Conserve the scenic, rural landscape character – the unique setting of this parcel as it contributes to the unique setting of Western Clifton Park. Conduct creative site planning that maintains residential and pastures and rural character allowing for direct visual access to open land, woodlots, farms, scenic views, etc.
- Protect farms and agricultural lands and uses; protect the core agricultural areas of Western Clifton Park; protect prime farm soils

- Permanent protection of larger contiguous areas of significant open space resources which are visible to the general public including farmlands, woodlands, and other ecological and natural wildlife habitats and corridors.
- Buffer and protect existing protected open space resources: [Design that respects and buffers existing term conservation easements, permanent conservation easements and other permanently protected lands and resources, such as not but not limited to the Grooms Tavern Site, the Vischer Ferry Historic and Nature Preserve including the remains of the Erie Canal, the Mohawk Towpath Scenic Byway]
- Conserve and protect the town-identified open space, natural and cultural resources that are priorities for future conservation,
- Conserve and design with respect to the existing hamlet settlement patterns, existing neighborhoods and existing residences. Buffer existing residences and public views from new development.
- Preserve natural water features, watersheds and provide for connected water habitats
- Protect natural landforms and conserve open lands habitat
- Conserve woodland areas and connected woodlands habitats
- Support the restoration and adaptive reuse of previously developed landscapes, including the adaptive reuse of farm structures that preserves the agricultural setting and uses such as the farmstead and barns and surrounding fields.
- Connect people to the special resources. Provide trail connections within neighborhoods and link to regional paths.
- Protect dark, night-time skies for the whole community.

### **Step 3. Development Concept.**

Once the proposed conservation lands have been identified in Step 1, and prioritized in Step 2, this Step 3 is to identify the area for development (primarily within the unconstrained land and protective of the priority conservation area(s)) the remaining land area of the site may be focused on for siting the access, circulation for streets and pedestrian paths, and locating the proposed number of residential units and other development.

### **Step 4. Summary Preliminary Plan of Development and Conservation Concepts.**

The proposed subdivision application must follow applicable subdivision regulations as outlined in \_\_\_\_ regarding the submission, timing, review process,

etc. This step involves formalizing the “drawing in” of the lot lines and the preparation on a plan meeting requirements for concept submission pursuant to Chapter 179 of the town code, Subdivision of Land.

## **Proof of preservation in perpetuity of Permanent Open Space for sites in private ownership.**

1. **Perpetuity.** For all required, dedicated permanent open space, the open space restrictions must be in perpetuity and shall be so noted on any plat or plan submitted for approval to the town.
2. **Type of Proof Required.** A deed restriction or a permanent conservation easement must be placed on the parcel and/or lot(s) with Permanent Open Space.
3. The proof of such restriction of open space land in perpetuity is required and shall be supplied to the Town of Clifton Park Planning Board, and filed prior to the final plat approval of a site plan or subdivision plat.
4. The Town of Clifton Park Planning Board may not grant final approval to any site plans or subdivision plats that require Permanent Open Space, until the planning board receives the proof of the restriction on the open space land - of a permanent conservation easement.
5. The Planning Board may not approve a final plat until the proof is presented at a planning board meeting.
6. A perpetual conservation easement and/or other rights to property which have the minimum effect of restricting development of the open space land and allowing use only for agriculture, forestry, active or passive recreation, watershed protection, wildlife habitat or other open space use and prohibiting residential, industrial and/or commercial use of such open space land, pursuant to Section 247 of the General Municipal Law and or \_\_\_\_ of the Environmental Conservation Law, shall be granted to the Town of Clifton Park, or to a qualified, not-for-profit land conservation organization or land trust as may be acceptable to the organization, municipality and to the Planning Board.
7. The type of conservation easement may be site-specific and customized according to the proposed use of the open space land, and selected from the following options: open space conservation easement environmental conservation easement, agricultural conservation easement, or historic resources conservation easement.
8. The aforesaid conservation easement instrument shall describe the open space land of a parcel in metes and bounds and by a property survey, and shall bear the statement: "This tract or parcel of land is open space land with a permanent conservation easement subject to the provisions of the Town of Clifton Park Zoning Law substantially restricting its use."
9. Open space created by the use of this article must be clearly labeled on the final plat and site plan as to its use, ownership, management, method of preservation and the rights, if any, of the owners of the subdivision to such land, and to the general public. The plan or plat shall clearly show that the open space land is permanently reserved for open space purposes and shall not be platted for building lots and shall indicate the liber and page of any conservation easements or deed restrictions required to be filed to implement such reservations.
10. Such proposed conservation easement or other rights shall be reviewed and approved by the Town Attorney’s office and be required as a condition of plat or plan approval.

11. Said conservation easement shall not be amendable to permit commercial, industrial, or residential development and shall be recorded in the Saratoga County Clerk's office prior to filing an approved final site plan or final subdivision plat in the CR zoning district.

## **Ownership and maintenance of open space land and common facilities.**

The Planning Board must find the form of ownership of any open space land adequate to fulfill the purposes of this article. The following methods may be used either individually or in combination, for ownership of open space land (exclusive of its conservation easement) and common facilities. The appropriate form of ownership shall be based upon the purpose of the permanent open space reservation as stated above in Section \_\_\_\_. Ownership methods shall conform to the following:

1. **Open space land may be held in private, non-common ownership.**
  - a. The required open space land may be included within one or more large conservancy lots that are entirely open space land, provided the open space is permanently restricted from future development, except for those uses listed above in Section \_\_\_\_\_. This option may be preferable for open space land that is intended for agricultural use.
  - b. The applicant shall provide the Town of Clifton Park with a written description and proof of instrument of the use restrictions of the open space land.
2. **Open space land may be held in private, common ownership by a Homeowners Association (HOA).**
  - a. Open space land and common facilities may be held in common ownership by a homeowners' association subject to all of the provisions for homeowners' associations as set forth in New York State regulations and the General Business Law.
  - b. The open space restrictions must be in perpetuity.
  - c. The applicant shall provide the Town with a description of the organization of the proposed homeowners association, including its bylaws, and all documents governing ownership, maintenance, and use restrictions for common facilities.
  - d. Such a homeowners' association shall be established by the owner or applicant and shall be operating (with financial subsidization by the owner or applicant, if necessary) before the conveyance of the first lot in the development.
  - e. The HOA must be responsible for liability insurance, local taxes, and the maintenance of any open space land and any other common facilities.
  - f. Membership in the homeowners' association shall be mandatory for each property owner within the subdivision and successive owners in title with voting of one vote per lot or unit, and the subdivider's control, therefore, passing to the individual lot/unit owners on sale of the majority of the lots or units.
  - g. Each lot or unit owner, must be required by recorded covenants and restrictions to pay fees to the HOA for taxes, insurance and maintenance of open space, and as applicable, any private roads and any other common facilities.
  - h. Property owners must pay their pro rata share of the HOA costs as listed above in (e) and the assessment levied by the HOA must be able to become a lien on the property.

- i. The bylaws shall confer legal authority on the association to place a lien on the real property of any member who falls delinquent in his or her dues. Such dues shall be paid with the accrued interest before the lien may be lifted.
  - j. The HOA must be able to adjust the assessment to meet changed needs.
  - k. The applicant shall make a conditional offer of dedication to the Town of Clifton Park, binding upon the HOA, for all open space to be conveyed to the HOA. Such offer may be accepted by the town, at the discretion of the Town Board, upon failure of the homeowners' association to take title to the open space from the applicant or current owner, upon dissolution of the association at any future time or upon failure of the HOA to fulfill its maintenance obligations or to pay its property taxes.
  - l. Ownership shall be structured in such a manner that real property taxing authorities may satisfy property tax claims against the open space lands by proceeding against individual owners in the HOA and the dwelling units they each own.
  - m. Written notice of any proposed transfer of common facilities by the association or the assumption of maintenance for common facilities must be given to all members of the association and to the Town of Clifton Park no less than 30 days prior to such event.
  - n. The association shall have adequate resources to administer, maintain, and operate such common facilities.
  - o. The Town Attorney's office shall review and find that the HOA documents presented as part of the application satisfy the conditions outlined above and such other conditions that the Planning Board shall deem necessary.
- 3. Open space land may be offered fee simple dedication to the town or an open space or park district controlled by the town, provided that:**
- a. There is no substantial cost of acquisition to the town
  - b. The town agrees to and has access to maintain such open space
  - c. Such facilities for public use shall be accessible to residents of the town.
- 4. Open space land may be offered for conveyance, or for sale as fee simple dedication to the county or state governments, a nonprofit land trust or other land conservation organization.**
- 5. Maintenance and monitoring standards for open space land.**
- a. Ongoing maintenance and monitoring standards shall be established, enforceable by the town against an owner of open space land as a condition of site plan or subdivision approval, to assure that the open space land is used for the purposes intended in this chapter and specifically pursuant to the approval of the project rendered by the town and to ensure the use of the open space land does not detract from the character of the neighborhood context. Such maintenance standards may include the obligation to mow open fields to maintain their scenic character, and to maintain dedicated trails.
  - b. If the Town Board finds that the open space land is being maintained in such a manner as to constitute a public nuisance or otherwise not in conformance with standards established herein, it may, upon reasonable written notice to the owner, enter the premises for necessary maintenance or other action necessary and appropriate, and the cost of any such maintenance by the town shall be assessed ratably against the owner, or the in the case of an HOA, the owners of

properties within the development and shall, if unpaid, become a tax lien on said properties.

- c. Unless otherwise agreed to by the Town of Clifton Park Planning Board, the cost and responsibility of maintaining of open space and facilities shall be borne by the private owner, the homeowner's association, the conservation organization or land trust, or in the case of lands and facilities deeded to the Town of Clifton Park, the municipality. Likewise, if any lands restricted "open space land" are deeded to the county or the state, these respective municipal governments would be responsible.

## **Open Space Incentive Zoning Option. (See Chapter § \_\_)**

In exchange for the protection of an equivalent acreage of permanent open space under the provisions of Chapter § \_\_\_\_, Town of Clifton Park, Open Space Incentive Zoning, a parcel or parcels greater than 10 acres in area may be developed at a density of up to one residential unit per 1.5 developable acres or 0.66 units per acre, provided that development also meets the following conditions and limitations.

- a. Increases in dwelling unit density shall not exceed allowable base density by more than 100 percent.
- b. Community open space benefits or amenities may only be located within the CR district.

For example, if the base density of a 100-acre site in the CR district is 33 dwelling units, than the maximum density that can be potentially achieved by applying for open space incentive zoning is 66 dwelling units.

Application for Open Space Incentive Zoning must be done prior to or in conjunction with an application for subdivision approval to the Planning Board.

## **Site Plan and Subdivision Review.**

All building and zoning permit applications in the CR district shall be processed by the Planning Board subject to site plan and subdivision review and approval. Applications will be considered and processed by the Town of Clifton Park Planning Board in accordance with §278 of Town Law, and Article \_\_\_\_ Site Plan Review and Approval, and the Town of Clifton Park Design Guidelines. As part of that process, the Town of Clifton Park Planning Board shall, at a minimum, apply the limitations and conditions of this article.

## **HAMLET MIXED USE (HM) DISTRICT**

### Outline:

1. Purpose
2. Permitted Uses
3. Space and Bulk Standards
4. Mixed-Use Buildings
5. Density Bonuses (Amenity Zoning)
6. Site Plan Review (procedure)

### **1. Purpose**

The purpose of the Hamlet Mixed-Use (HM) District in Western Clifton Park is to provide primarily for focused business development to serve adjacent residential hamlets and neighborhood areas and to allow for a creative mix of commercial and complementary residential uses. However, the district may remain primarily commercial uses, such as a mix of offices and retail uses. The allowance for residential uses is intended to foster the creation of places within town where one could walk from home to work to neighborhood businesses. In addition, the HM district is intended to allow for development that generates a low-traffic impact. Finally, the site layout and related designs for development within the HM District should be in a manner that respects and enhances the traditional hamlet context of the proposed project within the specific HM district location.

In general, development should:

- Enhance existing, unique, traditional hamlet settlement patterns within Western Clifton Park
- Restore, conserve and enhance the “sense of place” of the hamlet of Rexford through complementary, compact, new development, infill development and redevelopment layout and design
- Support a primarily business and residential setting within the HM District that connects and transitions to nearby Hamlet Residential District to the south and the rest of the hamlet of Rexford
- Foster pedestrian-friendly, walkable environments
- Utilize area master planning, and site plan layouts and architectural styles consistent with the form of traditional hamlet of Rexford
- Support connections within the hamlet of Rexford and vicinity both within the hamlet and outside of the hamlet,
- Create access and connections such as to the Mohawk River waterfront and to the Mohawk Towpath Scenic Byway, and other existing and proposed town-wide and regional pathways and trails

This section is further intended to support the protection of town-identified open space within Western Clifton Park with the provision of potential density incentives and transfer of development from town-identified open space areas to the HR zone as is applicable.

## 2. Permitted Uses

<b>Business Uses</b>	
General business offices	P
Medical and dental offices and clinics, excluding overnight occupancy by patients.	P
Attorneys' offices	P
Offices for licensed professionals, for example, architects, accountants, engineers, psychologists, optometrists and chiropractors.	P
Insurance offices of independent or general agents, including regional or district offices of individual companies.	P
Mortuaries or funeral homes.	P
Center for the day care of children.	P
Real estate offices	P
Banking institutions	P
Financial services, e.g., investment counseling and tax services	P
Animal hospital/veterinary offices, with the exclusion of outdoor runs and commercial kennels.	P
Mixed-use buildings, with combination of commercial uses on ground floor with residential units on upper floors *	P
Home occupation	P
Day-care home	P
Bed-and-breakfast facilities	S
Facilities for the sale and/or consumption of farm- and country-related edible and nonedible products at farm markets. Such facilities shall be consistent with the customary activities and operations normally associated with a farm	S
Animal-care facilities, provided that any structure or area used for such purposes, including pens or exercise runs, shall be at least 100 feet distant from any residential district	P
Bank or savings-and-loan association	P
Boardinghouse	P
Bowling alley	P
Convenience food store	P
Day-care center	P
Dry-cleaning establishment, where not more than five persons are employed and where no flammable cleaning fluids are used	P
Personal service establishments	P
Restaurant; or barroom, provided that no portion of the portion of a building occupied by such uses shall be located within 300 feet of the boundary line of any residential district	P
Commercial recreation facility, subject to the provisions of § 208-94	S
<b>Municipal Uses</b>	
Private schools, excluding business, dancing, trade or any other commercially oriented school	P
Nonprofit institutions for charitable, religious, cultural or community purposes.	P
Emergency ambulance facilities if and only as long as these facilities are under contract to the Town of Clifton Park to provide general health services to the Town	P
Public utility structures.	P

Radio installations, amateur (HAMS). See § 208-95A	P
Electrical substation, gas district governor station, telephone exchange or other public utility building, structure or use, except a business office, storage yard, or repair shop, and subject to the provisions of § 208-79E(2).	S
Federal, state, county or Town municipal building	P
All other telecommunication towers as in § 208-95B. [Added 12-9-1996 by L.L. No. 11-1996]	P
Cemeteries	S
Church or other place of worship	P
Section 208-96, Temporary uses and structures.	S
Public library	S
<b>Residential Uses</b>	
One-family dwellings	P
two-family dwellings	P
Community residences	P
Dwelling, two-family and/or semidetached	P
Accessory Structures: buildings accessory to the above which are an integral part of any of the above uses and are not in conflict with the purposes of this article as set forth above, which determination shall be made by the Planning Board	P

*P=permitted*

*S=pursuant to § 208-79 et seq (Special Permits)*

*\*see "mixed-uses" (section 4 below)*

### 3. Space and Bulk Standards

A. One-family detached dwellings – Limited to no more than 25% of a parcel’s total potential density

Base density: 1 unit per acre

Minimum lot size: 6,000 square feet

Minimum lot width: 50’

Minimum lot frontage: 50’

Front yard: 5’

Rear yard: 25’

Side yard: 5’ (20’ adjacent to commercial units)

Maximum building height: 35’

Maximum impervious surface lot coverage: 60%

B. Commercial uses and two-family, semi-detached, and multi-family dwellings – Limited to no more than 25% of the parcel’s total potential density.

Base Density:

Office uses: 4,000 gross square feet (gsf) per acre

Retail uses: 2,000 gsf per acre

Two-family, semi-detached and multi-family dwellings: 3,000 gsf per acre

For example, a project that includes 4,000 gsf of office space, 2,000 gsf of retail space, and 3,000 square feet of multi-family space would require three (3) acres of unconstrained land.

Minimum lot size: 12,000 square feet

Minimum lot width: 80'

Minimum lot frontage: 50'

Front yard: 10'

Rear yard: 30'

Side yard: 0' (20' adjacent to residential uses)

Maximum building height: 40'

Maximum impervious surface lot coverage: 60%

#### **4. Mixed-Use Buildings (residential uses may be allowed above commercial uses)**

Buildings in the HM District may include residential units as subordinate use to primary ground floor commercial use subject to the following provisions:

- i. Residential units shall not be permitted over an auto service station, or establishments storing or retailing flammable or fume producing goods.
- ii. The habitable area of each residential unit shall be at least five hundred (500) square feet.
- iii. Each residential unit shall be a separate dwelling unit with provisions for complete living including sanitary and sleeping facilities for year-round use by one (1) family.
- iv. Residential units shall not be located on the first floor of the building and each apartment shall contain all services for safe and convenient habitation meeting the New York State Fire, Building, Health and Environmental Codes.
- v. Residential units shall have access to the outside of the building which must be distinct from the access to uses on the first floor.
- vi. Each residential unit shall meet all applicable Town of Clifton Park off-street parking requirements.

#### **5. Density Bonus (through Open Space Incentive Zoning provisions)**

##### **A. Residential Bonus**

Applicants may propose and seek Town approval for an increase in the density of residential units within the Hamlet Mixed-Use (HM) zoning district per §(number) Open Space Incentive Zoning upon securing the required applicable development rights to town-identified open space parcels within Western Clifton Park.

##### **B. Office and Retail Bonus**

Applicants may propose and seek Town approval for an increase in the density of gross square footage of commercial units within the Hamlet Mixed-Use (HM) zoning district per §(number) Open Space Incentive Zoning upon securing the required applicable development rights to town-identified open space parcels within Western Clifton Park.

## **6. Site Plan Review**

All building and zoning permit applications in the HM District shall be subject to site plan approval. Applications will be considered by the Planning Board in accordance with Article XVI Site Plan Review and Approval and the Western Clifton Park Design Guidelines.



## **HAMLET RESIDENTIAL (HR) DISTRICT**

### Outline:

1. Purpose
2. Permitted Uses
3. Space and Bulk Standards
4. Density Bonuses (through Open Space Incentive Zoning)
5. Site Plan Review

### **1. Purpose**

The purpose of the Hamlet Residential (HR) District is to prevent adverse impact to the character of Western Clifton Park and to the hamlet of Rexford and to ensure that future growth is consistent and complementary to the existing hamlet settlement patterns. New development within the HR district shall adhere to the guidelines and standards set forth in the Western Clifton Park Design Guidelines. In general, development should:

- Enhance existing, unique, traditional hamlet settlement patterns within Western Clifton Park
- Restore, conserve and enhance the “sense of place” of the hamlet of Rexford through complementary, compact, new development, infill development and redevelopment layout and design
- Support a primarily residential setting within the HR that connects and transitions to nearby Hamlet Mixed-Use Zone to the north in the rest of the hamlet of Rexford
- Foster pedestrian-friendly, walkable environments
- Utilize area master planning, and site plan layouts and architectural styles consistent with the form of traditional hamlet of Rexford
- Support connections within the hamlet of Rexford and vicinity both within the hamlet and outside of the hamlet,
- Create access and connections such as to the Mohawk River waterfront and to the Mohawk Towpath Scenic Byway, and other existing and proposed town-wide and regional pathways and trails

This section is further intended to support the protection of town-identified open space within Western Clifton Park with the provision of potential density incentives and transfer of development from town-identified open space areas to the HR zone as is applicable.

## 2. Permitted Uses

<b>Residential Uses</b>	
One-family dwellings	P
Two-family dwellings, attached or semi-detached	S
Community residences	S
Accessory Structures: buildings accessory to the above which are an integral part of any of the above uses and are not in conflict with the purposes of this article as set forth above, which determination shall be made by the Planning Board	S
<b>Municipal Uses</b>	
Home occupation	P
Day-care home	S
Bed-and-breakfast facilities	S
Facilities for the sale and/or consumption of farm- and country-related edible and non-edible products at farm markets. Such facilities shall be consistent with the customary activities and operations normally associated with a farm.	S
Emergency ambulance facilities if and only as long as these facilities are under contract to the Town of Clifton Park to provide general health services to the Town	P
Public utility structures.	P
Radio installations, amateur (HAMS). See § 208-95A	P
Electrical substation, gas district governor station, telephone exchange or other public utility building, structure or use, except a business office, storage yard, or repair shop, and subject to the provisions of § 208-79E(2).	S
Federal, state, county or Town municipal building	P
All other telecommunication towers as in § 208-95B. [Added 12-9-1996 by L.L. No. 11-1996]	P
Cemeteries	S
Church or other place of worship	S
Section 208-96, Temporary uses and structures.	S
Public library	P

*P=permitted*

*S=pursuant to § 208-79 et seq (Special Permits)*

## 3. Area and Bulk Standards

### A. Residential uses

Base Density: 0.33 units per acre

Minimum lot size: 6,000 square feet

Front yard: 50'

Rear yard: 25'

Side yard: 5' (10' adjacent to commercial units)  
Maximum building height: 35'  
Maximum impervious surface lot coverage: 60%

#### **4. Density Bonus (through Open Space Incentive Zoning provisions)**

##### **A. Residential Bonus**

Applicants may propose and seek Town approval for an increase in the density of residential units within the Hamlet Residential (HR) zoning district per §(number) Open Space Incentive Zoning upon securing the required applicable development rights to town-identified open space parcels within Western Clifton Park.

#### **5. Site Plan Review**

All building and zoning permit applications in the HR District shall be subject to site plan approval. Applications will be considered by the Planning Board in accordance with Article XVI Site Plan Review and Approval and the Western Clifton Park Design Guidelines.



*Draft: November 11, 2004*

# Open Space Incentive Zoning

## Purpose and objectives

- A. It is the purpose of this article to empower the Town Board to grant incentives to the private sector engaged in the land development process to advance the town's specific policies in accordance with the Town's GEIS for the Western Lands of Clifton Park, the 2003 Comprehensive Plan Update, the 2003 Open Space Plan, and in coordination with other community planning mechanisms or land use techniques.
- B. This authority may be used by the Town Board to assist the following objectives from the town's GEIS for the western lands, Comprehensive Plan, and Open Space Plan:
- (1) To protect wildlife nature preserves, watersheds and water quality, highly valued ecological resources and environmentally sensitive areas.
  - (2) To protect active farm operations.
  - (3) To ensure that all development occurs in an ecologically sound manner.
  - (4) To preserve important open spaces, develop a comprehensive trails and pathway system; preserve scenic roads, cultural resources, and historic and archaeological resources.
  - (5) To protect wetlands and stream corridors for their benefits to wildlife habitat, flood and stormwater control, groundwater protection, erosion control, and recreation.
  - (6) To preserve open space for ecological, aesthetic, and recreational purposes.
  - (7) To preserve and enhance the existing diverse residential, rural, and historic character of Clifton Park and to provide for a diversity of housing.
  - (8) To allow for an increase in density on a given site providing the overall density of the Western Lands of Clifton Park is balanced.
  - (9) To establish permanent easements on town-identified open space parcels to prevent further development.
  - (10) To allow for an increase density of both commercial and residential development within the HM zone to create a more viable, walkable hamlet community.

## Authority

In accordance with § 261-b of the Town Law of the State of New York, the Town Board is empowered to provide for a system of zoning incentives as the Town Board deems necessary and appropriate, consistent with the purposes and conditions set forth herein.

## Applicability

This chapter applies only to Western Clifton Park zoning districts: Conservation Residential CR, Hamlet Residential HR, and Hamlet Mixed Use HM districts in the Town of Clifton Park, as shown on the Town of Clifton Park Zoning Map.

## Permitted incentives

The Town Board may grant the following specific incentives within the procedures set forth in this Section:

- Incentive A.** Single-family residential incentives: increases in single-family dwelling unit density beyond the base density within the HM, HM, or CR districts.

**Incentive B.** Commercial, two-family, semi-detached, and multi-family residential incentives: Increases in commercial uses and two-family dwelling, semi-detached dwelling, and multi-family dwelling unit density only in the HM district.

## Community benefits or amenities.

- A. The following community benefits or amenities may, at the discretion of the Town Board, be accepted in exchange for an incentive as provided in “Permitted Incentives” above. These community benefits or amenities may be either on or off the site of the subject application and may involve one or more parcels of land. **Community benefits or amenities may only be located within the CR district.**
- (1) **Permanent conservation easements:** agricultural conservation, open space, scenic, ecological, historic or other types of permanent conservation easements would be acceptable, on town-identified open space parcels within Western Clifton Park. Proof of perpetuity (signed purchase contract or easement title) is required in writing to the Town of Clifton Park Town Board prior to approval of an open space incentive zoning proposal.
  - (2) **Permanent protection of land in fee simple** for conservation and other community benefit purposes on town-identified open space parcels within Western Clifton Park. Proof of perpetuity (executed purchase contract or transfer of ownership of title) is required in writing to the Town of Clifton Park Town Board prior to approval of an open space incentive zoning proposal.
  - (3) **Cash in proportionate, equal value to the protection of the required acreage of unconstrained land that is commensurate with the incentive requested, that would be paid to the Town of Clifton Park’s dedicated open space fund account for utilization by the town exclusively for the permanent protection of open space and farmland in Clifton Park.** Proposed cash must be placed in an escrow account to be held by the town and documented in writing to the Town of Clifton Park Town Board prior to approval of an open space incentive zoning proposal.
  - (4) Any combination of the above-listed community benefits or amenities.
- B. These amenities will be in addition to any other mandated requirements pursuant to other provisions of the Town of Clifton Park Code and any other applicable law or regulation.

## Special conditions.

- A. All proposed amenities to be provided by the applicant must show a demonstrable benefit the benefit area.
- B. Where Incentive A (increase in single-family residential density) is sought, the Town Board shall only receive amenities per the following conditions:
- (1) The incentive granted will be in a one-to-one proportion to the development potential of the unconstrained land, as described in the table below and determined by the Town Board at the time of application.

*Table: Determination of amenity land required for single-family dwelling unit incentive*

	Density increase	Amenity land required
Single-family residential	1 unit	3 acres unconstrained land

(2) Residential unit density increases will be granted in increments according to the table above, of double the original base density, or in other words, not to exceed a 100% increase of the original base density for the incentive site.

C. Where Incentive B (increase in commercial, two-family, semi-detached, and/or multi-family residential density) is sought, the Town Board may only receive amenities per the following conditions:

(1) The incentive granted will be in proportion to the development potential of the conservation site provided in terms of unconstrained land, as outlined in the table below and determined by the Town Board at the time of application

*Table: Determination of amenity land required for commercial, two-family, semi-detached, and multi-family dwelling incentives*

	Density increase	Amenity land required
Office	1,000 gsf	2 acres unconstrained land
Retail	1,000 gsf	4 acres unconstrained land
Two-family, semi-detached, and multi-family apartments over commercial or retail ground floor space	One equivalent dwelling unit	2 acres unconstrained land

For example, a project that is seeking a density increase of 2,000 sf of office, 2,000 sf of retail space, and 2,000 sf of residential space beyond the base density would be required to provide 24 acres of unconstrained land as a conservation site.

(2) Commercial and two-family, semi-detached, and multi-family residential density increases will be granted in increments equal to the development potential of the amenity land provided per the above table, of triple the original base density, or not to exceed a 200% increase of the original base density for the incentive site.

## Criteria and procedure for approval.

A. Optional pre-application review. It is recommended that the applicant meet informally with town planning staff prior to completion of an application for purposes of gathering information for the proposed amenity/incentive exchange. The applicant is advised to review the GEIS, the Comprehensive Plan, the Open Space Plan, and any other materials the town may have on file regarding the open space incentive zoning program.

B. Applications requesting incentives in exchange for providing community benefits will be submitted to the Town Board in accordance with adopted procedures for requests to amend this chapter. The application will include the following information:

(1) The requested incentive.

(2) The proposed amenity.

- i. The location of the proposed conservation site must be demonstrated. The proposed conservation site should be one of the priority open space lands identified in the Land Conservation Plan in the Western Clifton Park GEIS and the Town of Clifton Park Open Space Plan.
- ii. The site's constrained land and unconstrained land must be mapped, and submitted as part of the application. **The proposed unconstrained land area that is the basis for the requested incentive must be specifically identified and highlighted on the map.**

- iii. The base density calculation must be provided that is the basis for the proposed exchange for incentives.
- iii. The proposed conservation site proposed for permanent protection must include this unconstrained land area and may include constrained land. Any proposed subdivision of land related to the efforts to obtain control of land for the incentive zoning proposal, must be approved by the Town as applicable.

(3) The estimated cash value of the proposed amenity.

(4) A narrative which demonstrates the following:

- (a) The benefits to the community, including the benefit area, from the proposed amenity
- (b) Consistency with the goals and objectives of the town's Comprehensive Plan, Open Space Plan, and western lands of Clifton Park GEIS
- (c) The relative importance and need for the amenity.
- (d) That there is adequate sewer, water, transportation, waste disposal and fire-protection facilities in the zoning district in which the proposal is located to handle the additional demands the incentive may place on these facilities beyond the demand that would be placed on them if the district were developed to its fullest potential.
- (e) That all conditions and other applicable requirements of the law are met.

(5) Any other information or support materials as needed or requested by the Town Board.

C. Review by Town Board. Within 45 days of submission of an application, pursuant to Subsection B herein, the Town Board will prepare a brief response to the proposal, outlining in writing the Town Board's determination on whether the proposal is worthy of further consideration and the basis for that determination. The Town Board may engage a consultant to assist in review of the application, the cost of which will be borne by the applicant. Suggested modifications to the proposal may also be provided by the Town Board to the applicant. At this point, the Town Board reserves the right to deny the project. However, with a supporting determination, the proposed application will be transferred to the Planning Board for review.

D. Advisory referral to Planning Board.

(1) The application will be submitted to the Planning Board for its nonbinding advisory opinion to the Town Board. The review at this stage is intended to obtain the input of the Planning Board for the subject land use decision. It is not intended to serve as a site or subdivision review, which would only occur after a decision by the Town Board on the incentive zoning request.

(2) The Planning Board will schedule a public workshop on the application, which may be conducted as part of its regularly scheduled meeting. The intent of the workshop is to share information between the applicant, the Planning Board and interested members of the public. The workshop will not supplant the formal hearing which will be conducted by the Town Board later in the review process.

(3) Within 45 days of receipt of the application from the Town Board, the Planning Board will prepare an advisory report to the applicant and the Town Board. The Planning Board's report will describe the beneficial aspects of the proposal and make recommendations for the amelioration of any adverse aspects of the proposal. The Planning Board's report and the application will then be transferred back to the Town

Board for its final decision on the application. The Planning Board reserves the right to deny the project, and describe why in its findings back to the Town Board.

- E. Compliance with SEQRA.
  - (1) Every decision by the Town Board concerning an application for use of incentive zoning on a particular project will fully comply with the provisions of SEQRA.
  - (2) The applicant will submit a Long Form Environmental Assessment, Part 1, to the Town Board after the referral by the Planning Board.
  - (3) The Town Board will establish itself as SEQRA lead agency for all applications submitted pursuant to this article.
  
- F. Public hearing by Town Board. Prior to its final decision and in conjunction with its SEQRA review, the Town Board will conduct a public hearing in accordance with the standard procedures for adoption of an amendment to the zoning ordinance or local law. At least five days' notice (14 days if a draft environmental impact statement or supplemental environmental impact statement was required) of the time and place of the hearing will be published in the official newspaper of the town.
  
- G. Findings and final decision.
  - (1) Following the public hearing and completion of the SEQRA process, the Town Board will approve, approve with modifications or conditions or deny the proposed incentive zoning application. A written statement of the findings will be prepared by the Town Board documenting the basis of its decision. The findings will include, but not be limited to, the following:
    - (a) SEQRA. That all requirements of SEQRA have been met, including the required findings under that law.
    - (b) Development capacity. That the proposed project, including the incentive, can be adequately supported by the public facilities available or provided as a result of the project, including but not limited to sewer, water, transportation, waste disposal and fire protection, without reducing the availability of such facilities for projects permitted as of right under the Town of Clifton Park Code.
    - (c) Public benefit. That the public benefit realized by the amenity provided by the applicant is commensurate with the incentive granted by the Town Board and that there is specifically a demonstrable benefit to the incentive area.
    - (d) Project quality. That the project is in harmony with the purpose and intent of this article and with the stated objectives and will promote the purposes herein, that the project is sufficiently advantageous to render it appropriate for grant of an incentive and that the project will add to the long-term assets of the Town of Clifton Park.
    - (e) Comprehensive Plan. That the use of incentive zoning for the particular project is consistent with the GEIS, Comprehensive Plan, and Open Space Plan
  - (2) The Town Board may impose conditions on a project to ensure that the above findings are ensured through the subsequent plan review and construction phases of the project.

