



FRIENDS OF THE MAHICANTUCK

TROY's SACRED FOREST

Its culture, ecology,
history, archaeology,
and significance to
the community.

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and submitted for consideration to

Mayor of the City of Troy, Patrick Madden

President of the City Council of Troy, Carmella Mantello

Planning Commissioner of the City of Troy, Steven Strichman

The Members of the Troy City Council

The Members of the Planning Commission

January 22, 2021

Troy, NY

COVER LETTER

Dear Mayor Patrick Madden,
City Council President Carmella Mantello,
Members of the City Council,
Planning Commissioner Steven Strichman,
and Members of the Planning Commission,

With this report, the Friends of the Mahicantuck provide comprehensive analysis of the significance of the “Sacred Forest” located at 1011 2nd Avenue. We provide an assessment of adverse impacts associated with the potential change in zoning code as well as potential development of the site.

The findings underscore the unique importance of the “Sacred Forest” and highlight its economic, cultural, ecological, archaeological and historical, and social value. In its significance, this site is unique to the entire region.

This report shows the site’s benefits to human health; its natural setting; social, cultural, historic, archaeological and recreational values; and inherent ecological sensitivity. The site at 1011 2nd Avenue thereby warrants designation as Critical Environmental Area (CEA), exceeding the designation criteria established in CRR-NY 617.14(g) — which we request the City of Troy to pursue as soon as possible.

The report provides an ecosystem service analysis, detailing the significant benefits to health and wellbeing for the residents of Troy, Pleasantdale as well as downstream communities. The site is an important indigenous heritage and cultural site of national significance (National Register eligible) and is an important green-space within the designated “Potential Environmental Justice area” that it is located in.

Ecological surveys, conducted in December 2020 and January 2021 and included in this report, document several county-rare as well as one state-rare species at the site. The survey also documents the site as potentially sensitive habitat for several species, including as feeding habitat of the Bald Eagle.

An economic cost-benefit analysis shows disproportionate direct as well as indirect costs resulting from the rezoning and associated development of the site. This includes a negative revenue assessment for the school district as well as for the City of Troy.

“Lost opportunity costs” must be expected particularly regarding the development of the city’s vacant housing stock. Allowing for high density development on this undeveloped site would significantly impact Troy’s capacities to develop its vacant housing stock due to insufficient demand. This is confirmed through the most recent forecast issued by US HUD for the region.

Therefore, a rezoning would undermine the strategic development goals established in the 2018 “Realize Troy” Comprehensive Plan, particularly regarding the development of existing housing stock, smart growth, and priority investment areas.

While this site certainly deserves preservation, this report raises significant concerns over process flaws and inconsistencies with the law, requiring urgent correction, should a change in zoning code be approved. Significant discrepancies with SEQRA as well as inconsistencies with the 2018 “Realize Troy” Comprehensive Plan strike us as particularly important.

Based on the findings of this report, we recommend:

- Making the preservation and protection of the “Sacred Forest” at 1011 2nd Avenue the city’s highest priority;
- Elected officials take the necessary steps to ensure that proper procedural steps are followed and inconsistencies with the law are remedied;
- The Planning Commission recommend against the rezoning for a) the significance of the site; b) anticipated adverse environmental impacts of a change in zoning code, as well as of a potential development; and as c) a positive recommendation would be premature until SEQRA review is completed; and
- Designating the site as Critical Environmental Area (CEA) to ensure the adequate consideration of its environmental significance for any future actions on this land.

Over 2300 signatures to our petition, more than eight hours of testimony against the rezoning at three public hearings, as well as countless written submissions show that your constituents are united across party-lines in opposition to the proposed rezoning and subsequent development of the Sacred Forest at 1011 2nd Avenue in Lansingburgh.

What is more, the public also shows clear and unbroken support for our vision to protect and preserve this land. We continuously advocate for a win-win solution that would create a long-term preservation for the public good at 1011 2nd Avenue, while supporting the City of Troy and the developer in identifying an appropriate site to realize Kevin Vandenburg’s vision on one of Troy’s many vacant sites.

In this letter and attached supporting material, testimony and evidence, we bring the most critical aspects of our case to your consideration.

The land at 1011 2nd Avenue is sacred. The land is indigenous land. It is the city’s last untouched waterfront forest. It is a valuable natural space with rare ecologies. Especially during this pandemic, the land is a critical green-space for the community in a DEC designated Potential Environmental Justice Area.

This forest has always protected us, provided us with reprieve, clean air and water. It is now on us to protect the Sacred Forest.

Thank you,
The Friends of the Mahicnatuck

January 22, 2022 Troy, NY



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ACRONYMS AND ABBREVIATIONS

Approx.	Approximately	NYS DoS	New York State Department of State
B.C. / B.C.E.	Before Common /Before Common Era	NYSERDA	New York State Energy Research and Development Authority
C.E.	Common Era	P	Planned Development District
CEA	Critical Environmental Area	PEJA	Potential Environmental Justice Area
DEC CP	DEC Commissioner Policy	R-1	Residential, Single Family Housing
(DEC) PEJA	Potential Environmental Justice Area	Res.	Resolution
EAF	Environmental Assessment Form	SEQRA	State Environmental Quality Review Act
e.g.	exempli gratia, “for example”	SHPO	State Historic Preservation Office
etc.	et cetera	US EPA	United States Environmental Protection Agency
NHPA	National Historic Preservation Act	US HUD	United States Department of Housing and Urban Development
NY	New York		
NYSDEC/DEC	Department for Environmental Conservation		

EXECUTIVE SUMMARY

The Sacred Forest is located at 1011 2nd Avenue in Troy, NY, with one acre of the parcel located in the Town of Schaghticoke. The entire site is located within a DEC designated “Potential Environmental Justice Area” (PEJA).

This parcel constitutes the majority (about 85-90%) of the last untouched forest along the Mahicantuck (Hudson River) in Troy (with the remaining percent located at the parcel directly to the south; and with the other wooded areas being brown-field locations in South Troy). It is of high historical, archaeological and cultural significance and is sacred to indigenous peoples. It is National Register eligible for its archaeological artifacts dating back to 1500-3000 B.C.E. The property is also an important green-space for the local community, including low-income and minority communities.

A LEGAL PARAMETERS AND PROCESS REQUIREMENTS

A.1 Comprehensive Plan Inconsistencies

The rezoning from R1-Single Family, Detached to P — Planned Development is inconsistent with the 2018 “Realize Troy” Comprehensive Plan. A rezoning has to be consistent with the comprehensive planning document. A rezoning of this parcel would require a zoning plan amendment.

A.2 Rezoning: Negative Impacts and Capacity Limits

Due to the significance of this land, a rezoning to P-Planned Development and associated permission of high-density development would constitute substantive negative impacts and exceed the development capacities of this land.

A.3 SEQRA and Segmentation

Any consideration of a rezoning as separate from the known development plans (as if they were separate actions) is a clear case of “segmentation,” according to SEQRA (and reaffirmed in case law). Currently, the City of Troy is considering rezoning and development as separate actions. However, on November 19, 2020, the Planning Commission discussed during a workshop with the developer Kevin Vandenburg clear site plans for a future development associated with the rezoning. Additionally, at a Planning Commission public hearing on December 27, 2020, the developer made reference to his development plans without providing specifics and the members of the commission were able to understand and

respond to the comments regarding development plans without additional clarification. In *Kirk-Astor Drive Neighborhood Ass’n v Town Board of Town of Pittsford*, 106 A.D.2d 868, 869, 483 N.Y.S.2d 526, 528 (4th Dep’t 1984), “SEQRA review of a rezoning proposal also had to consider the office park that was planned for the land. Similarly, in *Taxpayers Opposed to Floodmart, Ltd., v City of Hornell Industrial Development Agency*, 212 A.D.2d 958, 624, N.Y.S.2d 689 (4th Dep’t 1995), “environmental review of a proposed annexation also had to consider a Wal-Mart proposed for the land”.

Therefore, under SEQRA, the city cannot separate rezoning and development as if the two were independent actions. This would constitute a clear case of “segmentation” and make the city vulnerable to proceedings under Article 78. Furthermore, NYS law explicitly states that SEQRA should begin at the earliest possible time. While the planning commission’s recommendation is non-binding, it is fundamentally informing the decision of the City Council and therefore part of the approval process.

A.4 SEQRA and Rezoning

Should the commission or council consider a positive recommendation / approval of the request for rezoning, no further action should be taken until the developer has submitted an EAF and SEQRA has been initiated. SEQRA has to consider development as well as rezoning. Rezoning (as well as zoning plan amendment) need to be indicated as “discretionary actions” on the full EAF as part of the SEQRA review. This reports details for each of the aspects of significance clear reasons for why a rezoning itself would hold significant potential for negative environmental impacts.

A.5 DEC Potential Environmental Justice Area

The land is located within a DEC designated “Potential Environmental Justice Area”. As part of DEC CP 29, applicants for state permits (including SEQRA) are required to conduct extended public participation and outreach measures, including a written public participation plan, and are encouraged to do so prior to application (cp CP 29 section D). According to section E of the same DEC policy, a full EAF is required where projects are located within a Potential Environmental Justice Area (cp. Cp 29 section E).

B CONCLUSIONS AND RECOMMENDATIONS

1) **The Planning Commission must recommend against the change in zoning code.** At the very least it should recommend against the rezoning as premature until SEQRA is completed.

2) **The City Council must vote against the request for rezoning as premature** until the developer has submitted an EAF and rezoning has been incorporated as part of SEQRA for the development as a “discretionary action” along with the zoning plan amendment.

3) **The Planning Commission should further recommend the designation of the site as Critical Environmental Area (CEA).** This would ensure that the high significance of this site is appropriately considered in the current and any further reviews of any actions on this property, as is the purpose of such designation. This report shows that the site at 1011 2nd Avenue does far exceed the requirement and significance criteria for such a designation, as detailed in 6 CRR-NY 617.14 (g) and warrants such a designation.

C SITE SIGNIFICANCE AND ASSESSED IMPACTS

C.1 Archaeological Significance

This land is well known for its archaeological significance. Artifacts date back to at least 1500-3000 B.C.E. and the site is National Register eligible. It is part of a larger complex of archaeologically significant sites along the Hudson, including across the river. Most, if not all sites, have been destroyed by development in the past further increasing the significance of this site in particular.

C.2 Historical Significance

The land encompassing 1011 2nd Avenue was part of the original Stone Arabia Patent, granted in 1670 by the governor of the province of New York, Francis Lovelace. The land was then deeded to Abraham Jacob Lansing on July 13, 1769 by the Patroon Stephen Van Rensselaer. 1011 2nd Avenue has been locally known as “Lansing’s Grove” for 200 years and used as a recreational escape for city inhabitants and community access to the Hudson River for fishing, swimming, camping and picnics. The community activities at the site are

mentioned extensively in historic periodical archives and it remains to this day a place used by Lansingburgh and Pleasantdale residents to enhance their quality of life.

C.3 Cultural Significance

As such, this site is of high cultural significance to a number of indigenous peoples including the Stockbridge Munsee, Lenape, and Schaghticoke First Nations. These ties, grown over thousands of years, are still well alive and indigenous leaders held ceremony on this site as recently as December 2020. The cultural significance also extends to the present local community, particularly BIPOC youth and local residents of the Lansingburgh Neighborhood. The forest is an essential part of the neighborhood’s character.

C.4 Ecological Significance

This forest is an important ecological site within the City of Troy. In a recent preliminary survey in December 2020, led by Dr. David Hunt, several county-rare species have been identified, one of which — the scrub oak — is an important habitat indicator for globally rare species such as the buck moth. A state-rare species was likely identified as well. Detailed surveys are provided in the Appendix. Findings indicate that more extensive ecological surveys during the growth season (May-September) are required before a positive decision regarding rezoning would be possible. Initial findings however already show a high ecological significance due to the presence of several rare species on the site.

C.5 Ecosystem Services

Due to its ecological composition, location and character, the land located at 1011 2nd Avenue provides critical ecosystem services to the local community, the City of Troy overall, and downstream and adjacent communities — the loss to which all these communities would be harmed and impacted parties. Some of the most critical ecosystem services, which would be lost as a consequence of high-density development on this site, include: stormwater runoff protection, urban heat mitigation, clean air, carbon sequestration, flood protection, nature and wildlife habitats including species that themselves provide important ecosystem services.

This aspect is of increased significance, also legally, as the primarily harmed community is located in a DEC Potential Environmental Justice Area, causing disproportionate cost for a minority, low-income and/or marginalized community.

C.6 Significance for Climate Resilience

The Sacred Forest acts as a critical buffer to a range of climate risks and plays an important role in the City of Troy’s climate resilience. Due to its geographic location upstream of the entire city this waterfront forest provides critical resilience to flooding and storm-water impacts. It also acts as a buffer to storm-water runoff. Additionally, the forest is an important carbon sink while also providing mitigative effects to the Urban Heat Island and heat waves. It’s destruction would therefore significantly adversely impact the city’s overall climate resilience and would significantly increase flood risks to downstream locations in particular.

C.7 Community and Public Health

The forest provides critical ecosystem services beneficial to human physical and mental health. This report outlines the significant contribution to overall community wellbeing by providing clean water and clean air and due to its benefits to mental health. These services to public health are particularly critically important during the current pandemic and associated impacts on mental and physical health. In turn, an increase in density, associated with the proposed zoning change would to a significant degree adversely impact public health in this PEJA. Particularly increased particulate pollution as well as noise pollution associated with increased traffic would threaten the physical and mental wellbeing of the local community in a characteristically quiet neighborhood.

C.8 Economic Impacts

This report finds significant negative economic impacts through rezoning and/or development of the site at 1011 2nd Avenue due to a) costs associated with the loss of ecosystem services, b) costs of public services, resulted in an annual loss in revenue of at least \$890,000.00 / year, and c) lost opportunity costs, in particular regarding the limited housing demand and the resulting negative effects on capacities to redevelop vacant sites should this undeveloped green-space be opened to high-density development.

C.9 Housing Demand & Smart Growth Goals

The most recent Comprehensive Housing Market Analysis by the US Department for Housing and Urban Development (US HUD) for Albany-Schenectady-Troy explicitly states that housing demand is nearly at or already at capacity (cp. US HUD 2019, p. 1). This is particularly significant in context of a

high number of vacant, abandoned and neglected sites across Troy that are explicitly designated as investment priority areas in the 2018 “Realize Troy” Comprehensive plan.

In this context, rezoning to encourage high density development at this undeveloped site appears contrary to the development priorities established in the Comprehensive Plan. The existence of an old housing stock in need for development in combination with limited housing demand establishes clear development needs. Developing the site at 1011 2nd Avenue would undermine addressing these development needs and is contrary to the development strategy established in the Comprehensive Plan.

DESIGNATION AS CRITICAL ENVIRONMENTAL AREA

One measure at disposal to the City of Troy and recommended by this report is the designation of the Sacred Forest at 1011 2nd Avenue as “Critical Environmental Area” — see 6 CRR-NY 617.14: “A local agency may designate a specific geographic area within its boundaries as a critical environmental area (CEA).”

This report shows that this site qualifies for designation as CEA, exceeding the criteria defined in 6 CRR-NY 617.14(g): (i) benefit to human health (see chapter x); (ii) natural setting (see chapters x and x), (iii) social, cultural, historic, archaeological, and recreational values (chapter x), and (iv) inherent ecological sensitivity (chapter x).

CONSIDERATION OF IN-RIGHT DEVELOPMENT

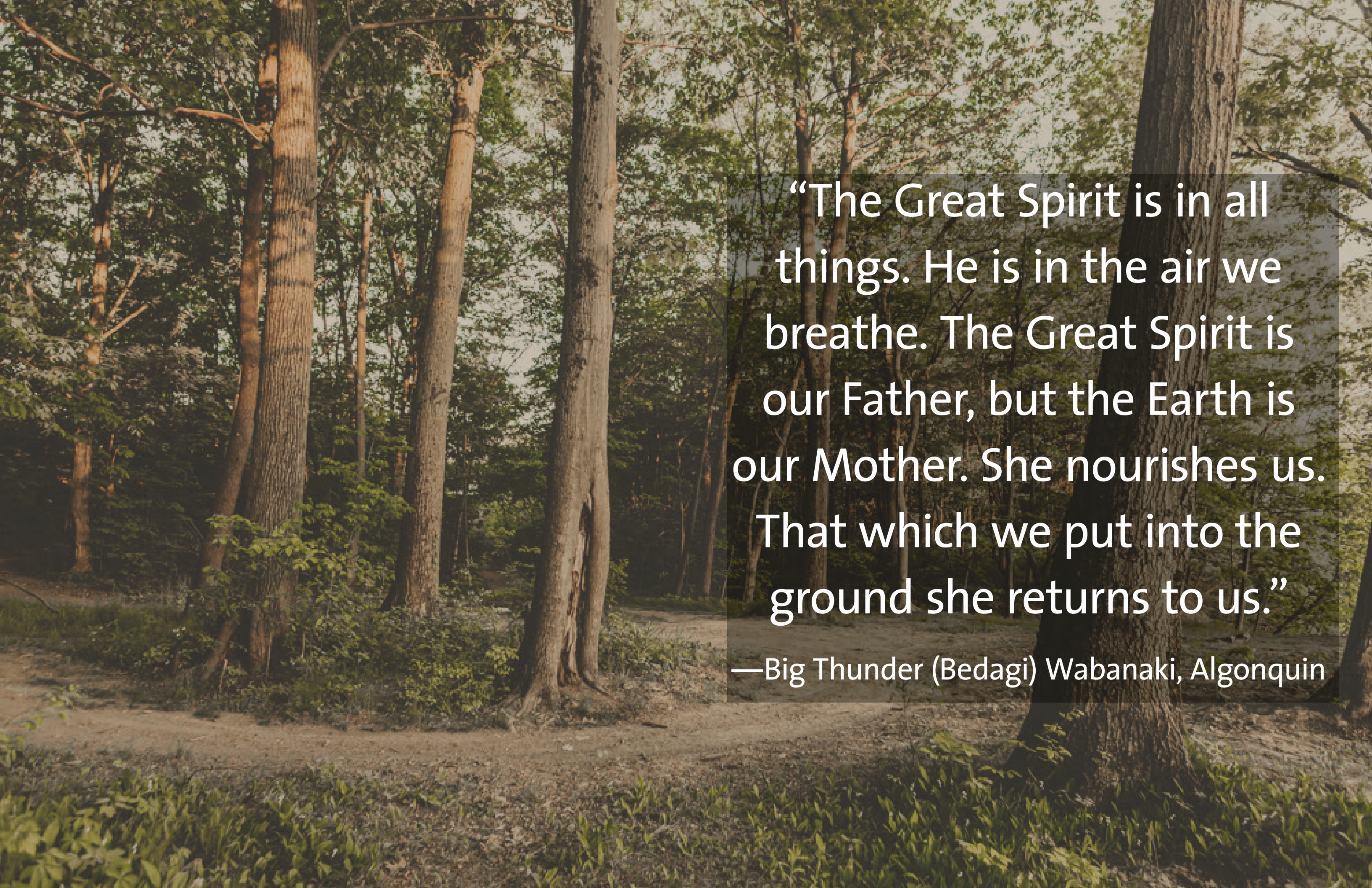
The developer “alternative site proposal” of approx. 38 apartment units would also be subject to SEQRA approval and would constitute a type I action per 6 NYCRR Part 617.4(6)(i).

A recommendation against rezoning is not only the only action consistent with NYS law and the process requirements established in SEQRA; it also means that a negative recommendation by the commission (and subsequent denial of the request for rezoning by the City Council) would not automatically mean that 38 family houses will be constructed on the site: This will require SEQRA approval, would

constitute in all likelihood constitute a type I SEQRA action (along with various required local, state and federal permits). The listed concerns and significant environmental impacts would remain valid and relevant in any future SEQRA associated with the potential 38 single family houses development option. The designation as Critical Environmental Area, warranted based on the findings of this report, would constitute additional protections for the site in review processes.

A 38 family housing development should be subject to considerations only if an application for such a proposal is received. This further underscores that a recommendation should insist on the submission of an application and the initiation of SEQRA, so the commission can make an informed determination about what it is reviewing and provide an informed recommendation on a concrete development proposal that is already known to be associated with the request for change in zoning code.





“The Great Spirit is in all things. He is in the air we breathe. The Great Spirit is our Father, but the Earth is our Mother. She nourishes us. That which we put into the ground she returns to us.”

—Big Thunder (Bedagi) Wabanaki, Algonquin

INTRODUCTION

OVERVIEW

This report provides a comprehensive overview of key issues regarding the significance of the “Sacred Forest” located at 1011 2nd Avenue in the Lansingburgh neighborhood of Troy, NY.

This land, sacred to indigenous peoples and valued by the local community as important green-space and natural recreational space, is currently threatened by a development project.

The development sees construction of approx. 240 “high end” apartment units in three four-story buildings. For the purpose of such a development, a change in zoning code (from R-1 to P) is required and has been requested by developer Kevin Vandenburg. The land is owned by the Golub family with the developer holding an option for purchase.

This report is intended to provide law-makers and decision makers as well as the general public with in-depth information regarding the significance and value of the forest at 1011 2nd Avenue as well as regarding impacts associated with a change in zoning code and subsequent development of the site.

METHODS

This report was written, drawing on input and analyses provided by experts, the latest state of the art of academic literature as well as testimonies on the development and site provided by experts to the City of Troy during public hearings.

For the purpose of this report, several analyses and assessments were commissioned with independent experts, including ecosystem assessments, ecological survey, general archaeological evaluation (not survey), and legal analysis. Additionally, the report was shared with an advisory committee for review and feedback.

The results are compiled here for overview and review and are preliminary results of a larger effort to provide decision-makers and the public with the best possible information as it becomes available. As such, the results presented here are highlights, as data collection, assessments and research continues.



HOW TO READ THIS REPORT

This report is structured so decision-makers and the public can read first those sections that are most relevant to them.

An **Executive Summary** highlights the most important findings and conclusions as they pertain to current considerations of a change in zoning code for 1011 2nd Avenue.

Additionally, each section begins with an overview and provides a convenient info-box with the **most important highlights of each section** — allowing the reader to quickly assess the most critical information provided in each section.

The report closes with a **conclusions** section, providing the reader with a broad-stroke review of the highlights for each individual section.

STRUCTURE

This report opens in **CHAPTER 1** with a detailed review of past actions regarding development of 1011 2nd Avenue and gives an assessment of the current status of this process. It also highlights critical process flaws and legal concerns.

Chapter 2 and **Chapter 3** provide a review of the most important findings regarding the land’s archaeological and ecological significance. This includes the national significance of the site’s archaeology as well as the documentation of county- and state-rare species.

Chapter 4 takes a look at the ecosystem services provided by the forested land, in particular regarding public health, flooding and stormwater, and climate and environmental resilience.

Chapter 5 discusses the cultural significance of the land and situates it’s role for the character of the neighborhood.

Chapter 6 provides an economic analysis of costs and benefits of a) remaining the site in its undeveloped state, b) ecosystem services and c) rezoning and development,

The report ends with the **conclusion section** with an overview of the highlights for each of the preceding sections.

The Appendix provides additional resources, including the recent ecological surveys from December 2020 and January 2021, an analysis of the Comprehensive Plan by Scenic Hudson and Riverkeeper, a NYS Department of State opinion, a stormwater runoff analysis and a written statement by economist Dr. Gowdy.

CHAPTER ONE

PROCESS AND LEGAL CONSIDERATIONS

This chapter provides a general outline of the process history, current status and next steps in the review of the proposed development at 1011 2nd Avenue and associated/discretionary actions (such as rezoning and zoning code amendment). It discusses discrepancies with the process as well as remedies and recommendations.

1.1 PROCESS HISTORY

May 2020 — Planning Commission

The public was first introduced to a potential development of the “Sacred Forest” site at 1011 2nd Avenue in May at an information sharing workshop during a City of Troy Planning Commission hearing. Conceived as an informal information workshop session, the developer introduced the commission and public to plans for developing the site at 1011 2nd Avenue by constructing six apartment buildings accommodating approximately 240 “high end apartment units”. The public already at this early meeting provided extensive feedback to the commission and developer, including an indigenous leader — and articulated strong concern and opposition to potentially disrupting this archaeologically and culturally significant site.

August 27, 2020 — City Council Planning Committee Meeting

At a hearing of the City Council Planning Committee, a request for rezoning associated with the development was introduced for a vote as Resolution Res. 91 “*Resolution Referring Lansingburgh Zoning Change Request To Planning Commission For Review and Recommendation (Council President Mantello) (At The Request Of The Administration)*”.

At the public forum, ten experts from various fields provided testimony to the members of the committee, arguing for the preservation and protection of the site and urged to vote against Res. 91 given the high cultural, archaeological, ecological and community significance of the site. Additional to the spoken testimony, several written statements were

entered into the record alongside petitions with signatures of 24 neighbors of the property, 42 Troy residents and 248 signatures on an online petition. A preliminary report was submitted to the record.

Members of the Planning Committee voted 1-2 to pass Res. 91.

September 10, 2020 — City Council General Meeting

At a general meeting of the Troy City Council, the request for rezoning was taken up again in form of Res. 91. At the public form, a large number of members of the public gave testimony alongside experts and representatives from organizations such as Scenic Hudson, Schaghticoke First Nations, Stockbridge Munsee, Friends of the Mahicantuck, a legal representative of Rupp, Baase, Pfalzgraf, Cunningham LLC and others. As was the case for the August 27 hearing, in over three hours of testimony not a single statement was in support of the development and/or proposed rezoning.

Additionally, a written opinion by New York State Department of State was submitted to the City of Troy assessing the residency requirement to speak during the forum as inconsistent with New York State Open Meetings Law. This requirement was however maintained by the City of Troy despite protest by advocacy groups and despite being made aware that this inconsistency results in the exclusion of indigenous leaders to speak at the hearing, including representatives of the Stockbridge Munsee and Schaghticoke First Nations.

The City Council passed Resolution 91 with a 3-4 vote.

HIGHLIGHTS

- Treating the rezoning as if it were an independent action under SEQRA constitutes “segmentation”
- According to SEQRA, review should start without delay and at the earliest possible time
- The site is located in an PEJA, requiring a full EAF for any action on the land. A written outreach plan is also required for actions within PEJAs per DEC CP 29.
- Rezoning to P (Planned Development) would be inconsistent with Troy’s Comprehensive Plan and therefore would require a Comprehensive Plan amendment.
- Residency requirement to speak at public forums were inconsistent with NYS Open Meetings Law
- Public disclosure of archeo-sensitive locations could be a violation of NHPA Section 304

November 19, 2020 — Planning Commission Workshop with Developer (No Opportunity For Public Comment)

With the referral to the Planning Commission, the matter of rezoning was taken up by the Planning Commission on November 19, 2020 in a workshop with the developer. The workshop was excluded from public comments.

The agenda included a “Project Narrative” for the development provided by the developer, which detailed site plans for development of 240 apartment units in three four-story buildings. This plan also included the location of archeo-sensitive areas (which is against best practice of archaeological preservation and conservation). During this workshop, the members of the Planning Commission discussed the development plans as part of the rezoning.

December 29, 2020 — Planning Commission Public Forum

The Planning Commission held a public hearing to hear public comment on: “*Planning Commission Recommendation to the City Council for Zone Change: Kevin Vandenburg is proposing a zone change from R-1 (Single-Family Residential Detached, §285-52) to P (Planned Development, §285-57).* Pursuant to §285-27 of the City Code a public hearing is required. The applicant is represented b Jamie Easton, P.E. of M.J. Engineering”.

During this hearing the public attempted to raise concerns regarding the potential segmentation of rezoning and development as separate actions, as well as concerns regarding the untimely initiation of SEQRA. Additionally the public as well as representatives of organizations, experts,

and representatives of indigenous groups, raised a range of environmental, archaeological, cultural, neighborhood character and other concerns.

At this meeting, several members of the public were cut off from completing their statements, including an indigenous leader. (Some members of the planning commission stepped in to allow some members of the public to complete their statements). Additionally, the scope of the public forum was limited by restricting matters of conversations regarding issues of segmentation and SEQRA, and by explaining that the public forum would be exclusively about the rezoning and not about development site plans.

1.2 CURRENT PROCESS STATUS

We find significant discrepancies between the current process and the State Environmental Quality Review Act, and find in part significant process irregularities.

The City of Troy is currently reviewing a request for change in zoning code for 1011 2nd Avenue. This process is outlined in the City Code, which requires a public hearing (§285-27). This hearing was held on December 29, 2020 (see above).

This is reaffirmed in recurrent statements that the commission is currently tasked with a review and recommendation exclusively regarding the request for rezoning itself (and not about any development at the site).

1.3 INCONSISTENCIES WITH SEQRA

1.3.1. SEGMENTATION

The City of Troy explicitly stated that it is currently exclusively reviewing a request for rezoning as complete action and held a public hearing as part of this process pursuant to §285-27 of Troy City Code. Currently the City of Troy is considering rezoning and development as separate actions, although the rezoning request is explicitly pursuant a known development proposal.

However, this process applies only to such cases, where the rezoning itself is indeed the complete and independent action. For the case of rezoning 1011 2nd Avenue, however, the case cannot be made that the rezoning constitutes a complete action.

Development plans are known, have been extensively discussed as part of the current review process, and were repeatedly referred to by members of the Planning Commission. A rezoning is not the complete action and is requested by Kevin Vandenburg pursuant a known development project. Rezoning has to be a discretionary action of what should be the review of the known development project.

Concrete development plans were subject of extensive discussion during the November workshop as well as during the public forum in December. The development plans are explicitly part of and informing the Planning Commission’s considerations and decision. It is also known from statements made by the developer to the Planning Commission that the rezoning is pursuant to his development plans. This includes during a workshop entirely dedicated to specific development plans on November 19, 2020, as well as conversations and discussions between developer, members of the Planning Commission, staff of the commission and legal council during a hearing on December 29th, 2020.

Therefore, the current process of review is inconsistent with the intent and outlined process requirements established in SEQRA (State Environmental Quality Review Act). In fact, any consideration of a rezoning as separate from the known development plans (as if they were separate actions), such as is the case for the review process as currently conducted by the City of Troy, constitutes a clear case of “segmentation”, according to SEQRA.

The NYS Environmental Quality Review Act (SEQRA) generally prohibits “segmentation”, which is defined as “the division of the environmental review of an action such that various activities or stages are addressed under this Part as though they were independent, unrelated activities, needing individual determinations of significance”.