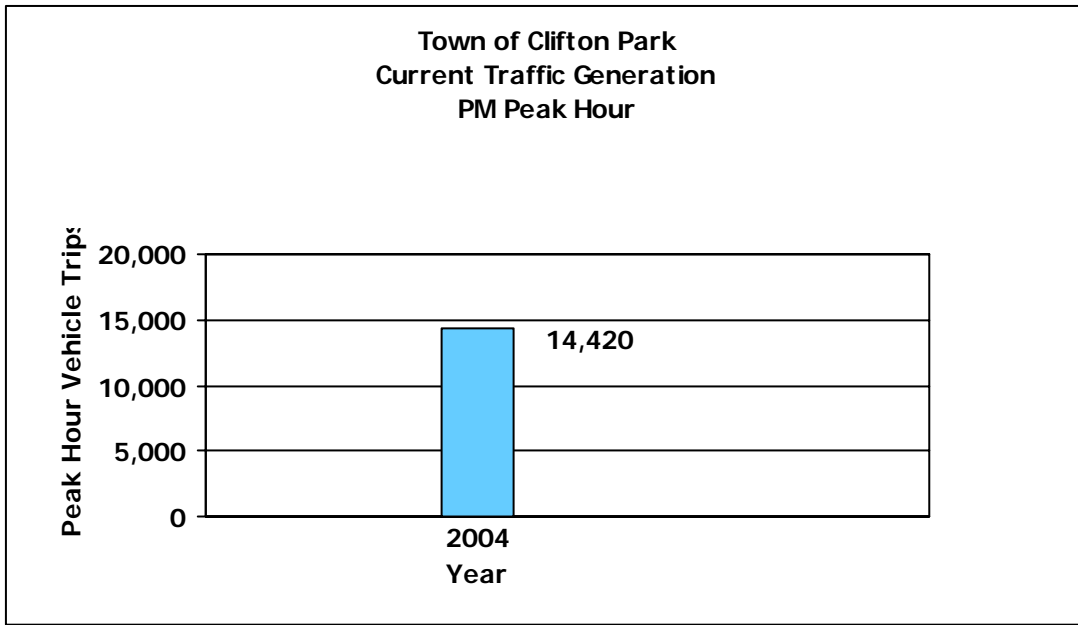
- H. Plan review. Following the receipt of a favorable decision by the Town Board, an application for approval may be submitted pursuant to the applicable provisions of the Town of Clifton Park Code.

# APPENDIX H

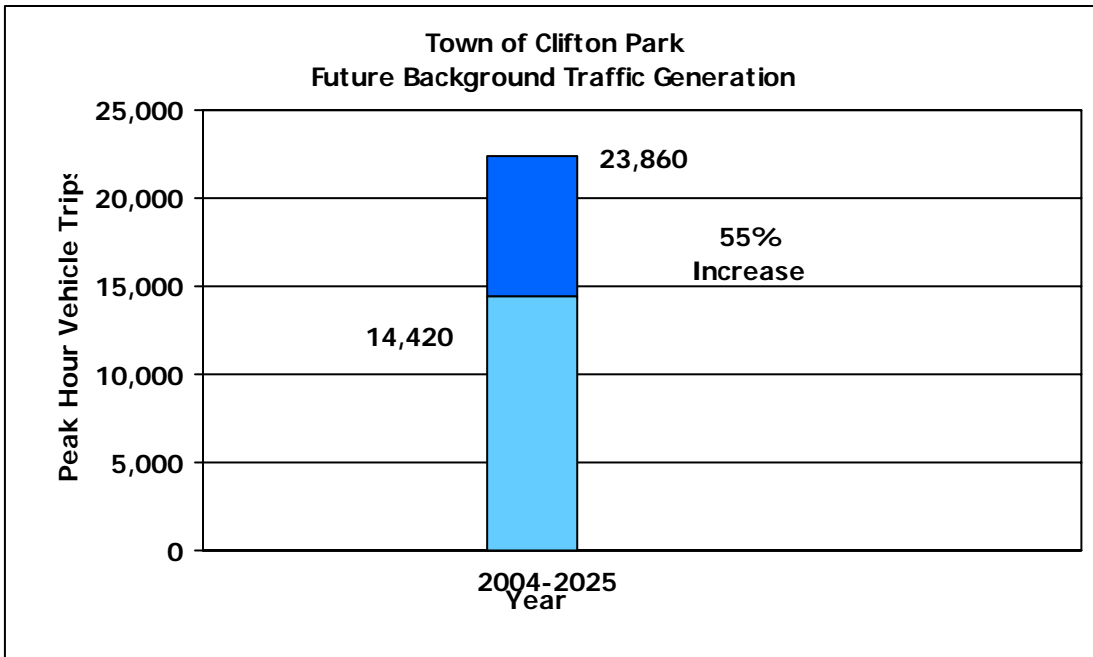
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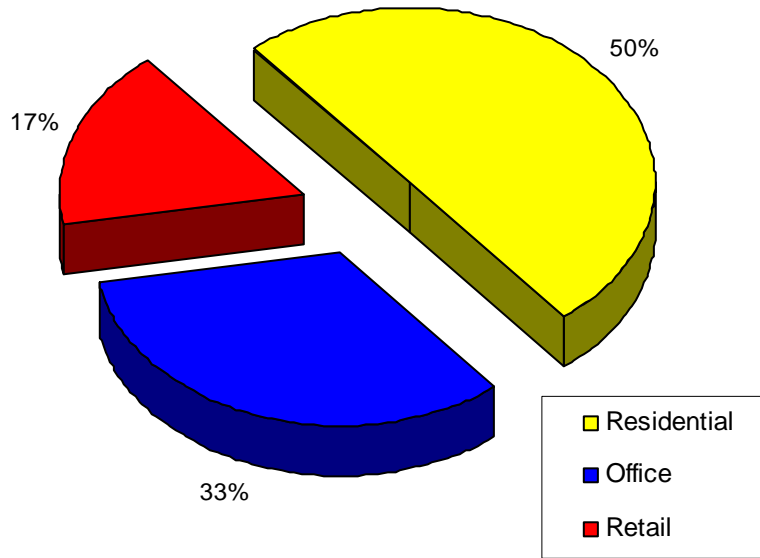
**Figure III-H-1**



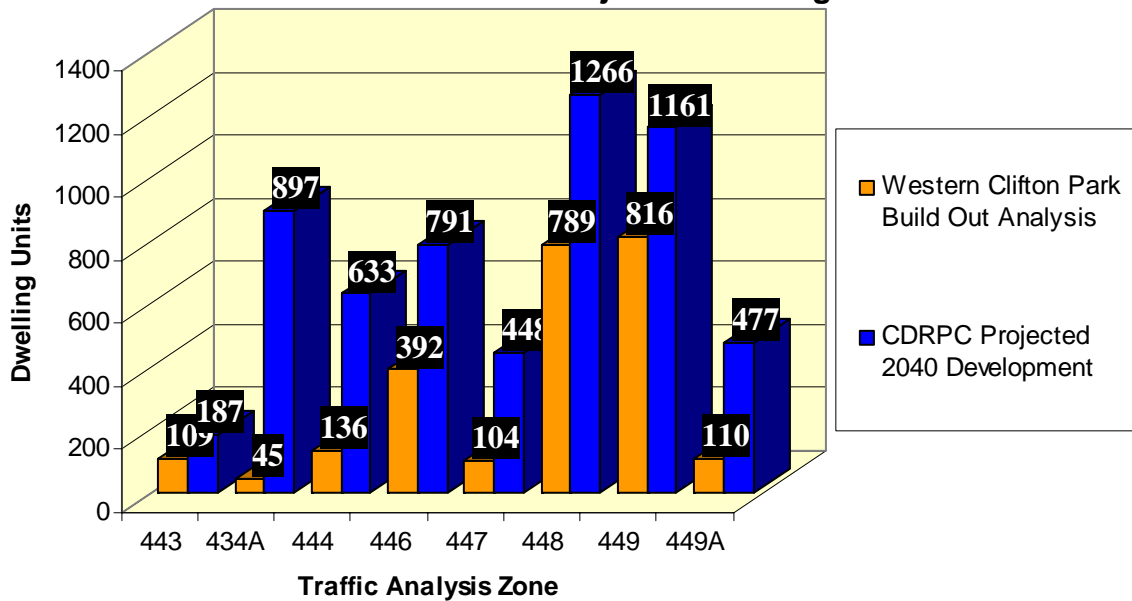
**Figure III-H-2**



**Figure H-10  
Study Area Traffic Generators**



**Figure H-11  
Town of Clifton Park Projected Dwelling Units**



**Figure H-12**  
**Traffic Generation Comparison**

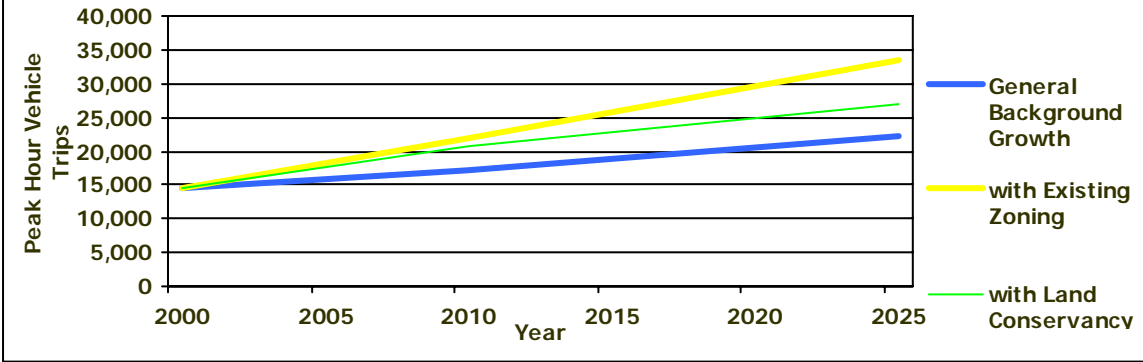
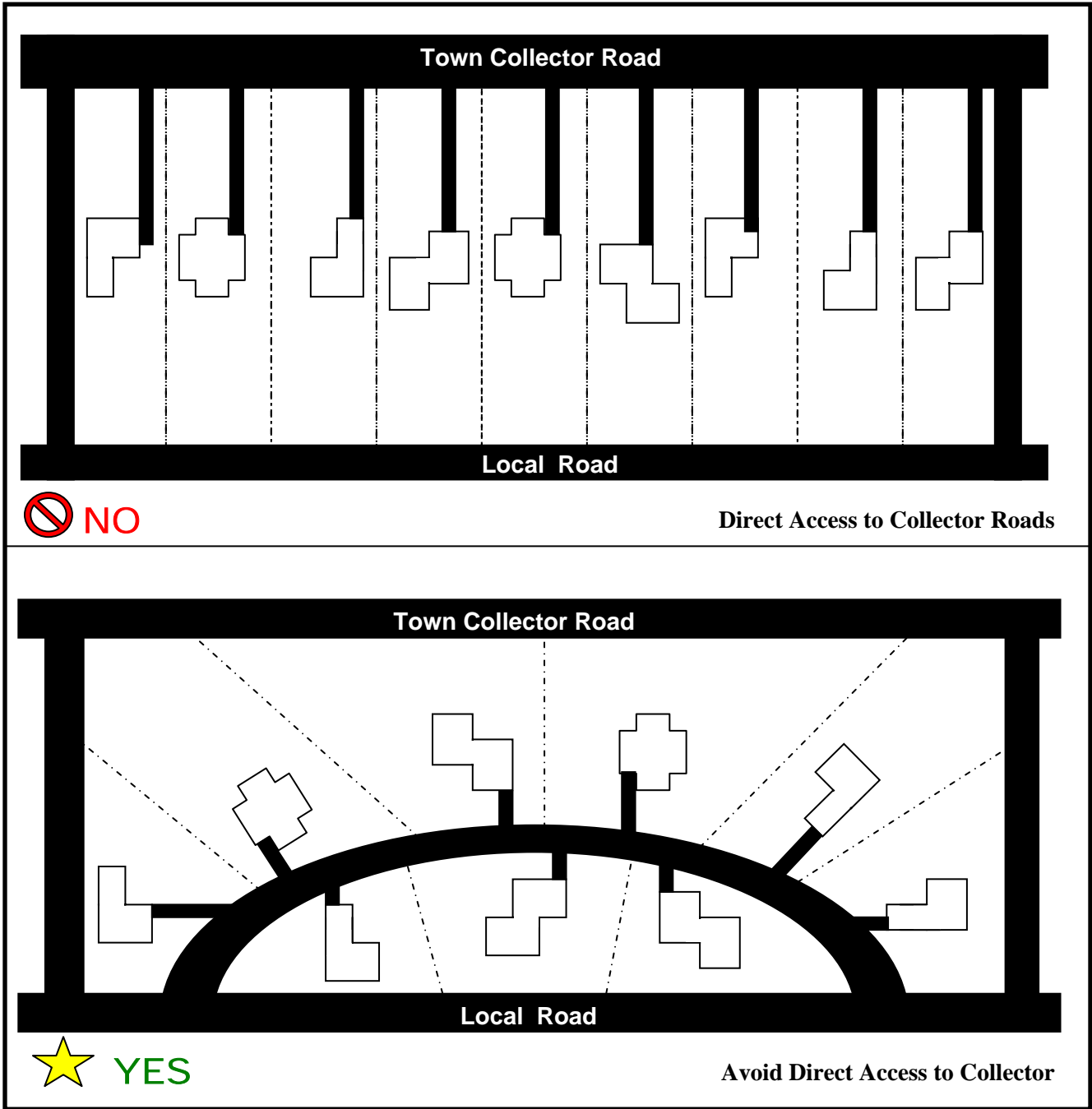
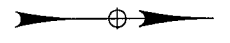
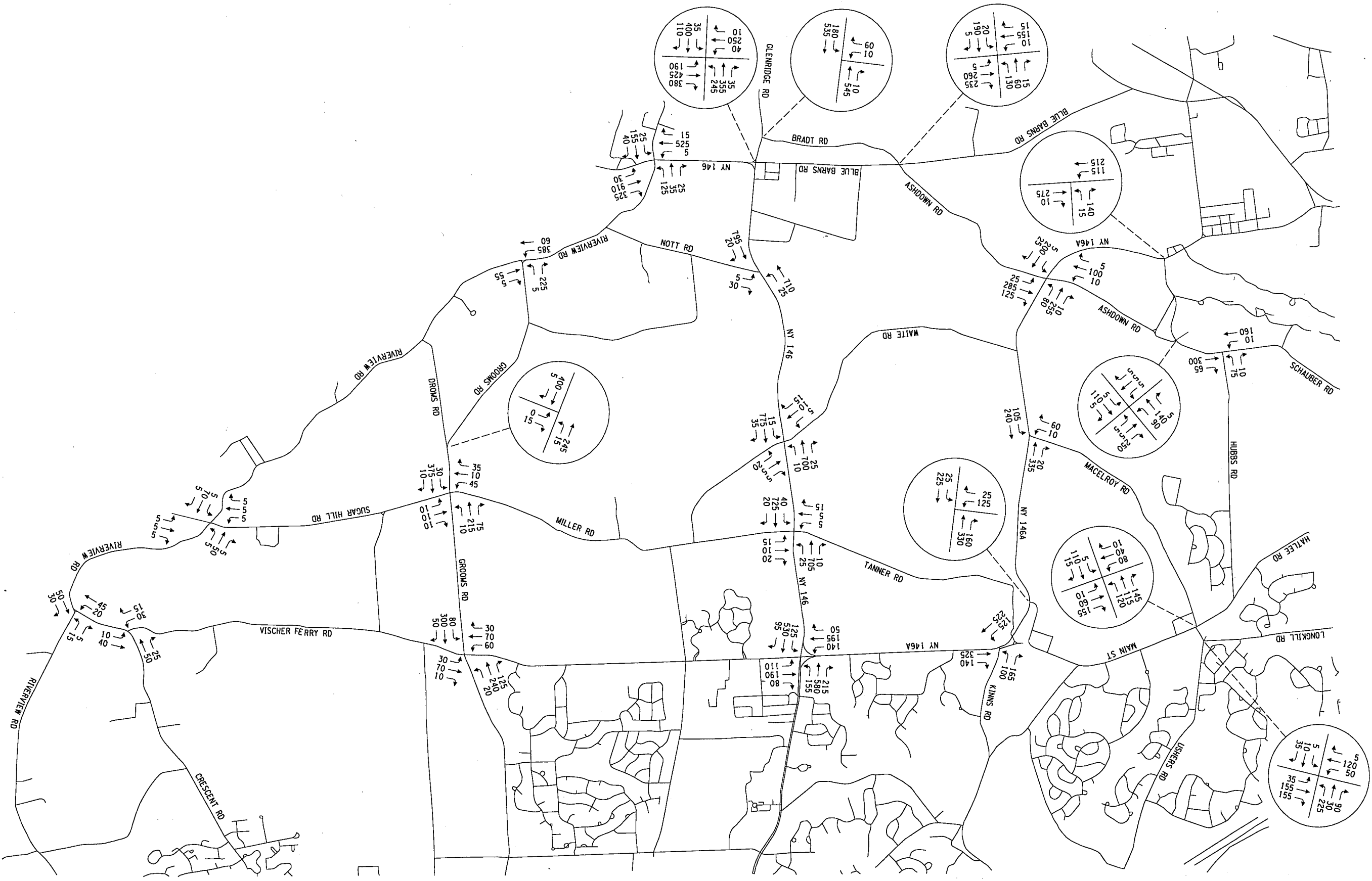


FIGURE III-H-15









2004 EXISTING TRAFFIC VOLUMES: PM PEAK HOUR

**CHA & ASSOCIATES LLP**  
 ENGINEERS, SURVEYORS, PLANNERS  
 LANDSCAPE ARCHITECTS

111 WINNERS CIRCLE ALBANY, NEW YORK, 12205

SCALE: NONE DATE: 9/04

FIGURE H-4  
 CLIFTON PARK CEIS  
 CLIFTON PARK, NY





# Western Clifton Park

## Generic Environmental Impact Statement

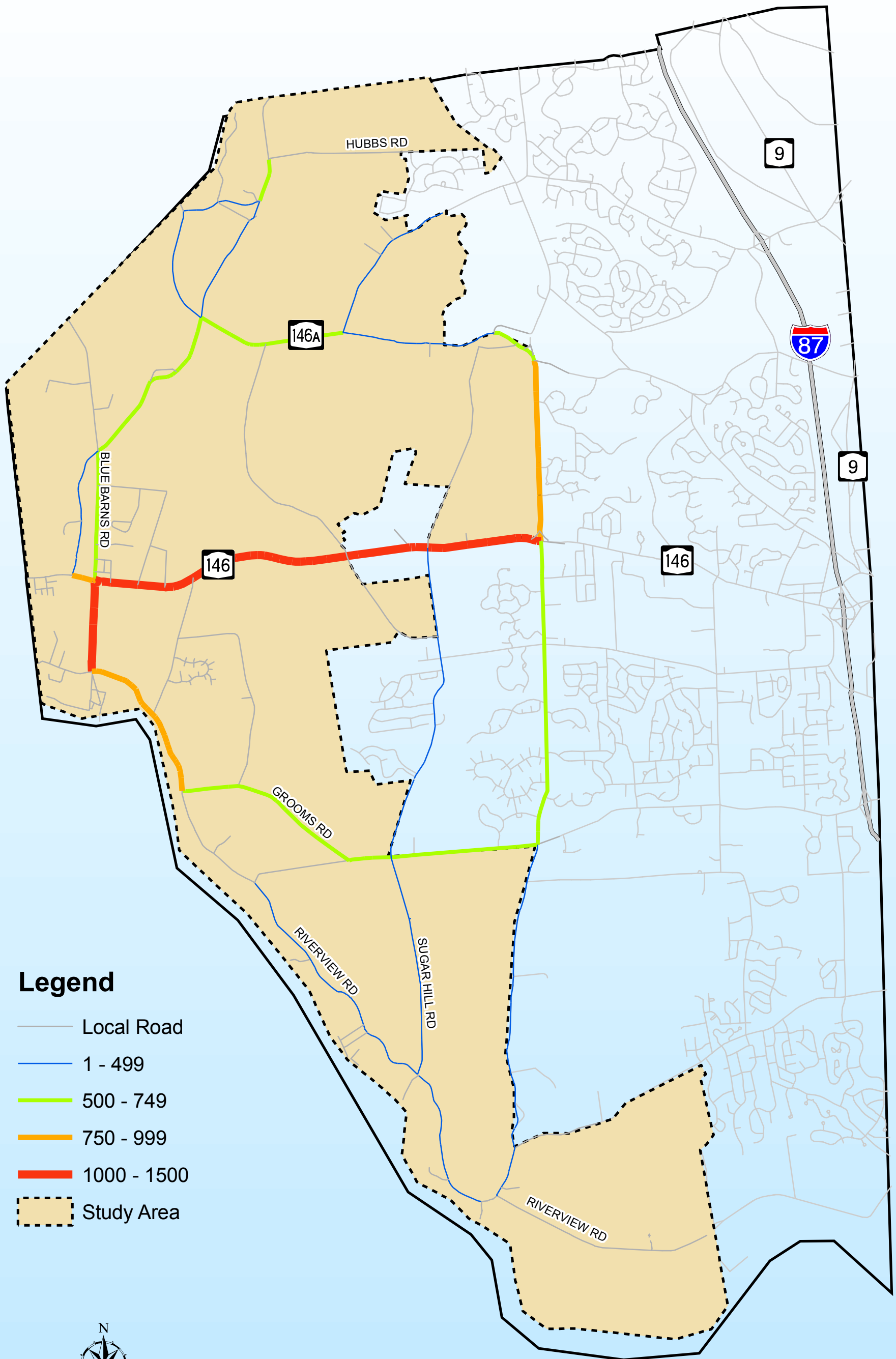


Figure H-5: 2-Way AM Peak Hour Volumes Existing Conditions





# Western Clifton Park

## Generic Environmental Impact Statement

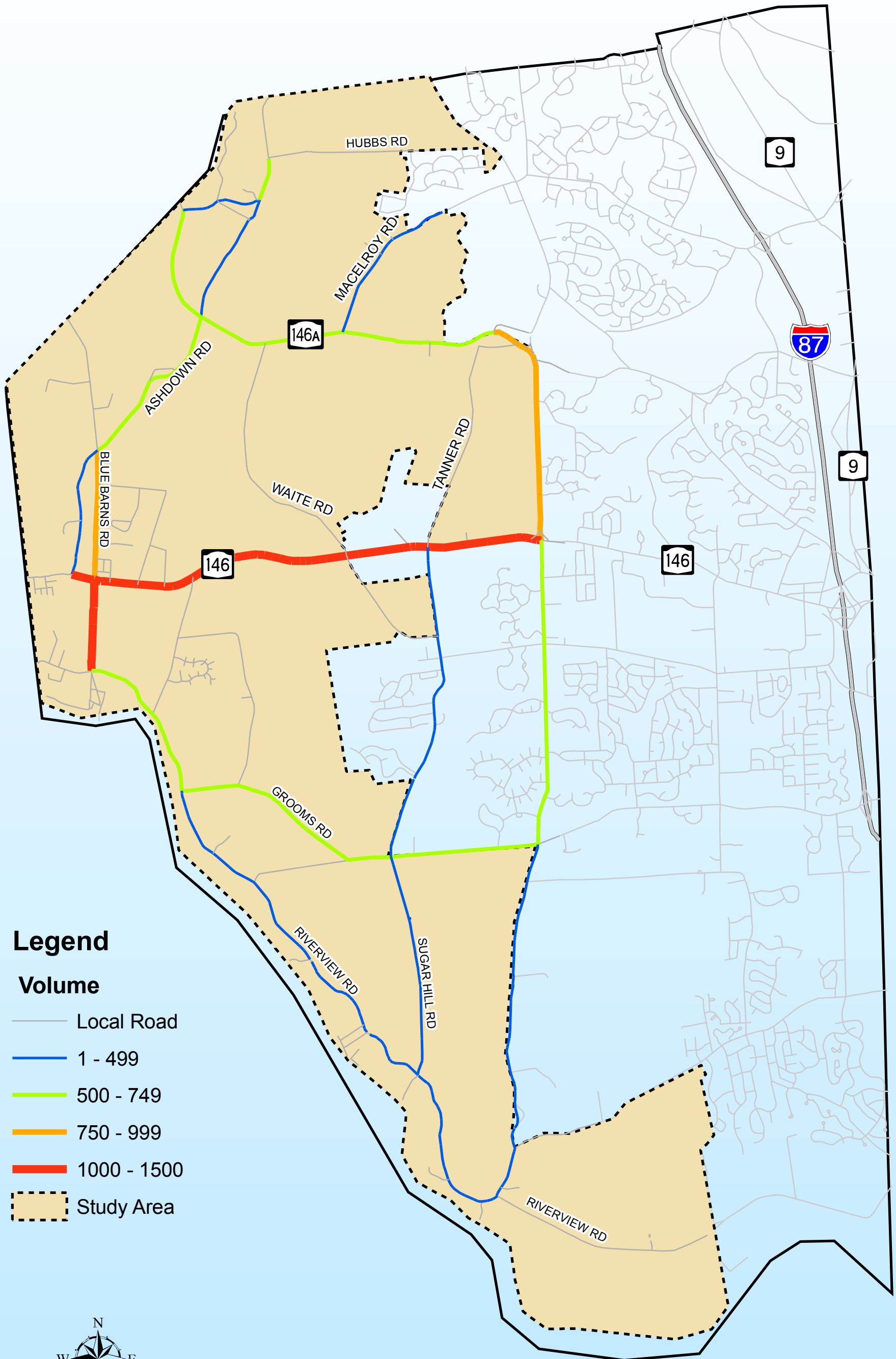


Figure H-6: 2-Way PM Peak Hour Volumes Existing Conditions





# Western Clifton Park

## Generic Environmental Impact Statement

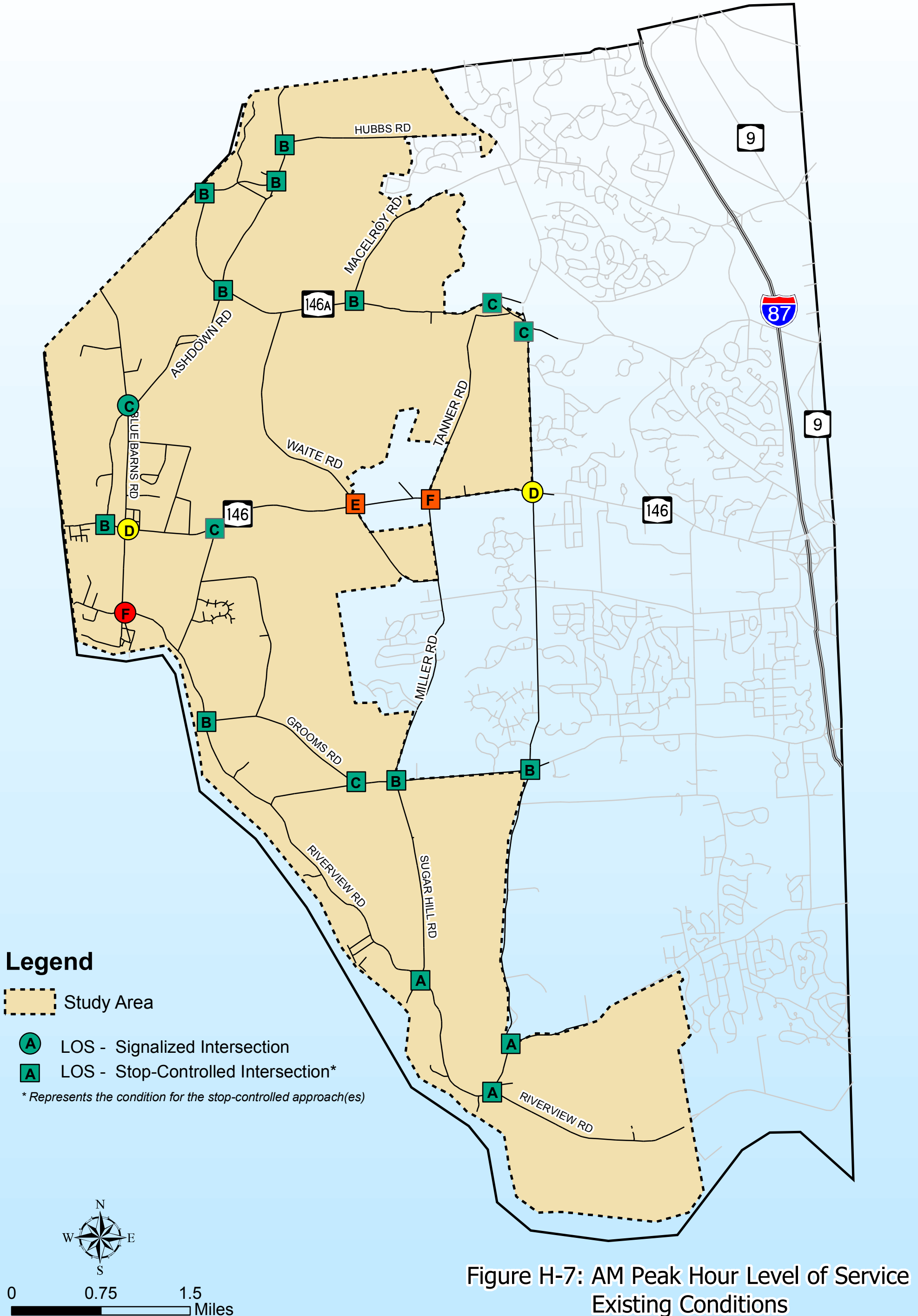


Figure H-7: AM Peak Hour Level of Service Existing Conditions





# Western Clifton Park

## Generic Environmental Impact Statement

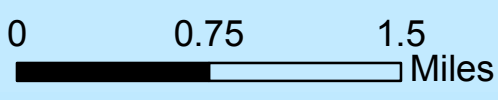
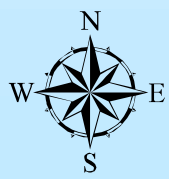
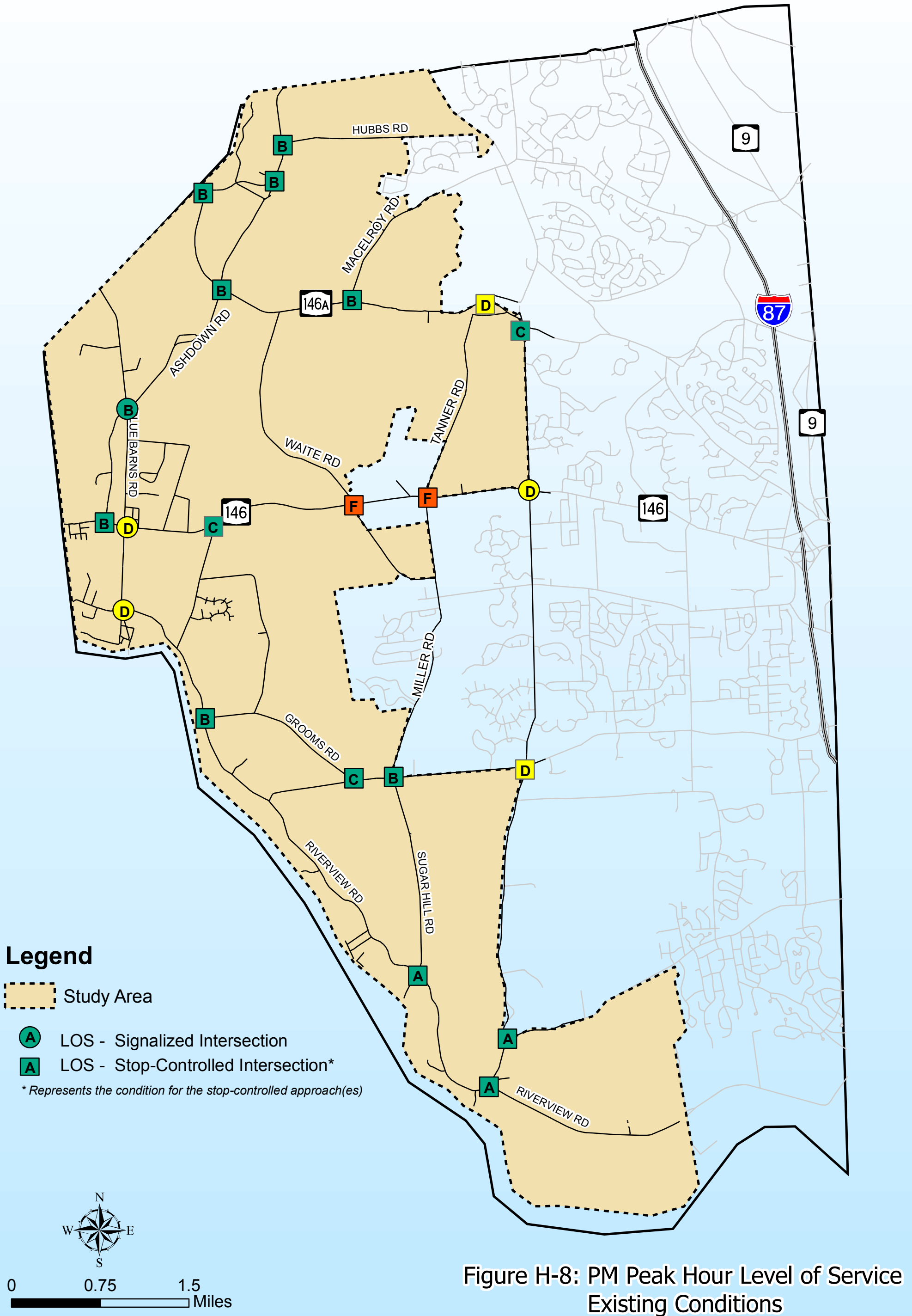