This applies also for cases where a rezoning is treated as if it were an independent, unrelated activity. That this is the case was also reaffirmed by the courts. In *Kirk-Astor Drive Neighborhood Ass’n v Town Board of Town of Pittsford*, 106 A.D 2d 868, 869, 483 N.Y.S.2d 526, 528 (4th Dep’t 1984), “SEQRA review of a rezoning proposal also had to consider the office park that was planned for the land. Similarly, in *Taxpayers Opposed to Floodmart, Ltd., v City of Hornell Industrial Development Agency*, 212 A.D.2d 958, 624, N.Y.S.2d 689 (4th Dep’t 1995), “environmental review of a proposed annexation also had to consider a Wal-Mart proposed for the land”.

Therefore, the current review process is contrary to the intent of SEQRA and constitutes a clear case of “segmentation”, making the city vulnerable to proceedings under Article 78.

1.3.2. TIMING OF SEQRA

While the planning commission’s recommendation is non-binding, it is fundamentally informing the decision of the City Council and therefore part of the approval process. Additionally, New York’s SEQRA explicitly states that the process of environmental review pursuant to SEQRA should begin at the earliest possible time and without delay.

The intent for the law is to avoid cases such as the one currently unfolding for the rezoning review for 1011 2nd Avenue: This becomes explicit when one considers the next steps in approving the request for rezoning within the process currently pursued by the City of Troy. After a recommendation by the planning commission, the matter would return to the Troy City Council for further consideration. Before approval through the City Council, a SEQRA review will become necessary. Statements made during the November workshop already made clear that the Planning Commission would likely be the lead agency in this SEQRA review — returning the matter to the commission for review once again. Ideally, SEQRA would have been initiated

with the initial referral to the Planning Commission per City Council resolution 91 in September 2020.

This would have ensured that the required full EAF is submitted, that the planning commission can make its recommendation based on a full review of all material facts including SEQRA review, and that the requirement to initiate SEQRA review at the earliest time possible is met.

1.3.3. CONCLUSIONS

Ultimately, the current process (upon request by the City Council) is one where the Planning Commission ended up in a paradoxical situation: One where it, per official statements of commission staff, is reviewing and making recommendations on the rezoning alone as a complete action, while simultaneously also considering and reviewing development plans as part of this review and recommendation process.

Additional confusion about the process emerges, as the recommendation is non-binding and regards the rezoning request in some capacity — at the same time as the SEQRA review is still outstanding but will likely be conducted by the Planning Commission as lead agency. According to statements made during the workshop in November, the City Council would like to designate the Planning Commission as lead agency for the SEQRA review for the rezoning (as well as the SEQRA for the development at a later point, which is considered by the City as a separate action).

This makes the purpose of the recommendation difficult to bring in consistency with key provisions of SEQRA regarding timing and issues of segmentation.

1.4 ENVIRONMENTAL JUSTICE AREAS

The matter becomes further complicated, as the site in question (1011 2nd Avenue) is located within a DEC designated “Potential Environmental Justice Area” (DEC CP 29).

The designation “Potential Environmental Justice Area” means “a minority or low-income community that may bear a disproportionate share of the negative environmental

consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

As part of the DEC policy CP 29, applicants for state permits (including SEQRA) are required to conduct extended public participation and outreach measures, including a written public participation plan, and are encouraged to do so prior to application (cp. CP 29 section D). According to section E of the DEC policy, a full EAF is required where projects are located within a Potential Environmental Justice Area (cp. Cp 29 section E).

This again relates back to inconsistencies with SEQRA, both in terms of segmentation issues as well as timing of initiation. At the time of application, but ideally before that, the developer is required to submit a full EAF as well as a written public outreach plan. None of these requirements have been fulfilled to this date. Importantly, the current discrepancies between the city’s review process and process requirements constituted in SEQRA directly lead to delays in compliance with DEC CP 29 regarding outreach obligations and the submission a full EAF. Additionally concerning is in this context a statement by the developer’s representative that he would merely provide the Planning Commission with a standard EAF instead of the EAF.

The Planning Commission should insist on the full EAF (as well as the initiation of SEQRA) prior to any recommendation, as a full EAF will become necessary once a SEQRA application is submitted (per DEC CP 29).

1.5 DISCREPANCIES WITH THE COMPREHENSIVE PLAN

Yet another potential — and potentially significant — process flaw relates to inconsistencies of the requested rezoning with the Comprehensive Plan (see Appendix 2).

Extensive analyses were submitted to the record regarding the inconsistencies of a change of zoning code to P (Planned Development) with the 2018 “Realize Troy” Comprehensive Plan. These inconsistencies were only partly addressed in the

current review process. The analyses clearly show a range of inconsistencies with the Comprehensive Plan. This constitutes potential for process flaws, should the rezoning be approved by the City Council — and must therefore be reflected in any recommendation by the Planning Commission.

New York’s zoning enabling statutes (General City Law §20(25), Town Law §263, Village Law §7-704) require “that zoning laws be adopted in accordance with a comprehensive plan” (NYS DOS 2015, p.1). Additionally, the zoning enabling acts continue to require that zoning be undertaken “in accord with a well considered plan” or “in accordance with a comprehensive plan”.

Additionally, a rezoning of a parcel of land “to a use category different from the surrounding area, usually to benefit a single owner or a single development interest”, constitutes illegal spot zoning (cp. NYS DOS 2015, p. 5). Explicitly, “size of the parcel is relevant, but not determinative. Illegal spot zoning occurs whenever ‘the change is other than part of a well-considered and comprehensive plan calculated to serve the general welfare of the community’” (Ibid.).

These provisions have at least three direct implications for the request for rezoning.

First, it can be argued that the rezoning benefits solely “a single development interest” as well “a single owner”, constituting **spot zoning**. While size is relevant, it is not determinative. Given that the rezoning is for the benefit of a single development interest of housing stock, the size of the land is less relevant.

This is especially the case, as significant concerns regarding negative economic, ecological, archaeological as well as development impacts have been raised and referred to — including concerns over housing demand as a limited resource and effects on the development of abandoned and neglected sites that are located within the Comprehensive Plan’s investment priorities areas.

Second, inconsistencies with the comprehensive plan would in this context also require a **Comprehensive Plan amendment**.

Third, any recommendation made by the Planning Commission needs to take these concerns into account. Given the

legal implications described above, a **recommendation must be made against a rezoning** unless concerns of spot zoning are eliminated and the comprehensive plan is amended.

1.8. ADDITIONAL IRREGULARITIES

Finally, we would like to draw attention to a number of additional, at times significant, irregularities & process flaws.

1.8.1. RESIDENCY REQUIREMENT TO SPEAK DURING PUBLIC FORUM AND ITS DISCRIMINATORY EFFECTS

Residency requirements to speak at public meetings imposed unfair restrictions. This was the case for public hearings held by the City Council Planning Committee (August 27, 2020) and by the City Council (September 10, 2020). While the residency requirement was not enforced at the August 27 hearing, it was enforced for the general meeting on September 10.

A NYS DOS Opinion (Appendix 3) was provided to the City Council and Council President Mantello ahead of the September 10, 2020, meeting. President Mantello responded by exempting one representative of the Friends of the Mahicantuck from the residency requirement. According to the opinion, applying different rules for participation to different segments of the public (including based on residency) is inconsistent with NYS Open Meetings law.

The residency requirement had in its consequence discriminatory effects. Indigenous leaders with ties to the land have significant stake and are directly affected by any decisions about the land at 1011 2nd Avenue. This is particularly striking in the context of a the history of forced removal from this land and the entire region. Indigenous leaders could not meet the residency requirement and were unfairly excluded from speaking, due to this rule. The City Council President was made aware of this effect.

1.8.2. PUBLICATION OF LOCATIONS OF ARCHEO-SENSITIVE AREAS

The developer as well as the City of Troy violated best practices regarding the disclosure of archeo-sensitive areas at 1011 2nd Avenue. It is the standard practice, also followed

by NYS SHPO, to not disclose the location of archeo-sensitive areas. The City of Troy disclosed the locations of these sites publicly by providing a map as part of the public agendas for November 19, 2020, as well as for December 29, 2020. The developer disclosed the same locations during his presentations at the workshop on November 19, 2020.

This jeopardized National Register eligible archeo-sensitive sites. It could also be a violation of law: Section 304 of the National Historic Preservation Act (NHPA) protects certain sensitive information about historic properties from disclosure to the public when such disclosure could result in, for example, a significant damage to the historic property.

1.8.3. LIMITING THE PUBLIC’S ABILITY TO PARTICIPATE IN DEMOCRATIC PROCESSES

Several instances occurred that are of concern in principles of democratic participation and open governance. NYS Open Meetings Law provides relatively large autonomy to communities regarding the conduct of public forums, their announcement, the publication of agendas, and their structure and content.

Yet, the purpose of law is not to provide best practice, but rather to ensure that *minimum* legal standards are met. This is also the case for the conduct of public forums and the shaping of public participation in decision-making processes. Government should not strive to meet minimum legal requirements when it comes to democratic processes, - such as the participation of the public in governance. **Rather, it should strive to adhere to the best practices possible.**

Several flaws undermined the public’s participation throughout a processes that started in May 2020, including:

- refusing to allow the public to finish their statements within reason (Hearing on December 29);
- refusing the public to read statements into the record that were previously submitted as written (Hearing on December 29)
- Excluding non-residence from speaking, including indigenous leaders (September 10)
- A priori restrictions and exclusions of specific topics that were within the scope of the agenda during a public forum, where public forum should be an opportunity for

- the public to raise its concerns freely
- Urging the public to not repeat itself, where the repetition of the same statement can itself be an important act and signify public consensus on a matter
- Instances where the ability of the public to prepare for public hearings was limited or prevented, including (in part significant) delays in responses to FOIL requests; the response to FOIL request after the date of scheduled public hearings; and limited or no response by public officials or members of the staff to sincere and important questions submitted in writing by representatives of advocacy groups.

1.7. CONCLUSIONS

This chapter outlined several significant issues with the current process that, some of which potentially amount to significant inconsistencies with the law, including SEQRA, NYS Open Meetings Law, New York’s zoning enabling statutes, and NHPA. Some of these issues include segmentation, spot zoning, inconsistencies with the 2018 “Realize Troy” Comprehensive Plan, delays in complying with DEC CP 29, and the disclosing of archeo-sensitive locations for a National Register eligible site.

Others are less explicitly in conflict with the law and instead represent a failure in fostering participation in democratic processes.

- We therefore recommend:**
- 1) the Planning Commission should recommend against the rezoning; at least as premature.
 - 2) The City Council should take the necessary steps to remedy inconsistencies with NYS Open Meetings law.
 - 3) The City Council and Mayor should take the necessary steps to ensure that participation in democratic processes do not only meet the requirements of the law, but follow the best standards available, as to encourage, welcome and foster public participation in democratic processes such as public forums.
 - 4) The Planning Commission should recommend to designate the Sacred Forest at 1011 2nd Avenue as Critical Environmental Area (CEA).

CHAPTER TWO

ARCHAEOLOGICAL SIGNIFICANCE

The archaeological, historical and cultural significance of the land located at 1011 2nd Avenue is well documented. Its significance constitutes eligibility for the National Register.

High density development zoning would increase foot traffic on the site, threatening the destruction of archeo-sensitive sites. Development would lead to an irrevocable loss of one of Troy’s most significant historical and archaeological locations with a history of over 5,000 years of human habitation and use.

The archaeological significance of the site, combined with the increased risk for disturbance through foot traffic associated with a change to high density zoning, should constitute enough ground for the Planning Commission to recommend against the rezoning. However, if a change in zoning code remains under consideration, no recommendation should be made until SEQRA review has completed. Similarly, SEQRA review should be initiated as soon as possible and without any further delay given the significance of the site.

2.1 ARCHAEOLOGICAL SIGNIFICANCE

A consistent academic consensus exists regarding the historical, archaeological and cultural significance of this site, particularly regarding the Mahican peoples, but also prehistoric communities that utilized this site as early as 1600-3000 B.C. (Brumbach, 1987).

Several archaeological studies have been conducted on this land, with one of the first significant studies dating back to the 1980ies (Brumbach, 1987; Lothorp et al, 2018). The existing reports, studies and academic publications all consistently conclude that the land in question is of high historical and archaeological significance, and that the found artifacts justify the registration of this land in the National Registry. This has also been confirmed in personal correspondence with a lead archaeologist involved in the recent 2020 survey. The report was not yet made available to the public.

According to these studies, the sites contain significant amounts of prehistoric and historic archaeological artifacts. The scientific consensus agrees that this site is of high historic, archaeological and cultural significance.

Amongst the artifacts are countless significant ones of members of the Mahican peoples, but also important finds

ranging back to prehistoric times. The site was used by the Mahican people as a quarry and tool making site. The site was also identified as the potential location of semi-permanent and potentially permanent settlements. Some of the studies also mention strong indications for burial sites (US EPA, 2002).

The EPA cultural resource survey associated with the 2002 Record of Decision relating the Hudson River remediation (Ibid.) also emphasizes the historical-cultural and archaeological significance of this site and notes the need for further study of this site for the future — which has not been independently conducted to this date. This report also states the high likelihood of yet to be recovered resources.

Finally, two reports associated with the site as well as a second in immediate proximity — both referred together as the Pleasantdale Quarry — explicitly identify the sites as historically and archaeologically critical and positively review the archaeological record associated with these sites as eligible for the National Register (Brumbach, 1993).

One of these reports, referenced and submitted to the record for the Troy City Council hearing on September 10, 20202 was authored by Hetty Jo Brumbach, Paula Zitzler, the Public Archeology Facility and Rensselaer Polytechnic Institute and discusses the “potential eligibility for nomination to the National Registry of Historic Places” (Brumbach, 1993, p 1).

HIGHLIGHTS

- The site at 1011 2nd Avenue is of high archaeological, historical and cultural significance.
- Studies found artifacts dating back to 1500-3000 B.C.E.
- Due to its archaeological-historical-cultural significance the site would qualify for CEA designation.
- Surrounding archaeological sites indicate a high likelihood for additional significant finds on this site.
- Considering the significance of the site, “In-Right” development would face SEQRA challenges
- Due to the significance of the site, SEQRA should be initiated without further delay
- Due to the significance of the site, the City of Troy should designate the site as CEA, and the Planning Commission should recommend to do so.

On page 81, the authors explicitly state that:
“Stage II survey recovered adequate data to determine that the prehistoric site ... appears to meet the criteria for eligibility to the National Register of Historic Places. [...] disturbance to the site has been minimal. Very little artifact collection has taken place and few of the residents are aware of the presence of the prehistoric material. Thus, unlike some quarry locations of the Hudson Valley, the site has not been depleted by collectors”

And continue:
“The site also has the potential for providing unique information pertaining to regional prehistory since it is one of the few professionally reported and investigated archaeological sites in Rensselaer County. Thus, the site is capable of yielding information important in prehistory.”

Based on these reports, the site’s unique importance becomes explicit and preservation critical.

It also makes clear that its development would lastingly destroy this site and rob the city and its people of a major aspect of its history. Similarly, a rezoning of the site would cause increased foot-traffic on the site, increasing disturbance risks to the archeo-sensitive locations.

2.2 SURROUNDING SITES¹

The proposed development in Lansingburgh/Speigletown at 1011 2nd Avenue is an area of high archaeological potential

considering it is near the confluence of two major river valleys, the Hudson and Mohawk. Lansingburgh has been long known to have been settled by Algonquian speaking people (Mohican) and various names for parts of the Burgh have been recorded by early settlers and historians.