Figure H-8: PM Peak Hour Level of Service Existing Conditions





# Western Clifton Park

## Generic Environmental Impact Statement



Behan Planning Associates, LLC  
Planning Community Futures

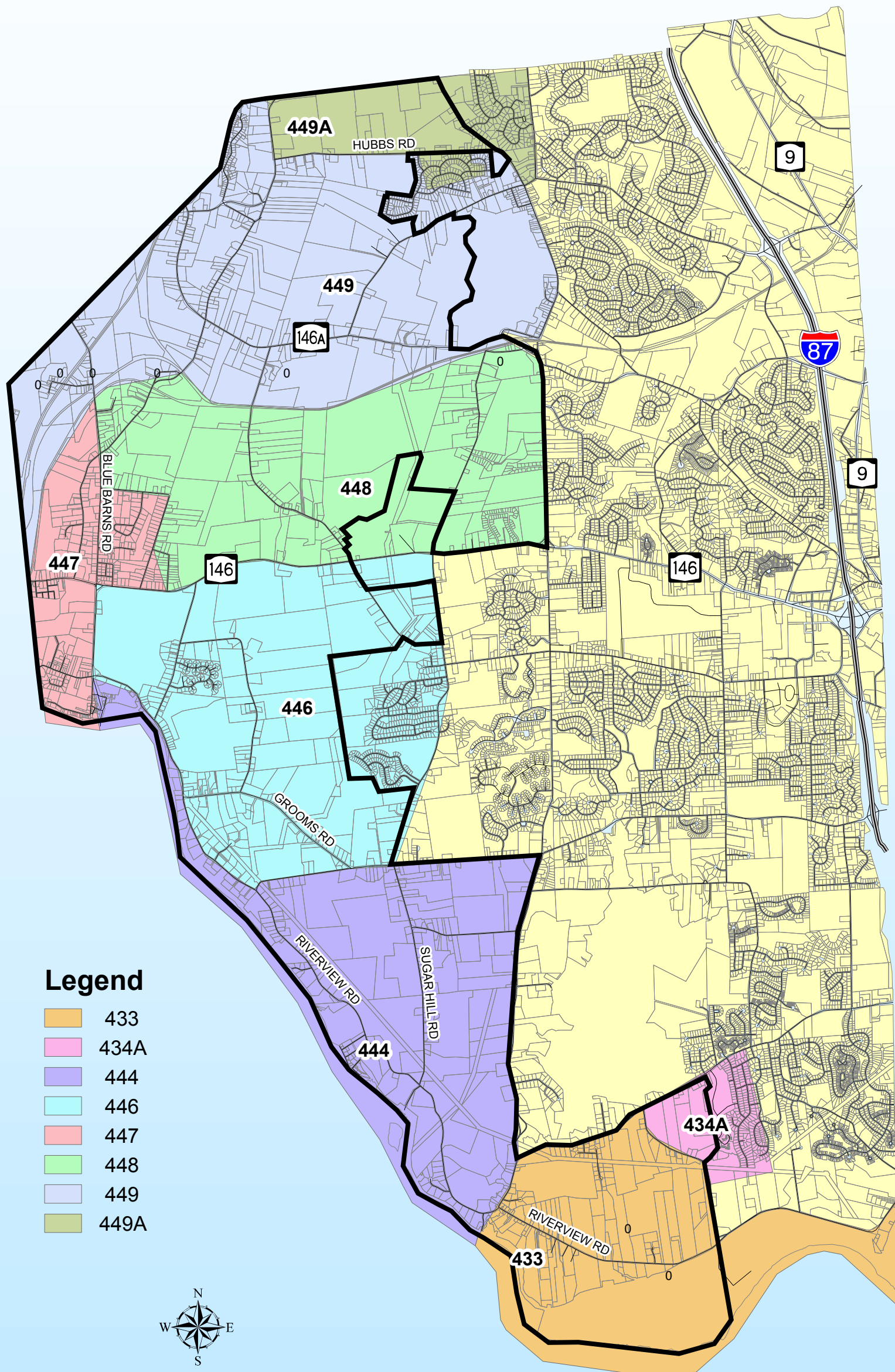


Figure H-9: Traffic Analysis Zones





# Western Clifton Park

Generic Environmental Impact Statement

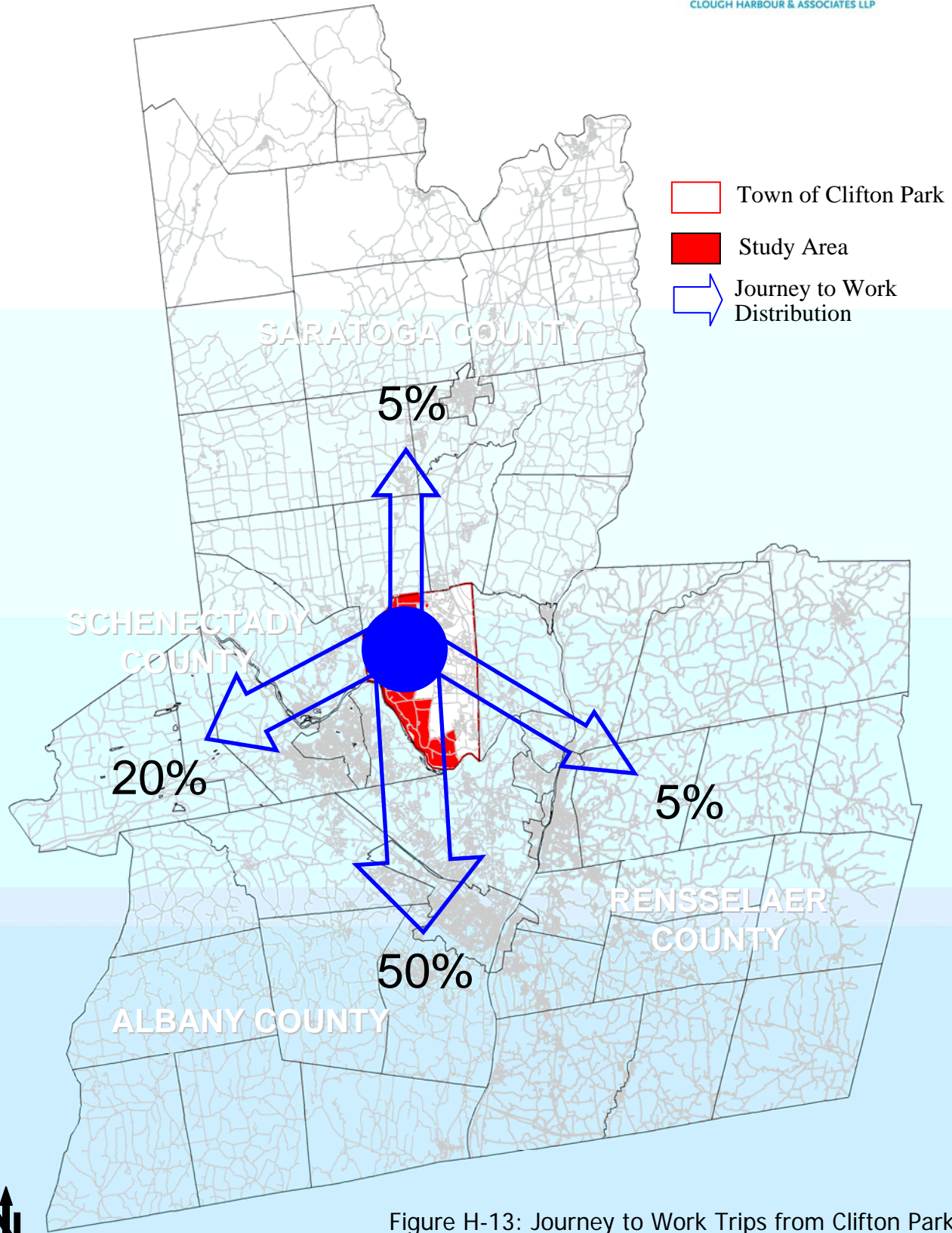


Figure H-13: Journey to Work Trips from Clifton Park

Not To Scale

Note: Excludes trips internal to the Town of Clifton Park (20%)



# APPENDIX I

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**DRAFT**

**PHASE IA LITERATURE REVIEW AND  
ARCHEOLOGICAL SENSITIVITY ASSESSMENT**

**WESTERN CLIFTON PARK  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
TOWN OF CLIFTON PARK  
SARATOGA COUNTY, NEW YORK**

**HAA 3047**

*Submitted to:*

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**An ACRA Member Firm  
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**AUGUST 2004**

**ABSTRACT**

Hartgen Archeological Associates, Inc. (HAA, Inc.) was retained by Clough, Harbour & Associates, LLP, to conduct a Phase IA Literature Review and Sensitivity Assessment for the western portion of the Town of Clifton Park, Saratoga County, New York (Map 1). The cultural resource study was conducted for a Draft Environmental Impact Statement (DEIS). The study was conducted according to the New York State Archaeological Council (NYAC) *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (1994). The study area is bounded by the Mohawk River in the south and southeast, the Saratoga/Schenectady county line in the west, the Clifton Park/Ballston town line in the north, and several roads (Hatlee Road, NY Route 146A and Vischers Ferry Road) in the east.

The work scope included an examination of the archeological files held by the New York State Museum (NYSM) and the Office of Parks, Recreation and Historic Places (OPRHP), previous cultural resource surveys, and State and National Registers for properties located within the study area that are listed on or determined eligible for listing on these registers. Historical and topographic maps and local histories were examined. A windshield survey was conducted by a staff archeologist and the architectural historian.

From precontact times to the recent past, the corridor from the Niskayuna area to the Saratoga area and beyond has been a focus of trade, transportation, and warfare. Environments favorable to precontact settlement and resource extraction include elevated areas along and overlooking bodies of water, such as the Mohawk River and Ballston Lake, moderate waterways, such as the Alplaus and Dwaas Kill, and small tributaries of these and other creeks. Historic development of the study area took place from the south to the north. European settlement at the ferry crossings provided linkages between Albany and northern New York. These areas still represent dense clusters of historic resources at Vischer Ferry and Rexford. Development of the Erie Canal added to this pattern, and large sections of the Erie Canal have been preserved. Farms in the center and northern portion of the study area still exist making farming a central industry. Active farms are centered at Grooms Corners, NY Route 146, Sugar Hill Road, and Vischer Ferry Road. Family cemeteries present in many of these locations constitute significant historic resources.

Generally speaking, there has been some development of farm properties throughout the study area. Intact horse farms and large hay fields are present in the northern portion where commercial development is largely isolated to the east and west of the study area. Development has taken place at Rexford, along River View Road, and near Grooms Corners in the central portion of the study area. Recent construction has taken place along Vischer Ferry Road in the southern portion of the study area. Large orchards are still prevalent along River View Road and Vischer Ferry Road. Recent efforts have been made to add to the list of inventoried historic properties in the Town of Clifton Park. Several structures have been nominated for listing on the State and National Registers of Historic Places, and their listing is considered likely. Clifton Park has its own register of historic resources. A copy of a pamphlet assembled by Clifton Park Town Historian John Scherer and the Clifton Park Historic Preservation Committee addressing many of these resources is included as Appendix 1. Areas of proposed development in the future would require individual assessments of their archeological potential(s).

DRAFT

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3. 1990 Rogers *New York State Geological Highway Map*
4. 2003 USDA/NRCS *Soil Survey Geographic (SSURGO) database for Saratoga County, New York*
5. 2004 Clough, Harbour & Associates, LLP, *Drainage Map*
6. 2002 Town of Clifton Park *Clifton Park Historic Markers*
7. 1756 Albany County *A Map of the County of Albany*
8. 1779 Sauthier *A Chorographical Map of the Province of New York in North America*
9. 1829 Burr *Map of the County of Saratoga*
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52. 865 River View Road looking east. The extended horizontals and simple detailing are hallmarks of mid-20<sup>th</sup> century design.

**PHASE IA LITERATURE REVIEW AND SENSITIVITY ASSESSMENT**

**DRAFT**

**INTRODUCTION**

Hartgen Archeological Associates, Inc. (HAA, Inc.) was retained by Clough, Harbour & Associates, LLP, to conduct a Phase IA Literature Review and Sensitivity Assessment for the western portion of the Town of Clifton Park, Saratoga County, New York (Map 1) in preparation for a Draft Environmental Impact Statement (DEIS). The Phase IA was conducted according to the New York State Archaeological Council (NYAC) *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (1994).

The work scope for this research includes an examination of the archeological files held by the New York State Museum (NYSM) and the Office of Parks, Recreation and Historic Places (OPRHP) for reported sites within the study area. Cultural resource surveys conducted in the vicinity of the study area were also consulted. State and National Registers were examined for properties located within the study area that are listed on or determined eligible for listing on these registers. Historical and topographic maps and local histories were examined in order to document the development of the study area vicinity.

A windshield survey was conducted by a staff archeologist and an architectural historian to examine current conditions in the study area, to identify past and current land uses, to document the nature and extent of previous disturbances, and to identify areas of archeological and historic sensitivity. In addition, environmental information pertinent to the study area was obtained and reviewed in order to assess the archeological sensitivity of the project.

Karen S. Hartgen, RPA, is the Principal Investigator for the project. Laura Hertle and Kim Croshier conducted site file and historical map research. Maps used in the report were prepared by Bernie Gerling. John Wilkinson is the Project Director and author.

**PROJECT INFORMATION**

**Location**

The Town of Clifton Park is located in the extreme southern portion of Saratoga County, New York (Map 1). The Mohawk River forms the southern boundary of the town and the county. The study area consists of the western half of Clifton Park bounded by the Mohawk River on the south and southeast, the Saratoga/Schenectady county line on the west, the Clifton Park/Ballston town line on the north, and several roads on the east. These include Hatlee Road in the northeast, NY Route 146A and Vischers Ferry Road in the center-east, and Crescent Road in the southeast.

For review purposes, the study area is divided into three portions; northern, central, and southern. The northern portion includes the area north of NY Route 146 to the boundary of the study area. The central portion of the study area includes NY Route 146 to Grooms Road/Droms Road. The southern portion of the study area includes Grooms Road/Droms Road to the Mohawk River.

## **Description**

This report will document reported cultural resources within the study area and is meant to be consulted by planners and developers working in the area. Therefore, there is no defined area of potential effect (APE). The total study area encompasses approximately 18,000 acres.

## **ENVIRONMENTAL INFORMATION**

### **Topography**

The large expanse of the study area encompasses diverse terrain and numerous micro-environments. The Town of Clifton Park is situated on a lightly rolling expanse on the north side of the Mohawk River with areas of variable elevation overlooking the Alplaus Kill in the west and the Mohawk River in the south. Portions of the Adirondack Mountains extend into northern Saratoga County, but not as far south as Clifton Park. The valley of the Mohawk River forms a divide between the northern and southern highlands of the state, much as the valley of the Hudson forms a divide between the highlands of New York and those of New England. These valleys and the rivers flowing through them provided major routes of travel from the Great Lakes to the center of the Hudson River, and from the St. Lawrence Seaway to the mouth of the Hudson at New York City, through the Laurentian Plateau or Canadian Shield which includes the Adirondack Mountains.

The lowest elevation in the study area is 186 feet above mean sea level (MSL) at the State Game Management Area and a section of the Old Erie Canal along the Mohawk River in the southeastern limit of the study area. Branches of the Dwaas Kill extend through the northern and central portions of the study area at an average elevation of around 310 feet MSL, draining north and east into the Anthony Kill outside the study area. Along the western boundary of the study area, the Alplaus Kill winds its way along Blue Barns Road and the county line at an elevation of 270 feet MSL and drains southward into the Mohawk River at an elevation of 210 feet MSL.

Most of the topography is lightly rolling and somewhat variable. There are several hills along the north side of the Mohawk River interspersed with alluvial floodplain open spaces. The highest elevation in the southern portion of the study area is 400 feet MSL along Sugar Hill Road. In the central portion of the study area the highest elevation is on a hilltop at 411 feet MSL along NY Route 146 at the Edison Club Golf Course. The highest elevation is 440 feet MSL along Blue Barns Road near Alplaus Kill in the northern portion of the study area. In the southern portion, many of the hills are utilized for orchard space, while in the northern area, there is more residential development.

Low-lying wet areas include a State Game Management Area along the Mohawk River (185 feet MSL), a large wet area in the center of the study area (325 feet MSL), and several smaller wet areas in the northern half of the study area, where the average elevation ranges from 320 feet MSL to 360 feet MSL.

Digital analysis of the topography indicates 417.24 acres of the study area contain slope in excess of 15% (Map 2).

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**Geology**

The bedrock geology of the region is extremely complex and will be dealt with here at a topical level. The Adirondack Highlands in the western part of Saratoga County are separated from the New England plateaus to the east by the Champlain-Hudson Trough, which was formed primarily by repeated depression when compared with the surrounding area, and by erosion as a secondary factor. The Hudson Valley lowlands on the east and the Mohawk Valley lowlands on the south form distinct belts across the county. The Hudson lowlands contain extremely deformed shales which display outcrops of white-weathering chert – important to precontact tool makers – while the Mohawk shales are undeformed and contain no chert beds.

The immediate geological environment of the study area (Map 3) consists of Middle Ordovician age Canajoharie Shale of the Lorraine, Trenton, and Black River Groups (Fisher et al. 1970).

**Soils**

There are several soil types within the study area. The table below has been compiled using the Soil Survey Geographic (SSURGO) database for Saratoga County, New York (USDA 2003). It lists each soil type in the study area by its abbreviated mapping designation, the number of polygons within the study area of that soil type, the full name of the soil type, its consistency, and the total acreage of that soil type within the study area. A soil survey map (Map 4) is included in the Map section immediately following the text.

**Table 1: Soils Within the Study Area**

MUSYM	COUNT	NAME	TYPE	ACREAGE
As	8	ALLIS	Silt	126.91
BtB	12	BROADALBIN	Silt	434.47
BtC	1	BROADALBIN	Silt	22.48
BtD	2	BROADALBIN	Silt	44.29
BvB	25	BROADALBIN	Silt	1470.64
BvC	15	BROADALBIN	Silt	337.54
BvD	1	MANLIUS	Channery Silt Loam	10.50
BxB	56	BURDETT	Silt	944.64
CeB	1	ROCK OUTCROP	Sandy loam over bedrock	4.51
Cg	5	CHEEKTOWAGA	Mucky very fine sandy loam	33.17
ChB	12	CHENANGO	Silt	315.38
ChC	6	CHENANGO	Silt	106.72
CIA	2	CLAVERACK	Loamy fine sand	7.83
CIB	3	CLAVERACK	Loamy fine sand	53.35
Cs	7	COSAD	Fine sandy loam	74.85
DeA	9	DEERFIELD	Loamy fine sand	92.07
DeB	17	DEERFIELD	Loamy fine sand	169.51
EIB	1	ELMRIDGE	Very fine loamy sand	6.67
FI	5	FLUVAQUENTS	Gravelly loamy silt	46.67
HoA	10	HOOSIC	Gravelly sandy loam	186.92

MUSYM	COUNT	NAME	TYPE	ACREAGE
HoB	16	HOOSIC	Gravelly sandy loam	279.29
HoC	16	HOOSIC	Gravelly sandy loam	201.34
HuB	16	HUDSON	Silt	327.17
HuC	5	HUDSON	Silt	32.66
HuD	2	HUDSON	Silt	7.79
In	20	ILION	Silt	208.13
Lm	3	SACO	Silt	84.09
Ma	26	MADALIN	Mucky silty clay loam	315.65
MnB	6	NASSAU	Channery silt loam	145.51
MvA	7	MOSHERVILLE	Silt	236.98
MvB	12	MOSHERVILLE	Silt	307.29
MxB	15	HORNELL	Channery silt loam	345.56
NaC	1	ROCK OUTCROP	Channery silt loam over bedrock	3.86
NaD	5	ROCK OUTCROP	Channery silt loam over bedrock	81.46
NuB	39	NUNDA	Silt	1149.64
NuC	19	NUNDA	Silt	194.05
OaA	8	OAKVILLE	Loamy fine sand	98.35
OaB	30	OAKVILLE	Loamy fine sand	653.99
OaC	19	OAKVILLE	Loamy fine sand	339.91
OaD	1	OAKVILLE	Loamy fine sand	12.94
OeE	2	WINDSOR	Loamy fine sand	32.91
Pm	2	PALMS	Muck	15.07
Pp	11	PALMS	Muck	292.75
Ra	29	RAYNHAM	Silt	644.75
RhA	32	RHINEBECK	Silt	529.27
RhB	25	RHINEBECK	Silt	564.32
Sa	7	SCARBORO	Mucky loamy sand	199.89
SeA	22	SCIO	Very fine sand loam	327.05
SeB	20	SCIO	Very fine sand loam	653.70
Sh	2	SHAKER	Very fine sand loam	36.36
Sn	8	SUN	Silt	114.41
Te	3	TEEL	Silt	158.68
Tg	1	TIOGA	Fine sand loam	9.21
Ud	2	UDIPSAMMENTS	Dredged loamy sand	97.24
Ue	5	UDORTHENTS	Graded silt loam	59.72
UnB	4	UNADILLA	Very fine sand loam	44.20
Wa	20	WAREHAM	Loamy sand	276.40
WnB	1	WINDSOR	Loamy sand	8.24

The most frequently occurring soils within the study area are Broadalbin, Nunda, and Oakville soils.

Broadalbin soils vary by degree of slope falling into three subcategories of 0-3% slope, 3-8% slope, and 8-15% slope. The soils are very deep, well-drained to moderately well drained with moderate permeability at the surface and slow permeability in the subsoil, moderate water capacity, and rapid surface runoff. Broadalbin soils were formed in glacial till with a dense substratum. They are found on hillsides in glacially modified uplands.

Nunda soils (3-8% slope and 8-15% slope) are very deep and moderately well drained. They were formed in silty mantle and the underlying glacial till and are found on hillsides on till plains. Permeability is moderate at the surface and slow with increasing depths and strata. Water capacity is moderate. Surface runoff is medium on slight slopes and rapid on steep slopes.

Oakville soils are deep and moderately well drained to well drained soils formed in water-sorted sand. These soils are found on glacial outwash plains, lake plains, and beach ridges. The four subtypes of Oakville soils are divided by percentage of slope from 0-3% all the way to 25-35% slope. All have rapid permeability, low to moderate water capacity, and variable runoff depending on the degree of slope.

### **Drainage**

The most significant topographic elements of the study area relative to precontact sensitivity are elevated and low-lying areas along key drainages, and the confluences of small waterways with the Mohawk River (Map 5). Terraces along the Mohawk River, Alplaus Kill, and Ballston Lake would typically be considered potential locations for precontact settlements. Other, smaller waterways in the study area include the Dwaas Kill and tributaries of the Long Kill, which gradually drain northward into the Anthony Kill and then Round Lake. Stony Brook drains from the Colonie Reservoir (originally a pond) into the Mohawk River near Visher Ferry. Several small, unnamed waterways drain the wet areas toward the larger waterways within the study area.

### **Existing Vegetation and Precolonial Forest Zone**

Environmental information concerning the project area and vicinity is useful in order to assess its archeological potential. Plant species that are indigenous to the area or those that were introduced after colonization were often a valuable resource for the inhabitants of a particular region. Several forest types have been proposed that are likely to have existed in New York before land modifications, deforestation, and the introduction of foreign species (Küchler 1964). The forest type within which the project area is located is therefore described through the concept of "potential natural vegetation," which infers its past forest environment, not necessarily that which is current.

The project is located in the Northern Hardwood zone of natural vegetation (Küchler 1964). The Northern Hardwood zone is found in eastern and central New York, north central Pennsylvania, and extends westward to Michigan and Wisconsin. Smaller areas are found in the southern Appalachian Mountains. This forest type is characterized by tall, broad-leaved deciduous trees with an admixture of needle-leaf evergreens. The Northern Hardwood zone is not as productive as the neighboring Appalachian Oak Forests. Mast seeds from deciduous trees in both forest types provided a food source for game pursued by Native Americans and the seeds themselves a source of starch for winter provisioning.

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**Man-Made Features and Alterations**

The study area contains areas of residential, commercial, and agricultural land use. Based upon a review of project area maps, prior disturbance from construction of the Erie Canal (Old Erie Canal, Erie Canal, and Erie Barge Canal phases) can be expected along the banks of the Mohawk River having an effect upon the presence of precontact cultural resources. This is offset by the significance of the canal itself and all its associated elements. Likewise, the original Indian trails have been largely obliterated by roadway and railroad construction. Again, some of the transportation routes have historic significance as the pathways of warfare and commerce. A pond north of Stony Creek has been modified to create a dam and reservoir. Specific changes are addressed in the historical map review section (p.14) and windshield survey section (p.26).

**DOCUMENTARY RESEARCH**

**Office of Parks, Recreation and Historic Preservation (OPRHP) and New York State Museum (NYSM)**

*Archeological Sites*

A search of the files at OPRHP and NYSM indicates that there are 30 archeological sites within the study area. A brief description of these sites is included in Table 2. The "Status" column identifies properties concerning their current listing on the National Register of Historic Places (NR), their eligibility for such listing (NRE), the State Register of Historic Places (SR), and the local Clifton Park Register of Historic Places (CP). Several properties are within the NR Vischer Ferry Historic District (VFHD)

**Table 2: Archeological Sites Within the Study Area**

OPRHP	NYSM	STATUS	SITE NAME	DESCRIPTION	LOCATION
Multiple		NR, CP	Vischer Ferry Historic District	(See Below)	(See Below)
A09103.000002		NR, CP	Grooms Tavern Complex	(See Below)	(See Below)
A09103.000010		NRE, CP	Erie Canal Lock	In VFHD, built in 1890s, originally used as canal passage.	In State Game Management Area, southern portion of study area.
A09103.000072			Ruins of Van Vranken Homestead c.1840	In VFHD, standing ruins as of 1974.	South of River View Road, southern portion of study area.
A09103.000073			Dairy Barn (William H. Van Vranken)	In VFHD, surface traces visible.	On River View Road, southern portion of study area.
A09103.000077			Wagon Road	In VFHD, surface traces visible, led to canal terminating at the canal store.	North of Riverview Road, southern portion of study area.

OPRHP	NYSM	STATUS	SITE NAME	DESCRIPTION	LOCATION
A09103.000080		NRE	Erie Canal	In VFHD, standing ruins between Barge Canal Lock 7 and the Northway, well preserved. Includes Erie Canal Lock 19.	Western portion of State Game Management Area, southern portion of study area.
A09103.000088		CP	18 <sup>th</sup> Century Mill Site and Stone Arch Bridge	Standing ruins, surface traces visible.	On Stony Creek near intersection of Crescent Road and Vischer Ferry Road, southern portion of study area
A09103.000091	971		Cryne	Old site file.	500 feet northeast of Mohawk River, southern portion of study area.
A09103.000092	970		Steinmetz	Old site file.	800 feet northeast of Mohawk River, southern portion of study area.
A09103.000093	4730		ACP SARA.	Large area, traces of occupation.	Colonie Reservoir, southern portion of study area.
A09103.000094	4726		ACP SARA 32.	Camps along the river at Vischer Ferry, large number of relics.	Between River View Road and Mohawk River, Vischer Ferry Historic District, southern portion of study area.
A09103.000095	958		First Bayou	On the flats east of the Mohawk River, NW of Site 38.	Shore of Mohawk River, southern portion of study area.
A09103.000096	957		Second Bayou	Flats on the north side of the Mohawk River, southeast of Vischer Ferry.	Shore of the Mohawk River, southern portion of study area.
A09103.000097	973		Third Bayou	Old site files.	Shore of the Mohawk River, southern portion of study area.
A09103.000101	6234		SDY 116	Old site files.	Near Vischer Ferry Road, southern portion of study area.
A09103.000102	6235		SDY 114	Old site files.	Between River View Road and Mohawk River, southern portion of study area.

OPRHP	NYSM	STATUS	SITE NAME	DESCRIPTION	LOCATION
A09103.000103	6242		SDY 88	Old site files.	Near Grooms Road, central portion of study area.
A09103.000105	6248		SDY 107	Old site files.	Between River View Road and Mohawk River, southern portion of study area.
A09103.000164		NRE	Sambrook Edge Site, Simon West-Gradus Vischer Site	Pre-1834 to post 1866, white and red earthenware, stoneware, kaolin pipes, clay marble, metal buttons, bone and shell.	Between River View Road and Mohawk River, southern portion of study area.
A09103.000165			Vischer Edge Site, Gradus Vischer Site	Buried traces of an early to mid-19 <sup>th</sup> -century structure with red and white earthenware, kaolin pipe fragments, clay marble, metal buttons, bone and shell. stoneware, clamshells,	On River View Road, near Vischer Ferry Road intersection, southern portion of study area
A09103.000218	10878	NRE, CP	Erie Canal and Rexford Aqueduct Site	Mid-1820's to c. 1920,	Balltown Road on Erie Canal, south of Rexford, southern portion of study area.
A09103.000226			LA67-1	Timber Frame, post and beam, mortise and tenon, historic	Grooms Road north of Droms Road, central portion of study area.
A09103.000225		NRE	Althouse Site	Built c. 1932 atop existing foundation after previous superstructure burned.	West of NY Route 146A and NY Route 146 intersection, northern portion of study area.
	7834		SDY 113	Old site files.	500 feet northeast of Mohawk River, southern portion of study area.
	7835		SDY 37	Old site files.	On banks of Mohawk River, southern portion of study area.
	4718		ACP SARA 24.	Large-area precontact site near Vischer Ferry "destroyed by barge canal."	Centered 2,000 feet from the Mohawk River, southern portion of study area.

OPRHP	NYSM	STATUS	SITE NAME	DESCRIPTION	LOCATION
	4719		ACP SARA 25?	ACP map shows village but description is camps.	East of Rexford, on Edison Club Golf Course, central portion of study area.
	4720		ACP SARA 26.	Camps near Rexford flats.	In village of Rexford, central portion of study area.
	4745		ACP STDY 11, ACP SARA No#.	Village near Rexford flats 1 mile east of Alplaus, 3 miles northeast of Schenectady.	Village of Rexford and Alplaus, central portion of study area.

***National Register***

The computer inventory at OPRHP was examined for properties listed on the State and National Registers of Historic Places. Two National Register properties including one district are located within the study area.

The Vischer Ferry Historic District (Multiple OPRHP numbers) is located in the southeastern portion of the study area. It is bordered by the Mohawk River on the south, and runs along Crescent Road in the north. The historic district encompasses over 246 acres, and includes resources that represent over two centuries of historical development (1700-1907). A section of Clinton’s Ditch (the original Erie Canal), cut stone remains of a canal drydock, abutments from two farm bridges that spanned the canal, a section of road established in the colonial period, the sites of Fort’s Ferry landing and cellar holes and sites of dwellings and outbuildings associated with the settlement and subsequent development of the area around Vischer Ferry during the 18<sup>th</sup> and 19<sup>th</sup> centuries are components of the historic district. In 1907, the Mohawk River was dammed to provide water to the Barge Canal, and the old Erie Canal was abandoned. However this caused annual spring flooding and the local residents were forced to leave their dwellings. This resulted in limited development and has preserved the historical development of the Vischer Ferry area.

The second National Register property in the study area is the Grooms Tavern Complex (A09103.000002). It lies at the intersection of Droms Road and Sugar Hill Rd in the hamlet of Grooms Corners. Built in 1825, the tavern is described as having both Federal and Greek Revival characteristics. The complex also includes a privy, and a wagon and blacksmith shop (built in the 1840s). This quickly became a popular place for travelers heading between Schenectady and Waterford (east to west) and also between the Mohawk River ferries to Ballston Spa (north to south). The complex also became a popular place for locals as well. The first town meeting for the government of Clifton Park was held here on April 1, 1828, and periodically continued to meet here until 1868. The building was temporarily used as a hotel until the late 19<sup>th</sup> century when the first floor was used as a general store and as the local post office. The area's first manually operated gas pump was installed in the early 20<sup>th</sup> century when automobile use became more popular. The complex was owned and operated by the Grooms family until 1923. During the mid to late 20<sup>th</sup> century, the Grooms Tavern Complex was commercially used through a succession of owners. In 1988, the buildings became vacant but remain historically significant and substantially intact.

### *National Register Eligible Properties*

The OPRHP computer inventory identified 22 properties that have been determined eligible for the National Register located within or adjacent to the study area. These include 4 historic archeological sites and 18 structures.

The Erie Canal (multiple OPRHP numbers) marks the south and western borders of the study area. It meets criteria for inclusion in the National Register for several reasons. The Erie Canal is associated with events that have made a significant impact to the patterns of New York State history. Any architectural elements associated with the construction of the Erie Canal would also be considered eligible for inclusion on the State and National Registers of Historic Places.

One such historic archeological site is the Erie Canal and Rexford Aqueduct site (A09103.000218), which includes 8 properties spread out along Aqueduct Road, NY Route 146, and lands of the State of New York on both sides of the Mohawk River. Elements of the aqueduct were constructed in the mid-1820s but construction and alteration continued up until 1920. The aqueduct was an important feature of the Erie Canal, which bends around large oxbows of the Mohawk River between the counties of Schenectady and Saratoga.

Two additional archeological sites within the study area have been determined eligible for the State and National Registers of Historic Places.

The first is the Althouse historic site (A09103.000225) on NY Route 146. The original structure was built c.1830s for P. Althouse, an early settler of the area. After a fire destroyed the original house, another was built upon the foundations in 1932. An archeological survey at the site recovered numerous ceramics, kaolin pipe fragments, metal hardware, and several types of colored and clear glass, faunal bone, and shell.

The last is the Sambrook Edge Site, Simon West-Gradus Vischer Site (A09103.000164) in the hamlet of Vischer Ferry. The site is located less than 100 feet from the Mohawk River and consists of buried traces of the home of Simon West (1856) and Gradus Vischer (1866). Archeological testing identified early to mid-19<sup>th</sup>-century American and British stoneware and earthenware, as well as kaolin pipe fragments, a clay marble, metal buttons, and faunal remains.

Eighteen buildings are eligible for the State/National Registers in the study area.

**Table 3: State/National Register Eligible Structures/Properties List**

<b>OPRHP #</b>	<b>STRUCTURE NAME</b>	<b>DESCRIPTION</b>	<b>LOCATION</b>
091.03.000003	Bowman (Best) House	Greek Revival farmhouse c.1832, recently renovated. Stone lintels, leaded transoms/sidelights.	Sugar Hill Road north of River view Road.
091.03.000108	988 Main Street	No specific info.	988 Main Street, Rexford.
091.03.000109	Jonesville Store	Store.	East side at Hatlee Street, north side.
091.03.000112	Building J; 19 <sup>th</sup> -century Sherman residence	Greek Revival and Adam stylistic detailing; constructed c. 1835.	East side of NY Route 146A, north of NY Rte 146.
091.03.000115	NY Route 146A Bldg. T	Built in 1810, Federal style characteristics of the late 18 <sup>th</sup> -early 19 <sup>th</sup> centuries. Shovel tests indicate no significant archeological evidence.	West side NY Route 146A, 4 <sup>th</sup> building south of Kinns Road.
091.03.000132	NY Route 146A Bldg. 3C	Built in 1830 based on undetailed massed-plan box from New England prototype, 19 <sup>th</sup> -century materials on associated properties.	North side NY Route 146A, east of Macelroy Road.
091.03.000134	Hicks House	No specific info.	West side Vischers Ferry Road.
091.03.000135	Hicks House at 1234 NY Route 146	No specific info.	1234 NY Route 146.
091.03.000148	847 Grooms Road CR 91	No specific info.	847 Grooms Road.
091.03.000149	825 Grooms Road CR 91	No specific info.	825 Grooms Road.
091.03.000151	931 Grooms Road CR 91	No specific info.	931 Grooms Road.
091.03.000152	Grooms Road CR 91	No specific info.	CR 91 east side, south of NIMO ROW.
091.03.000156	284 Sugar Hill Road	No specific info.	284 Sugar Hill Road.
091.03.000162	Clubhouse Golf Club	Greek Revival House on west side.	NY Route 146 Balltown Road.
091.03.000184	Jonas Southard dwelling	Constructed c. 1840. Excellent example of Greek Revival domestic architecture.	1585 Balltown Road.
091.03.000217	939 River View Road	C. 1880 folk Victorian townhouse with Italianate features.	939 Riverview Road Near Rexford School.
091.03.000041	Rexford Family Homestead	Farmhouse constructed 1763, revised as Queen Anne in 1880. Bar, shed, and gardens intact.	1643 NY Route 146.

OPRHP #	STRUCTURE NAME	DESCRIPTION	LOCATION
091.03.000214	935 River View Road	C. 1910 Queen Anne/Craftsman cottage in good condition near contemporaneous houses.	North side Riverview Road, 560 feet west of NY Route 146.

The following information is from the OPRHP inventory forms and previous surveys. Little or no additional information was available at OPRHP for the Jonesville Store and several other properties.

The Rexford Family Homestead is located at 1643 Route 146. It is in excellent condition and there have been no major alterations. A barn, garage, shed and gardens are also a part of the homestead. This building was erected in 1763 and was later redone as an 1830 Greek Revival Farmhouse and again remodeled in 1880 in an example of Queen Anne architecture. This was the home of Edward Rexford who was an original settler, and fought in the American Revolution. This building overlooks the old canal town.

The Jonas Southard dwelling is located at 1585 Route 146. This building is in good condition although there have been rear additions and window replacements. Built in 1840, this demonstrates Greek Revival domestic architecture. Jonas Southard was the son of an early settler and this building was one of the larger farms in Clifton Park producing butter, cheese, wool, potatoes and grains.

In the hamlet of Rexford, the dwelling at 935 Riverview Road is in excellent condition. A two-bay barn and garage are associated with the homestead. Built in 1910, the dwelling provides a good example of a transitional Queen Anne/Craftsman cottage. The building retains integrity of design, materials, and workmanship and is enhanced by its setting, which consists largely of contemporaneous dwellings in good condition.

The structure at 939 Riverview Road is also in excellent condition, although siding, an early 20<sup>th</sup>-century entry and a rear porch have been added. It was constructed in 1880 and is an example of a folk Victorian townhouse, uncommon in rural areas. This was one of the earliest buildings on River View Road contemporaneous with Rexford's expansion around the Erie Canal in the mid- to late 19<sup>th</sup> century.

Building J on Route 146A was constructed in 1835. It demonstrates Greek Revival (and Adam) stylistic detailing to a building form well-represented in early-to-mid-19<sup>th</sup>-century buildings in the region. It is considered a local research value in exemplifying stylistic preferences of early settlers in interior portions of Clifton Park. Building T on Route 146A is eligible for the National Register. It was constructed in 1810 and demonstrates basic and subtle Federal stylistic characteristics of the late 18<sup>th</sup>-early 19<sup>th</sup> centuries. Building 3C on Route 146A was originally constructed in 1830. Architecturally this is an undetailed massed-plan box derived from New England prototypes.

The Clubhouse Golf Club (09103.000162) on Balltown Road (NY Route 146) is a substantially intact Greek Revival style residence constructed c.1850. It is described as a notable example of a typical rural vernacular adaptation of classic architectural forms. The additions and outbuildings on the property are not considered contributing elements of the site. It was the residence of J. Southard at one time, which may cause some confusion with the J. Southard property previously mentioned.

It should also be noted that River View Road is a designated Federal Scenic Byway referred to as the Mohawk Towpath Byway.

### **Clifton Park Register of Historic Places**

Information received from town historian John Scherer indicates that several of the previously mentioned historic properties have been included on a Clifton Park Register of Historic Places. The local register includes 28 sites (mostly with historic structures), 31 historic markers, and 22 cemeteries. Of these, 14 sites, 16 markers, and 9 (or possibly 10) cemeteries are within the study area, most relate to the same properties. The Clifton Park Register number is abbreviated as CP.

Most of these sites are included on the previous listings. A copy of the Clifton Park Register of Historic Places map is presented as Map 6. The map also indicates the locations and boundaries of the existing and newly defined historic districts in Clifton Park and NR property locations.

**Table 4: Clifton Park Register Properties Within The Study Area**

<b>CP Number</b>	<b>Name</b>
Marker 3	Erie Canal
Marker 4	Lock 19
Marker 5	Vischer Ferry Historic District
Marker 6	Ferry Site 1790-1922
Marker 7, Site 15, Cemetery 9	Amity Reformed Church
Marker 9	Irish House
Marker 12, Site 7	Tavern, c. 1820
Marker 13	Vischer House
Marker 14, Site 6	Van Arnum House
Marker 15, Cemetery 10	Shepherd House
Marker 16, Site 19	Aqueduct, 1842
Marker 17, Site 1	Cyrus Rexford House
Marker 18	Country Club Acres
Marker 19, Site 2, Cemetery 6	(Nathan) Garnsey House
Marker 20, Site 3	(Levi) L. Garnsey House
Marker 31, Site 18	The Castle-1885
Site 4, Cemetery 17	Nicholas and Eldret Vischer House
Site 20	Store and Post Office
Site 23	Jonas Southard House
Site 25	John Clute House
Site 26	Stone Arch Bridge
Site 27	Grange Hall
Cemetery 5	Jones Cemetery
Cemetery 7	Rexford Cemetery (exhumed)

CP Number	Name
Cemetery 18	Van Vranken Cemetery
Cemetery 20	Terpening Cemetery
Cemetery 22	Wetmore-Smith Cemetery
Possibly – Cemetery 19	Simms Cemetery (may be outside the study area limits)

### *Previous Surveys*

The library at the OPRHP contained reports of 11 of 12 archeological surveys previously conducted within the study area. The report associated with one of the surveys was not available.

In June of 1999, the New York State Museum conducted a Cultural Resource Reconnaissance Survey Report on *PIN 1085.27.101, NY 146 from River Road to Glenridge Road* in the central section of the study area. Shovel tests and a surface survey were conducted but no prehistoric sites were identified. One historic, multi-component site was discovered, identified as Erie Canal and Rexford Aqueduct Site (NYSM), and determined NRE.

In December of 1979, the New York State Museum conducted an Archaeological Survey and Cultural Resource Assessment of *PIN 1085.11, Routes 146-146A to Route 9* in the northeastern portion of the study area. No precontact sites were discovered. Ceramics from the 19<sup>th</sup> century were recovered, but deemed not to be a significant deposit because the sherds were found in buried topsoil covered with fill.

In June of 1990, the New York State Museum conducted a Cultural Resource Survey Report of *PIN 1009.01.101, Route 146A/D & H Railroad, Route 146A R&P* in the northern portion of the study area on Route 146A. A walkover inspection was performed and several buildings including building ruins were mapped and photographed.

In August of 1989, Collamer and Associates, Inc. conducted a Stage 1B Archaeological Investigation for the *Elnora Transmission Line and Substation*, which included a large portion of the current study area. The transmission line project area began south of Droms Road and extended northeast along Miller Road/Tanner Road, through Clifton Park Center, along Route 146A, the D & H Railroad, Waite Road, NY Route 146, Grooms Road, Droms Road, and River View Road. No significant cultural materials were recovered during shovel testing; however, only a portion of the area was tested.

In July of 1989, Collamer and Associates, Inc. conducted a Phase IB archeological survey for *Sterling Estates* in the southern portion of the study area in Vischer Ferry at the Riverview and Vischer Ferry Road intersection. No evidence of artifacts and features were discovered during the visual field inspection, and no significant materials were recovered during the field reconnaissance.

In January of 1997, the New York State Museum conducted a Cultural Resource Reconnaissance Survey Report for *PIN 1753.62.121, County Route 91, Riverview Road and Grooms Rd.* in the southern portion of the study area. One historic archeological site was uncovered in the shovel testing. Coal and concrete fragments were recovered, but were considered part of an isolated find because they were not associated with any structures. Nails, coal, mortar, and flat glass were found possibly related to a residential structure, but lacking in significant research potential.

In January of 1991, Edward Curtin conducted a Stage 1A/1B survey of the *Vischer's Edge Subdivision* in the southern portion of the study area between the Mohawk River and Riverview Road. Two historic archeological sites were identified. The Sambrook Edge site is NRE and contained white and red earthenware, stoneware, kaolin pipes, clay marble, metal buttons, and faunal remains including both bone and shell. The second site, the Vischer Edge Site contained clamshells and white earthenware.

In June of 2002, Arch Tech conducted a Stage 1A/1B Cultural Resource Investigation for *Tom Hicks Sugar Hill Road Bank* north of Riverview Road and west of Sugar Hill Road in the southern portion of the study area. Historic artifacts were discovered during visual surface inspection including 19<sup>th</sup>- and 20<sup>th</sup>-century ceramic fragments, bottle glass, and a toy car. These materials were not considered eligible for the National Register.

In November of 2002, Edward Curtin conducted a Phase 1B and Phase 2 for the *Sterling Heights Residential Subdivision* in the northern portion of the study area on Route 146, between Route 146A and Tanner Road. One historic archeological site (the Althouse site) was identified by HAA, Inc. in an earlier Phase IA of the project area. Shovel tests and units conducted during the Phase 1B and Phase 2 contained pearlware, whiteware, glass, and nails.

In September of 2003, Landmark Archaeology conducted a Phase I Archaeological Investigation for the *Curnyn Meadows Residential Subdivision* in the central portion of the study area east of Appleton Road and north of Grooms Road. Shovel and bucket auger tests were performed during fieldwork. No precontact sites were discovered. One historic site was identified containing a demolished barn. The site does not possess National Register potential.

## **HISTORICAL MAP REVIEW**

Several historical and topographical maps were examined in order to document prior land usage, land modifications, historical and economic development in the vicinity of the study area.

### **Eighteenth-Century Maps**

The first map reviewed for the study area is the 1756 Albany County *A Map of the County of Albany* (Map 6). There are six structures indicated along the Mohawk River in the study area. A seventh structure is depicted between the study area and the Alt Place Creek, another spelling of Alplaus Creek.

The 1779 Sauthier *A Chorographical Map of the Province of New York in North America* (Map 7) is an early version taken from surveys under the order of Major General William Tryon. This is the first map of the study area to indicate the town name of Clifton Park and depicts the boundaries of several patents and structures along the Mohawk. Though partially cut off in this resized map, there are notations for Canastota, the Ale Place (Alplaus), and the Indian Path.

### **Nineteenth-Century Maps**

The first map of the 19<sup>th</sup> century reviewed for the study area is the 1829 Burr *Map of the County of Saratoga* (Map 9). The map proportions appear to be extended and elongated. Key elements of development in the town of Clifton Park are visible including the Erie Canal, patent boundaries and allotments within the patents, county roads in dotted lines, and some structure locations. The original roadways are considered historic resources. The squares with crosses indicate churches and the circles with radiating lines depict mill locations. Some of the churches are still present.

The 1866 Beers *New Topographical Atlas of Saratoga County, New York* (Map 10) depicts the location of numerous residences and businesses. The post office at Grooms Corners was built by this time. The future Colonie Reservoir is shown as a pond along Stony Creek north of Visher Ferry post office. This map is an excellent reference for the locations of specific historic structures in the study area. The Erie Canal is depicted as a dark band along the north bank of the Mohawk River. Inset maps for Visher Ferry (Map 10a) and Rexford Flats (Map 10b) are also given, providing a good degree of detail for specific structure and waterways in these hamlets. The alignment of the roads appears much as they do today signifying the potential for both precontact and historic camps along the former Indian trails turned 19<sup>th</sup>-century thoroughfares.

### **Twentieth-Century Maps**

The first 20<sup>th</sup>-century map reviewed for the study area is the 1904 USGS *New York-Schenectady Sheet* (Map 11). Elnora is depicted south of Jonesville. The Schenectady and Saratoga railroad became part of the Delaware and Hudson line, which built another east-west line in the study area partly shared with the Fitchburg Railroad. Individual structures are depicted with relatively wide spaces between most of the residences with the exception of settlement concentrations at Visher Ferry, Rexford Flats, Ballston Lake, and Jonesville. There are clusters of structures at Grooms Corners and Elnora.

The 1930 USGS *New York-Schenectady Quadrangle* (Map 12) is identical to the previous map in many ways with the addition of more detailed topographic contours and wet areas. Some of the roads were improved by this time, indicated by red lines for the roadways. The alignment of the roads is largely unchanged, and the number of structures is only slightly higher than the previous map. The Fitchburg Railroad is depicted as the Boston and Maine Railroad, with an extension crossing the Mohawk River at densely settled Rexford. This was where the trolley crossed into Saratoga County from Schenectady, which had grown considerably by the time of this mapping. A service line for the New York Power and Light Company crosses the center of the study area.

The 1954 USGS map was updated in 1980 (*Niskayuna/Round Lake/Burnt Hills/Schenectady Quadrangles, New York 7.5 Minute Series Topographic*) and is presented here as Map 13. Growth in development is depicted along the east side of Ballston Lake, north of Rexford Flats, northwest of Jonesville, and east of the study area in the Clifton Park center. The Colonie Reservoir is depicted northeast of Stony Creek. There are several orchards in the southern portion of the study area and a Forest Preserve just south of the Boston and Maine railroad. A large State Game Management Area is located in the extreme southeastern limit of the study area along the Mohawk River. The Old Erie Canal passes through this park area.

The last map reviewed for the study area is the 1991-1993 NYSDOT *Burnt Hills/Round Lake/Niskayuna/Schenectady New York 7.5 Minute Series Quadrangles* (Map 1 and 14). Large power transmission lines are depicted paralleling the river. There are more structures throughout the study area with some larger structures depicted than on previous maps. Large development has not taken place within the study area and large areas of open space are still present. Map 14 indicates the photo angles for the Photograph section.

## **PRECONTACT AND HISTORIC OVERVIEW**

The earliest people known to inhabit the North American continent were the Paleo-Indians who migrated from Siberia into Alaska during glacial times. Archeological evidence suggests that the spread from the West Coast into the Northeast took place over a very short period of time. In the Northeast, evidence of Paleo-Indians is scattered since these highly mobile hunters traveled in small bands. Sojourns of Paleo-Indians hinged upon seasonal migration patterns of now extinct, large mammals, such as mammoth, mastodon, and bison (Funk 1976:209-211). The extinction of the megafauna in the Northeast has been dated and seems tied with the appearance of Paleo-Indians in the North American continent from 10,500 to 8000 B.C. (Funk 1976:212).

Like the Paleo-Indian complexes, there is sparse evidence of Early and Middle Archaic precontact occupation in New York (8000 to 4000 B.C.). Groups of these time periods were likely highly mobile and survived in a similar manner to the Paleo-Indians. During this time, the Northeast underwent vast ecological changes evolving from a conifer-dominated forest to mixed forest environments (Ritchie and Funk 1973:8).

The Late Archaic period is thought to begin at 4000 B.C. with the emergence of Otter Creek point types and similar side-notched projectiles (Ritchie and Funk 1973:iv). Dr. Funk refers to the Otter Creek or Vergennes manifestation as the base for the classic Laurentian stone tool tradition. The Laurentian is postulated to have originated within the Laurentian boreal forest's provenience of the Upper Great Lakes and the St. Lawrence Valley. This tradition includes stone tools, such as the plummet, gouge, bannerstones (atlatl weights), ground slate implements made into points, semilunar knives or ulus, and chipped stone ulus (Ritchie 1994). Other phases of the Laurentian tradition include the Frontenac phase (around 2000 B.C.), and the Brewerton phase, with its atlatl weights and notched, triangular projectile points at sites yielding radiometric dates around 2000 B.C. (Ritchie and Funk 1973:44-46).

Significant cultural changes during the Late Archaic period include the emergence of mortuary ritualism, cemeteries, steatite bowls, and a shift from plain, utilitarian artifacts to objects with ornamentation, such as effigy pestles, birdstones, and stone gorgets. These changes not only mark the termination of the Late Archaic, but also are carried through the Transitional stage (1500-1000 B.C.) into Woodland times. The Transitional period lasted approximately 300 years and marks the transition between the Late Archaic and Early Woodland periods. Carved soapstone vessels and characteristic projectile points associated with the Transitional period include the Orient and Frost Island phases.

The Woodland period (1000 B.C.-A.D. 1600) is the best documented and most understood precontact period. It has been divided into the Early, Middle, and Late Woodland phases based on changes in subsistence, settlement duration, and cultural organization (Ritchie and Funk 1973:96). During the Early Woodland period, the eventual replacement of soapstone pots (steatite) by pottery signifies the beginning of the Early Woodland (1000-300 B.C.) and Point Peninsula phase. The influx of native copper artifacts from the Illinois and Ohio valleys is the earliest trade route recognized in New York. Subsistence patterns of Early Woodland cultures are not considerably different from those of the Late Archaic. The economy was still largely dependent on gathering and hunting accompanied by a greater emphasis on fishing. Early Woodland sites are concentrated on low-lying areas along small inland streams and major drainage systems. The use of storage pits and small cemeteries suggests populations were beginning to establish fixed settlement areas (Funk 1976:310).

The Early Woodland (1000-300 B.C.) is divided into two phases: Meadowood and Middlesex. Although distributed throughout all of New York State, the focus of Meadowood settlement was western New York. The Middlesex phase is also known almost exclusively from burial sites. These sites are concentrated in east-central and eastern New York and the Lake Champlain drainage. Middlesex had strong ties to the Adena culture of the Ohio Valley. Stone tools of the Middlesex phase were largely produced of materials from the Ohio Valley. However, the farther away Middlesex sites were from the Ohio Valley, the more frequently they included tools made from local lithic materials (Ritchie and Funk 1973:97).

Technological advances in ceramic quality accompanied by the increased use of pottery were exhibited during the beginning of the Middle Woodland period (300 B.C.-A.D. 1000). In addition, the early stages of agriculture in the Northeast appeared during this time (1 B.C.-A.D. 1). As a result, the size of Middle Woodland settlements increased, and they were less mobile.

The Hunter's Home phase of the late Middle Woodland period was characterized by more elaborate pottery decoration, the increased use of pipes with a straight or slightly bent obtuse-angle elbow form, and the ascendancy of the broad triangular arrow point of the Levanna type (Ritchie 1994). The beginnings of specific cultural traditions are apparent in the settlement pattern, burials, and artifacts of this period (Ritchie and Funk 1973:355). Trade in exotic goods with Hopewell and Adena cultures was discontinued during the Middle Woodland, possibly an effect of increased local food surplus.

During the Late Woodland period (A.D. 1000-1600) agriculture grew in importance, populations expanded, and large fortified villages emerged. One of the major cultural traditions defined for the Late Woodland is the Iroquois (A.D. 1000-1600). Each tradition is characterized by specific pottery styles (Ritchie and Funk 1973:165). Iroquois subsistence continued the Middle Woodland dependency on agriculture of maize, beans, and squash, and Iroquois settlements were also large villages, often fortified and placed on defensible topography (Ritchie 1969:301). Iroquois villages often lasted a generation or more in one location before being moved because of depleted soil and woodland resources.

Alluvial plains on the riverbanks provided superb land for horticulturalists growing the maize/beans/squash complex of crops. Ritchie notes many small to medium-sized sites have been located directly on floodplains in the Genesee, Delaware, and Susquehanna valleys. Larger village sites were located on higher terraces than the water-source sites, which have contained deeply covered caches and storage pits indicative of agriculture (Ritchie 1994:274). The desirability of these lands did not remain unnoticed to European colonists who settled the area in the 17<sup>th</sup>-century.

The original Indian occupants of the Clifton Park area were the Algonquins, who built villages in the eastern Mohawk valley before the territory came under nominal control of the Iroquois, their eventual rivals. The Iroquois name for Saratoga was Sarachtogue, meaning hillside of a great river, and was part of a larger area called Kayaderosseras.

Clifton Park was a strategic location north of Schenectady and Albany and there were numerous military trails through the present-day town limits. The many well-used Indian trails, which crossed the territory were the first man-made transportation routes of the region. These served as avenues of trade and warfare between the Mohawk tribe of the Iroquois and the Algonquins (Johnstone 1980:6). An early Indian trail was called the Kayderosseras Trail extending from Lake George to the Mohawk River. Most accounts state the Mohawks (or a group of Laurentian Iroquois) were driven from the St. Lawrence River by an Algonquin group called the Adirondacks in the mid-16<sup>th</sup>-century. The defeated Indians moved south to the Mohawk valley where members of the Mohawk tribe were known to have built three palisaded villages on high ground miles from the river, between 1560 and 1580 (Johnstone 1980:6).

Eventually these people settled along the river. By the time Dutch settlers arrived in the area around 1600, the Mohawks were a considerable force and part of the larger Iroquois nation. The Iroquois held territory from the Hudson River, west to Ohio, and north to Canada. The Algonquins held the land of New England and the lower Hudson valley. During times of war between the two groups, the eastern portion of the Mohawk valley was a no man's land. As the French and Dutch fur trade grew more competitive, corresponding native disputes over hunting rights and lands increased, eventually becoming inter-tribal wars. Prior to this development, Indian conflicts were primarily small-scale raids for property, prestige, or family revenge (Johnstone 1980:6).

In 1609, Samuel Champlain shot and killed two Mohawk chiefs while traveling with a group of rival Huron Indians (Johnstone 1980:6). This event combined with conflicts in Ohio and overseas helped set the stage for years of bloody conflict as the Mohawks sided with the Dutch and then the English to fight the French and their allies, known as the French and Indian War. Also in 1609, an Englishman named Henry Hudson in the employ of the Dutch East India Company made his historic voyage up the river later to bear his name. A year later, after discovering the northern bay also named after him, his crew mutinied and set him adrift, never to be seen again.

From 1650 to 1652 the Iroquois engaged in and won a series of conflicts, which consolidated their territory and fierce reputation (Sylvester 1878:20). Indian lands were bought and traded via land surveys and purchases or “patents” issued by the Dutch Governor General and later by his British successor. Widespread public dissatisfaction with the management of the colony by the Dutch companies facilitated a change of power from Dutch rule to English rule in 1664 with relatively little bloodshed for that time.

Under British rule, the area was officially part of Albany County as established by James, Duke of York, brother to Charles II, King of England. “Between 1664 and 1788, 16 patents were issued which encompassed all of the land which is now Saratoga County” (Johnstone 1980:2). Many of these patents would take decades to come to fruition as their terms and conditions of ownership were foiled by Indian and French attacks on Dutch and later English settlements.

In 1666, the Marquis de Tracy led a military expedition from Quebec to the valley of the Mohawks via the Kayderosseras Trail (Johnstone 1980:26, Sylvester 1878:4). His success was short-lived, as the defeated Mohawks returned to the area after the battle was over and de Tracy returned to Canada.

Historical period settlement in the region was concentrated on the Mohawk and Hudson Rivers. In 1669, Pieter Danieke Van Olinda is recorded as the owner of an island on the Mohawk near Niskayuna purchased from the Iroquois (Johnstone 1980:28). The area was then called by its Indian name Canastigione, or Nestigione, meaning “corn flats”. In 1672, Claes Janse Van Boeckhoven and Ryck Claes Van Vranken also obtained property in the area near Niskayuna in the area later called Vischer Ferry. Settlement was largely confined to the Niskayuna/Vischers Ferry crossing on the Mohawk. This length of the river was known as “The Flats” and consists of broad alluvial plains well-suited for farming (Johnstone 1980:28). Saw- and gristmills were later constructed.

In 1689, William Apple's corn crop on the banks of the river was destroyed by Mohawk Indians on their way to battle in Montreal. They made portage from the Aaltplaas Kill (or creek) to Ballston Lake (Sylvester 1878:34). In 1690, the French Governor of Canada (Count de Frontenac) sent a war party of soldiers and allied Indians to destroy English settlements in the Mohawk valley and to take the City of Albany. After a brutal winter trek, which included the old Algonquin route called the Aalplaats Trail along the creek of the same name, the group entered the undefended fort of Schenectady. There, they killed most of the inhabitants, took several prisoners, and burned the homes to the ground in what was later called the Schenectady Massacre. This was not the last time the Aalplaats Trail would be used for warfare, but it was the most infamous.

In 1693, Counte de Frontenac returned to the Mohawk valley via the Kayderosseras Trail to punish the Mohawks for returning to their lands. The Frenchman captured so many Indian enemies that his progress back along the trail was seriously reduced, and the British caught up to the French to engage them in a pitched battle in the Town of Wilton.

Some reports place the Fort family as settlers of the north bank of the Mohawk as early as 1684, but the Fort family was living in the Fort's Ferry area by 1700. In 1708, two patents including nearly all of present-day Clifton Park were issued to multiple investors. The Kayderosseras Patent was one of the largest in state history and included 500,000 acres of territory. The Clifton Park Patent was smaller and included the southern portion of Clifton Park. William Apple was recompensed for his losses with a small patent between the Kayderosseras and Clifton Park patents.

In 1709, Queen Anne's war in Europe spilled over to the colonies and there was violence once more in Albany County and its territories. This had little overall effect in New York, as British forces sent to do battle with the French in the north were twice sent home with no one to fight. British reinforcements sent by ship from Boston were wrecked one year, and the British naval forces in the St. Lawrence were destroyed by storms the following year (Sylvester 1878:39). In 1713, the Treaty of Utrecht ended Queen Anne's war and peace reigned in the colony for a brief period.

The fur trade continued to be a major industry of the earliest settlers and one source of several conflicts between the French and their Indian allies in the north and the Dutch and English with their Indian allies on the south side of the Mohawk River. As the French and Indian wars waged on, disputes over land patents waged as well slowing the development of the area. This pattern would continue through the War of Independence.

In 1728, Nicholas Fort built the first local rope ferry across the Mohawk River east of the study area, providing a key transportation linkage between lands on the north side of the river and access to Albany and Schenectady. In 1744, England and France resumed their warfare. From 1745 to 1747, the English and French traded off possession and destruction of a fort (Fort Clinton) in Saratoga in a series of bloody battles (Sylvester 1878:39). This conflict officially ended in 1748. The last French and Indian War began in 1754 and lasted until 1763 including several pitched battles conducted in the areas of Fort Edward, Fort Ann, and Lake George.

In 1763, the McDonald brothers built a log cabin trading post on the Aalplaats Trail at the shores of Ballston Lake. The cabin was later used as a base for surveys of the Kayderosseras Patent and again in 1771 as an outpost for the Superintendent of Indian Affairs for the British Crown, Sir William Johnson (Johnstone 1980:7). Johnson used his considerable influence with the Indians to ratify the Kayderosseras Patent, which was never fully acknowledged by them until 1768 (Sylvester 1878:19). In 1772, two districts were formed from the County of Albany; Halfmoon (named after Henry Hudson's ship) and Saraghtoga [*sic*].

Loyalty to the British Crown divided many families and communities in New York as events in the colony led up to the War of the Revolution. The move for independence was fueled by outrage over increased taxation and military occupation of colonial homes without recompense. Parts of New York again became no man's lands as militia, spies, and saboteurs for both sides raided supplies from farmers and businessmen, and battles were fought on fields and wooded roads.

The American Revolution came to a dramatic conclusion in Saratoga County. British General Burgoyne advanced to Fort Edward, driving General Schuyler south to Saratoga and then to the mouth of the Mohawk (French 1860:586). Schuyler made the British progress slow and costly, felling trees to place across the trails. Residents fled to Albany and much of the county was "stripped of nearly every evidence of civilized occupation" (French 1860:586). General Gates took over for Schuyler and led the rebel militia north again to Stillwater for two of the most important battles of the campaign against the British. Bereft of reinforcements, Burgoyne removed the British forces to Saratoga. As Fort Edward was captured by the Americans, Burgoyne's forces were hedged in along the waterways (French 1860:586). General Burgoyne's surrender at the Battle of Saratoga in 1777 spelled a new beginning in the bloody history of the region. After these conflicts ended, a great deal of land was cleared, lumber and other mills were built, and more settlers arrived.

Some time around 1780, Eldert Vischer's family came to the Flats at present-day Vischer's Ferry and built a ferry across the Mohawk River (Johnstone 1980:28). In 1783, General George Washington used the ferry on a return journey to visit General Gordon in Ballston (Sylvester 1878:473). Other families had built a store, hotel, and three mills along nearby Stony Creek. The Vischer family was included in the list of persons signing the Clifton Park and Kayderosseros Patents. The hamlet was called Amity after a Dutch church built there in 1802, and both names were used for the hamlet up until 1890 (Johnstone 1980:28). The number of Dutch settlers declined with time after 1664 as the English supplanted the Dutch in official rulership of New York.

The Fort and Vischer ferries were critical strategic points at the narrow points of the Mohawk River and brought farm goods to settlers and to market, provided military access for troops, and were the only way for people in Clifton Park to reach the churches and schools not available yet in their own locales. As such, the ferries were guarded by militia during times of conflict (Johnstone 1980:28). Some residents kept homes on both sides of the river using their Clifton Park residence during the summer. The last original home at Forts Ferry was burned by vandals in 1972 (Scherer 1996:10), but there are still original homes in Vischers Ferry.

Other pioneers took up residence at Dunsback Ferry and Crescent. Several present-day hamlets of Clifton Park were named after European settlers, many of whom owned large tracts of land and held positions of some authority. Most began a life of farming along the rich alluvial flats and newly opened land concentrating on dairy, hay, grains, and apples (Johnstone 1980:29).

Jonesville was named for James Jones, an innkeeper who settled about 1790. Grooms Corners, settled about the time of the revolution, was named for James Groom, who held Clifton Parks first town meeting at his home in 1828. Edward Rexford, who came to Clifton Park from England before the Revolution, gave his name to Rexford Flats. Stevens Corners, now Clifton Park hamlet, was named for Ephraim Stevens, the town's first supervisor. Elnora was originally called Hubbs after local resident John Hubbs (Johnstone:1980:28).

Elnora was reputedly renamed after the wife of railroad supervisor C.D. Hammond who ran the depot and later the post office. It served as a freight depot for the Delaware & Hudson Railroad starting around 1877, and the major export was molding sand for foundries (Scherer 1996:69).