This territory was recorded as early as 1614 as found on the Adriaen Block map of New Netherland and Cornelius Hendrickson map of 1616, two early Dutch traders of the Hudson Valley and who were responsible for the founding of nearby Albany.

Panhoosicklay north of Troy near the Piscawen Kill (Middleburgh St). Part of the name is retained in the area (Hoosick).

Potquassick was an early name for Lansingburgh and might mean “round stones.” One historian applied the name to a woodland east of the river and “near a small island commonly known as whale fishing island.” Whale Island was in the Hudson directly across from Herman Melville’s home, now the Lansingburgh Historical Society at 2 114thStreet. The name of a whale is from pootau, “he blows strongly.” The place name seems to be from petuhqui “it is round” and quassik, means “Stone.” Whale Island is now buried under the raised level of the Hudson River. Whale Island was inspiration for Melville’s writing.

Sheepschack was on the site of Lansingburgh according to a 19thcentury historian. It may be derived from seip, “a river.” Taescameasick is also placed on the site of Lansingburgh and

suggests a ford. Nachtenac was used to describe Waterford and the mouth of the Mohawk River. It means “Excellent land.” Quahemiscos is Mohican for Van Schaick Island. Tiosaronda is Mohawk for the junction of the Mohawk and Hudson Rivers and means “mingling of two streams,” or “place where streams empty themselves.”

In addition, over the last century and a half, many Native sites have been found in the Burgh.

Just yards from this proposed development site is a well known flint mine, now on the property of the Hannaford shopping market. Flint, or Chert, is a sedimentary cryptocrystalline form of Quartz and is found in rocks such as limestone and chalks and was used extensively for tool making and hunting implements from the first arrivals of indigenous people in the area some 10,000 years ago.

The famous Flint Mine Hill in Coxsack for example is on the National Register of Historic Places. West Athens Hill, south of us, is a well-known Paleoindian work site that dates back to about 13,000 years ago. These deposits of flint were well known to indigenous peoples of the area and they often lived close by.

Over the last two centuries and particularly in the 19th and early 20th century, amateur archaeologists combed the banks of the Hudson River in the Capital District discovering Native sites of various ages. In 1897 a Native cemetery was uncovered near the intersection of River and Second Avenues; a neighboring camp site was also located. There was an early camping spot of three acres with signs of two occupations on nearby Green Island.

The famous Menomine’s Castle (village) was located on Peebles Island and can be seen on the Van Rensselaer Map of 1631. Chief Menomine was killed in the Mohican war with the Mohawks between 1624-1626.

So is Unawats Castle in South Troy. It is an Algonquin word and may be derived from oosoowneat, meaning “To swim” as a place favorable for bathing, or a customary way of crossing. In 1922 Arthur C. Parker reported the discovery of “chipped red slate” projectile points at the southeast end of Peebles island. A collector named Albert C. Hurd of Troy found several sites in Troy, the Burgh, and surrounding area and also found sites at the northeast end and on either side of the railroad tracks on the island.

On nearby Van Schaick Island, a burial of a Native woman and her child was uncovered on the golf course and in 1926 Homer Folger of the Burgh, a carpenter at the Matton Shipyard, discovered a Native burial and artifacts near the shipyard, north of the yard.

Folger in 1933 found another well preserved Indian burial and in April 1938 he found two burials that had been exposed by the high water of the river at the north tip of Van Schaick Island. The bodies were buried in a fetal position and a projectile point was embedded in the skull of one of the burials.

Indian burials were found during WW II when a new frame building was constructed at Matton. North of Peebles Island other Native burials have been found. In 1981 Native bones were uncovered while a sewer connector was being dug at 43 Hudson River Road, about a mile north of Broad Street in Waterford. North of Peebles Island just across the Mohawk River Channel three burials were uncovered in 1995 in Waterford all in fetal position. There were radiocarbon dates to ca. 995 AD. A third burial was dated 1435 AD.

Many other artifacts were found on the Matton Shipyard over the years north of the yards including eight Owasco Indian Burials with large pit features with fragments of Late Woodland Iroquois pots.

Menomine’s village moved around and some believe it once was located on the east bank of the Hudson not far from this proposed development site near a stream. Also, on a 1639 map it shows this possible village on the north side of the Mohawk below the Cohoes Falls and is labeled Vastichuyt-meaning stronghold. In 1640 a Dutch visitor of the falls recorded there “are many Indians here, whom they call Maquas[Mohawks].” The Mohawks had driven the Mohicans from the land earlier.

A village site north of the Waterford Bridge along the Hudson was recorded in 1920. The site was extensive and yielded an abundance of stone artifacts. This would have been directly across from the development site and it is highly likely that a settlement was here on the east side of the river and close to the flint mine.

When the Freihofer’s Bakery was being built, several Native skeletons were recovered from it.

At the foot of Glen Avenue in the “Batestown” section of the Burgh, workmen grading the Laureate Athletic grounds in 1890 found two well preserved Native skulls about four feet from the surface. There was more as published in the Troy Daily Times:

An Indian Burial-Ground—Workmen Make an Interesting Discovery.
The workmen grading the Laureate athletic grounds, at the foot of Glen avenue, were surprised yesterday at the discovery of human bones. Two well-preserved skulls were exhumed, about four feet below the surface, on the bank of the river. The men were digging up the loam which is being placed on the baseball diamond. Other bones were uncovered, and this morning another skull was found. The lower jaw was in place and most of the teeth were found. The contractor said this morning that the bones of about a dozen persons had been found. From the location it is believed that a burial-place of the old Mohawk Indians was uncovered. Twenty years ago, when the Waters boat-factory was built several feet north, the bones of several persons were found, and with them arrowheads and other Indian relics were discovered.

Troy Daily Times. June 3, 1890: 3 col 6.

As late as 2012, artifacts attributed to Mohican occupation were found in the South Troy industrial park on the east bank.

As you can see prehistoric occupation of the Troy-Lansingburgh area is well documented and considering that many sites have been found near the proposed development, it is imperative that a well-funded archaeological study must be conducted before any decision is made. I feel quite confident that there might be evidence of Native occupation on the proposed development site.

Footnotes:

¹ Author of this Section 2.2: Dr. Don Rittner, Professor of Archaeology

2.3 CONCLUSIONS

The archaeological significance of the site is well documented and acknowledged by the developer. Based on the presented evidence, this site **qualifies for the designation as Critical Environmental Area (CEA)**, fulfilling criteria (iii) of CRR-NY 617.14(g).

The archaeological significance is uncontested, underscoring the importance of commencing the SEQRA processes as soon as possible.

Subsequently, the Planning Commission should refrain from any positive recommendation for change in zoning code without having the best information possible at its disposal. A complete SEQRA review is an elementary part of this information gathering.

A change in zoning code to P would allow for significant increase in density, therefore increase foot-traffic on the site. This constitutes a significant environmental impact on this archeo-sensitive site and therefore would require a “pos dec” (positive declaration) as part of the SEQRA processes. This is also the case, if SEQRA is only conducted for the rezoning itself as independent from the development (which would constitute “segmentation” anyways).

Finally, an “alternative site proposal”, which foresees the construction of approx. 38 single family houses on the site, is 1) not subject of consideration, would require 2) the submission of a full EAF according to DEC CP 29, and 3) would require its own SEQRA review.

The alternative site proposal should therefore not determine the outcome of the commission’s considerations. However, even if it were considered, mitigation standards of archeo-sensitive sites require the documentation and mitigation of impact regardless of project, leading to the conclusion that the permitting 38 single family houses would face serious challenges within its own SEQRA process.

Given these issues, and in particular the archaeological significance and adverse impacts of a high density development on the site, **the Planning Commission should recommend against the requested change in zoning code.**

CHAPTER THREE

ECOLOGICAL SIGNIFICANCE

The ecology of the forested land at 1011 2nd Avenue, commonly referred to as “Sacred Forest”, is of high significance. Two consecutive ecological surveys were conducted on the site by Dr. David Hunt on December 20, 2020 and January 14, 2021. The detailed reports are provided in Appendix 1 and are summarized in this chapter.

These preliminary surveys already identified several **county-rare** and **potentially one state-rare species** and found significant indicators for the presence of protected species.

Due to these findings, we recommend that no action is taken on the land until sufficient ecological study and documentation during the grow season (May-September) was completed.

Given the high probability of adverse impacts, and given that in-right development would be subject to its own SEQRA review per DEC CP 29, **the Planning Commission should recommend against the rezoning due the ecological significance of the site.**

3.1 SUMMARY OF KEY FINDINGS

The forested land contains two significant ecological features:

- **“Pleasantdale Bluffs”:** A county-important rocky summit/slope ecosystem complex that contains knolls and cliffs along the Hudson River spanning the Troy/Schaghticoke municipal boundary with associated county-exemplary occurrences of Pitch-Pinke-Oak-Heath Rocky Summit plus Shale Cliff & Talus Community, as well as 24 known regionally rare plants.
- **“Hudson River Schaghticoke”:** A county-important riparian ecosystem complex containing the Hudson River, shoreline communities, and an associated flood plain, stretching from the Washington County line downstream to the Federal Dam in Troy with associated county-exemplary occurrences of Unconfined River plus Riverside Sand/Gravel Bar, as well as many regionally-rare plants.

Recent surveys of the parcel at 1011 2nd Avenue on December 20, 2020, and January 14, 2021, confirmed the presence of multiple features of both regionally important sites (“Pleasantdale Bluffs” and “Hudson River Schaghticoke”) including multiple characteristic natural communities and county-rare plants.

Because herbaceous and graminoid plants are often not detectable under current survey conditions, Dr. Hunt strongly recommends the parcel be studied by a qualified ecologist during the growing season (May to September) to better evaluate the suspected/potential presence of several additional regionally-rare species including

- The state-rare moth inland barrens buckmoth, known to feed on scrub oak (identified during both surveys in December 2020 and January 2021)
- The state-rare plants pleated-leaved knotweed plus bristly rose, both known just to the north in Schaghticoke.

Any decision about potential land use changes should consider the regional importance and rarity of multiple ecological features here (especially the Shale Cliff and Talus Community, riverside habitat, and rare plant species like scrub oak).

If any structures are to be built on the parcel, Dr. Hunt strongly recommends that they are placed as close as possible to Second Avenue, farthest away from the ecologically important features of the site, and that any impacts to the high knolls, steep W-facing slopes bordering the Hudson River, and the river shoreline are minimized.

HIGHLIGHTS

- Several county-rare species and likely one state-rare species were documented in recent surveys.
- Additional ecological surveys during the growth season (May - September) are needed.
- Due to its ecological significance the site would qualify for CEA designation.
- The ecological sensitivity and significance of the site warrants a recommendation against rezoning.

Ecological Communities (Appendix 1 - Map 1, Tables 1-2).

Three natural communities observed onsite that have county to state importance (Shale Cliff & Talus Community, Riverside Sand/Gravel Bar, and Pitch Pine-Oak-Heath Rocky Summit).

The Riverside Sand/Gravel Bar probably meets the criteria for “state significance”, although not yet documented in the databases of NY Natural Heritage Program (of NYS DEC). All 3 community types are “county rare” and the cliff community is also “state rare”. The example of the latter community onsite comes close to meeting criteria for “state significance”.

Although the patches of Pitch Pine-Oak-Heath Rocky Summit onsite are very small and narrow, especially compared to

those to the north within the Pleasantdale Bluffs complex, sufficient observations have now been made to map this community on the 1011 2nd Avenue parcel.

Rare Species (Appendix 1 - Map 2, Table 3).

Several rare species (table 3) for the larger Pleasantdale Bluffs complex were identified. The rare species population map for the parcel best reveals the most ecologically-sensitive part of the site (map 2), from a practical perspective.

Dr. Hunt still has several specimens of potentially rare mosses to evaluate, relying on a close colleague to expedite any identifications. He expects 1 to 5 county rare species among the collections, possibly 1 state rare species.

The following are species were successfully identified on the site in non-ideal survey conditions

State Rare		
Pleurocera Acuta (Pa)	Sharp Hornsnail	About 100, confirmed Jan '21
County Active List		
Galium pilosum	Hairy Bedstraw	40 individuals
Solidago squarrosa	Stout Goldenrod	5 individual, present
Sabulina Michauxii (Sm)	Rock Sandwort	30 individuals
Selaginella Rupestris (Sr)	Rock Spikemoss	3 individual
Solidago Squarrosa (Ss)	Stout Goldenrod	About 200 individuals
County Watch List		
Galium Boreale (Gb)	Northern Bedstraw	20 individuals confirmed
Drymocallis Arguta (Da)	Tall Cinquefoil	About 10 individuals
Arabisopsis lyrata (Al)	Lyre-Leaf Cress	About 50 individuals
Lechea Intermedia (Li)	Large-Podded Pinweed	5 individuals
Quercus Ilcifolia (Qi)	Scrub Oak	30+ individuals
Woodsia Ilvensis (Wi)	Rusty Woodsia	50+ individuals

Important Animal Habitats (Appendix 1 - Table 4).

Animal habitats are more flexibly defined than other features and harder to determine. Key observations often depend on specific times of the year or day (e.g., nocturnal) and specific microhabitats (e.g., the bottom substrate of the Hudson River).

Confirmation of “important habitat” is also complicated by the need for a minimal number of different species and number of individuals, which can be seasonally and annually highly variable. As Table 4 shows, to date the most certain important habitat is a “bald eagle feeding territory”, backed up not just by the one local report/observation but probably also by mapping of the entire habitat by the NY Natural Heritage Program.

Similarly, although no onsite observations of odonates (dragonflies and damselflies) have been made, mapping of the

entire nearby Hudson River habitat by the NY Natural Heritage Program of 3 state-rare odonates suggests the presence of an “odonate concentration area” in the river along the parcel.

Based on observations of abundant spent shells, Dr. Hunt suspects a “riverine mollusk concentration area” in the river next to the site, however, confirmation would need to involve shallow underwater observations, best made between May and September.

Although the beaver lodge was mapped and it could be a component of an “aquatic mammal concentration area”, observations of other species would be needed for this designation. Many pieces of information needed for confirmation of important animal habitat require patience and the presence of someone onsite for extended periods of time or the perfect time for observations.

The following important animal habitats have been confirmed or are potential on or near this site

Animal Group	Habitat Type	Certainty
Bald Eagle	Feeding Territory	90%; state mapped important habitat
Odonates	Concentration Area	80%;
Riverine Mollusks	Concentration Area	70%; abundant spent shells from 2 taxa

Additionally, the presence of a beaver lodge on the site, abundant cut trees and a swimming individual could constitute a aquatic mammal concentration area (pending detailed surveys).

3.1 CONCLUSIONS

The ecological significance of the site is documented in surveys provided in Appendix 1. These preliminary surveys already identified a significant presence of **several county-rare** and one potentially **state-rare species**.

The findings establish that this site qualifies for the **designation as a Critical Environmental Area (CEA)** by fulfilling CRR-NY 617.14(g) criteria (iv) and therefore **the Planning Commission should recommend such designation**.

Given these findings, the surveying ecologist recommends that no action is taken on the land until sufficient additional surveys are completed during the grow season (May-September) and include adequate survey of wildlife (including nocturnal species).

Given these issues, in particular the presence of sensitive ecologies and the potential presence of protected species, adverse impacts of a high density development on the site are clear, and **the Planning Commission should recommend against the requested change in zoning code**.



CHAPTER FOUR

ECOSYSTEM SERVICES AND CLIMATE CHANGE

Besides the intrinsic value of intact ecosystems as a public good, the ecology at 1011 2nd Avenue also provides critical ecosystem services that enhance the public benefit and should make its maintenance a high-priority objective for the City of Troy.

This section provides a brief overview of essential ecosystem services provided by the “Sacred Forest” at 1011 2nd Avenue (4.2) and discusses (4.3) the most critical environmental impacts associated with the loss of the natural state of this site. In section 4.4., critical aspects of this land’s contribution to protections against climate change and to community resilience are elaborated, before providing conclusions in section 4.5.

4.1 ECOSYSTEM SERVICES

The urban landscape exacerbates many environmental challenges, such as “stormwater runoff and flood risk, chemical and particulate pollution of urban air, soil and water, the urban heat island, and summer heat waves” (Livesley, MCPerson, Calfapietra, 2016). It is well documented that urban forests play an important role in mitigating these effects and thereby provide important ecosystem services.

Ecosystem services can be defined as the benefits that people derive from nature. The Millennium Ecosystem Assessment (MEA, 2005) and the UK National Ecosystem Assessment (UK NEA, 2011) categorize these as:

- provisioning services (providing benefits such as food and timber);
- regulating services (providing benefits such as carbon sequestration and flood protection);
- cultural services (providing benefits such as public amenity and opportunities for recreation),
- supporting services (providing benefits such as soil formation and biodiversity/habitats for wildlife).

Due to the forested character, natural state, and geographic location along the Hudson River and at the most northern, upstream part of the City of Troy, this land provides

significant ecosystem services to the benefit of the entire City, downstream communities, but in particular the residence of the local community of a DEC designated “Potential Environmental Justice Area” (PEJA).

This means that the loss of this forest would constitute significant adverse impacts that would disproportionately impact the residents of this PEJA.

The forest at 1011 2nd Avenue must be classified as “urban woodland” due to its size (Forestry Commission, 2011), making this site unique as they “tend to be able to provide provisioning and regulating services to a greater degree than sparsely planted areas” (Davies et al, 2017).

Davies et al (2017) provide a comprehensive review of ecosystem services delivered by urban forests in general, detailed in the table below. Woodland type urban forested areas, such as the forest at 1011 2nd Avenue provide a significant amount of ecosystem services, and include²:

REGULATING SERVICES: Carbon sequestration, temperature regulation, stormwater regulation, air purification, and noise mitigation.

CULTURAL SERVICES: Health, nature and landscape connections, social development and connections, education and learning, cultural significance.

HIGHLIGHTS

- The forested land at 1011 2nd Avenue provides a range of critical ecosystem services.
- These ecosystem services are particularly critical given the “Potential Environmental Justice Area”
- Several ecosystem services are critical to public health, establishing the harm to public health associated with development and rezoning
- Developing the land would negatively impact the city’s resilience to climate and environmental risks.

Due to the location of the forest at 1011 2nd Avenue, the provision of regulating services must be deemed as significantly higher than average urban woodlands. The location along the Hudson River combined with its exclusive status as waterfront forest within the City of Troy increase the value of stormwater regulation and flood protection services provided by the forest.

services, including the provision of clean air, noise mitigation, and the mental and physical health benefits associated with the access to natural green spaces and woodlands in particular. For data on detailed aspects of individual ecosystem services, see Davies et al. (2017).

Footnotes:

Its location in an Environmental Justice Area further increases the significance of provided regulating and cultural

² Additional services can be generated by proper cultivation, particularly food provision.

Table 2 Matrix of the relationship between ecosystem services and urban forest components.

Ecosystem service		Urban forest components			
		Single tree	Line of trees	Tree cluster	Woodland
Provisioning	Food provision				
	Fuel provision (woodfuel)				
	Wood provision				
Regulating	Carbon sequestration				
	Temperature regulation				
	Stormwater regulation				
	Air purification				
	Noise mitigation				
Cultural	Health				
	Nature and landscape connections				
	Social development and connections				
	Education and learning				
	Economy				
	Cultural significance				
Diservice	Fruit and leaf fall				
	Animal excrement				
	Blocking of light, heat or views				
	Decrease in air quality				
	Allergenicity				
	Spread of pests and diseases				
	Spread of invasive species				
	Damage to infrastructure				
	Creation of fear				
	Tree and branch fall (especially during storms)				

Commonly delivered Sometimes delivered Rarely delivered

4.2 ECOSYSTEM SERVICES AND PUBLIC HEALTH

The forested land at 1011 2nd Avenue provides critical ecosystem services that are beneficial to public health. Similarly, a high density development of this undeveloped land and forest would result in potentially significant adverse public health impacts.

Forested areas and waterfronts in natural state provide a wide range of critical ecosystem services that directly and indirectly contribute positively to public health. These contributions are well-known and scientifically established and will be only summarized in this section. Instead, this section focused on site specific aspects; especially in context of the site's location in a DEC designated Potential Environmental Justice Area (PEJA).

Increasingly, planners and local governments recognize the important value of natural or “green infrastructure” spaces, which comprises an “interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water and provides a wide array of benefits to people and wildlife” (Benedict and McMahon, 2006). Today, it is well established that urban forests mitigate the impacts of the urban landscape while providing multiple benefits for environmental quality and community wellbeing. The importance of forested areas for physical and mental health, especially in urban areas, has become further explicit in context of the COVID-19 pandemic — particularly in Environmental Justice Areas.

4.2.1. FORESTED AREAS AND PUBLIC HEALTH

According to Boyd (2017), forested areas provide many important benefits for “human physical health [...] including provision of clean drinking water, fostering increased physical activity, promoting faster healing in hospitals, reduction of heat-related mortality, reduced incidence of cardiovascular-related mortality, improved air quality and related reductions in respiratory-related mortality, reduced incidence of childhood asthma, and improved birth outcomes” (cp. also Benedict and McMahon, 2006; Cotrone, 2015; Akabri, Pomerantz and Taha, 2001; Beattie, Kollin and Moll, 2000; Nowak, 2002; Lovasi et al., 2008; Wolf, 2008; Mitchell and Popham, 2008; Donovan et al., 2013).

Trees also help prevent asthma, “either by encouraging outdoor play or through an effect on local air quality” (Lovasi et al. 2008).

Importantly, clean water and drinking water quality are perhaps one of the most significant benefits of natural open spaces, especially forested areas, as pollutants that are carried by rainwater into surface waters such as streams, rivers and lakes are absorbed by forested areas. The Hudson River is an important drinking water source for many communities downstream. Additionally, the Hudson River is an important fishing source for the communities in Troy. The forested land at 1011 2nd Avenue provides critical water filtration services that ensure that pollutants do not reach the sensitive ecology of the river.

4.2.2. FORESTED AREAS AND MENTAL HEALTH

Trees and forested areas have been also linked to important mental health benefits that become particularly important during the current pandemic and associated mental health impacts, particularly in PEJAs. This includes reduced stress and mental fatigue, reduced aggression, and enhanced mental, emotional and cognitive development (cp. e.g. Benedict and McMahon, 2006; Wolch, Byrne and Newell, 2014; Kuo and Sullivan, 2001).

Van den Berg et al. (2010) show that “the relationships of stressful life events with number of health complaints and perceived general health were significantly moderated by the amount of green space in 3-km radius”. This would highlight an important role for trees and other natural features as stress buffers.

This becomes particularly important during the current pandemic, where limited social interactions, increased unemployment and economic concerns, and other stressors lead to an accelerating mental and physical health crisis. These impacts are disproportionately felt by communities in Environmental Justice Areas.

The forest at 1011 2nd Avenue is therefore not only an important community resource, but an investment in the community's physical and mental health; critical ecosystem services which would become costly losses if destroyed.

6.2.3. FORESTED AREAS & ENVIRONMENTAL JUSTICE

The forest at 1011 2nd Avenue is located in a DEC designated Environmental Justice Area, and therefore provides critical

ecosystem services in an area that has historically worse access to green spaces and other green infrastructures that are critical to physical and mental health. This means that the destruction of this forested area will further exacerbate critical injustices.

It is well established that significant gaps exist in the spatial distribution of the urban forests and waterfronts across socioeconomic variables; including income, race and ethnicity, housing tenure, and/or population density.

This is also the case for Troy, NY and this neighborhood in particular. Located in an Potential Environmental Justice Area, the forest is a well known community resource used by local BIPOC youth and community members of all ages as an easily-accessible natural retreat from the pressures of urban life, particularly during the pandemic. This means that the loss of provided ecosystem service benefits for public health would disproportionately impact members of this PEJA community.

4.2 CLIMATE CHANGE AND RESILIENCE

Natural, forested spaces are a critical asset to the city's environmental and climate resilience. This area, upstream of the entire city, significantly protects the city from flooding directly (as a buffer flood zone for flooding) and indirectly by preventing runoff and maintaining the integrity of the river bank. The development of the site in the proposed form would significantly interfere with the ability of this land to absorb runoff and protect the city from river pollution and flooding.

Studies well-establish that developments, such as the proposed, and the associated displacement of natural waterfront and channelization significantly increase river flood risks downstream. The direct effects of sedimentary flow and associated environmental degradation of the Hudson River additionally exacerbate the increase of flood risks downstream at other areas across the City of Troy and other communities along the Hudson River.

This is also acknowledged in the 2018 “Realize Troy” Comprehensive Plan, which states:

“The majority of the Hudson River shoreline south of the Collar City Bridge has been channelized, which has interrupted or removed natural ecosystems. Due to this activity, sediment from the Hudson River is no longer deposited on the banks, and limited habitat is available for fish and wildlife species” (p. 16)

The New York State Department of Environmental Conservation (NYSDEC), estimates that by 2080 the City of Troy could face over 3 feet of sea-level rise on the tidal Hudson River due to global climate change.

Rainfall events are also expected to become less predictable, more extreme, and occur in the form of heavy downpours or extended droughts. The elevation of the 100-year floodplain and the city's history of extreme flooding suggest that the threat of damage to and loss of property is heightened due to anticipated climate change.

4.2.1. STORMWATER AND FLOODING

Natural waterfront green-spaces play a significant role in preventing stormwater runoff related flooding as well as the contamination through pollutions carried by stormwater runoff.

The forest at 1011 2nd Avenue plays a critical role for the City of Troy in preventing runoff contamination and as for the city's flood resiliency —particularly in context of growing flood risks associated with climate change.

The important positive effects of green-spaces on stormwater runoff, water filtration and flood protection have been discussed already in this report. An extended runoff simulation and analysis is forthcoming and will be provided at a later point.

4.3 NEGATIVE IMPACTS

The rezoning and development (combined and individually) have therefore significant potential for negative environmental impacts, including on public health, and include potentially significant public service costs resulting from these negative impacts and the loss of ecosystem services.

There are several environmental impacts that constitute direct and indirect public harm as well as economic costs associated with the proposed rezoning of Parcel 70.64-1-1 as well as the proposed development of the site. These will also have significant consequences for costs due to lost ecosystem services, the negative impacts on the city’s climate and extreme weather resilience, and subsequently the city’s revenue (see box on the right).

Increases in impervious surfaces as a result of deforestation and high-density development have been linked to a number of negative impacts, including decreases in air and water quality and increases in the magnitude of urban heat islands, which have been linked to heat-related mortality and the production of noxious ground-level ozone.

These consequences and impacts stand in direct conflict with the 2018 Comprehensive Plan, undermining valuable efforts taken by the city, including its participation in the Climate Smart Communities Program. Additionally, the development does not adhere to critical provisions for waterfront protection and renaturalization established in existing code as well as in the additional zoning logics established in the comprehensive plan (which a change in zoning code must adhere to).

4.3.1. PUBLIC HEALTH

An individual’s health is determined by many factors including genetics, healthcare, socioeconomic circumstances, environmental exposures, and behavioral patterns.

Socioeconomic circumstances, environmental exposures, and behavioral patterns are classified as Social Determinants of Health (SDOH), or “non-medical factors that determine health outcomes.”³ Researchers in public health have determined that SDOH contribute more towards an individual or community’s health outcomes than traditional health factors like genetic predisposition or healthcare. With this information, Governor Cuomo issued Executive Order No. 190

This development and the associated change in zoning code will, amongst others, have the following adverse impacts due to ecosystem service loss and ecosystem impacts:

- High density zoning and traffic increase will lead to increased illness related to air pollution, noise pollution and water contamination, and increase risks of traffic accidents.
- Increased pavement and loss of natural runoff buffers will increase run-off pressures on the Hudson River, leading to adverse health impacts on downstream communities.
- Increase pressures on the already strained combined sewage infrastructures is linked to an increase in fines for combined sewage overflow and will lead to negative impacts on downstream communities.
- Further channelization of the Hudson, already leading to increased flood risks, will be further increased with this development — leading to increased flood hazards for downstream properties across the city. The location of this property in particular will severely increase flood risks for the entire city.
- Significant loss of forest and natural waterfront will increase other critical hazards, including urban heat, runoff pollution, air pollution and their severe impacts on public health.
- Effects will disproportionately impact communities living in a DEC PEJA.

in 2018, a Health Across All Policies (HAAP) initiative that calls for integrating health considerations into all policy and decision making across all sectors and all levels of government in New York State⁴.

4.3.2. TRAFFIC, EMISSIONS, ROAD SAFETY

A higher density zoning will inevitably increase traffic at the site. The developer, for example, proposes a 240 unit apartment. An average of 1-2 vehicles per apartment unit must be assumed, leading to an increase of vehicles using the 2nd Avenue road by 240-480 vehicles. This means that the rezoning to a higher density will inevitably lead to an significant increase in vehicle related emissions and an increased risk of traffic accidents on this two-lane and bend-ing section of the road.

4.3.3. SEWAGE OVERFLOW

The city’s sewage and water management infrastructure is

already at capacity. In the last few years, Troy was in violation of state reporting laws in association with massive sewage overflows⁵ leading to significant cost for the community. In fact, Troy is the region’s worst polluter regarding overflows.

The city itself acknowledged that “Unfortunately, sewer overflow events are fairly routine for shoreline communities like Troy.”⁶

It is in this context that the proposed development and its impacts on the loss of this land will significantly escalate this already urgent emergency. The location of the site at the very north of the city, combined with its size and its impact on the city’s sewer system will lead to significant environmental and monetary costs for the city and all its residents.

4.3.4. WATER QUALITY

Natural, forested spaces are a critical asset to the city’s environmental and climate resilience⁷. This area, upstream of the entire city, significantly protects the city from flooding directly (as a buffer flood zone for flooding) and indirectly by preventing runoff and maintaining the integrity of the river bank. The development of the site in the proposed form would significantly interfere with the ability of this land to absorb runoff and protect the city from river pollution and flooding.

The property is directly adjacent to the Hudson. This means development impacts on this land will significantly affect the flood resilience of Troy, particularly due to its location upstream of the entire city (last property before the city line); The undeveloped higher elevation provides additional pro-tection against runoff and to the integrity of the areas of the land that comprise a flood zone. Studies show the importance of such natural assets in runoff protection.⁸

Development, particularly high-density development, will significantly increase runoff pollution⁹ through the loss of water absorbing forest and forest soils and the use of impervious material as well as the associated increased traffic and pollution. This only constitutes¹⁰ an increased threat of environmental harm on surrounding communities, downstream communities and the Hudson river itself.