In 1788, the northern districts of Albany County were discontinued and became the "mother towns" of Saratoga County. That same year, a Methodist society was formed in Grooms Corners. The society met in a log cabin for many years and was the parent Methodist group to many groups to follow on the north side of the river. In 1791, the New York State Legislature designated the four towns of Saratoga (Halfmoon, Balls Town, Saraghtoga, and Stillwater) to be their own entities and the county was officially formed. Ballstown became the county seat in 1794. In 1795, a Baptist society was formed in Clifton Park Center. These churches and the Amity Dutch Reformed Church at Amity/Vischers Ferry provided religious services to a number of residents speaking many languages (Johnstone 1980:3).

Fourteen men from Clifton Park served in the War of 1812 (Sylvester 1878:481). In 1820, a road or "turnpike" from the Mohawk River to Saratoga (the Waterford-Saratoga Turnpike) was constructed and taverns sprang up in Jonesville and Clifton Park village (Scherer 1996:7). In 1822, contracts began to be drawn up for digging the proposed Erie Canal along the Mohawk River (Scherer 1985:18).

The construction of the Erie Canal brought major changes for the hamlet of Vishers Ferry and the rest of Clifton Park. In 1823, the construction of the Erie Canal's aqueduct over the Mohawk at Rexford, the nearby aqueduct at Crescent, and later construction of the Champlain Canal in 1825, provided means to transport products in the region adding to the economic prosperity (Sylvester 1878). These canals were instrumental in the development of Saratoga County. Both canals were eventually linked via an aqueduct at Crescent, which became the commercial center of Halfmoon (Johnstone 1980:3). The aqueduct at Rexford carried the canal over the Mohawk River from its northern to its southern bank. There were 2 locks of the canal, a hotel, and several stores at Rexford at this time (Scherer 1996:8). The population of Vishers Ferry boomed as canal construction workers, supervisors, carpenters, boat builders, and others moved into the region to work and live (Johnstone 1980:28). Two dry docks were utilized to build and repair canal boats in Vishers Ferry.

Mineral springs brought fame and tourists to spas in Saratoga and Ballston. Some historians even attribute the regional mineral waters with properties attractive to game and fur-bearing animals (Sylvester 1878:19). Travel along the many roads of Clifton Park was a difficult affair, as the sandy roads were numerous but of poor quality (Spafford 1824:216). The mill power of Alplaus Creek at this time was impressive (Gordon 1836:673). An effort was made to raise investors and build a bridge crossing the Mohawk, but it never materialized until later (Scherer 1985:79)

The Town of Clifton Park (then "Clifton") was annexed from the Town of Halfmoon in 1828 (Johnstone 1980:28) and was formally named in 1829 (Sylvester 1878:12). By 1830, there were 2,494 persons listed as residing in Clifton Park (Gordon 1836:686). The 1830s saw the advent of private railroads bringing tourists to Saratoga and Ballston spas, and farm or market goods to and from the whole county. In 1832, the nation's second railroad was constructed to carry passengers and freight between Schenectady and Saratoga (Scherer 1996:69). This line passes along the western edge of Clifton Park. The railroad depot at Elnora was one of few local stops for goods delivered by train, which quickly took a toll on the canal traffic and profits. The hamlet of Jonesville also developed as a result of the improvement in rail transportation.

Farm parcels were rented out by descendants of the patent holders for 15 to 20 cents an acre (Gordon 1836:672). By 1835, the town population dipped to 2,282 persons, with 202 militiamen, 470 voters, and 43 foreigners or "aliens" living on 20,560 acres of land. Most of this is listed as improved land and Clifton Park had the highest value of real estate in the county, as well as the highest taxes by a goodly sum (Gordon 1836:686). A co-ed boarding school, the Jonesville Academy, was established in 1836.

A Baptist church was built in 1841, while a Methodist church soon followed in 1842. These institutions were essential to public life and welfare in Clifton Park, as many municipal and legal services were not available elsewhere. Churches kept vital records and helped settle legal disputes in the absence of an established or accessible court system (Johnstone 1980:29).

The Erie Canal was enlarged in the 1840s and another wave of workers moved to the area along the Mohawk River. Several Greek Revival homes were built in the hamlet of Visher Ferry between 1840 and 1860 while canal employees took up residence. By 1850, most of the businesses along the river specialized in maritime supplies, instruments, and services. Farming was the main business in the interior of Clifton Park.

When the canal operations declined in favor of rail transport, settlements along the river decreased in population (Johnstone 1980:28). The economic development of Clifton Park and vicinity was somewhat hampered by the lack of adequate water resources inland to operate larger mills and service developing industry. Although such enterprises were numerous on the Mohawk and Hudson, the interior region lacked many large water courses and the population relied upon farming (Johnstone 1980:29). Still, the 19<sup>th</sup> century was generally a period of economic and social prosperity in Clifton Park with profits from farming, growing industries, and specialized services encouraging growth. In 1860, the population of Clifton Park was 2,804 persons. There were 22 homes in Clifton Park center, 45 in Amity/Vischers Ferry, 30 in Jonesville, and 25 homes in Rexford Flats (French 1860:587). No figures were given for Grooms Corners or Forts Ferry. The Clifton Park Village Female Seminary was established in 1863 (Sylvester 1878).

The economic good fortune of Saratoga County did not seem to be seriously interrupted by the Civil War, since this was one of the first national conflicts during which none of the battles took place in Saratoga County. Many residents enrolled in the service at this time forming parts of the 30<sup>th</sup> New York volunteers in 1861; the 77<sup>th</sup>, 115<sup>th</sup>, and 153<sup>rd</sup> Regiments in 1862, and the 2<sup>nd</sup> Veteran Cavalry in 1863 (Hough 1872:588). By 1865, the population of Clifton Park was 2,712 persons and the number dropped to 2,657 persons by 1870 (Hough 1872:589). Town taxes skyrocketed from a total of \$26,072 in 1863 to \$308,395 in 1864 and 1865, then dropped again to \$52,365 in 1866 (Hough 1872:589). The respite in town taxes was double-edged, for the county tax tripled that same year. Clearly, the war was costly both in lives and to the living.

Post-Civil War industries in the county included cheese factories, paper goods, as well as woolen and cotton mills (Hough 1872:587). Architecture of the late 19<sup>th</sup> century in Clifton Park reflected the tastes of the day, especially the large Victorian homes built between 1875 and 1895. Residents found themselves at a confluence of advancing technologies in industry and transportation, plentiful natural resources, and largely unchecked financial speculation and construction projects (Johnstone 1980:29). These forces would invert their values in short order spelling a predictable downturn in economics for Clifton Park.

As trees disappeared into the mills, some mills were unable to keep pace with new technologies, and water power in the interior decreased due to construction elsewhere. The new transportation routes took their toll as goods from other parts of the nation replaced those produced locally, and agricultural costs were drastically undercut by the productivity of the plains states and cheap railway costs. The hamlets along the canal in Clifton Park and Saratoga County suffered measurably. The Jonesville Academy closed in 1876, but the structure was later used for a public school.

One source notes the visible presence of an old Indian burial ground on the wooded property of one Jacob Van Vranken (Clifton Park Historic Register, Cemetery 18). The account describes persons living in 1878 recalling the deaths and burials of many Indians in the vicinity (Sylvester 1878:480). This is considered a very late date for a continued native presence in the area and may reflect some inaccuracies of memory. Nevertheless, the former Van Vranken property is an archeologically sensitive location.

In the 1880s and 1890s Vischer Ferry received newfound popularity as a resort. By the end of the 19<sup>th</sup>-century the hamlet contained a female seminary, a hotel, a wagon and carriage shop, as well as several other mechanic shops. Census records place the population of Clifton Park at around 2,000 persons for one hundred years (1840-1940) (Johnstone 1980:29). The possessive "s" in Visher's Ferry was dropped and the name became Vischer Ferry in 1893 (Scherer 1985:14).

In 1900, a bridge was constructed to link the north and south sides of the Mohawk river at Visher Ferry, but winter ice jams destroyed portions in 1901 and the remainder in 1902. The stone abutments still remain (Scherer 1985:10). Some authors suggest this event kept the rural character and charm of the hamlet intact by forcing reliance upon the ferry once again. A steel bridge for a trolley was built across the river in 1904.

An amusement park was opened just west of the village of Rexford in 1906 as Luna Park, became Dolle's Park in 1911, and finally the Rexford Amusement Park in 1916. An electric trolley ran from Schenectady to the amusement park, then to Ballston and Saratoga (Scherer 1996:111). The amusement park included a roller coaster, merry-go-round, train rides, ice cream parlors, fireworks stands, artists and vendors. The canal was still a central attraction for picnics and quiet boat rides.

In 1915 the Mohawk River was dammed to create the Erie Barge Canal, a wider and deeper waterway for larger commercial boat traffic. As this and the roads of Saratoga County were improved, ferry traffic dropped off and ceased some time after 1917 (Scherer 1985:81).

The introduction of the automobile marked another significant change in the history of Saratoga County. Tourists traveled further abroad in cars, and the spas of Saratoga were visited less often. This was compounded by reform movements against gambling, which also cost the resort considerably. The self-reliance and small community interaction among the hamlets of Clifton Park was eroded by national trends geared toward the centralization of goods and services. There was a migration from the farms throughout the county as rural residents sought work in the larger communities of Troy, Schenectady, and Saratoga Springs.

But as those cities increased in size and density, people began to move back to Clifton Park. Reforestation programs were begun in the 1920s and 1930s to replace the lost trees, and the state of New York revitalized the springs at Saratoga. The Rexford Amusement Park closed in 1933, and the trolley bridge was dismantled in 1943 (Scherer 1996:80). By the 1950s, jaded city dwellers began to seek out the quiet hamlets of Clifton Park. The town population almost doubled from 1940 to 1960.

The construction of the Northway (I-87) in 1966 was a turning point in the history and population of the town, and by 1970, the population figure had tripled (Johnstone 1980:29). Numerous housing developments, shopping areas and support services were constructed for commuters. The Town of Clifton Park today is a “bedroom community” with most of its residents traveling elsewhere for their employment during the week (Johnstone 1980). There are numerous sections of the town, which retain a considerable historic character and intact historic structures or structural remains.

This is most evident in Vischer Ferry, which was designated as a historic district in 1975. In 1976, the town board incorporated the recommendations of the Vischer Ferry Association into its planning and established the Vischer Ferry Nature and Historic Preserve Committee to oversee development of recreation and preservation plans for the natural, structural, and archeological resources along the river. Land-use planning has become an essential element in both the development and preservation of Saratoga County and the Town of Clifton Park.

## **WINDSHIELD SURVEY**

A windshield survey was conducted by a staff archeologist and the architectural historian on June 16, 2004, to identify current land uses, to assess the degree of historic preservation in the hamlets and along the roadways, and to document the open spaces of the Town of Clifton Park. The weather was clear and sunny with excellent visibility. Photographs of representative portions of the study area are presented after the Map section.

The terrain on the east side of Ballston Lake is steeply sloping (Photo 1). There are numerous structures and areas of associated previous disturbance along East Side Drive (Photo 2). There is some wooded space behind the residences. The waterways near the road appear modified.

Several modern homes line Schauber and Old Schauber roads, which borders a waterway. There is a large area of gravel fill and previous disturbance along the road in front of the intersection of the old and new Schauber roads. The waterway in this location appears unmodified (Photo 3). A mixture of older and newer structures exists along Schauber Road. There is a cluster of historic and modern structures at Schauber and Hubbs roads. Many of the properties in this area are devoted to horse farms (Photo 4). As with most roads in the study area, there are sections of open field (active and fallow) between the residences and farms (Photo 5). There is an area of recent development to the south of Hubbs Road near Hatlee Road and east of Hatlee Road near Jonesville.

Larger properties with historic structures and hay farms flank the rolling topography of MacElroy Road (Photo 6). Most of the high spots in the study area have some degree of construction ranging from athletic fields (Photo 7) to structures. Some active farm properties appear to be graded (Photo 8). Cemeteries of varying sizes are found throughout the study area. Most of these are well-fenced and clearly mapped. Visual inspection and conversations with the Town Historian indicate there are also numerous, small (and therefore less obvious) family cemeteries associated with the historic farmhouses.

Conditions along NY Route 146A are similar with commercial properties in isolated locations. There is a large golf course on the south side of NY Route 146A while the properties on the north side of the road are more residential (Photo 9). Structures cluster at NY Route 146A and MacElroy roads, and near the northwestern boundary at NY Route 146A and Schaubert Road. Some of the open spaces in this area are quite large (Photo 10). There are numerous orchards in the study area (Photo 11). Many of the farms are no longer active (Photo 12). There is an area of commercial development at the northern bend of NY Route 146A (Photo 13). Recent construction includes the placement of a water line on the north side of NY Route 146A (Photo 14).

There are several older structures, many with associated outbuildings, on the winding roads connecting larger roads in the study area. This is evident along Tanner Road in the east, Waite Road in the center, and Ashdown Road in the west, between NY Route 146A and NY Route 146. These roads cross several small waterways and border wet areas of varying size and density (Photo 15). Railroad tracks are still in use in the study area (Photo 16), portions of which are still densely wooded between areas of construction (Photo 17). The area along the Alplaus Creek is also wooded (Photo 18).

A narrow railroad overpass provides access for traffic entering the study area from across the creek (Photo 19). There are several modern structures clustered northwest of NY Route 146 and Balltown Road, which becomes Blue Barns Road north of the intersection. There are large open areas between clusters of historic structures along NY Route 146 (Photo 20).

There is a large area of fill at the bend in Appleton Road (Photo 21). Modern residences are interspersed with older structures along roads south of NY Route 146. A modern residential development has been built around the old Nott farmhouse on Nott Road. A large golf course extends through a large portion of the west-central study area (Photo 22). To the southeast is an area of open spaces surrounded by wet areas (Photo 23). Clusters of structures, some historic (Photo 24), are present in the Grooms Corners area including Grooms Road, Droms Road, and Sugar Hill Road.

River View Road extends along the high bluffs overlooking the Mohawk River (Photo 25). There is a marina east of the river crossing with intact canal elements (Photo 26) immediately adjacent to areas of previous disturbance (Photo 27). There are numerous historic features and structural remains on both sides of the Mohawk River at Rexford (Photo 28). Historic structures in the hamlet of Rexford are clearly visible from the south bank (Photo 29). North of Rexford the Edison Golf Club occupies the east side of Balltown Road (Photo 30), while commercial development has taken place along the west side of the road (Photo 31).

There is very little commercial development in the southern portion of the study area. The topography along River View Road (Photo 32) and Vischer Ferry Road is rolling and interspersed with woods, wet area, open fields, and orchards. Some of the large orchards along Vischer Ferry Road have large lawn spaces in front of the newer residences (Photo 33). Some older residences line the road (Photo 34). A large retirement residential community development is located at Ray Road and Vischer Ferry Road (Photo 35). There is an area of previous disturbance from construction and mining on Vischer Ferry Road (Photo 36). A new residence has been constructed on top of a high hill in this area (Photo 37), the location of a precontact archeological site (A09103.000093) reported by Arthur C. Parker in the 1920s.

There is a concentration of historic features in the extreme southeastern portion of the study area. These include a historic bridge associated with a mill site (A09103.000088) (Photo 38), and intact elements of the Erie Canal (Photo 39). Abutments can still be seen at the Vischer Ferry crossing (Photo 40). While there are open spaces along the river, they are typically smaller in size than in the northern and central areas with more historic structures nearby (Photo 41). A recreation and preservation area with intact portions of the Erie Canal is located near the southeastern limit of the study area (Photo 42). Historic items line the lawns of many homes throughout the study area, even in front of modern residences (Photo 43). There is some recent construction near the Colonie Reservoir, which is bordered by wet areas (Photo 44).

### **Architectural Resources**

A windshield survey was conducted of the study area on June 16, 2004. The following observations were made of the architectural resources at that time. The architectural resources of the study area fall into five groups: 1.) those structures constructed before the Revolutionary war, 2.) those constructed between 1783 and 1825, 3.) those constructed between 1825 and 1860 (the Canal era), 4.) those constructed between 1860 and 1930, 5.) and structures constructed since 1930. The information that follows supplements the letter of John Scherer, Clifton Park Town Historian, which is presented as Appendix 1 in this report. The dates presented here are based either upon historic plaques or on an estimate from the exterior appearance.

The structures in the first group were built by the earliest settlers of European descent. Very few of these structures remain in Saratoga County making the preservation of each one important. Given the passage of a significant amount of time since their initial construction, it is not surprising that none of these remaining structures has come down to us in an unaltered state. Three structures, which fall into this category, were identified by the survey within the study area. The rear wing of the Nicholas and Annette Vischer house on Ferry Drive in Vischer Ferry may have been constructed sometime between 1735 and 1762 (Scherer 1985:33) (Photo 45). Portions of the Edward Rexford House at 1643 Route 146 in Rexford date to c.1763. Although not previously identified as such, the house at 833 River View Road, east of Vischer Ferry may be in this group as well. Its exterior form is evocative of 18<sup>th</sup>-century construction, and its location on River Road places it within the area first settled by Europeans. An examination of the interior would facilitate verification of its age. These houses all appear to have begun as wood or composite wood and brick-framed structures of one-and-a-half stories with a bent-frame structural system following traditional Dutch techniques. Additional structures from this era may exist, remodeled at an early date and now part of a larger dwelling.

The second era of settlement is represented by approximately twenty structures within the study area. This era began with the conclusion of the Revolutionary War and ended with the opening of the Erie Canal. Yankee settlers flooded into Saratoga County during this period; it is not surprising that many of the houses surviving from this period were constructed by them. Included in this group are the Nathan Garnsey house on Route 146 Rexford (1791), the Abner Irish house (c.1795), the Abraham and Mary Van Arnum house on Droms Road (c.1798), 1004 Hatlee Road (c.1800), the house at the southwest corner of Grooms and Vischer Ferry roads (c.1790-1810), the Nicholas and Catherine Van Vranken Vischer House, Grooms Corners (c.1801), the Schauber house on Old Schauber Road (1806), the Francis Vischer house, Stony Creek Reservoir (1813), the William Peters House, Crescent and Vischer Ferry Road (c.1814), 122 Ashdown Road, corner Route 146a (c.1810-1820), 277 Sugar Hill Road (c.1810-1820 with later additions), the Best house, 113 Vischer Ferry Road (1815) (Photo 46), the Nott house, 37 Nott Road (c.1815-1820, although usually dated earlier), Stormy Hill Farm on Ray Road (c.1810-25), Hope Farm, in the 1860s on Route 146 (c.1815-1820), and 216 Sugar Hill Road (c.1820).

These houses are typically one-and-a-half or two-story, five-bay wide dwellings of the late Georgian or "Federal" style and represent the dwellings of successful farming families of this era. Some retain their associated barns and outbuildings. No structures from this era that would have been occupied by less-affluent families were identified by the survey. This is frequently the case since these buildings were typically wood-framed and of poorer construction.

The overall rarity of standing structures from this era warrants protection of them and their associated landscapes as a thematic group throughout the town. More secure dates for the construction of these dwellings and others of more uncertain date is possible with access to their interiors. Many of these houses have already been individually placed on the town's historic register.

The third era, which spans from the opening of the Erie Canal to the beginning of the Civil War, is well represented in the study area. The Vischer Ferry Historic District encompassing more than seventy buildings and structures is an excellent assemblage of built culture from this era. The hamlet of Rexford largely dates to the same period and should be considered for protection by listing on the Town, State, and National registers. Grooms Corners also retains spatial and architectural integrity to this era of the 19<sup>th</sup> century and should be considered for similar protection.

Contemporary with the development of these three communities agriculture expanded dramatically. Some farms were established by descendants of long-established families while others were founded by families that were new to the area. Among the individual houses, farmsteads, and public buildings constructed during this era are the National Register Listed Grooms Tavern complex at Grooms Corners (c.1825, 1840), 967 River View Road (c.1825), the Levi Garnesy house, 1401 Route 146 (c.1830) (Photo 47), the John Clute house (1832 datestone), the Shepherd house, 141 Sugar Hill Road (1832 datestone, a wing may date to c.1785), the National Register Eligible Jonas Southard house, 1585 NY 146 (c.1850), the Abraham Van Woert house in the 330 block of River View Road (1850), 14 Garnsey Road (c.1850). A few examples of modest dwellings probably constructed for tenant farmers exist from this period. A good example is found at 993 Hatlee Road (Photo 48). The buildings from this era can be generally characterized as Greek Revival in style. Their ubiquitous presence throughout the study area lends a recognizable character to the town.

The era spanning 1860-1930, from the Civil War to the Great Depression saw slow but constant development of the study area. The hamlet of Ballston Lake dates almost entirely to this era, and is characterized by small cottages, which appear to have been built as seasonal dwellings but have now been converted to year-round use (Photo 49). The Chimneys (aka the Castle), the summer home and studio of Hudson River School painter William Bliss Baker, was constructed here in 1885. Many fine houses were constructed along River View Road during this era including 955 River View Road (c.1890) (Photo 50) and 969 River View Road (c.1920). Many are probably associated with the expansion of General Electric in nearby Schenectady. Very few new farms were established during this period, and no farmsteads begun in this era were identified during the survey. Additional houses were constructed during the latter half of this period in areas that were formerly used for agricultural purposes. Among these is the fine Arts & Crafts style house at 10 Old Schaubert Road (c.1915) (Photo 51).

Finally, structures constructed in the era since 1930 are found throughout the study area. In particular, concentrations of buildings from c.1950 onward are found in residential developments, such as that located north of Glenridge Road and east of Blue Barn Road and Sambrook Edge along the Mohawk west of Vischer Ferry. Buildings from this era do not generally fall within the definition of what is considered to be historic, but individual examples, such as 865 River View Road (Photo 52) may be considered to have sufficient design merit to warrant protection.

## **SUMMARY**

The town of Clifton Park has always occupied an important strategic location on the north shore of the Mohawk River as it empties toward and into the Hudson River. From precontact times to the present, the corridor from the Niskayuna area to the Saratoga area and beyond has been a focus of trade, transportation, and warfare. The development of the study area in the western portion of the town of Clifton Park took place largely from the south to the north. This is reflected in the number of historic structures and sites concentrated along the Mohawk River.

### **Precontact Archeological Sensitivity**

Environments favorable to precontact settlement and resource extraction include the numerous waterways extending through the study area. These include larger bodies of water, such as the Mohawk River and Ballston Lake, moderate waterways, such as the Alplaus and Dwaas Kill creeks, and small tributaries of these and other creeks. Elevated areas overlooking wet areas are ideal for precontact resources. However, these locations are also favored by later occupants of the area, and some disturbance of these locations can be anticipated. Historic structures have been built on many of the hilltops, and later replaced with modern structures. This does not rule out the possibility that intact archeological sites might be present in such locations, and in fact illustrates the possibility that historic materials can be found in layers of deposits over or around precontact deposits.

### **Historic Archeological Sensitivity**

Postcontact settlement by Europeans centered at the ferry crossings essential to providing linkages between the north and the growing cities of Albany (originally Beverwyck) and Schenectady. These areas still represent the densest clusters of historic resources at Vischer Ferry and Rexford. Development of the Erie Canal added to this pattern, and large sections of the Erie Canal have been preserved. Farms in the center and northern portion of the study area maintained themselves for many years, and farming remains a central industry in the study area. Clusters of farmhouses, tenant houses, and outbuildings attest to this agricultural history. Many are centered at Grooms Corners, along NY Route 146, Sugar Hill Road, and Vischer Ferry Road. Family cemeteries found in many of these locations are considered significant cultural resources. John Scherer, historian for the Town of Clifton Park, has assembled an inventory and register of historic resources throughout the town including structures and cemeteries.

Generally speaking, there has been some development of farm properties throughout the study area. Intact horse farms and large hay fields are present in the northern portion of the study area, while commercial development is largely isolated east and west of the study area. Some recent development has taken place at Rexford, along River View Road, and near Grooms Corners in the central portion of the study area. Recent construction was also noted along Vischer Ferry Road in the southern portion of the study area. Large orchards are still prevalent along River View Road and Vischer Ferry Road in the south.

Recent efforts have been made to add to the list of inventoried historic properties in the Town of Clifton Park. Several structures have been nominated for listing on the State and National Registers of Historic Places, and their listing is considered likely. In addition, the Town of Clifton Park has assembled its own inventory and Register of Historic Places. A pamphlet assembled by the town historian John Scherer and the Clifton Park Preservation Committee is included in Appendix 1 for OPRHP review. Copies are at the town hall. It addresses many of the historic resources in Clifton Park showing the locations of significant structures, historic markers, and cemeteries. Mr. Scherer has proposed historic district designations for the hamlets of Rexford, Grooms Corners, and Clifton Park Center just outside the study area.

## **RECCOMENDATIONS**

Any areas of proposed development in the future would require individual assessments of their archeological potential(s). In addition, planning should be conducted using the information compiled by Mr. Scherer and the Clifton Park Preservation Committee, some of which is presented in this report. Since River View Road is a federal scenic byway, its viewshed should be protected.

Unlike other towns in the Capital Region, which were settled much earlier, the town of Clifton Park was sparsely settled in the era before the Revolutionary War. Increasing numbers of settlers arrived beginning in the late 1780s, but the number of settlers remained small until the Erie Canal era. For this reason architectural resources dating to the period before 1825 are—and always were—rare within the study area. Their rarity accords them special significance as a group, which outweighs their strictly architectural importance. A dramatic expansion of development followed the opening of the Erie Canal. The large number of village structures and farmsteads that were constructed in the years between 1825 and 1860 still characterize the town as a whole giving it a Greek Revival character. Since this architectural style is today closely associated in the public imagination with the Town of Clifton Park, buildings from this era have a special iconographic significance and warrant protection at some level. A number of these buildings have already been protected by National Register listing.

Development within the study area was largely spotty during the second half of the 19<sup>th</sup> century and first half of the 20<sup>th</sup> century. Individual structures worthy of protection are located throughout the study area, however. Ballston Lake presents a concentration of cottages constructed during the first three decades of the 20<sup>th</sup> century. An historic district could be configured to include some or all of these modest dwellings, and the nearby Baker house.

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**APPENDIX 1**

**Information From Town Historian John Scherer**



DRAFT

April 23, 2004

Clifton Park Town Board  
One Town Hall Plaza  
Clifton Park, New York 12065

Dear Board Members:

I would like to provide some input as to historical areas and sites within the building moratorium area in the western part of our town. The town should be aware of these historically sensitive places as it determines zoning and building requirements for this area.

Proposed historic districts for the moratorium area are Clifton Park Center (the hamlet around the Clifton Park Center Baptist Church), the hamlet of Rexford, and the hamlet of Grooms Corners. All three of these hamlets retain their mid nineteenth century rural flavor, and efforts should be made to preserve this atmosphere. These hamlets will become historic districts as soon as the Town Board approves the revised historic zoning ordinance.

Historic buildings in the moratorium area are the Historic Grooms Tavern, Clifton Park Center Baptist Church, Cyrus Rexford House on Route 146, Nathan Garnsey House on Route 146, Levi Garnsey House on Route 146, Jonas Southard House on Route 146, Abraham Van Arnum House on Droms Road, Grange Hall at Grooms Corners, and the Rexford Methodist Church. All of these structures are currently on the Clifton Park Register of Historic Places, and two of them, the Grooms Tavern and the Clifton Park Center Baptist Church are on the National Register of Historic Places. The Nathan Garnsey House, Rexford House, and Grange Hall are also being nominated to the National Register.

Besides the Clifton Park Center Baptist Church Cemetery that was recently added to the National Register there are several small family cemeteries in the moratorium area. There is the Terpening Cemetery on the west side of Appleton Road, the Wetmore-Smith Cemetery on the north side of Riverview Road, Rexford, behind the Wetmore-Smith House, the Rexford Cemetery on the east side of Route 146 between McLane and Hollister Streets, the Garnsey Cemetery, on the north side of Route 146 west of Nott Road, the Jones Cemetery on the east side of Waite Road, north of Route 146, and the Shepherd Cemetery at Bowman Orchard on Sugar Hill Road.

Another concern in the moratorium area is Riverview Road and Sugar Hill Road. Riverview Road is a Federal Scenic Byway known as the Mohawk Towpath Byway connecting

Waterford and Cohoes to Schenectady. Care should be taken to preserve the rural and scenic landscapes along Riverview Road. The Historic Grooms Tavern will serve as an attraction and information center for the Byway connecting to it via Sugar Hill Road. Again the wonderful view shed along Sugar Hill Road should be preserved, as well as the mid nineteenth century flavor of Grooms Corners.

For more information about the above sites and cemeteries, and for exact locations, please see the brochure *A Guide to Historic Clifton Park*. Please let me know if I can be of further assistance.

Sincerely,

John L. Scherer  
Historian

**Professional Affiliations:**

Registered Professional Archaeologist (RPA)  
 Adjunct Research Associate, University at Albany, SUNY  
 Treasurer, Iroquois Indian Museum  
 Board Member, American Cultural Resource Association  
 Board Member, Rensselaer County Historic Society (RCHS)  
 Chair, RCHS Preservation Committee  
 Board Member, Iroquois Indian Museum  
 State Plan for Historic Resources Steering Committee Member, for Office of  
 Parks, Recreation and Historic Preservation  
 Town Historian, North Greenbush

American Cultural Resources Association  
 Archaeological Conservancy  
 Archaeological Institute of America  
 Council for Northeast Historic Archaeology  
 Eastern States Archeological Federation  
 Greenbush Historical Society  
 Historic Albany Foundation  
 The Holland Society of New York  
 Hudson-Mohawk Industrial Gateway  
 Maine Archaeological Society  
 Maryland Archeological Society  
 National Trust for Historic Preservation  
 The Native American Institute at Columbia-Green Community College  
 New Hampshire Archaeological Society  
 New Hampshire Preservation Alliance  
 New York Archaeological Council  
 New York State Archaeological Association  
 Northeastern Anthropological Association  
 Preservation League of New York State  
 Society of American Archaeology  
 Society of Historic Archeology  
 Scenic Hudson  
 Society for Industrial Archeology  
 Vermont Archaeological Society  
 Women's Transportation Seminar

Former President, New York State Archaeological Association (NYSAA)  
 Former Board Member, American Cultural Resources Association (ACRA)  
 Former Board Member, Cornell Cooperative Extension of Rensselaer County  
 Former President, New York Archaeological Council (NYAC)

**Publication:**

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**APPENDIX 3**

**OPRHP Project Review Cover Form**

## PROJECT REVIEW COVER FORM

Please complete this form and attach it to the top of any and all information submitted to this office for review.  
Accurate and complete forms will assist this office in the timely processing and response to your request.

This information relating to a previously submitted project  
**PROJECT NUMBER** PR  
(Previous number assigned to this project by this office)

If you have checked this box and noted the previous Project Review (PR) number assigned by this office you do not need to continue unless any of the required information below has changed.

This is a new project

If you have checked this box you will need to complete ALL of the following information.

Project Name West Clifton Park DEIS, Phase 1A

Location Mohawk river to northern town line  
You MUST include street number, street name and/or County, State of Interstate route number if applicable

City/Town/Village Town of Clifton Park  
List the correct municipality in which your project is being undertaken. If in a NON-INCORPORATED hamlet/village you must also provide the name of the town.

County Saratoga

If your project covers multiple communities/counties please attach a list defining all municipalities/counties included.