4.3.5. URBAN HEAT ISLAND AND HEAT MORTALITY

Forested areas serve as “natural air conditioning” for the surrounding communities in urban centers and provide a natural refuge and relief from oppressive summer heat; a

climate risk that is anticipated to significantly increase for the city of Troy and already constitutes a major public health threat today. Development, even if major parts of the forest would not be destroyed, would significantly impact the accessibility and functioning of this critical asset.¹¹

A recent article published in the New York Times (August 24, 2020) discusses the direct relationship between health, income and racial disparities in relationship to exposures to extreme heat in the urban context.

4.3.6. AIR QUALITY AND RELATED ILLNESS

Air Quality will be negatively impacted, both directly and indirectly. The increased traffic associated with the development will diametrically impact the air quality of this neighborhood. Additionally, the loss of tree and natural space will further exacerbate air quality loss.¹² This is directly linked to a range of illnesses.

Rensselaer County had the highest rate of asthma hospitalizations for all ages and for ages 0-17 years in the Capital Region. Troy/Lansingburgh had 2.5 times the asthma emergency department visit rate and 1.8 times the asthma hospitalization rate as New York State excluding NYC.

Additionally, asthma hospitalization rates per 10,000 residents in Rensselaer County were significantly higher for black (32.4) and Hispanic (33.3) residents when compared with white non-Hispanic (7.9) residents in Rensselaer County.¹³ Negative impacts to air pollution associated with the proposed change in zoning will exacerbate existing disproportionate impacts of poor air quality for PEJA community residents.

4.3.7. NOISE POLLUTION

Currently zoned as R1, the rezoning will significantly increase noise levels due to increased population density, increased traffic and the loss of green space as natural noise shield; this will significantly disrupt the character, but also public health of the otherwise characteristically quiet neighborhood.

4.3.9. FLOODING

Studies well-establish that developments, such as the pro-posed, and the associated displacement of natural waterfront and channelization significantly increase river flood risks downstream (cp. Chen, 2016). The direct effects of sedimentary flow and associated environmental degradation of the Hudson River additionally exacerbate the increase of

flood risks downstream at other areas across the City of Troy and other communities along the Hudson River.

This is also acknowledged in the comparative plan which states

“The majority of the Hudson River shoreline south of the Collar City Bridge has been channelized, which has interrupted or removed natural ecosystems. Due to this activity, sediment from the Hudson River is no longer deposited on the banks, and limited habitat is available for fish and wildlife species” (p. 16)

This risk is exacerbated when one considers the climate projections by the New York State Department of Environmental Conservation (NYSDEC). Rainfall events are also expected to become less predictable, more extreme, and occur in the form of heavy downpours or extended droughts. The elevation of the 100-year floodplain and the city’s history of extreme flooding suggest that the threat of damage to and loss of property is heightened due to anticipated climate change.

Flooding in particular would be gravely exacerbated by opening this parcel up to high-density development, as Liz Moran explained in a submission to the record for the public hearing on September 10, 2020, quoted in the following from the minutes:

“This project would threaten the City with more flooding. Natural buffers and forests are key for flood prevention, and this area of Troy has already suffered from significant flooding. As the climate continues to warm, more frequent severe storms will also impact the area. According the New York State Department of Environmental Conservation (DEC), 100-year storms are projected to become 20-50% more likely by the 2020s, and 70-190% by the 2050s. This translates to 15.3-16.8 feet flood heights along the Hudson River.

Additionally, climate change is leading to more frequent precipitation east of the Hudson River. By the 2050s, precipitation may increase 12% from baseline 1971-2000 levels. Additionally, as the climate continues to warm, the Hudson River will continue to rise, causing more flooding over time. High estimate projections for sea level rise indicate the Hudson River may rise by 27-30” by the 2050s.

To reduce the risk of severe flooding, DEC recommends that communities “use natural vegetated buffers to protect assets

from flood risk,” and “identify and conserve natural areas contributing to stormwater management.” Natural resources, like trees and other green spaces, absorb water from running off into waterways, and also absorb excess rain and flood waters.

The developer claims because this area is above the 100-year flood zone, it would not negatively impact flooding. This is false, because removing green-space means fewer natural resources to absorb excess rain and snow melt, causing more runoff to the Hudson River and surrounding area.”

4.4 CONCLUSIONS

This has important implications for the considerations of a current request for rezoning for 1011 2nd Avenue.

- **Ecosystem Services.** The forest at 1011 2nd Avenue provides critical ecosystem services to the local community, the entire City of Troy as well as downstream communities — with direct and indirect benefits for public health.
- **Disproportionate Harm for Community in Environmental Justice Area.** The forest is located in a DEC designated Environmental Justice Area. This means that the loss of ecosystem services would place unfair harm disproportionately on the communities in this area.
- **Rezoning and development are coupled.** The proposed rezoning is connected to a known development project. These development plans are well-known and statements by the developer during meetings on August 27, September 10, November 17 and December 29 all reaffirm that the rezoning is sought for the purpose of specific development plans. A consideration of the rezoning alone would be inconsistent with the intent of SEQRA and constitute “segmentation”. This is particularly problematic considering the loss of ecosystem services provided by the forest and the disproportionate harm inflicted on the community living in the PEJA.
- **Negative Impacts of Rezoning:** There are clear negative environmental impacts on public health associated with a change in zoning code to allow for high density development, as would be the case for a change in zoning.
 - Higher density would lead to increased traffic. A change in zoning code to allow for higher density would lead to an increase in traffic and associated public health impacts (noise, air pollution, runoff,



impacts on water quality, impacts on traffic safety). Under a density allowed with P, an increase of at least around 240 vehicles must be expected, but a much higher number of vehicles is more realistic given allowed density parameters in the zoning as well as vehicle owner statistics.

- Higher density would lead to increased noise pollution associated with the increase in population. Noise pollution and increased urbanization is well established for its link to psychological and physical health impacts.
- Higher density would lead to increased pressures on public infrastructure. Particularly a change in density on this parcel upstream of the entire city would lead to significant increases in pressures on

the aging combined-sewer infrastructure, which already is at capacity. A higher density rezoning therefore would lead to increased overflow pollution with direct public health impacts on local and downstream communities along the Hudson river.

- **Negative Impacts of Development.** These negative public health impacts would be exacerbated by the development proposed by Kevin Vandenburg. Impacts detailed above become particularly explicit with this development and the associated canopy loss, increased traffic, disturbance, runoff through pavement of parking lots and construction, noise and shading impacts, increased sewage use, increase air and water pollution and the loss of critical ecosystem services associated with the development.

Given these impacts, the following conclusions become necessary:

Development and rezoning are (individually and in combination) linked to have highly significant adverse impacts on the public health of the local community of this DEC designated “Potential Environmental Justice Area” as well as on the broader public of Troy. While a development of the site is permissible in R-1, the public health impacts associated with a high density zoning far exceed the impacts of development within the current zoning.

This alone should provide enough grounds for the Planning Commission to recommend against the rezoning.

This underscores the importance of **initiating a SEQRA at the earliest possible moment**, as is also recommended in the law itself. Furthermore, it underscores the importance for **avoiding segmentation** — that is: the Planning Commission should insist in its recommendation that the proper process as outlined in the law should be followed. A rezoning independent from the known development is not permissible, and the exacerbated risk for harm to public health makes this even more significant.

The request for rezoning of the site in question should therefore be **NOT APPROVED** by the City Council, and the Planning Commission should recommend **AGAINST A REZONING**.

Additionally, given these findings, the site **qualifies for the designation as a Critical Environmental Area (CEA)** by fulfilling CRR-NY 617.14(g) criteria (i) and therefore the Planning Commission should recommend such designation.

Footnotes:

³ https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1
⁴ https://www.health.ny.gov/prevention/prevention_agenda/health_across_all_policies/docs/roadmap_report.pdf
⁵ Times Union (July 7, 2017) “Massive Albany Troy Sewage Spills in Hudson” <https://www.timesunion.com/7dayarchive/article/Massive-Albany-Troy-sewage-spills-in-Hudson-11273421.php>
⁶ Statement of City of Troy: “Understanding Troy’s Combined Sewer Infrastructure System” July 10, 2017 <http://www.troyny.gov/understanding-troy-combined-sewer-infrastructure-system/>
⁷ USDA Urban Forests and Climate Change <https://www.fs.usda.gov/ccrc/topics/urban-forests-and-climate-change>
⁸ Conservation Tools: Working With Nature to Manage Stormwater <https://conservationtools.org/guides/166-working-with-nature-to-manage-stormwater>
⁹ DOS: Impacts of Urban Runoff https://www.des.nh.gov/organization/divisions/water/wmb/tmdl/documents/stormwater_chapt1.pdf
¹⁰ <https://pubs.er.usgs.gov/publication/wri014071>
¹¹ EPA: Reduce Urban Heat Island Effect <https://www.epa.gov/green-infrastructure/reduce-urban-heat-island-effect>
¹² Benefits of Urban Trees: (https://www.nature.org/content/dam/tnc/nature/en/documents/Public_Health_Benefits_Urban_Trees_FINAL.pdf)
¹³ http://www.hcdiny.org/content/sites/hcdi/2019_CHNA/2019_HCDI-Community-Health-Needs-Assessment.pdf



CHAPTER FIVE

NEIGHBORHOOD AND CULTURAL SIGNIFICANCE

The land at 1011 2nd Avenue contributes importantly to the current neighborhood character of Lansingburgh in beneficial ways and holds high cultural and social significance to diverse communities within Troy, the neighboring Town of Schaghticoke, as well as to indigenous communities across the state.

In terms of ecosystem services, this means that the land provides critical cultural services to the local community, the residence of the City of Troy as well as the Town of

Schaghticoke, as well as the different indigenous tribes and nations with historically grown cultural and spiritual ties to this land.

The value of these cultural services cannot be under-emphasized, especially considering its location within a PEJA.

The significant cultural value for a wide range of — often marginalized — communities should underscore the importance of a recommendation against the rezoning.

HIGHLIGHTS

- The forest is of high cultural relevance to the original custodians of this land.
- Indigenous history was systematically erased. Destroying this site would contribute to that loss.
- The land significantly contributes to the neighborhood character of the neighborhood.
- A change in zoning code would significantly alter the character of this neighborhood.

5.1 CULTURAL SIGNIFICANCE TO INDIGENOUS PEOPLES

This land is of critical significance to indigenous peoples, as it represents a direct connection to their historical homelands — a connection that today is still well alive and maintained. As such, the cultural significance far exceeds the already extensive archaeological importance of this land. It is tied to a history that was purposefully and violently erased through colonialism. Connecting past and present, it is as such tied

to indigenous identity. The destruction of this archaeological and cultural space would further perpetuate this erasure.

This land provides a lifeline, a direct connection to the ancestral homelands from which the indigenous people were forcibly removed. It’s destruction would constitute a repetition of past violence and crime.

Perhaps, consider the statement by Kanerahtiio Roger Jock, spoken at the public hearing on December 29th, 2020, and submitted in writing to the record, from where it is quoted:

My name is Kanerahtiio Roger Jock. I am Kanien’kehá:ka (Mohawk) Bear Clan from Akwesasne. My great-grandmother is from the Schoharie region of the Mohawk Valley. This is where my DNA comes from, and my ancestors have a long history of relations with the Mahican People that continues to this day.

I am also the project director of the Waterfall Unity Alliance based in West Fulton, NY -- where we are building a traditional longhouse as an initial point of return to our ancestral soils. The mission of the Waterfall Unity Alliance is to protect the Mohawk Watershed

and all Earth; and create solutions to the existential challenges of our time.

It’s no longer just the native people of this land who know that we need to respect the Earth, live in reciprocity, and stop destructive development in the name of so-called progress. Our economy should not be based on destroying the Earth. The native trees have a right to be here. Our grandchildren have the right to be able to come and visit this forest, sit by the river, gather medicines. This is a rare place of peace that is senseless to destroy.

Now that it is threatened, the people who continue to love and honor the land are here to say STOP! NO! NO MORE! No more development that destroys the last forests. No more paving over ancestral land. No more short-term gain for long-term destruction.

We join our voice to theirs and say no more to this old story that is leading us to extinction.

We need to walk together in a new way. We respect the history of the Mahicans on this land. The land is sacred. The river is sacred. The trees and the breathing life on the riverside are

sacred. It is time to protect what is sacred and protect what we love.

We need to stand together and make our old agreements new again. As long as the water flows and the grasses grow, we will respect each other and walk together under the Great Law of Peace, protecting the Earth and all creation.

5.2 CULTURAL SIGNIFICANCE TO THE LOCAL PUBLIC

This connection extends to the present local communities that live alongside, on, and with this forest. It is well known locally as a sanctuary amongst the urban landscape. It is an important access point to the river for fishing, provides shelter and renewal of energy, and is one of the rare access points to natural spaces for local BIPOC youth in this Environmental Justice Area.

As such, this land is integral to the fabric of social and cultural identity in the Lansingburgh neighborhood and beyond. Public testimony, documented in the zoom recordings as well as minutes, speaks to this importance repeatedly:

I have lived in Troy all my life. I have walked this area and shared this area with my son. We enjoy the ability to go down, enjoy nature and play at the river like any normal child would love to do. We have too many houses and not enough parks or nature. If you build more overpriced lofts you are proving your greed. This doesn't help our community. If you allow this you are not only destroying and removing trees and land. Your destroying and removing the people that already live here. — Andrea M.B.

5.3. CHANGE IN NEIGHBORHOOD CHARACTER

The impact of allowing high-density development at this site cannot be understated — and extends to the neighborhood character. This is a quiet neighborhood of single-family housing, and the forest at 1011 2nd Avenue importantly contributes to the character of this neighborhood as “in the city, but not quite in the city”: It provides a connection to nature and places the neighborhood in it.

Placing high density zoning squarely in the hart of this neighborhood therefore would irrevocably alter the character of the neighborhood — substantially increasing traffic through this neighborhood, changing the noise and view scape, and disruption the “sense” the residents ascribe to living in “the Burgh”, and particularly to this area of Lansingburgh.

It is for these reasons that a development of this land would irrevocably destroy the cultural significance of this land, and high density zoning would significantly alter the neighborhood character of this area. High density. The Planning Commission should therefore recommend against the change in zoning code from R-1 to P.

Additionally, the site qualifies for the designation as a Critical Environmental Area (CEA) by fulfilling CRR-NY 617.14(g) criteria (iii) and therefore the Planning Commission should recommend such designation.

CHAPTER SIX

ECONOMIC COSTS AND BENEFITS

The unique character of the site at 1011 2nd Avenue provides considerable direct and indirect economic benefits that would be potentially lost with rezoning and subsequent development of the site. Additionally, the rezoning and development itself would generate economic benefits — that however would be offset by additional direct and indirect incurred economic costs associated with rezoning and development.

Finally, there is also a lost opportunity cost to the city and the public, associated with benefits of the potential long-term protection and preservation of the site. This chapter explores the three dimensions in a general cost-benefit analysis (a detailed analysis of each dimension will be provided at a later time).

6.1 ECONOMIC BENEFITS OF THE CURRENT STATE OF THE SITE

The site provides several critical ecosystem services (cp. Chapters 3 and 4) to the communities. The economic benefit of these ecosystem services are difficult to quantify. However an approximation of the economic benefits provided by the ecosystem can be roughly approximated in combining anticipated cost calculations for lost services as a consequence of the site’s disruption and/or destruction combined with approximation of dollar values for provided services.

It is important to note that ecosystem services are not always easy to assign dollar values, nor should they be, as intrinsic values are lost to such calculations. However, it is useful to apply these economic valuing methods in this context, as even the most generalized undervaluation of ecosystem services still makes explicit the economic losses incurred by their destruction through, for example, development (cp. DEFRA, 2007).

This general analysis is qualitative in scope and does not provide monetary quantifications of the services provided. However, the qualitative analysis already shows significant economic benefits that warrant further analysis at a later point.

6.1.1. QUALITATIVE ECOSYST. SERVICE ANALYSIS

Of the common evaluation techniques, three critical values are used: direct use market value, indirect use value, and option value.

This section does not provide a complete ecosystem valuation. Rather it provides a generalized valuation, based on highly conservative estimates, for selected ecosystem services provided by this land. See table to the right for analysis.

6.1.2. QUALITATIVE ANALYSIS: BASELINE

Four options are chosen for the analysis: Do nothing would leave the site in the current zoning but would not develop it. Option 2 is the in-right development of the site through the construction of approx. 35 single family housing units. Option 3 is the change in zoning code and subsequent high-density development of the site.

In its current state, the site provides critical ecological services, but also suffers from a lack of conservation and stewardship activities that mitigate littering and other forms of pollution of the site, while also preventing the further support of for example additional recreational opportunities with positive health and public wellbeing outcomes.

Recreation: The site is currently used for recreational purposes by the local community and serves as important green-space, which has direct public health benefits. While recreational tourism is virtually nonexistent for this site, and no revenue is generated, recreational uses for the local communities have

HIGHLIGHTS

- Significant costs are associated with the loss of ecosystem services.
- Additional costs associated with increased public service expenses are expected.
- 240 apartment units on undeveloped land will increase public safety cost by approx. \$36,000 / year.
- They also will increase net-costs for the school district by approx. \$495,000 / year.

potentially significant beneficial outcomes, particularly for mental health.

Biodiversity: Currently, ecological surveys (chapter 3) show a high degree of biodiversity at the site. This includes several rare species as well as a generally healthy and flourishing habitat. The high biodiversity enhances quality of life and public health, but is also tied strongly to the recreational capacities of the land. As a healthy, diverse ecosystem, this parcel in particular provides also important ecosystem services far beyond its boundaries, e.g. through pollinators, water quality impacts and air quality impacts.

Visual Quality of the Landscape: The visual quality of natural lands is well-documented in the academic literature and its effects have been extensively studies. Natural features rank thereby particularly high, while development structures need to take surrounding land uses and visual consistency into account, as well as shading impacts and loss of visibility of natural features.

Carbon Sequestration: In average, a mature tree sequesters about 48 pounds CO₂ per year. A single street tree returns over \$90,000 of direct benefits (not including aesthetic, social and natural) in the lifetime of the tree, for a marginal planting

Qualitative Assessment of Ecosystem Service Impacts

	Do Nothing /Baseline	R-1 Development	Rezoning to P+Development	Conservation + Creation of Preservation
Recreation	+	--	--	++
Biodiversity	+	--	-	++
Visual Quality of the Landscape	+	-	-	++
Carbon Sequestration	+	-	--	++
Clean Air Air filtration through trees Traffic Exhaust	+ + +	- - -	-- -- --	++ ++ ++
Clean Water Runoff protection Combined Sewage Overflow	+ + +	- - -	-- -- --	++
Risks and Hazards High Temperatures Flooding	+ + +	- - -	-- -- --	++
Real Estate Benefits	+	- / --	--	++
Tax Benefits (direct)	0	+	?	+

+ Likely positive effect / - likely negative effect / 0 likely no effect/insignificant / ? uncertain effect



cost. An acre of trees would sequester about 1 metric ton of carbon per acre and year.

Clean Air: Forested areas play a critical role in providing clean air through their production of oxygen. At the same time, different degrees of development are net-carbon producers — often to significant amounts. This does not include the emissions associated with construction and development itself. A 240 unit apartment, for example, would increase traffic related emissions of greenhouse gases and noxious air pollutants by at least 240-480 additional vehicles — with significant public health costs.

Clean Water: Similarly, forests absorb runoff water and filter rain waters before releasing them again into their environment. This is particularly important in context of runoff pollution and associated fines and costs produced by a new development burdening the existing sewage infrastructure of the city.

Risks and Hazards: Forested waterfronts in particular play a significant role in mitigating flooding hazards for downstream communities. Channelization, as associated with developments of waterfront properties, additionally increase flood hazards and risks, as does increased runoff. The economic costs associated with these hazards are already significant and are likely to rise significantly with the development of this site.

Real Estate Costs and Benefits: The presence of forested areas and/or mature trees has moderate to strong impact on the resale value of homes listed for under \$150,000, and significantly strong influence on homes listed for over \$250,000. Additionally, a number of studies have shown that real estate agents and home buyers assign between 10-23% of the value of a residence of the trees on the property. At the same time, density changes adversely impact property and resale values in traditionally quiet neighborhoods. Tax Benefits: Tax benefits include a combination of revenue sources for a holistic assessment:

- direct tax revenue from the different options
- + effects on tax revenue from surrounding properties
- + negative impacts (costs) incurred from direct and indirect public service costs

6.1.3. QUALITATIVE ANALYSIS: RESULTS*
* The results here (Overall economic benefits/cost) assess only the economic costs/benefits in relation to provided ecosystem services. An overall interpretation of how the results relate to tax revenue associated with the options is provided in the description.

DO NOTHING
(Economic Cost/Benefit: [+])

This option would leave the land as-is. This option is the easiest to achieve and would maintain several beneficial ecosystem services with direct and indirect economic benefit to the city as well as provide additional economic benefits for other services. Recreation and tax benefits are the lowest of the benefits in this option, are however a net-positive when one considers public health benefits, as well as the tax revenue generated through the site. Additionally, positive effects must be noted on surrounding properties (valuation/appraisal as well as resale value).

Overall moderate economic benefits for the city

REZONING+DEVELOPMENT / HIGH DENSITY
(Economic Cost/Benefit: [- -])

This is the most costly option for the city, due to a combination of factors (see section 4.3.) This includes increased public services costs, the loss of ecosystem services (same as for in-right development) plus additional costs associated with significant increase in pollution and associated public health and cleanup/mitigation costs. Those include costs for combined sewage overflow, increased public health costs due to traffic and air pollution, and other effects that have direct consequences for the city revenue and overall budget.

Overall moderate-high economic costs for the city

IN RIGHT DEVELOPMENT / SINGLE FAM HOUSING
(Economic Cost/Benefit [-])

This option is unlikely, considering the economic cost of development (necessary blasting for construction on the shale formation; infrastructure creation, topography). This option has some low economic benefits for the city, as it would generate additional tax revenue for the newly created development.

It would result in a net-loss compared to the do-nothing-option due to incurred public service costs and lost ecosystem services. This analysis assumes a large-scale disturbance of the ecosystem through development. However, compared to the rezoning+development option, the costs are relatively low, as pollution effects remain limited.

Overall low economic costs for the city

CONSERVATION AND PRESERVATION
(Economic Cost/Benefit: + +)

This option sees the long-term preservation of the land through a trust and the additional creation of cultural-ed-ucational programming and the maintenance of paths for recreational purposes. This option would enhance the ecosystem services through stewardship and conservation measures as well as the recreational capacities through promotion and soft-green tourism options. The direct public benefits are expected to be high, associated with cultural and educational programming, while generating direct and indirect tax revenue through these economic activities. The costs for the city are marginal, as the procurement, preservation and long-term stewardship is planned to be achieved with private equity.

Overall moderate-high economic benefit for the city

6.2 COST/BENEFIT OF REZONING/DEVELOPMENT

There are several critical economic impacts that constitute direct and indirect cost to the tax base and the tax paying residents of the City of Troy, associated with the proposed rezoning of Parcel 70.64-1-1 and the proposed development of the site.

Based on the attached and here briefly reviewed studies, it is clear that the proposed development will negatively impact the tax revenue of the city of Troy.

Charles Mahron (2018) writes that:
“Despite the obfuscation of modern accounting practices, the math equation for a local government is fairly straightforward: a public infrastructure investment must generate enough private wealth to pay for the ongoing replacement and repair of that infrastructure or, if it is to be sustained, it must be subsidized by a more financially productive part of the system.”

The established rule of thumb is that a ratio of 40:1 (\$40 private wealth to \$1 public investment) is required for a development project to generate and maintain a positive tax revenue (Ibid.).

While developers often pay for the initial development and construction cost, the City of Troy will be responsible for critical maintenance and public service costs. This includes Increased road maintenance and traffic management costs Increased resource strain for the public school system with the influx of large amounts of new residents in short time Increased costs for other public services, including the fire department, garbage collection, public safety, etc.

As Mahron (2018) writes on the case of development costs, a municipality of similar size and structure:

Rapid growth “[...] provided the local government with the immediate revenues that come from new growth — permit fees, utility fees, property tax increases, sales tax — and, in exchange the city takes on the long term responsibility of servicing and maintaining all the new infrastructure. The money comes in handy in the present while the future obligation is, well ... a long time in the future.”

And concludes:

“This thinking is how you end up with two dollars of public infrastructure for every one dollar of private investment. This is how you spend yourself into bankruptcy”.

When the full extent of costs are taken into consideration, including maintenance, public infrastructure and public service costs, the proposed development will in fact negatively impact the tax revenue in the city.

Instead, leading economists and development experts recommend prioritizing development of existing infrastructure, property and sites, especially vacant sites in economically disadvantaged communities. This has the benefit of minimizing public investment needs and strengthening tax revenue in short- as well as long-term. (cp. Appendix 5: written testimony by Prof. John Gowdy).

This is also made explicit in the 2018 Troy Comprehensive Plan, which identifies the need to develop vacancies in Major Investment Areas (Comprehensive Plan Map 2 Investment Areas), whereas the parcel in question lies outside the Lansingburgh Investment Area as well as outside the slow development area and is clearly identified as R-1. Consider this quote from the Comprehensive Plan:

“Troy’s high vacancy rates are also contributing to neighborhood destabilization. There are approximately 23,100 housing units in Troy and approximately 2,100 of these units, or 9%, are vacant and unused. Prospective residents are deterred from purchasing homes in neighborhoods with high vacancy rates as they are perceived as areas with higher crime, and where continued disinvestment may occur. These conditions have resulted in a weak housing market and low housing values compared to the region.” (p.11)

And the plan establishes sites in direct proximity to the parcel for which the rezoning is requested as development focus areas in the spirit of avoiding associated revenue burdens associated with spot zoning developments such as the development proposed for this parcel (see Appendix 2).

The anticipated short-term economic revenue is anticipated to be outweighed by both, short- and long-term economic costs, based on the expert testimony by economist John

Gowdy attached in the appendix (Appendix 5). The anticipated short-term economic revenue associated with this development proposal is anticipated to be outweighed by both, short- and long-term economic costs.

What is more, studies explicitly and repeatedly show that because of market competition and resource constraint associated with a development of land routinely and structurally prevent the development of other, vacant but already developed sites (Ordway, 2018).

In the immediate proximity of the development site proposed by Kevin Vandenburg are several vacant properties, including several that have been identified in the Comprehensive Plan as development priority/focus areas.

6.2.1. COST OF PUBLIC SERVICE CALCULATION
Increased public spending for services outweighs the anticipated revenue.

Based on comparative data of similar developments in similar locations in Troy we offer an (generously calculated) anticipated tax revenue for the city around \$300,000.00

The anticipated tax revenue for the school district is assessed (similarly generously) with \$400.000,00.
(Based on approximated unit value calculations).

(A) Increase in Spending for Public Schools (TROY SCHOOL DISTRICT)

At the same time, in the state of New York, an average of annually \$22,366 are spent per pupil on the public education system¹⁴. In Troy this number is closer to \$28,000, but we will use the more conservative average.

A conservative estimate would be 40 new pupils entering the Troy School System — an estimate that is very conservative for 240 apartment units.

This leads to an increase in spending of \$894,640.

Increase Revenue approx. \$400,000
Increase Spending approx. \$894,640

NET-LOSS OF APPROX. \$494,640

(B) Increase in Costs For City of Troy On the Example of Public Safety

Estimates for cost increases for Public Safety Services are hard to estimate. One way to estimate this is the per capita spending for safety services.

According to the 2020 proposed Budget, a total of \$40,329,791 will be expended for safety services. This excludes overtime, extraordinary expenditures and other expenditures not listed in the general budget itemization.

The population of Troy lies at 49,826 for 2017.

This results in a per capita spending of (rounded) \$800. With 240 units, and an conservatively estimated 1.75 persons living in each unit, this leads to a increase in cost of:

240x800x1.75 = \$336,000.00

Tax Revenue (240 units).....approx. \$300,000
Cost Increase: safety services.....approx. \$336,000

NET-LOSS (Public Safety)\$36,000/year.

This does not incorporate other increased public service costs, such as road maintenance, etc.

6.2.2. LOSS IN PROPERTY VALUE, RESALE VALUE AND RENTAL INCREASES

Besides the cost associated with strains on the local infrastructure, this development will also lead to additional direct and indirect costs for the local residents and the overall neighborhood.

The development will lead to significant loss of property value and resale value due to the loss of green-space and waterfront, which also negatively impacts the city budget The tax savings of industrial development may measure a few hundred dollars a year per taxpayer, but the loss in property values measures in the thousands. Typically it takes decades of tax savings to make up for the loss in property value. Property value will decline with the loss of a significant green-space and undeveloped waterfront forest property

Rental increases in surrounding housing are expected to increase due to the amenities at the property, clearly designed for the use of renters at the property.

6.3 COST OF LOST OPPORTUNITY / HOUSING DEMAND

Housing demand is a limited resource. The most recent Comprehensive Housing Market Analysis by the US Department for Housing and Urban Development (US HUD) for Albany-Schenectady-Troy (forecast period: September 1 2018 - September 1 2021) explicitly states that housing demand is nearly at or already at capacity (US HUD 2019, p. 1):

The current rental housing market is slightly soft. The overall rental vacancy rate is estimated at 8.0 percent, up from 7.1 percent in April 2010. The market for apartments is balanced, with a vacancy rate of 4.7 percent during the second quarter of 2018, up from 2.4 percent a year earlier (Reis, Inc.). The average asking rent in August 2018 was \$1,187, a 7-percent increase from a year earlier. During the forecast period, demand is estimated for 1,975 new market-rate rental units (Table 1). The 1,600 units currently under construction will meet most of that demand.

Since that forecast, extensive numbers of new apartment units saw their construction in Troy, NY, further contributing to the satisfaction of limited housing demand. Whereas this demand can be anticipated to have slightly increased over the forecast period, this increase must be assumed to be mostly compensated by extensive new construction projects within Troy, NY over the same time.

This is particularly significant in context of a high number of vacant, abandoned and neglected sites across Troy that are explicitly designated as investment priority areas in the 2018 “Realize Troy” Comprehensive plan. There are priority development areas in the direct vicinity of this property. A vacant price chopper as well as several vacant locations across the local Lansingburgh neighborhood are identified as priority and development nodes in the comprehensive plan.

As the plan states (p.11):

“Troy’s high vacancy rates are also contributing to neighborhood destabilization. There are approximately 23,100 housing units in Troy and approximately 2,100 of these units, or 9%, are vacant and unused. Prospective residents are deterred from purchasing homes in neighborhoods with high vacancy rates as they are perceived as areas with higher crime, and where continued disinvestment may occur. These conditions have resulted in a weak housing market and low housing values compared to the region”.