### TYPE OF REVIEW REQUIRED/REQUESTED

1. Is this project being developed using New York State funds ?  Federal funds ?

If you checked either or both of these boxes list the New York State and/or Federal Agency or Program that is providing the funding:

2. Does this project requires a New York State permit ?  Federal permit ?

If you checked either or both of these boxes list the New York State and/or Federal Agency or Program that is providing the permit and the type of permit being requested:

3. SEQRA  New York State Environmental Quality Review Act

4. Information Request   
No state or federal funding or permit(s) involved

### CONTACT PERSON FOR PROJECT

Name Chris Einstein Title \_\_\_\_\_

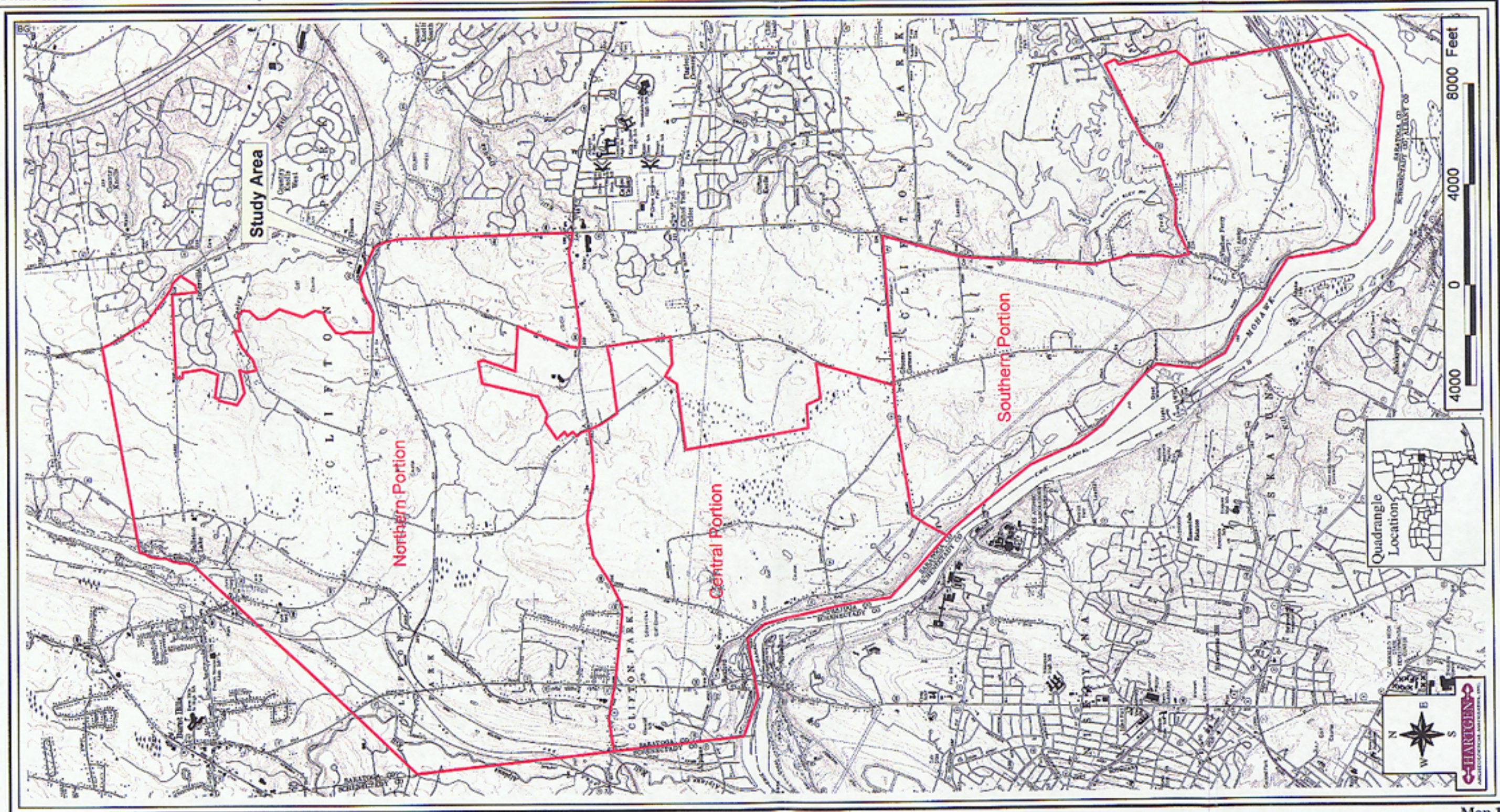
Firm/Agency Clough, Harbour & Associates, LLP

Address III Winners Circle City Albany STATE NY Zip 12205

Phone (518) 453-4500 Fax (518) 453-4773

**MAPS**

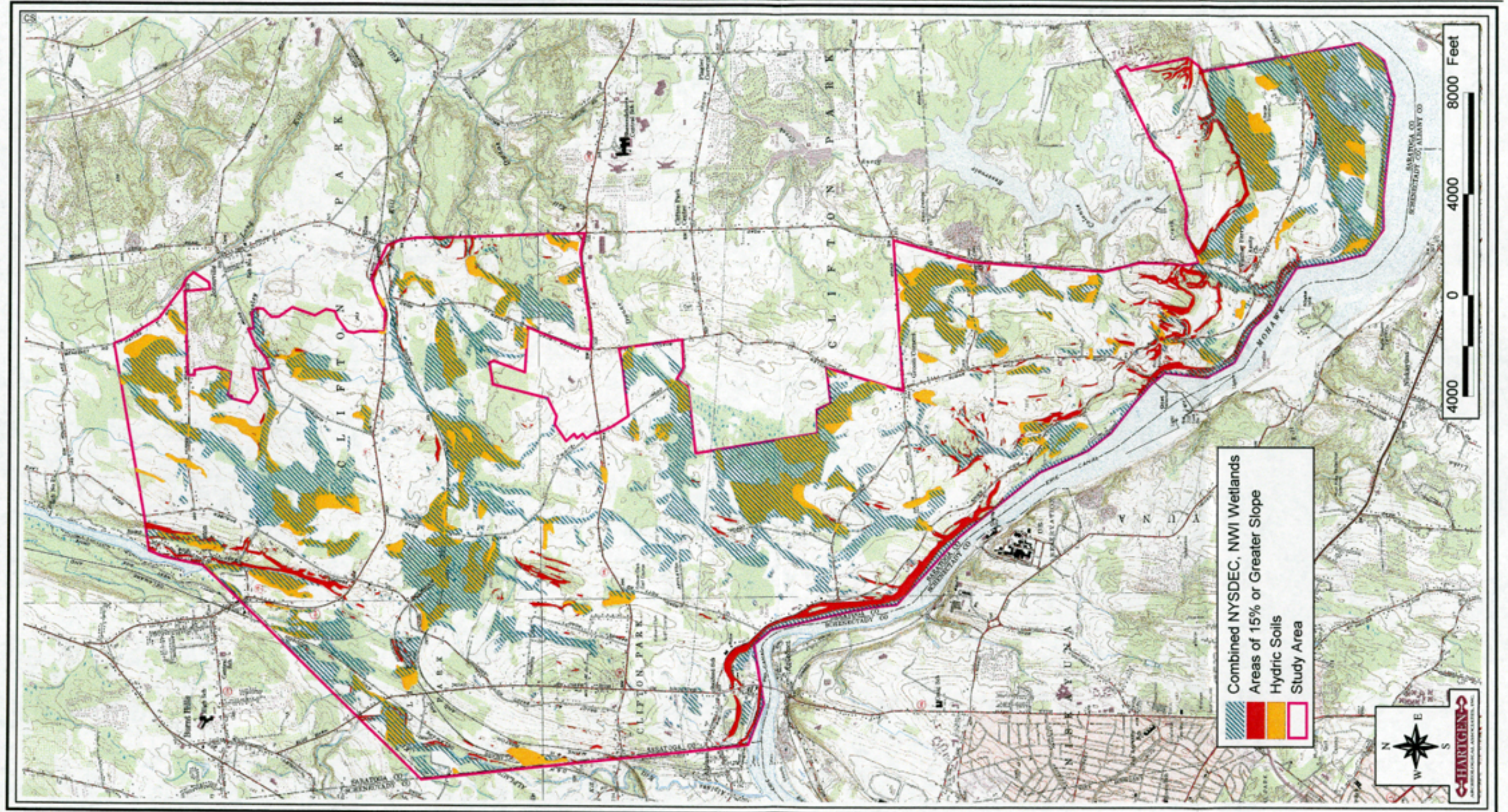




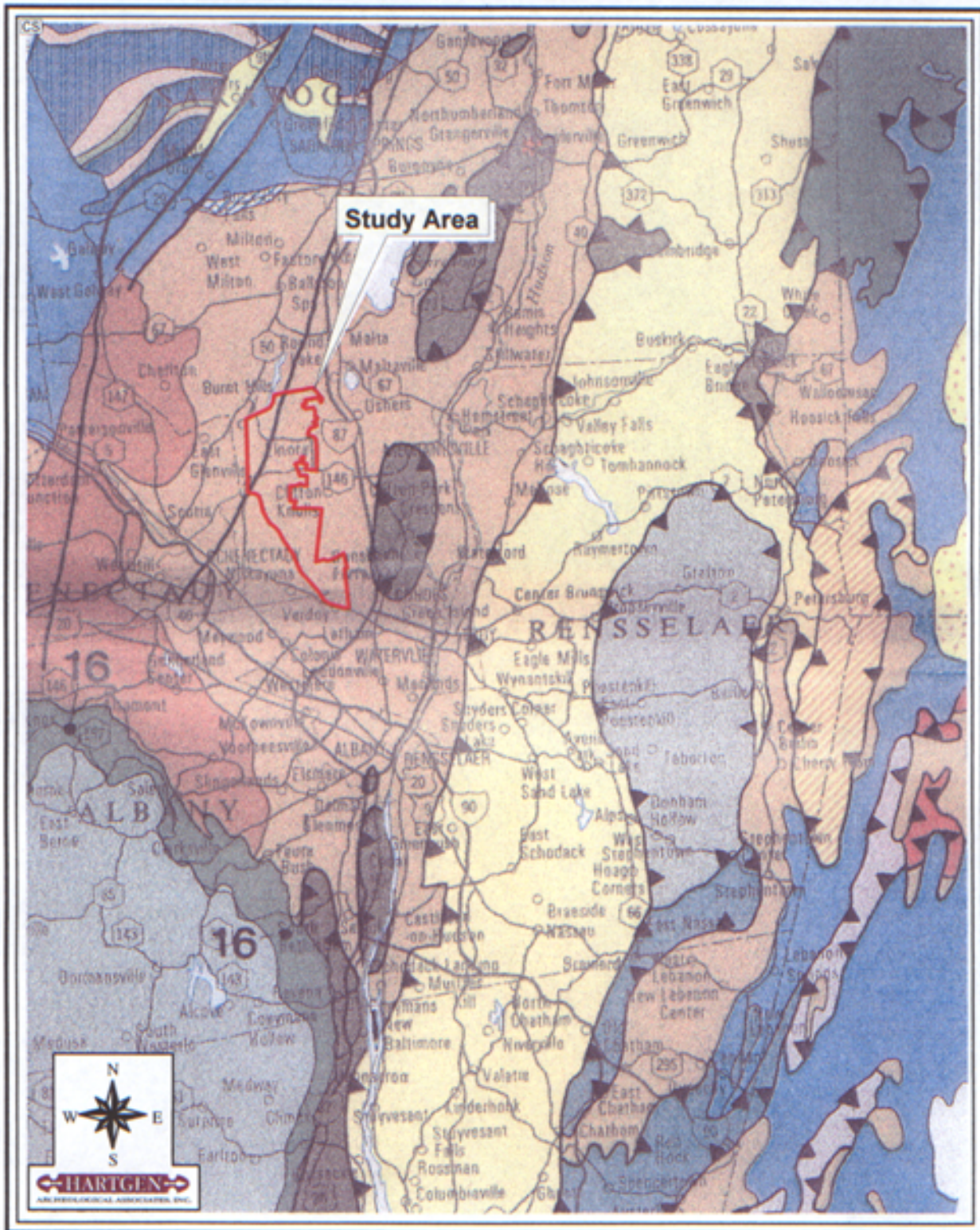
Map 1

1991-1993 NYSDOT Burnt Hills/Round Lake/Niskayuna/Schenectady New York 7.5 Minute Series Quadrangles





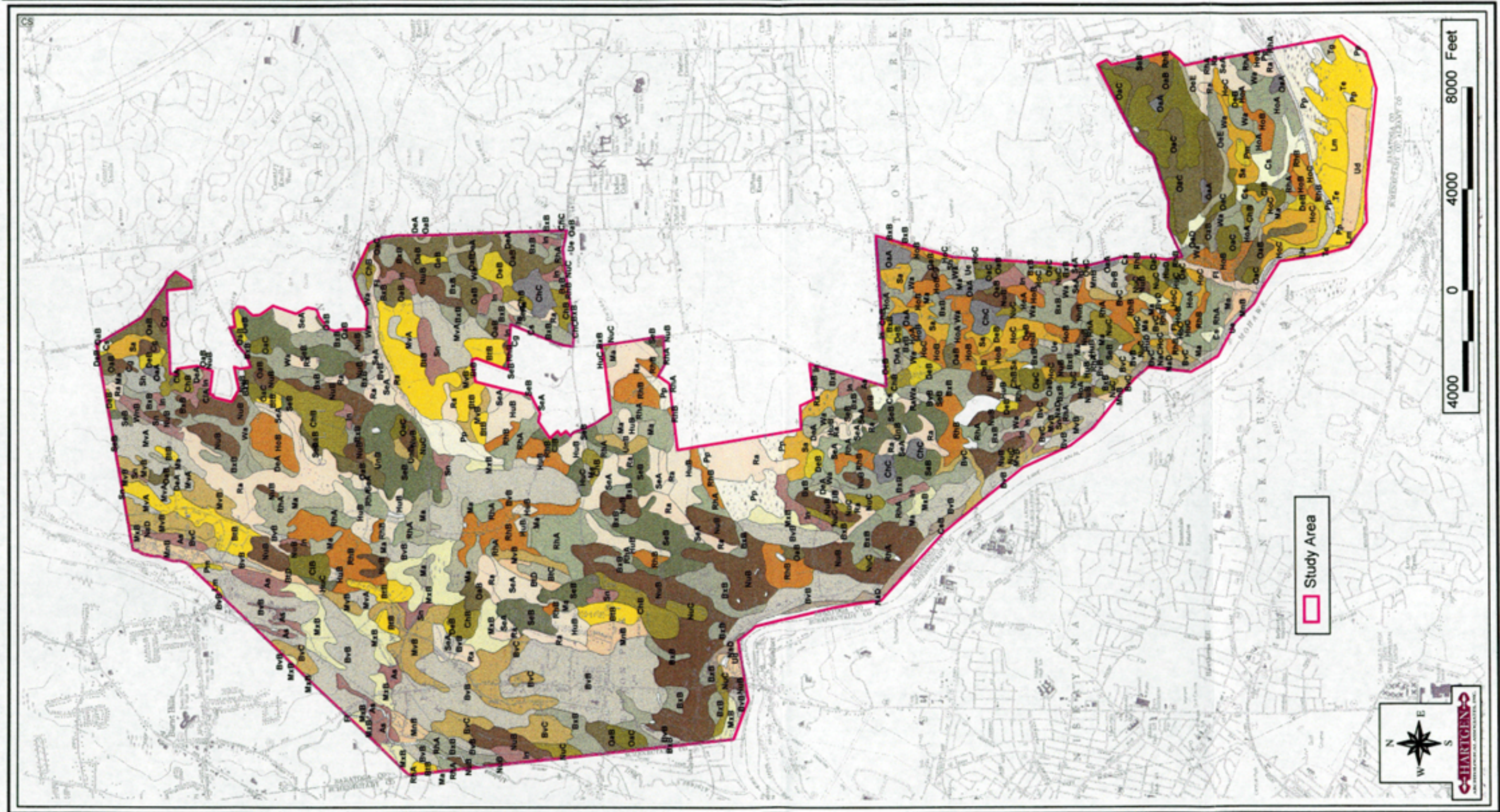




Map 3

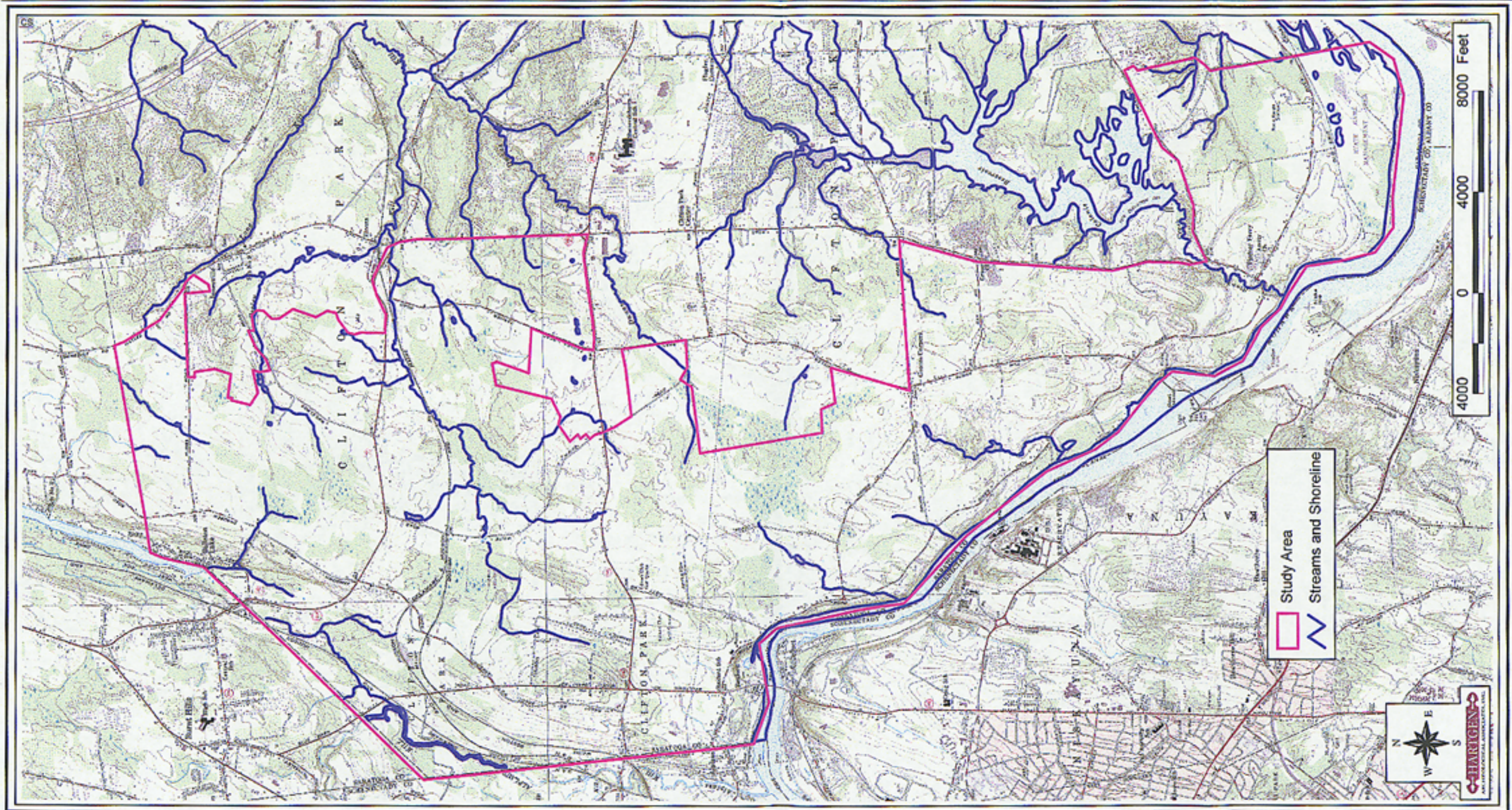
1990 Rogers New York State Geological Highway Map





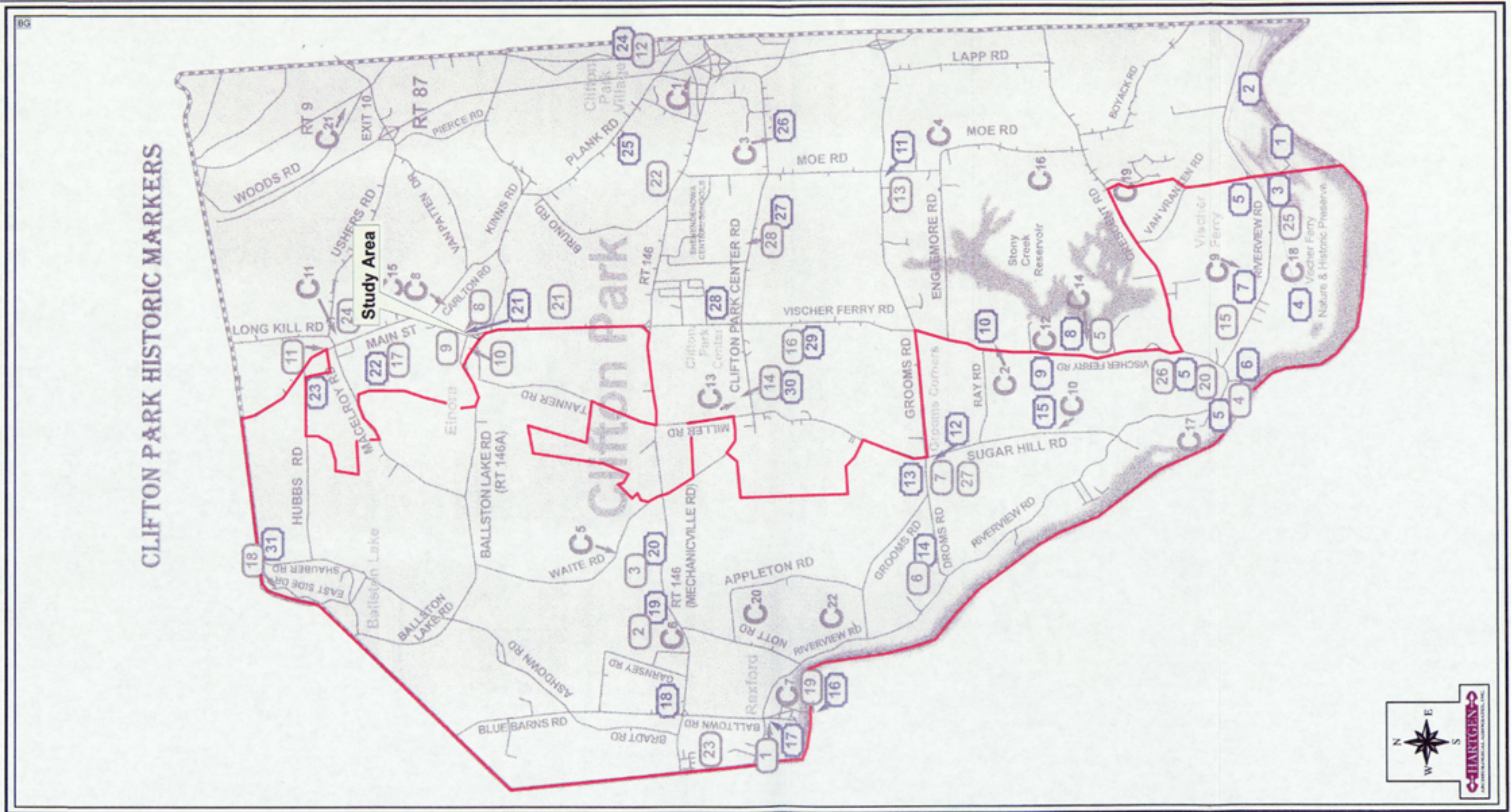
Map 4  
2003 USDA/NRCS Soil Survey Geographic (SSURGO) database for Saratoga County, New York





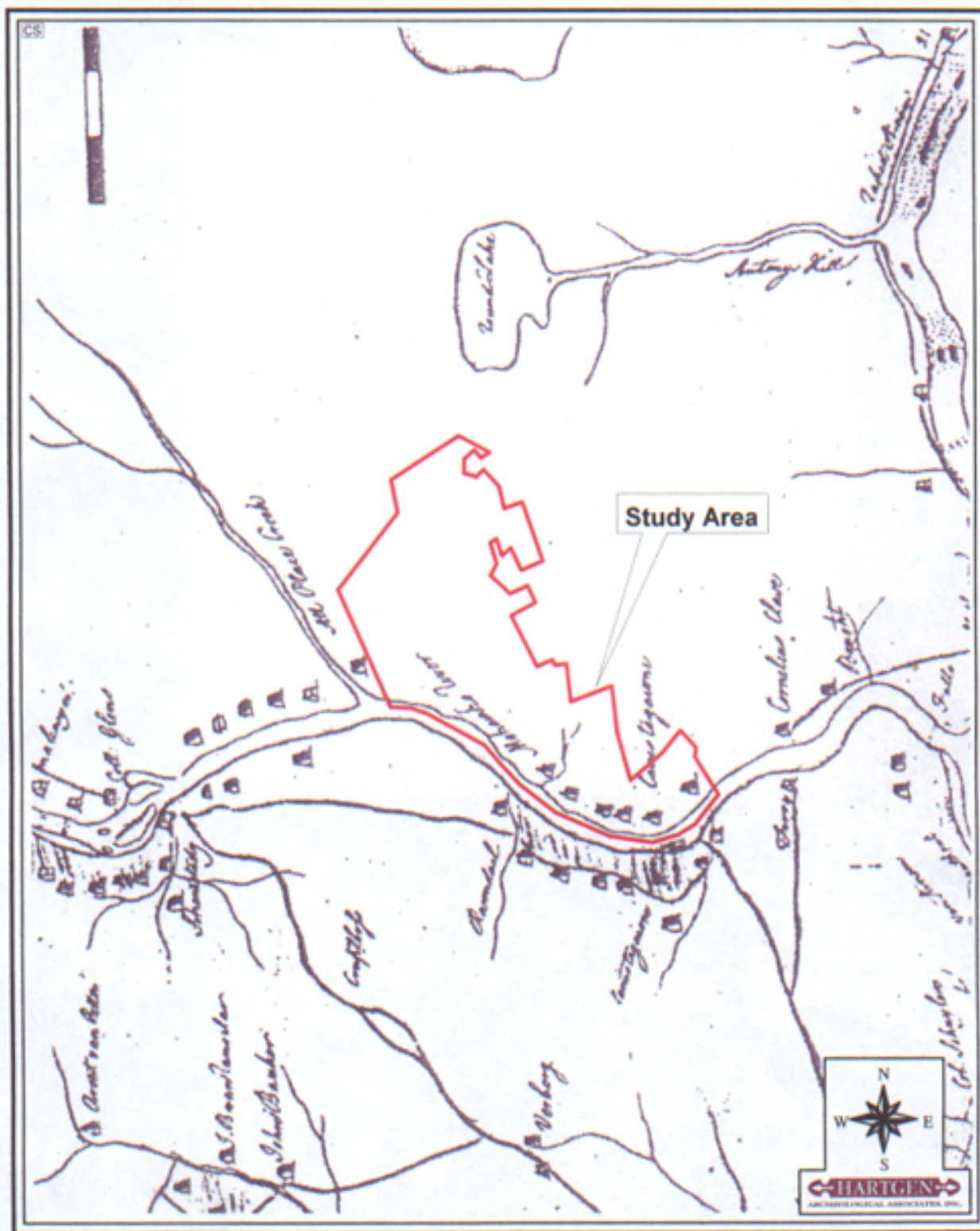
Map 5  
2004 Clough, Harbour & Associates, LLP Drainage Map





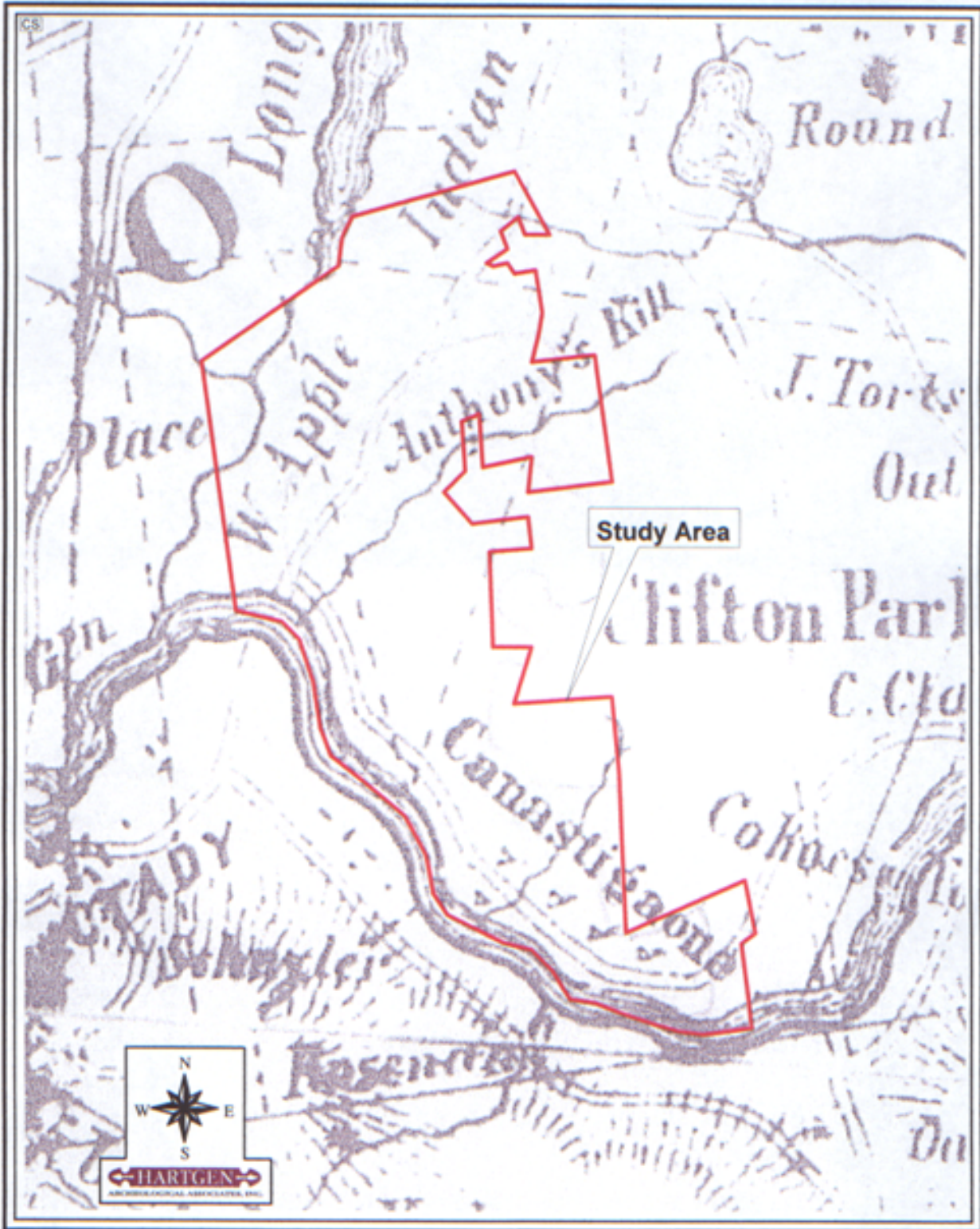
Map 6  
2002 Town of Clifton Park Clifton Park Historic Markers





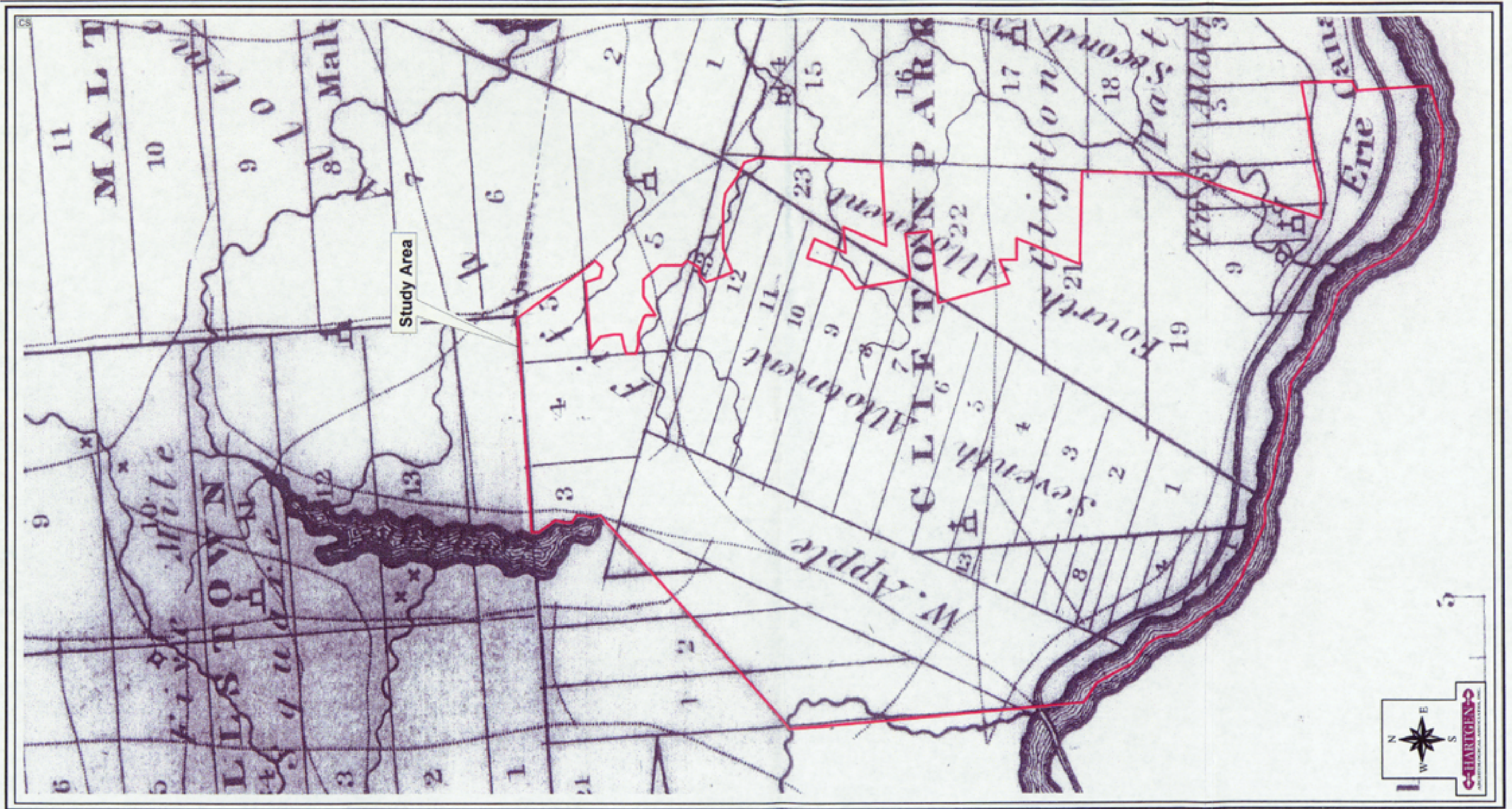
Map 7  
1756 Albany County A Map of the County of Albany





Map 8  
1779 Sauthier A Chorographical Map of the Province of New York in North America

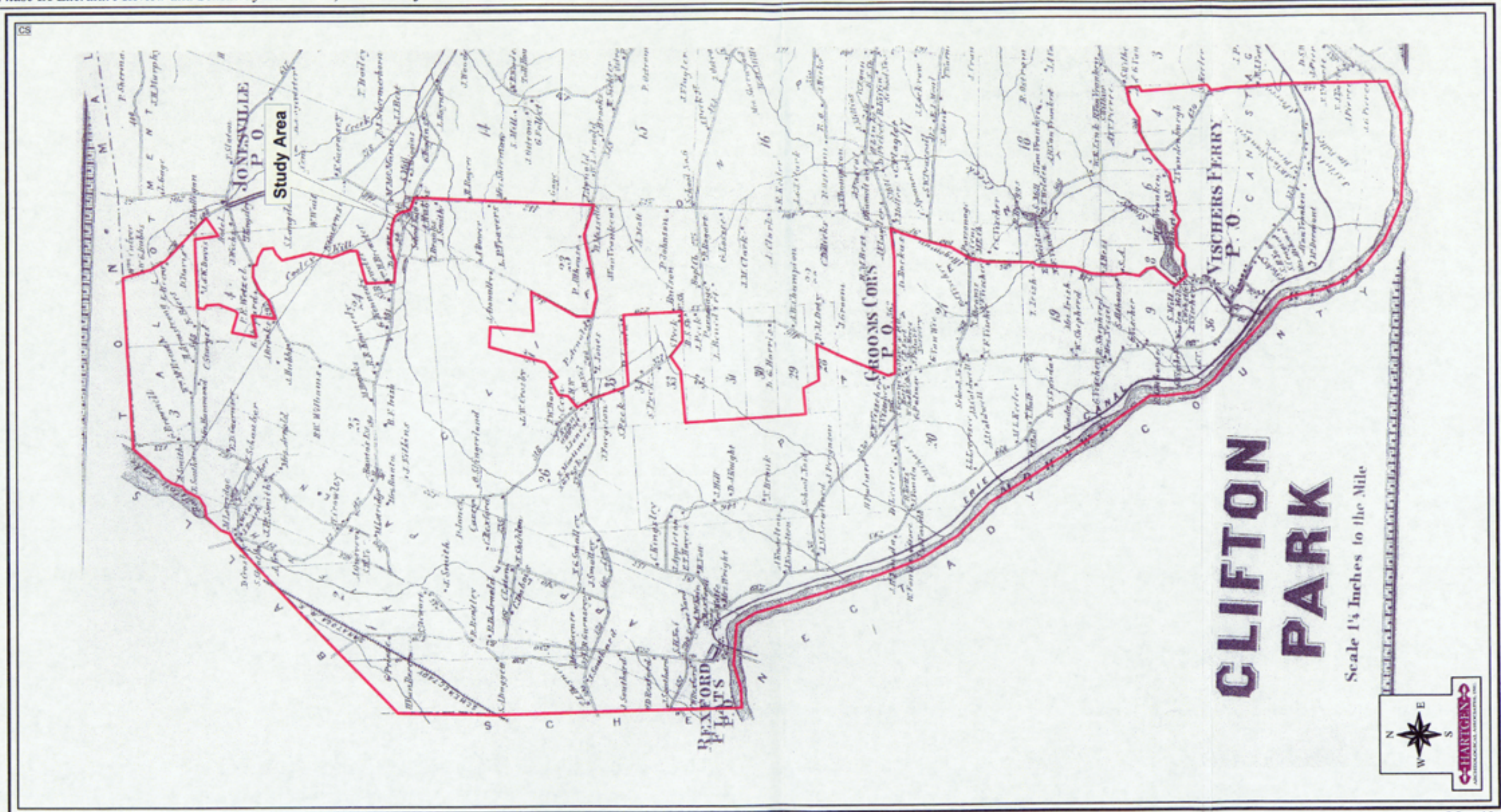




Map 9

1829 Burr Map of the County of Saratoga



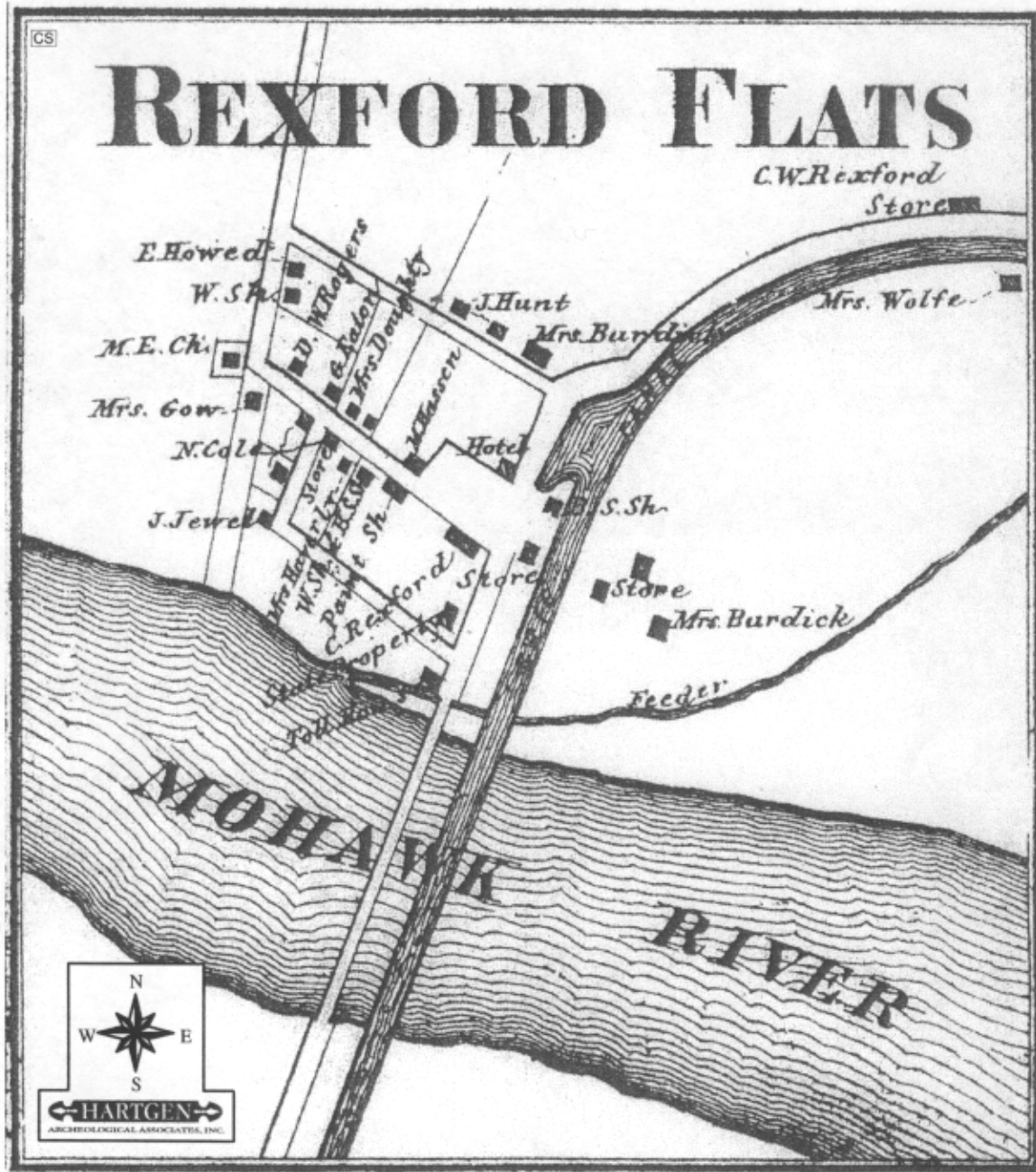


Map 10

1866 Beers New Topographical Atlas of Saratoga County, New York



DRAFT

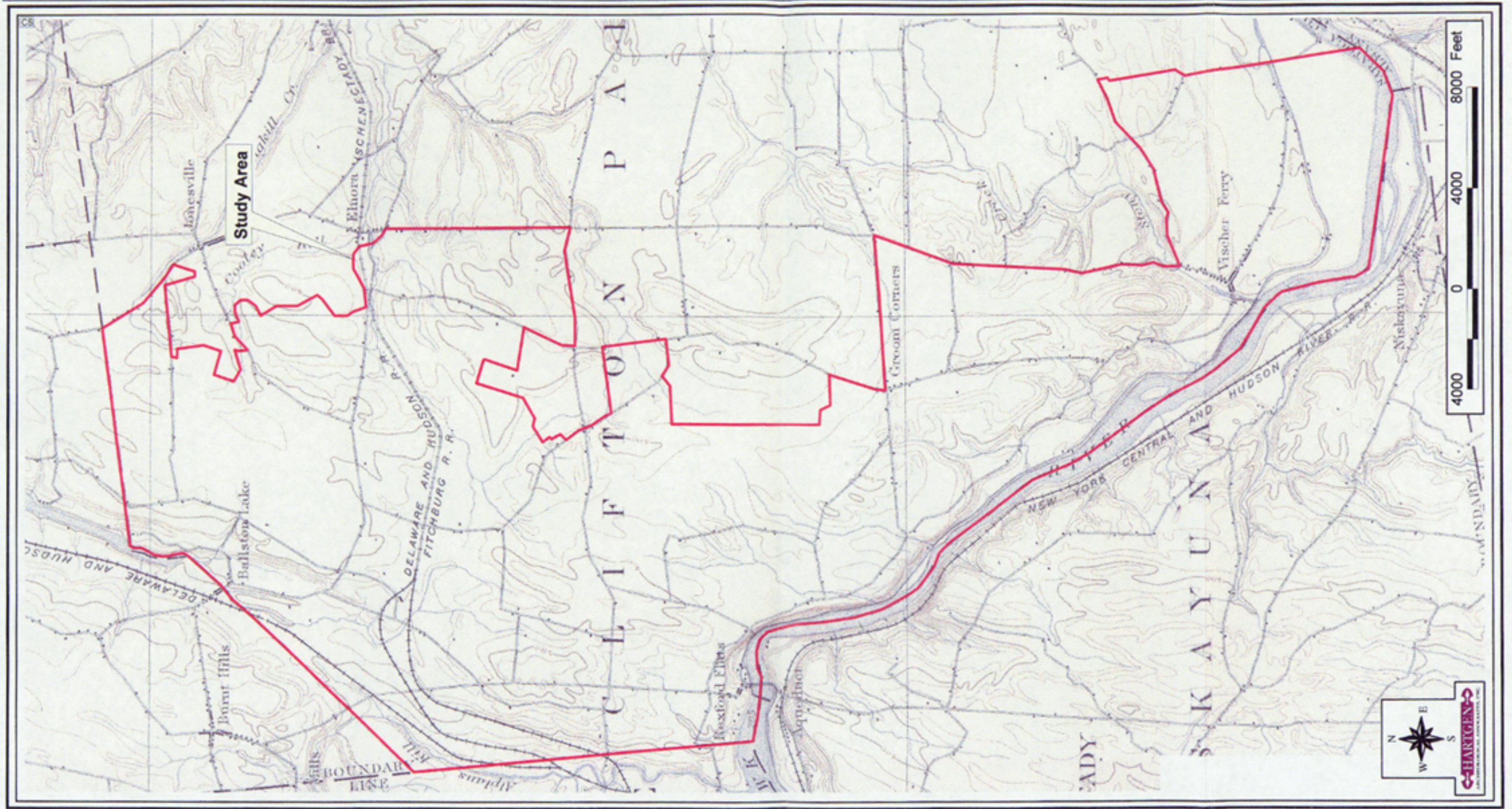


Map 10a

1866 Beers Inset Map of Rexford Flats, New Topographical Atlas of Saratoga County, New York



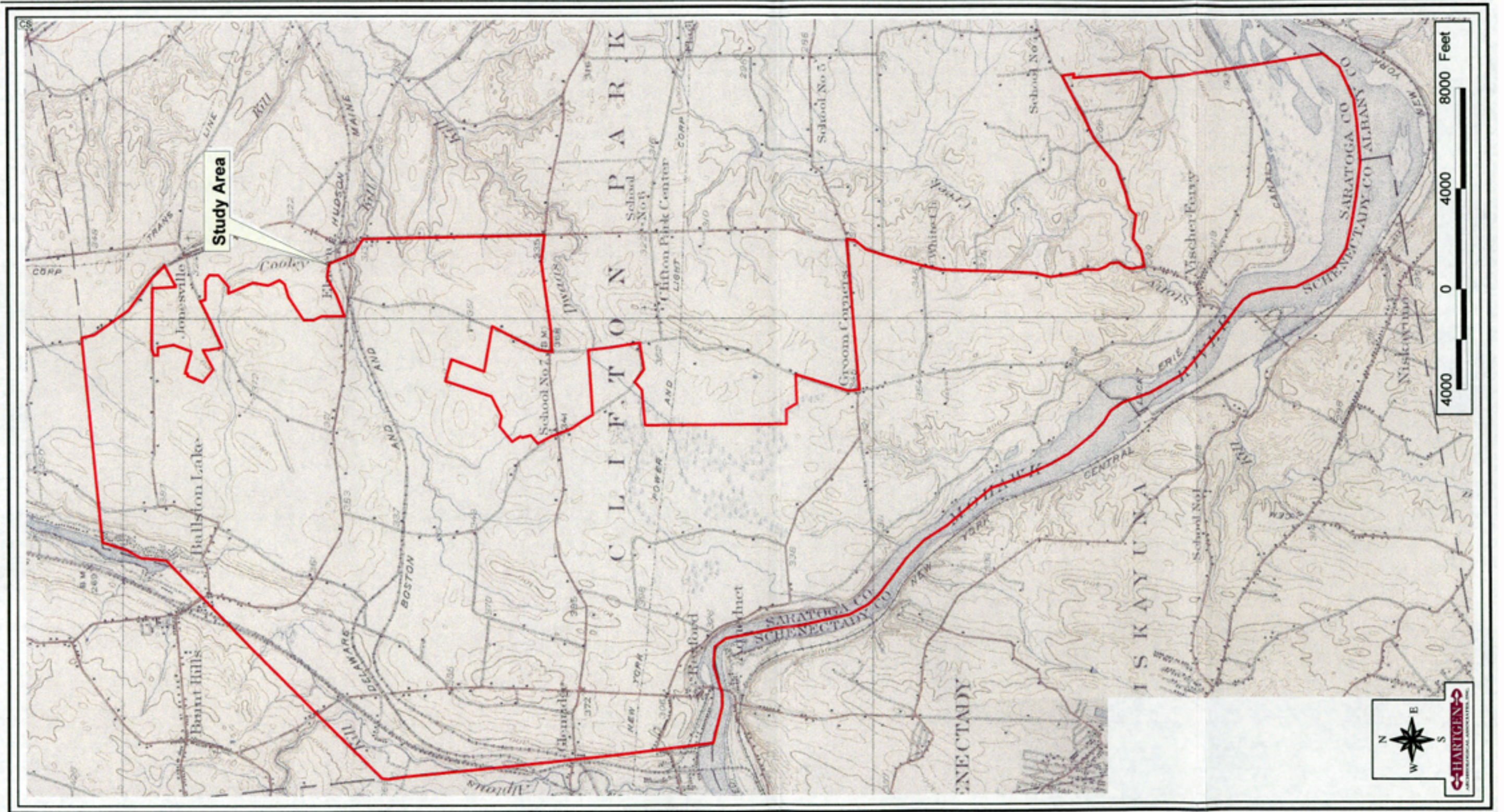
Map 10b  
1866 Beers Inset Map of Vischers Ferry, New Topographical Atlas of Saratoga County, New York



Map 11

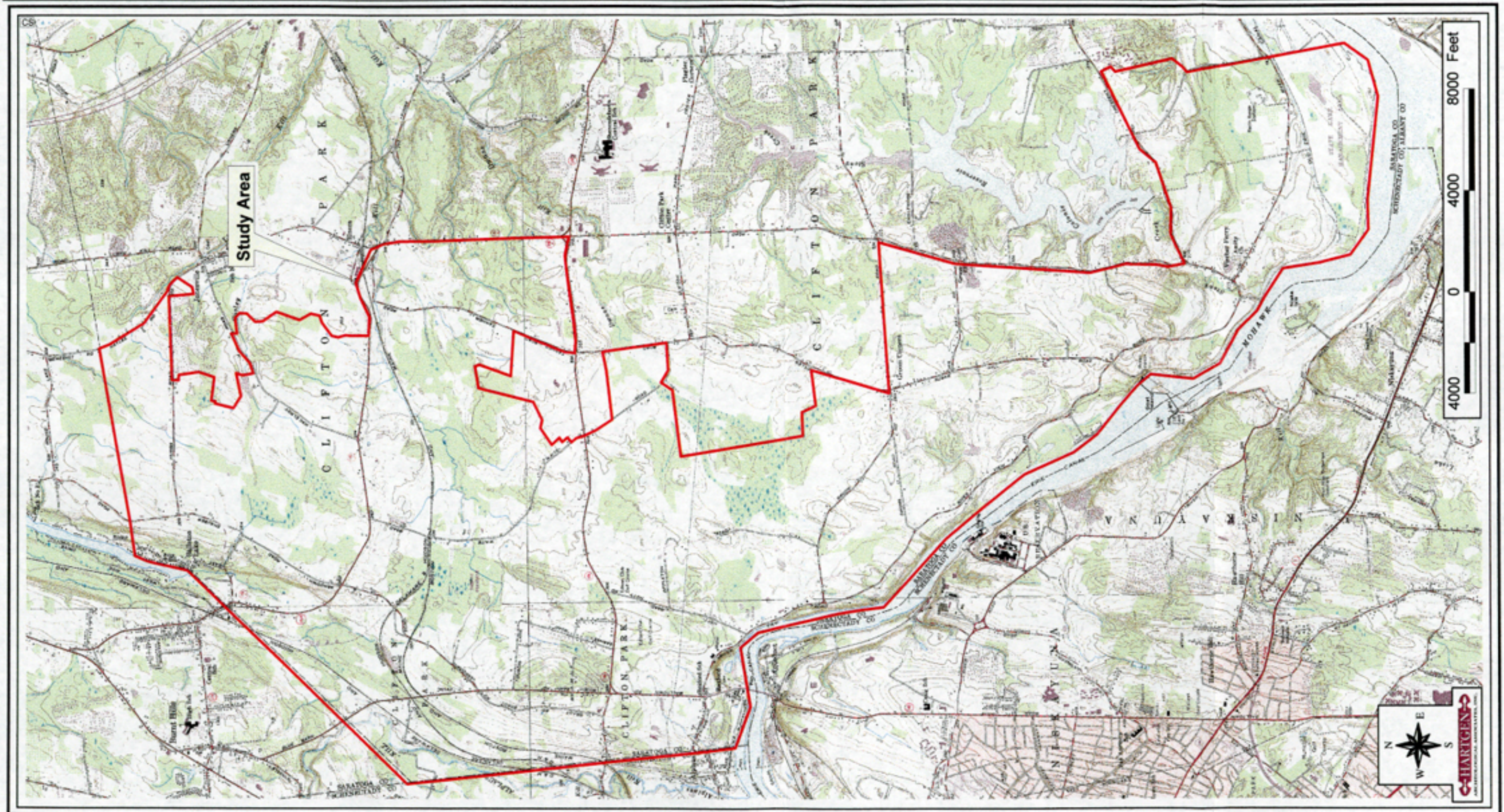
1904 USGS New York-Schenectady Sheet





Map 12  
1930 USGS New York-Schenectady Quadrangle

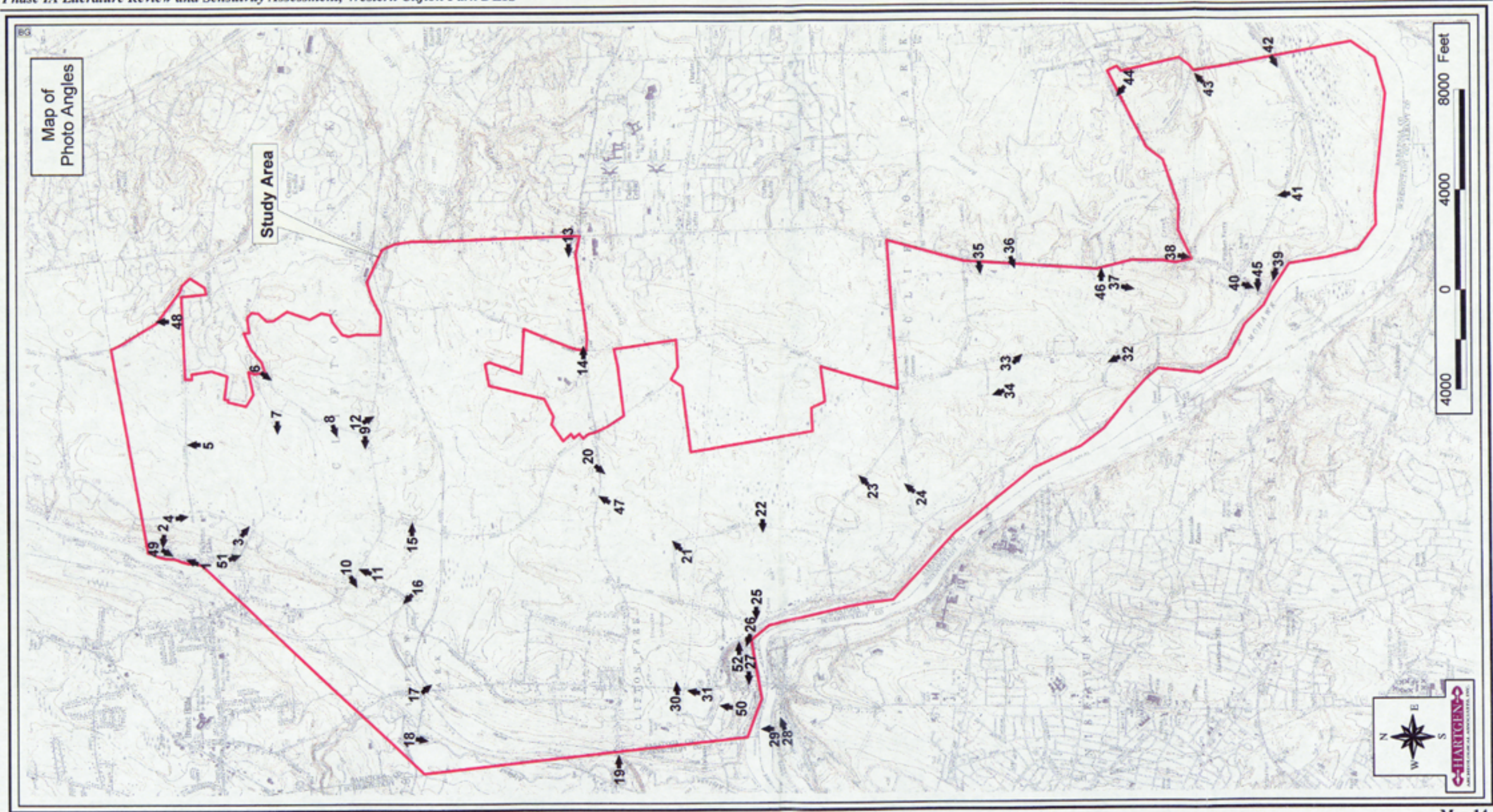




Map 13

1980USGS Niskayuna/Round Lake/Burnt Hills/Schenectady Quadrangles, New York 7.5 Minute Series Topographic





Map 14  
1991-1993 NYSDOT Burnt Hills/Round Lake/Niskayuna/Schenectady New York 7.5 Minute Series Quadrangles



**PHOTOGRAPHS**





1. Northeast view of the ridge along East Side Drive at Ballston Lake.



2. Northwest view of a filled driveway along East Side Drive.



3. Southeast view of Cooley Creek, which empties into a large wet area.



4. South view of a horse farm at Schaubert Road and Hubbs Road.



5. North view of an open space along the north side of Hubbs Road.



6. Southwest view of an open space along MacElroy Road.



7. West view of an athletic field at the top of a hill.



8. Southwest view of an active farm field along MacElroy Road.



9. West view of NY Route 146A with open space to the north and a golf course to the south.



10. Southwest view of a large open field at NY Route 146A and Ashdown Road.



11. Northeast view of an orchard on the north side of NY Route 146A. Orchards and horse farms were fairly common in the study area.



12. Southeast view of collapsed outbuildings on the south side of NY Route 146A.



13. West view of NY Route 146 from NY Route 146A, where there is commercial development.



14. East view of recent disturbance from the placement of a water line on the north side of NY Route 146.



15. East view of a wet area on the east side of Waite Road.



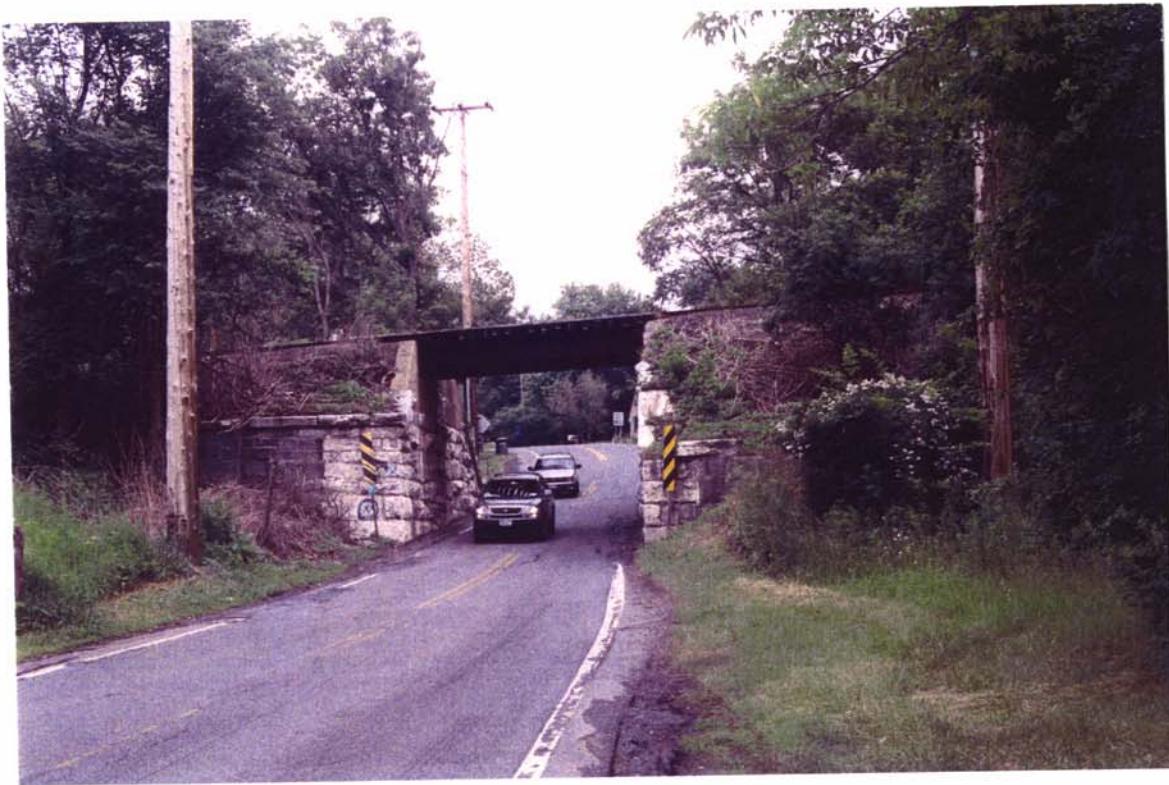
16. Northwest view of two branches of the Delaware and Hudson railroad along Ashdown Road.



17. Southeast view of a wooded area along the east side of Blue Barns Road.



18. Southwest view of the Alplaus Creek along the western border of the study area.



19. East view of a narrow railroad overpass at NY Route 146.



20. Southwest view of a rolling field on the south side of NY Route 146.



21. Northeast view of a filled area along Appleton Road.



22. West view of a golf course along the west side of Appleton Road.



23. Northeast view of a large open area along the north side of Grooms Road.



24. Northeast view of a cluster of historic structures on the north side of Droms Road.



25. West view of the Mohawk River from the top of the bluffs at River View Road.



26. Northwest view of canal elements in use at the Rexford Marina.



27. West view of a large filled area at the marina.



28. Northeast view of the existing bridge, aqueduct, and marina on the river.



29. North view of structures along the north bank of the river at Rexford.



30. East view of a golf course along the east side of Balltown Road.



31. Northeast view of commercial structures on the west side of Balltown Road.



32. Northwest view of the rolling topography along River View Road.



33. Southeast view of large lawns and orchards on the east side of Sugar Hill Road.



34. Northwest view of a 19<sup>th</sup>-century structure off the west side of Sugar Hill Road.



35. West view of a residential development at Ray Road and Vischer Ferry Road.



36. Southwest view of previous disturbances on the west side of Vischer Ferry Road.



37. Southwest view of a modern structure on a hill along Vischer Ferry Road. A precontact archeological site (A09103.000093) was reported here in the 1920s.



38. Southwest view of a historic bridge at Crescent Road and Vischer Ferry Road.



39. Northwest view of canal elements on the north side of Vischer Ferry crossing.



40. Southwest view of the Mohawk River at Vischer Ferry crossing.



41. Northwest view of open space near historic outbuildings on River View Road.



42. Southwest view of the Erie Canal along River View Road.



43. Northeast view of a grinding stone on the front lawn of a modern structure on the east side of Van Vranken Road.



44. Northwest view of the Colonie Reservoir along Crescent Road.



45. Looking west toward what may be the 18<sup>th</sup> century portion of the Nicholas and Annette Vischer house. Its one-and-a-half story form is typical for 18<sup>th</sup>-century dwellings constructed by settlers of Dutch descent.



46. The Best house, 113 Vischer Ferry Road, looking northeast. With its Palladian window and arched door with sidelights, this house typifies dwellings constructed for wealthy farmers at the beginning of the 19<sup>th</sup> century.



47. The Levi Garnsey house, 1401 Route 146 looking north. Five-bay wide center hall houses continued to be constructed in the town during the middle decades of the 19<sup>th</sup> century.



48. 993 Hatlee Road looking northeast. An example of once-common but now rare tenant housing from the second quarter of the 19<sup>th</sup> century.



49. 113 East Side Drive. This early 20<sup>th</sup>-century bungalow is typical of many of the small houses in Ballston Lake.



50. 955 River View Road looking north-northeast. An example of a late 19<sup>th</sup>-century residence.



51. 10 Old Schauber Road looking southeast. An example of an early 20<sup>th</sup>-century Arts & Crafts style bungalow.



52. 865 River View Road looking east. The extended horizontals and simple detailing are hallmarks of mid-20<sup>th</sup> century design.

**APPENDIX 2**

**Qualifications of the Principal Investigator**



# *Hartgen Archeological Associates, Inc.*

## *Cultural Resource Specialists*

1744 WASHINGTON AVENUE EXT. · RENSSELAER, NEW YORK 12144

**KAREN S. HARTGEN, RPA**

**Qualifications:**

**36 CFR 61 Qualified Archeologist**

**Education:**

**State University of New York at Albany  
Master of Arts, Anthropology, December 1988**

**State University of New York at Albany  
Bachelor of Arts, Anthropology, January 1970**

**Special Training:**

**Historic Preservation Law Course**

Section 106 training course jointly sponsored by the Advisory Council on Historic Preservation and the University of Nevada, Reno.

**Experience:**

***March 1973 to Present***

**President and Principal Investigator  
Hartgen Archeological Associates, Inc.**

I have directed the cultural resource management firm since 1973, completing over 5000 cultural resource projects in New York and New England. The firm currently has a full time staff of 25 and a trained seasonal staff of 40. We provide services in historical documentation, site file searches, field reconnaissance, archeological survey and excavation, artifact preservation, collection management, cartography, GIS, architectural history, historic structure survey, National Register nominations, Environmental Impact Evaluations as mandated under NEPA, NHPA, SHPA and SEQR. Archeological surveys include initial surveys to locate sites (Phase IA and IB), development of research designs and field methodologies to identify sites (Phase II), and subsequently data retrieval as mitigating measures (Phase III).

***June 1974 to 1978***

**New York State Museum and Science Service  
State Education Department, Albany  
Assistant Highway Salvage Coordinator**

Administration and coordination of the Highway Salvage Archeology Program for New York State during field seasons. Intermediary between various State agencies and cooperating institutions in the process of project evaluation and impact mitigation. Also prepared detailed financial reports for Federal reimbursement.



# APPENDIX J

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Field Name	Field Type	Formula / Entry Option
Adj School Operatinf Expense per Student	Calculation (Number)	= School Operating Cost no Dept Admin / School Enrolment
BASE YEAR	Text	Do not allow user to override validation Required value
Bond Interst Rate	Number	
Bond Term	Number	
Break Even Home High Density SAC	Number	
Break Even Home High Density SAC School Construction TEST	Calculation (Number)	= (Impact on Levy per Student * SAC Multiplier R2 3) + (Operating Cost Per Student * SAC Multiplier R2 3) + ( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R2 3)+ (School Other Income Per Student * SAC Multiplier R2 3)+ ((Break Even Home High Density SAC - (Break Even Home High Density SAC * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
Break Even Home High Density SAC TEST	Calculation (Number)	= (Operating Cost Per Student * SAC Multiplier R2 3) + ( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R2 3)+ (School Other Income Per Student * SAC Multiplier R2 3)+ ((Break Even Home High Density SAC - (Break Even Home High Density SAC * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
Break Even Home Mod Density SAC School Construction	Calculation (Number)	= (Impact on Levy per Student * SAC Multiplier R1) + (Operating Cost Per Student * SAC Multiplier R1) + ( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+ (School Other Income Per Student * SAC Multiplier R1)+ ((Break Even Home Moderate Density SAC - (Break Even Home Moderate Density SAC * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
Break Even Home Moderate Density SAC	Number	
Break Even Home Moderate Density SAC TEST	Calculation (Number)	= (Operating Cost Per Student * SAC Multiplier R1) + ( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+ (School Other Income Per Student * SAC Multiplier R1)+ ((Break Even Home Moderate Density SAC - (Break Even Home Moderate Density SAC * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
CHECK school Tax	Calculation (Number)	= (School Taxable Assesed Value/1000)*School Tax Rate Per Thousand
City Population	Number	
City Tax Levy	Number	
City Tax Rate Per Thousand	Number	
City Tax Rate Test	Calculation (Number)	= City Tax Levy / (City Taxable Assesed Value / 1000)
City Taxable Assesed Value	Number	
Comm B123 Value Minus Land	Calculation (Number)	= Comm B123 Value Per Acre - (Comm B123 Value Per Acre * Land Value Percent Reduction)
Comm B123 Value Per Acre	Number	
Comm B4 5 Value Minus Land	Calculation (Number)	= Comm B4 5 Value Per Acre - (Comm B4 5 Value Per Acre * Land Value Percent Reduction)
Comm B4 5 Value Per Acre	Number	
Comm Light Industrial Value Minus Land	Calculation (Number)	= Comm Light Industrial Value Per Acre - (Comm Light Industrial Value Per Acre * Land Value Percent Reduction)
Comm Light Industrial Value Per Acre	Number	
CREATION DATE	Date	Auto-enter the: "Creation Date"
CS Expense Per Capita	Calculation (Number)	= (CS Expenses - (CS Expenses * CS Fixed E) ) / City Population
CS Expenses	Number	
CS Fixed E	Number	
CS Percent Fixed R	Number	
CS Revenue	Number	
CS Revenue Per Capita	Calculation (Number)	= ( ( CS Revenue - (CS Revenue * CS Percent Fixed R))) / City Population
DEBT SERVICE	Number	
Dev Notes	Text	
Existing Excess School Capacity	Number	
expenses	Calculation (Number)	= CS Expenses + Gen Admimn Expenses + Public HS Expenses + Tax CS Expenses + Recreation Expenses + Highway Expenses

Field Name	Field Type	Formula / Entry Option
Gen Admimn Expenses	Number	
Gen Admin Expense Per Capita	Calculation (Number)	= (Gen Admimn Expenses - (Gen Admimn Expenses * Gen Admin Percent Fixed E)) / City Population
Gen Admin Percent Fixed E	Number	
Gen Admin Percent Fixed R	Number	
Gen Admin Revenue Per Capita	Calculation (Number)	= (Gen Admin Revenues - (Gen Admin Revenues * Gen Admin Percent Fixed R)) / City Population
Gen Admin Revenues	Number	
Highway Expense Per Capita	Calculation (Number)	= (Highway Expenses - (Highway Expenses * Highway Percentage Fixed E)) / City Population
Highway Expenses	Number	
Highway Percentage Fixed E	Number	
Highway Percentage Fixed R	Number	
Highway Revenue	Number	
Highway Revenue Per Capita	Calculation (Number)	= (Highway Revenue - (Highway Revenue * Highway Percentage Fixed R)) / City Population
Impact on Levy per Student	Calculation (Number)	= PMT(( School Building Cost Per Student * ((School Building Aid Percentage -1) *-1)), Bond Interst Rate, Bond Term)
Land Value Percent Reduction	Number	
MODIFICATION DATE	Date	Auto-enter the: "Modification Date"
Operating Cost Per Student	Calculation (Number)	= School Operating Cost no Dept Admin / School Enrolment
OSP Ease Value Per Acre	Number	
OSP Purch Value Per Acre	Number	
Percapita Expense	Calculation (Number)	= Gen Admin Expense Per Capita + CS Expense Per Capita + Public HS Expense Per Capita + Tax CS Expense Per Capita + Recreation Expense Per Capita + Highway Expense Per Capita
Percapita Revenue	Calculation (Number)	= Gen Admin Revenue Per Capita + Highway Revenue Per Capita
Persons Per Household	Number	
Public HS Expense Per Capita	Calculation (Number)	= (Public HS Expenses - (Public HS Expenses * Public HS Percent Fixed E)) / City Population
Public HS Expenses	Number	
Public HS Percent Fixed E	Number	
Public HS Revenue Per Capita	Text	
R1 du acre	Number	
R1 Home Net Impact Per Acre	Calculation (Number)	= (Operating Cost Per Student * SAC Multiplier R1) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+( School Other Income Per Student * SAC Multiplier R1)+( ((R1 Home Value - (R2 3 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
R1 Home Value	Number	
R1 Home Value Minus Land	Calculation (Number)	= R1 Home Value - (R1 Home Value * Land Value Percent Reduction)
R1 Net Impact Per Acre School Construction	Calculation (Number)	= (Impact on Levy per Student * SAC Multiplier R1) + (Operating Cost Per Student * SAC Multiplier R1) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+ (School Other Income Per Student * SAC Multiplier R1)+( ((R1 Home Value - (R1 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
R2 3 du acre	Number	
R2 3 Home Value	Number	
R2 3 Home Value Minus Land	Calculation (Number)	= R2 3 Home Value - (R2 3 Home Value * Land Value Percent Reduction)
R2 3 Net Impact per Acre	Calculation (Number)	= (Operating Cost Per Student * SAC Multiplier R2 3) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R2 3)+ (School Other Income Per Student * SAC Multiplier R2 3)+( ((R2 3 Home Value - (R2 3 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
R2 3 Net Impact Per Acre School Construction	Calculation (Number)	= (Impact on Levy per Student * SAC Multiplier R2 3) + (Operating Cost Per Student * SAC Multiplier R2 3) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R2 3)+ (School Other Income Per Student * SAC Multiplier R2 3)+( ((R2 3 Home Value - (R2 3 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))

Field Name	Field Type	Formula / Entry Option
Recreation Expense Per Capita	Calculation (Number)	= (Recreation Expenses - (Recreation Expenses * Recreation Percent Fixed E)) / City Population
Recreation Expenses	Number	
Recreation Percent Fixed E	Number	
Recreation Percent Fixed R	Number	
Recreation Revenue	Number	
Recreation Revenue Per Capita	Calculation (Number)	= (Recreation Revenue - (Recreation Revenue * Recreation Percent Fixed R)) / City Population
Revenue	Calculation (Number)	= Highway Revenue + Gen Admin Revenues
Revenue Share	Calculation (Number)	= State Aid Per Student / Adj School Operatinf Expense per Student
Rpud du acre	Number	
Rpud Home Net Impact Per Acre	Calculation (Number)	= (Operating Cost Per Student * SAC Multiplier R1) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+( School Other Income Per Student * SAC Multiplier R1)+( ((R1 Home Value - (R2 3 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
Rpud Home Value	Number	
Rpud Home Value Minus Land	Calculation (Number)	= R1 Home Value - (R1 Home Value * Land Value Percent Reduction)
Rpud Net Impact Per Acre School Construction	Calculation (Number)	= (Impact on Levy per Student * SAC Multiplier R1) + (Operating Cost Per Student * SAC Multiplier R1) +( Percapita Expense * Persons Per Household) - ((State Aid Per Student * SAC Multiplier R1)+( School Other Income Per Student * SAC Multiplier R1)+( ((R1 Home Value - (R1 Home Value * Land Value Percent Reduction))/1000))* (City Tax Rate Per Thousand + School Tax Rate Per Thousand))
S1 B123 Acres	Number	
S1 B123 Acres Value	Calculation (Number)	= S1 B123 Acres * Comm B123 Value Per Acre
S1 B4 5 Acres	Number	
S1 B4 5 Acres Value	Calculation (Number)	= S1 B4 5 Acres * Comm B4 5 Value Per Acre
S1 Cap proj Impact on Levy	Calculation (Number)	= PMT(S1 Capital Improvement, Bond Interst Rate , Bond Term)
S1 Capital Improvement	Number	
S1 City Tax Per Thousand	Calculation (Number)	= (City Tax Levy + S1 Expense + S1 Open Space Impact on Levy + S1 Cap proj Impact on Levy ) / ( (City Taxable Assesed Value + S1 Housing Value + S1 Com Ind Value)/1000)
S1 Com Ind Acres	Number	
S1 Com Ind Acres Value	Calculation (Number)	= (S1 Com Ind Acres * Comm Light Industrial Value Minus Land) + (S1 B123 Acres * Comm B123 Value Minus Land) + (S1 B4 5 Acres * Comm B4 5 Value Minus Land)
S1 Com Ind Value	Calculation (Number)	= (Comm Light Industrial Value Minus Land * S1 Com Ind Acres)
S1 Combined City School Tax	Calculation (Number)	= S1 City Tax Per Thousand + S1 School Tax Per Thousand
S1 Combined City School Tax construction	Calculation (Number)	= S1 City Tax Per Thousand + S1 School Tax Per Thousand With Construction
S1 Ease Acres Value	Calculation (Number)	= S1 OS Acres Purch Ease * OSP Ease Value Per Acre
S1 Expense	Calculation (Number)	= Percapita Expense * S1 New Population
S1 FS Purch Value	Calculation (Number)	= S1 OS Acres Purch FS * OSP Purch Value Per Acre
S1 Housing Value	Calculation (Number)	= ((R1 Home Value Minus Land * S1 R1 Acres) * R1 du acre) + ((R2 3 Home Value Minus Land * S1 R2 3 Acres) * R2 3 du acre) + ((Rpud Home Value Minus Land * S1 Rpud Acres) * Rpud du acre)
S1 Impact on Levy of School Construction	Calculation (Number)	= PMT(S1 School Construction , Bond Interst Rate, Bond Term)
S1 Net Impact on City Tax Levy	Calculation (Number)	= (S1 Expense + S1 Open Space Impact on Levy) - S1 Property Tax Revenue
S1 Net Impact on Combined Levy	Calculation (Number)	= S1 Net Impact On School Tax Levy No Construction + S1 Net Impact on City Tax Levy
S1 Net Impact on Combined Levy Per Acre	Calculation (Number)	= S1 Net Impact on Combined Levy/(S1 R1 Acres + S1 Com Ind Acres + S1 R2 3 Acres)
S1 Net Impact on Combined Levy School Construction	Calculation (Number)	= S1 Net Impact On School Tax Levy + S1 Net Impact on City Tax Levy
S1 Net Impact On School Tax Levy	Calculation (Number)	= (S1 Impact on Levy of School Construction + S1 New School Operating Cost) - (S1 New School Non Tax Revenue + S1 One New State Aid + S1 School Tax Revenue)
S1 Net Impact On School Tax Levy No Construction	Calculation (Number)	= (S1 New School Operating Cost) - (S1 New School Non Tax Revenue + S1 One New State Aid + S1 School Tax Revenue)

Field Name	Field Type	Formula / Entry Option
S1 New Housing Units	Calculation (Number)	= S1 New R1 Housing Units + S1 New R2 3 Housing Units + S1 New Rpud Housing Units
S1 New Population	Calculation (Number)	= (S1 New R1 Housing Units + S1 New R2 3 Housing Units +S1 New Rpud Housing Units) * Persons Per Household
S1 New R1 Housing Units	Calculation (Number)	= S1 R1 Acres * R1 du acre
S1 New R2 3 Housing Units	Calculation (Number)	= S1 R2 3 Acres * R2 3 du acre
S1 New Rpud Housing Units	Calculation (Number)	= S1 Rpud Acres * Rpud du acre
S1 New School Non Tax Revenue	Calculation (Number)	= (School Other Income / School Enrolment) * S1 New Students
S1 New School Operating Cost	Calculation (Number)	= Operating Cost Per Student * S1 New Students
S1 New Students	Calculation (Number)	= (S1 New R1 Housing Units * SAC Multiplier R1)+ (S1 New R2 3 Housing Units * SAC Multiplier R2 3) + (S1 New Rpud Housing Units * SAC Multiplier Rpud)
S1 New Students Minus Existing Capacity	Calculation (Number)	= S1 New Students-Existing Excess School Capacity
S1 One New State Aid	Calculation (Number)	= S1 New Students * State Aid Per Student
S1 Open Space Donated Acres	Number	
S1 Open Space Expense	Calculation (Number)	= (OSP Purch Value Per Acre * S1 OS Acres Purch FS)+ (OSP Ease Value Per Acre* S1 OS Acres Purch Ease)
S1 Open Space Impact on Levy	Calculation (Number)	= PMT( S1 Open Space Expense, Bond Interst Rate , Bond Term)
S1 Open Space Impact on Levy Per Acre	Calculation (Number)	= (PMT( S1 Open Space Expense, Bond Interst Rate , Bond Term))/S1 OS Acres Purch FS
S1 OS Acres Purch Ease	Number	
S1 OS Acres Purch FS	Number	
S1 Property Tax Revenue	Calculation (Number)	= ((S1 Housing Value + S1 Com Ind Value)/1000) * City Tax Rate Per Thousand
S1 R1 Acres	Number	
S1 R1 Acres Value	Calculation (Number)	= (S1 R1 Acres * R1 Home Value)*R1 du acre
S1 R2 3 Acres	Number	
S1 R2 3 Acres Value	Calculation (Number)	= (S1 R2 3 Acres * R2 3 Home Value) * R2 3 du acre
S1 Rpud Acres	Number	
S1 Rpud Acres Value	Calculation (Number)	= (S1 Rpud Acres * Rpud Home Value) * Rpud du acre
S1 Sample Home Taxes	Calculation (Number)	= ((Sample Home * City Tax Rate Per Thousand) + ( Sample Home * School Tax Rate Per Thousand))/1000
S1 Sample Tax	Calculation (Number)	= (S1 Combined City School Tax * Sample Home) / 1000
S1 Sample Tax School Construction	Calculation (Number)	= (S1 Combined City School Tax construction * Sample Home) / 1000
S1 School Construction	Calculation (Number)	= (School Building Cost Per Student * S1 New Students Minus Existing Capacity) * ((School Building Aid Percentage -1) * -1)
S1 School Tax Per Thousand	Calculation (Number)	= (School Tax Levy + (S1 New School Operating Cost- (S1 One New State Aid+ S1 New School Non Tax Revenue))) / ((City Taxable Assesed Value + S1 Housing Value + S1 Com Ind Value)/1000)
S1 School Tax Per Thousand With Construction	Calculation (Number)	= (School Tax Levy +S1 Impact on Levy of School Construction + (S1 New School Operating Cost- (S1 One New State Aid+ S1 New School Non Tax Revenue))) / ((City Taxable Assesed Value + S1 Housing Value + S1 Com Ind Value)/1000)
S1 School Tax Revenue	Calculation (Number)	= ((S1 Housing Value + S1 Com Ind Value)/1000) * School Tax Rate Per Thousand
S1 Total Acres	Calculation (Number)	= S1 Open Space Donated Acres + S1 OS Acres Purch Ease + S1 OS Acres Purch FS + S1 B123 Acres + S1 B4 5 Acres + S1 Com Ind Acres + S1 R2 3 Acres + S1 R1 Acres + S1 Rpud Acres
S1 Total Value Bump Minus Land	Calculation (Number)	= (S1 R1 Acres Value + S1 R2 3 Acres Value + S1 Rpud Acres Value + S1 B123 Acres Value + S1 B4 5 Acres Value + S1 Com Ind Acres Value) - ((S1 R1 Acres Value + S1 R2 3 Acres Value + S1 Rpud Acres Value + S1 B123 Acres Value + S1 B4 5 Acres Value + S1 Com Ind Acres Value) * Land Value Percent Reduction)
S2 B123 Acres	Number	
S2 B123 Acres Value	Calculation (Number)	= S2 B123 Acres * Comm B123 Value Per Acre
S2 B4 5 Acres	Number	
S2 B4 5 Acres Value	Calculation (Number)	= S2 B4 5 Acres * Comm B4 5 Value Per Acre
S2 Cap proj Impact on Levy	Calculation (Number)	= PMT(S2 Capital Improvement, Bond Interst Rate , Bond Term)

Field Name	Field Type	Formula / Entry Option
S2 Capital Improvement	Number	
S2 City Tax Per Thousand	Calculation (Number)	= (City Tax Levy + S2 Expense + S2 Open Space Impact on Levy + S2 Cap proj Impact on Levy ) / (( City Taxable Assesed Value + S2 Housing Value + S2 Com Ind Value)/1000)
S2 Com Ind Acres	Number	
S2 Com Ind Acres Value	Calculation (Number)	= S2 Com Ind Acres * Comm Light Industrial Value Per Acre
S2 Com Ind Value	Calculation (Number)	= Comm Light Industrial Value Minus Land * S2 Com Ind Acres
S2 Combined City School Tax	Calculation (Number)	= S2 City Tax Per Thousand + S2 School Tax Per Thousand
S2 Combined City School Tax construction	Calculation (Number)	= S2 City Tax Per Thousand + S2 School Tax Per Thousand With Construction
S2 Ease Acres Value	Calculation (Number)	= S2 OS Acres Purch Ease * OSP Ease Value Per Acre
S2 Expense	Calculation (Number)	= Percapita Expense * S2 New Population
S2 FS Purch Value	Calculation (Number)	= S2 OS Acres Purch FS * OSP Purch Value Per Acre
S2 Housing Value	Calculation (Number)	= ((R1 Home Value Minus Land * S2 R1 Acres) * R1 du acre) + ((R2 3 Home Value Minus Land * S2 R2 3 Acres) * R2 3 du acre) + ((Rpud Home Value Minus Land * S2 Rpud Acres) * Rpud du acre)
S2 Impact on Levy of School Construction	Calculation (Number)	= PMT( S2 School Construction , Bond Interst Rate, Bond Term)
S2 Net Impact on City Tax Levy	Calculation (Number)	= (S2 Expense + S2 Open Space Impact on Levy) - S2 Property Tax Revenue
S2 Net Impact on Combined Levy	Calculation (Number)	= S2 Net Impact On School Tax Levy No Construction + S2 Net Impact on City Tax Levy
S2 Net Impact on Combined Levy Per Acre	Calculation (Number)	= S2 Net Impact on Combined Levy/((S2 R1 Acres + S2 Com Ind Acres + S2 R2 3 Acres)
S2 Net Impact on Combined Levy Sch Construction	Calculation (Number)	= S2 Net Impact On School Tax Levy + S2 Net Impact on City Tax Levy
S2 Net Impact On School Tax Levy	Calculation (Number)	= (S2 Impact on Levy of School Construction + S2 New School Operating Cost) - (S2 New School Non Tax Revenue + S2 New State Aid + S2 School Tax Revenue)
S2 Net Impact On School Tax Levy No Construction	Calculation (Number)	= (S2 New School Operating Cost) - (S2 New School Non Tax Revenue + S2 New State Aid + S2 School Tax Revenue)
S2 New Housing Units	Calculation (Number)	= S2 New R1 Housing Units + S2 New R2 3 Housing Units + S3 New Rpud Housing Units
S2 New Population	Calculation (Number)	= (S2 New R1 Housing Units + S2 New R2 3 Housing Units+S2 New Rpud Housing Units) * Persons Per Household
S2 New R1 Housing Units	Calculation (Number)	= S2 R1 Acres * R1 du acre
S2 New R2 3 Housing Units	Calculation (Number)	= S2 R2 3 Acres * R2 3 du acre
S2 New Rpud Housing Units	Calculation (Number)	= S2 Rpud Acres * Rpud du acre
S2 New School Non Tax Revenue	Calculation (Number)	= (School Other Income / School Enrolment) * S2 New Students
S2 New School Operating Cost	Calculation (Number)	= Operating Cost Per Student * S2 New Students
S2 New State Aid	Calculation (Number)	= S2 New Students * State Aid Per Student
S2 New Students	Calculation (Number)	= (S2 New R1 Housing Units * SAC Multiplier R1)+ (S2 New R2 3 Housing Units * SAC Multiplier R2 3) + (S2 New Rpud Housing Units *SAC Multiplier Rpud)
S2 New Students Minus Existing Capacity	Calculation (Number)	= S2 New Students-Existing Excess School Capacity
S2 Open Space Donated Acres	Number	
S2 Open Space Expense	Calculation (Number)	= (OSP Purch Value Per Acre * S2 OS Acres Purch FS)+ (OSP Ease Value Per Acre* S2 OS Acres Purch Ease)
S2 Open Space Impact on Levy	Calculation (Number)	= PMT( S2 Open Space Expense, Bond Interst Rate , Bond Term)
S2 Open Space Impact on Levy Per Acre	Calculation (Number)	= (PMT( S2 Open Space Expense, Bond Interst Rate , Bond Term))/S2 OS Acres Purch FS
S2 OS Acres Purch Ease	Number	
S2 OS Acres Purch FS	Number	
S2 Property Tax Revenue	Calculation (Number)	= ((S2 Housing Value + S2 Com Ind Value)/1000) * City Tax Rate Per Thousand
S2 R1 Acres	Number	
S2 R1 Acres Value	Calculation (Number)	= (S2 R1 Acres * R1 Home Value)* R1 du acre
S2 R2 3 Acres	Number	

Field Name	Field Type	Formula / Entry Option
S2 R2 3 Acres Value	Calculation (Number)	= (S2 R2 3 Acres * R2 3 Home Value) * R2 3 du acre
S2 Rpud Acres	Number	
S2 Rpud Acres Value	Calculation (Number)	= (S2 Rpud Acres * Rpud Home Value) * Rpud du acre
S2 Sample Tax	Calculation (Number)	= (S2 Combined City School Tax * Sample Home) / 1000
S2 Sample Tax School Construction	Calculation (Number)	= (S2 Combined City School Tax construction * Sample Home) / 1000
S2 School Construction	Calculation (Number)	= (School Building Cost Per Student * S2 New Students Minus Existing Capacity) * ((School Building Aid Percentage -1) * -1)
S2 School Tax Per Thousand	Calculation (Number)	= (School Tax Levy + (S2 New School Operating Cost- (S2 New State Aid+ S2 New School Non Tax Revenue))) / ((City Taxable Assesed Value + S2 Housing Value + S2 Com Ind Value)/1000)
S2 School Tax Per Thousand With Construction	Calculation (Number)	= (School Tax Levy +S2 Impact on Levy of School Construction + (S2 New School Operating Cost- (S2 New State Aid+ S2 New School Non Tax Revenue))) / ((City Taxable Assesed Value + S2 Housing Value + S2 Com Ind Value)/1000)
S2 School Tax Revenue	Calculation (Number)	= ((S2 Housing Value + S2 Com Ind Value)/1000) * School Tax Rate Per Thousand
S2 Total Acres	Calculation (Number)	= S2 Open Space Donated Acres + S2 OS Acres Purch Ease + S2 OS Acres Purch FS + S2 B123 Acres + S2 B4 5 Acres + S2 Com Ind Acres + S2 R2 3 Acres + S2 R1 Acres + S2 Rpud Acres
S2 Total Value Bump Minus Land	Calculation (Number)	= (S2 R1 Acres Value + S2 R2 3 Acres Value + S2 Rpud Acres Value + S2 B123 Acres Value + S2 B4 5 Acres Value + S2 Com Ind Acres Value) - ((S2 R1 Acres Value + S2 R2 3 Acres Value + S2 Rpud Acres Value + S2 B123 Acres Value + S2 B4 5 Acres Value + S2 Com Ind Acres Value) * Land Value Percent Reduction)
S3 B123 Acres	Number	
S3 B123 Acres Value	Calculation (Number)	= (S3 B123 Acres * Comm B123 Value Per Acre)
S3 B4 5 Acres	Number	
S3 B4 5 Acres Value	Calculation (Number)	= S3 B4 5 Acres * Comm B4 5 Value Per Acre
S3 Cap proj Impact on Levy	Calculation (Number)	= PMT(S3 Capital Improvement, Bond Interst Rate , Bond Term)
S3 Capital Improvement	Number	
S3 City Tax Per Thousand	Calculation (Number)	= (City Tax Levy + S3 Expense + S3 Open Space Impact on Levy + S3 Cap proj Impact on Levy) / ((City Taxable Assesed Value + S3 Housing Value + S3 Com Ind Value)/1000)
S3 Com Ind Acres	Number	
S3 Com Ind Acres Value	Calculation (Number)	= S3 Com Ind Acres * Comm Light Industrial Value Per Acre
S3 Com Ind Value	Calculation (Number)	= Comm Light Industrial Value Minus Land * S3 Com Ind Acres
S3 Combined City School Tax	Calculation (Number)	= S3 City Tax Per Thousand + S3 School Tax Per Thousand
S3 Combined City School Tax construction	Calculation (Number)	= S3 City Tax Per Thousand + S3 School Tax Per Thousand With Construction
S3 Ease Acres Value	Calculation (Number)	= S3 OS Acres Purch Ease * OSP Ease Value Per Acre
S3 Expense	Calculation (Number)	= Percapita Expense * S3 New Population
S3 FS Purch Value	Calculation (Number)	= S3 OS Acres Purch FS * OSP Purch Value Per Acre
S3 Housing Value	Calculation (Number)	= ((R1 Home Value Minus Land * S3 R1 Acres) * R1 du acre) + ((R2 3 Home Value Minus Land * S3 R2 3 Acres) * R2 3 du acre) + ((Rpud Home Value Minus Land * S3 Rpud Acres) * Rpud du acre)
S3 Impact on Levy of School Construction	Calculation (Number)	= PMT( S3 School Construction, Bond Interst Rate, Bond Term)
S3 Net Impact on City Tax Levy	Calculation (Number)	= (S3 Expense + S3 Open Space Impact on Levy) - S3 Property Tax Revenue
S3 Net Impact on Combined Levy	Calculation (Number)	= S3 Net Impact On School Tax Levy No Construction + S3 Net Impact on City Tax Levy
S3 Net Impact on Combined Levy Per Acre	Calculation (Number)	= S3 Net Impact on Combined Levy/(S3 R1 Acres + S3 Com Ind Acres + S2 R2 3 Acres)
S3 Net Impact on Combined Levy Sch Construction	Calculation (Number)	= S3 Net Impact On School Tax Levy + S3 Net Impact on City Tax Levy
S3 Net Impact On School Tax Levy	Calculation (Number)	= (S3 Impact on Levy of School Construction + S3 New School Operating Cost) - (S3 New School Non Tax Revenue + S3 New State Aid + S3 School Tax Revenue)
S3 Net Impact On School Tax Levy No Construction	Calculation (Number)	= (S3 New School Operating Cost) - (S3 New School Non Tax Revenue + S3 New State Aid + S3 School Tax Revenue)
S3 New Housing Units	Calculation (Number)	= S3 New R1 Housing Units + S3 New R2 3 Housing Units + S3 New Rpud Housing Units

Field Name	Field Type	Formula / Entry Option
S3 New Population	Calculation (Number)	= (S3 New R1 Housing Units + S3 New R2 3 Housing Units+S3 New Rpu Housing Units ) * Persons Per Household
S3 New R1 Housing Units	Calculation (Number)	= S3 R1 Acres * R1 du acre
S3 New R2 3 Housing Units	Calculation (Number)	= S3 R2 3 Acres * R2 3 du acre
S3 New Rpu Housing Units	Calculation (Number)	= S3 Rpu Acres * Rpu du acre
S3 New School Non Tax Revenue	Calculation (Number)	= (School Other Income / School Enrolment) * S3 New Students
S3 New School Operating Cost	Calculation (Number)	= Operating Cost Per Student * S3 New Students
S3 New State Aid	Calculation (Number)	= S3 New Students * State Aid Per Student
S3 New Students	Calculation (Number)	= (S3 New R1 Housing Units * SAC Multiplier R1)+ (S3 New R2 3 Housing Units * SAC Multiplier R2 3) + (S3 New Rpu Housing Units * SAC Multiplier Rpu)
S3 New Students Minus Existing Capacity	Calculation (Number)	= S3 New Students-Existing Excess School Capacity
S3 Open Space Donated Acres	Number	
S3 Open Space Expense	Calculation (Number)	= (OSP Purch Value Per Acre * S3 OS Acres Purch FS)+ (OSP Ease Value Per Acre* S3 OS Acres Purch Ease)
S3 Open Space Impact on Levy	Calculation (Number)	= PMT( S3 Open Space Expense, Bond Interst Rate , Bond Term)
S3 Open Space Impact on Levy Per Acre	Calculation (Number)	= (PMT( S3 Open Space Expense, Bond Interst Rate , Bond Term))/S3 OS Acres Purch FS
S3 OS Acres Purch Ease	Number	
S3 OS Acres Purch FS	Number	
S3 Property Tax Revenue	Calculation (Number)	= ((S3 Housing Value + S3 Com Ind Value)/1000) * City Tax Rate Per Thousand
S3 R1 Acres	Number	
S3 R1 Acres Value	Calculation (Number)	= (S3 R1 Acres * R1 Home Value) * R1 du acre
S3 R2 3 Acres	Number	
S3 R2 3 Acres Value	Calculation (Number)	= (S3 R2 3 Acres * R2 3 Home Value) * R2 3 du acre
S3 Rpu Acres	Number	
S3 Rpu Acres Value	Calculation (Number)	= (S3 Rpu Acres * Rpu Home Value) * Rpu du acre
S3 Sample Tax	Calculation (Number)	= (S3 Combined City School Tax * Sample Home) / 1000
S3 Sample Tax School Construction	Calculation (Number)	= (S3 Combined City School Tax construction * Sample Home) / 1000
S3 School Construction	Calculation (Number)	= (School Building Cost Per Student * S3 New Students Minus Existing Capacity) * ((School Building Aid Percentage -1) * -1)
S3 School Tax Per Thousand	Calculation (Number)	= (School Tax Levy + (S3 New School Operating Cost- (S3 New State Aid+ S3 New School Non Tax Revenue))) / (( City Taxable Assesed Value + S3 Housing Value + S3 Com Ind Value)/1000)
S3 School Tax Per Thousand With Construction	Calculation (Number)	= (School Tax Levy +S3 Impact on Levy of School Construction + (S3 New School Operating Cost- (S3 New State Aid+ S3 New School Non Tax Revenue))) / (( City Taxable Assesed Value + S3 Housing Value + S3 Com Ind Value)/1000)
S3 School Tax Revenue	Calculation (Number)	= ((S3 Housing Value + S3 Com Ind Value)/1000) * School Tax Rate Per Thousand
S3 Total Acres	Calculation (Number)	= S3 Open Space Donated Acres + S3 OS Acres Purch Ease + S3 OS Acres Purch FS + S3 B123 Acres + S3 B4 5 Acres + S3 Com Ind Acres + S3 R2 3 Acres + S3 R1 Acres + S3 Rpu Acres
S3 Total Value Bump Minus Land	Calculation (Number)	= (S3 R1 Acres Value + S3 R2 3 Acres Value + S3 Rpu Acres Value + S3 B123 Acres Value + S3 B4 5 Acres Value + S3 Com Ind Acres Value) - ((S3 R1 Acres Value + S3 R2 3 Acres Value + S3 Rpu Acres Value + S3 B123 Acres Value + S3 B4 5 Acres Value + S3 Com Ind Acres Value) * Land Value Percent Reduction)
SAC Multiplier R1	Number	
SAC Multiplier R2 3	Number	
SAC Multiplier Rpu	Number	
Sample Home	Number	
School Building Aid Percentage	Number	
School Building Cost Per Student	Number	
School Enrolment	Number	

Field Name	Field Type	Formula / Entry Option
School Operating Cost no Dept Admin	Calculation (Number)	= (Total Operating Expenditures - (Total Operating Expenditures * .10))-DEBT SERVICE
School Other Income	Number	
School Other Income Per Student	Calculation (Number)	= School Other Income / School Enrolment
School Tax Levy	Number	
School Tax Rate Per Thousand	Number	
School Tax Rate Test	Calculation (Number)	= School Tax Levy / (School Taxable Assessed Value / 1000)
School Taxable Assessed Value	Number	
SERIAL NUMBER	Calculation (Number)	Indexed = Status(CurrentRecordID)
State Aid Per Student	Calculation (Number)	= Total State Aid / School Enrolment
Tax CS Expense Per Capita	Calculation (Number)	= (Tax CS Expenses - (Tax CS Expenses * Tax CS Percent Fixed E)) / City Population
Tax CS Expenses	Number	
Tax CS Percent Fixed E	Number	
Tax CS Percent Fixed R	Number	
Tax CS Revenue Per Capita	Calculation (Number)	= ((Tax CS Revenues - (Tax CS Revenues * Tax CS Percent Fixed R)) ) / City Population
Tax CS Revenues	Number	
Total Operating Expenditures	Number	
Total State Aid	Number	
VERSION NAME	Text	Do not allow user to override validation Required value Unique values only Message: "A unique name must be entered here." Indexed