A rezoning discourages the development of already developed vacant areas with existing infrastructure and public services in place. The development of this property, and the associated rezoning, stand in conflict with these development needs and undermine soft and smart growth and development.

Accordingly, the rezoning would stand in direct conflict with the provisions and priorities laid out in the Comprehensive Plan, the smart growth development principles established in the Comprehensive Plan, and the New York State Smart Growth Criteria.

In this context, development of a greenfield site — an undeveloped site — appears counter-productive and undermining smart growth and sustainable development priorities outlined in the same Comprehensive Plan. The existence of an old housing stock in need for development in combination with limited housing demand therefore constitutes an urgent need for strategic development, recognized in the Comprehensive Plan, as well. Developing the site at 1011 2nd Avenue would therefore undermine the development of these priority investment areas and potentially prevent development of neglected sites and old housing stock in need of development.

This is associated with direct and indirect costs of lost opportunity to the City of Troy. As detailed above, direct and indirect costs of public services arise from developing undeveloped urban green-spaces in particular. At the same time, undeveloped vacant properties decrease surrounding property values, deter prospective residents, and accelerate continued disinvestment of affected areas, according to Troy’s own Comprehensive Plan (p. 11).

Given limited housing demand, direct and indirect costs associated with the development of an undeveloped site, and the additional costs (direct and indirect) arising from lost opportunities to develop vacant site, the anticipated costs for the City of Troy are significant, considering the already shown high revenue loss in section 6.3.2. of this report.

A rezoning would therefore be harmful to the economic interests of the City of Troy and the Planning Commission should recommend against the rezoning.

Footnotes:

¹⁴ <https://www.governing.com/archive/state-education-spending-per-pupil-data.html>



CONCLUSIONS

CHAPTER ONE — PROCESS AND LEGAL CONSIDERATIONS

- Treating the rezoning as if it were an independent action under SEQRA constitutes “segmentation”
- According to SEQRA, review should start without delay and at the earliest possible time
- The site is located in an PEJA, requiring a full EAF for any action on the land. A written outreach plan is also required for actions within PEJAs per DEC CP 29.
- Rezoning to P (Planned Development) would be inconsistent with Troy’s Comprehensive Plan and therefore would require a Comprehensive Plan amendment.
- Residency requirement to speak at public forums were inconsistent with NYS Open Meetings Law
- Public disclosure of archeo-sensitive locations could be a violation of NHPA Section 304

CHAPTER TWO —ARCHAEOLOGICAL SIGNIFICANCE

- The site at 1011 2nd Avenue is of high archaeological, historical and cultural significance.
- Studies found artifacts dating back to 1500-3000 B.C.E.
- Due to its archaeological-historical-cultural significance the site would qualify for CEA designation.
- Surrounding archaeological sites indicate a high likelihood for additional significant finds on this site.
- Considering the significance of the site, “In-Right” development would face SEQRA challenges
- Due to the significance of the site, SEQRA should be initiated without further delay
- Due to the significance of the site, the City of Troy should designate the site as CEA, and the Planning Commission should recommend to do so.

CHAPTER THREE —ECOLOGICAL SIGNIFICANCE

- Several county-rare species and likely one state-rare species were documented in recent surveys.
- Additional ecological surveys during the growth season (May - September) are needed.
- Due to its ecological significance the site would qualify for CEA designation.
- The ecological sensitivity and significance of the site warrants a recommendation against rezoning.

CHAPTER FOUR — ECOSYSTEM SERVICES AND CLIMATE CHANGE

- The forested land at 1011 2nd Avenue provides a range of critical ecosystem services.
- These ecosystem services are particularly critical given the “Potential Environmental Justice Area”
- Several ecosystem services are critical to public health, establishing the harm to public health associated with development and rezoning
- Developing the land would negatively impact the city’s resilience to climate and environmental risks.

CHAPTER FIVE — NEIGHBORHOOD AND CULTURAL SIGNIFICANCE

- The forest is of high cultural relevance to the original custodians of this land.
- Indigenous history was systematically erased. Destroying this site would contribute to that loss.
- The land significantly contributes to the neighborhood character of the neighborhood.
- A change in zoning code would significantly alter the character of this neighborhood.

CHAPTER SIX — ECONOMIC COSTS/BENEFITS

- Significant costs are associated with the loss of ecosystem services.
- Additional costs associated with increased public service expenses are expected.
- 240 apartment units on undeveloped land will increase public safety cost by approx. \$36,000 / year,
- And will increase net-costs for the school district by approx. \$495,000 / year

RECOMMENDATIONS

1) **The Planning Commission must recommend against the change in zoning code.** At the very least it should recommend against the rezoning as premature until SEQRA is completed.

2) **The City Council must vote against the request for rezoning as premature** until the developer has submitted an EAF and SEQRA review has been completed. Within the EAF rezoning as well as zoning plan amendment must be listed as discretionary actions

3) **The Planning Commission should further recommend the designation of the site as Critical Environmental Area (CEA).** This would ensure that the high significance of this site is appropriately considered in the current and any further reviews of any actions on this property, as is the purpose of such designation. This report shows that the site at 1011 2nd Avenue does far exceed the requirement and significance criteria for such a designation, as detailed in 6 CRR-NY 617.14 (g) and warrants such a designation.

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Appendix 1

Ecological Survey December 2020

TO: Troy City Planning Board.
FROM: David Hunt, Ecological Intuition & Medicine
Rensselaer County Biodiversity Greenprint Project
RE: Golub Parcel. Proposed Apartment Complex Development.
Pleasantdale Bluffs, City of Troy.
DATE: December 22, 2020

Planning Board Members,

As part of my effort of over 20 years to map and provide information to landowners and conservation organizations about regionally-important ecological/biodiversity sites throughout Rensselaer County, I would like to bring to your attention information on two important sites connected to the 9.93-acre Golub parcel (Tax Parcel 70.64-1-1) in the City of Troy, on which an apartment complex is reportedly being proposed:

"Pleasantdale Bluffs"

a county-important rocky summit/slope ecosystem complex containing knolls and cliffs along the Hudson River spanning the Troy/Schaghticoke municipal boundary with associated county-exemplary occurrences of Pitch Pine-Oak-Heath Rocky Summit plus Shale Cliff & Talus Community, as well as 24 known regionally rare plants.

"Hudson River Schaghticoke"

a county-important riparian ecosystem complex containing the Hudson River, shoreline communities, and an associated floodplain, stretching from the Washington County line downstream to the Federal Dam in Troy with associated county-exemplary occurrences of Unconfined River plus Riverside Sand/Gravel Bar, as well as many known regionally-rare plants.

These sites were documented and mapped as part of my contributions to the 2017 Rensselaer County Conservation Plan, coordinated by the Rensselaer Land Trust, focusing on 10 ecological features ranging from relatively small scale (e.g., rare plant concentration areas) to relatively large scale (e.g., regionally-important aquatic networks, forest landscapes, and large-scale conservation sites). Maps have reportedly been accessible on-line since that time for all municipalities and citizens of the county to consult.

I provide an attached packet of summary information about these two sites and their biodiversity components with special focus on the Golub parcel, which explains the basic information available online. More detailed information is available upon request. Each site

represents multiple overlapping county-important ecological features, 6 at Pleasantdale Bluffs, 8 at Hudson River Schaghticoke. Because both these ecological sites are somewhat large, much of the prior information was based on field surveys and historical records off the Golub parcel. Both sites were mapped remotely from air photo plus associated datalayers on land cover, hydrology, topography, geology, and soils. A recent survey of the Golub parcel (December 20, 2020), conducted under 2 feet of snow in conjunction with a group of concerned local neighbors, confirmed the presence of multiple features of both regionally important sites including multiple characteristic natural communities and county-rare plants. Because herbaceous and graminoid plants are often not detectable under these conditions, I strongly recommend the parcel be studied by a qualified ecologist during the growing season (May to September) to better evaluate the suspected/potential presence of several additional regionally-rare species including 1) the state-rare moth inland barrens buckmoth, known to feed on scrub oak, which was just found on the parcel, and 2) the state-rare plants pleated-leaved knotweed plus bristly rose, both known just to the north in Schaghticoke.

Hopefully, any decision about potential land use changes of the Golub Parcel should consider the regional importance and rarity of multiple ecological features here (especially the Shale Cliff & Talus Community, riverside habitat, and rare plant species like scrub oak). Whether or not the parcel is further evaluated for rare plants and animals, if any structures are to be built on the parcel, I strongly recommend that they are placed as close as possible to Second Avenue, farthest away from the ecologically-important features of the site, and that any impacts to the high knolls, steep W-facing slopes bordering the Hudson River, and the river shoreline are minimized.

Sincerely in Biodiversity Conservation,

David Hunt. Ph.D. Ecologist. Grafton, NY.
Rensselaer County Biodiversity Greenprint Project
(Designing an Ark for the Native Species of Rensselaer County)

348 Jay Hakes Road; Cropseyville, NY 12052; (518) 279-4124

Site 1. **Pleasantdale Bluffs.** (See Maps 1-4).

A. County-important Restricted Ecosystem Complex. (Map 1)
Complex type:
Rocky summit/slope complex, circumneutral, bluff/gorge, Hudson River Valley regional variant, large river escarpment bluff type.
Size: 336 acres.
County Importance: Importance Tier 1 of 3 (most important).
Extent on Golub Parcel: 40% of tract (N half).
Contribution of Golub Parcel: 5% of Complex (S edge).
Characteristic Community Types:
include Pitch Pine-Oak-Heath Rocky Summit, Shale Cliff & Talus Community. (see Exemplary Natural Communities).
Associated Rare Species:
numerous county-rare plants (see Rare Plant Concentration Area).
Description:
substrate includes exposed bedrock. contains characteristic open rocky summit/slope community types with associated rare plant species. The known core of this complex, "Pleasantdale Bluffs" in a more strict sense, is represented by knolls/bluffs at the N end of a patch directly along the Hudson River just W of the W end of River Bend Road. More of the site is mapped along gorges to the NE, between Haughney and Brickyard Roads, mostly unexplored to date.

B. Constituent Exemplary Natural Communities. (Map 2)
Shale Cliff & Talus Community (SCTC4)
Regional Conservation Importance:
County Priority 3 of 4 (near-exemplary). likely "county significant" but not "state significant".
Size: 6.3 acres.
Location:
corrected 2020 from 2017 mapping to bluffs just W of W end of River Bend Road in Schaghticoke plus bluffs along SW edge of Golub tract.
Extent on Golub Parcel:
5% of tract (SW edge). presence confirmed during December 2020 field survey.
Contribution of Golub Parcel: 40% of community (S patch).
Description:
steep slope with exposed shale bedrock. open canopy habitat dominated by low shrubs, scattered herbs, graminoids, mosses, and lichens.

Site 1. **Pleasantdale Bluffs.** p. 2.

Pitch Pine-Oak-Heath Rocky Summit.
Regional Conservation Importance:
County Priority 2 of 4 (co-exemplary). likely "county significant" but not "state significant".
Size: 2.7 acres.
Location:
corrected 2020 from 2017 mapping to knoll just W of W end of River Bend Road in Schaghticoke.
Extent on Golub Parcel:
not mapped on tract, but both highest knoll and upper crest of cliff resemble this community type based on December 2020 field survey.

C. Rare Plant Concentration Area. (Map 3)
County Importance:
concentration priority 3 of 7 (highly concentrated). 28th most important rare plant site in county as of 2017; 5th town priority for Schaghticoke as of 2017.
Size:
29 acres. originally mapped at 129 acres but in incorrect location. corrected to patch of Pleasantdale Bluffs ecosystem complex bordering Hudson River.
Species Composition:
with 17 county rare species/1 state rare species (1 state watch list, 7 county active list, 10 county watch list) documented for 2017 county conservation plan; recently expanded to 24 county rare species/3 state rare species (1 state active list, 2 state watch list, 10 county active list, 14 county watch list). Information on individual species shown in Table 1. Several additional rare plant species are expected, associated with historical specimens at the NY State Museum labelled "Lansings Grove", reportedly the local name for this site, that have not yet been attached to this site.
Extent on Golub Parcel:
40% of tract (N half); as ecosystem complex. presence confirmed during December 2020 field survey.
Contribution of Golub Parcel: 15% of concentration area (S edge).
Location:
corrected 2020 from 2017 mapping to match corresponding patch of rocky summit/slope ecosystem complex along Hudson River.

Site 1. **Pleasantdale Bluffs**. p. 3.

D. Rare Animals.

No rare animals have yet been identified from Pleasantdale Bluffs, most of the field surveys being focused on natural community types and vascular plant species. The observed presence of several individuals of scrub oak on the rocky summit and cliff community types suggests the potential for the state-rare moth "inland barrens buckmoth", which is known to feed primarily on that shrub. Similarly, no surveys for Karner blue butterfly, a globally rare moth characteristic of pitch pine barrens, are known to date from the site.

E. County-Important Roadless Blocks

see Hudson River Northern Rensselaer County Block below, under Site 2 (Hudson River Schaghticoke).

F. County-Priority Conservation Site North Troy Hills & Bluffs. (Map 4)

Site type: Level-2 site (mostly moderate-scale local ecosystems).
 Description: large aggregate of rocky summit/slope complexes.
 County-Importance: Tier 2 of 4 site (moderate county priority).
 Size: 1168 acres.
 Ecosystem Complex Composition:
 includes complexes associated with Bald Mountain Brunswick, Oakwood Cemetery Troy, Pleasantdale Bluffs, and River Road Schaghticoke.
 Extent on Golub Parcel: 40% of parcel.
 Contribution of Golub Parcel: 2% of conservation site.

Site 2. **Hudson River Schaghticoke** (See Maps 5-8).

A. County-important Restricted Ecosystem Complex. (Map 1)

Complex type:
 Riparian complex. non-tidal, confined river, large river type (main channel) in calcareous flats.
 Size: 1191 acres.
 County Importance: Importance Tier 1 of 3 (most important).
 Extent on Golub Parcel:
 <1% of tract (borders entire W edge of tract, tract influences local quality of site).
 Contribution of Golub Parcel: <<1% of the complex (inland edge)
 Characteristic Community Types:
 include Unconfined River and Riverside Sand/Gravel Bar (see Exemplary Natural Communities).
 Associated Rare Species:
 several county-rare plants (see Rare Plants).
 Description:
 includes river, shoreline communities and associated floodplain.
 Location:
 Stretches along the entire non-tidal portion of the Hudson River from the Washington County line downstream to the Federal Dam in Troy. Only the Rensselaer County part of this complex has been mapped to date. The complete site extends N into Washington County and W into Saratoga County.

B. Constituent Exemplary Natural Communities. (Map 5)

Unconfined River
 Regional Conservation Importance:
 County Priority 2 of 4 (co-exemplary). likely "state significant".
 Size: 949 acres.
 Location:
 representing entire non-tidal portion of Hudson River from Washington County line downstream to Federal Dam in Troy; only the Rensselaer County part of this community has been mapped; it extends N into Washington County and W into Saratoga County.
 Extent on Golub Parcel:
 <<1% of tract (borders entire W edge of tract; tract influences local quality of large community example).
 Contribution of Golub Parcel: <<1% of community border.
 Description:
 wide, slow flowing, moderately deep river dominated by run and pool microhabitats, relatively confined within shale

Site 2. **Hudson River Schaghticoke.** p. 2.

stream terraces in a moderately wide valley.

Riverside Sand/Gravel Bar

A 37-acre county co-exemplary site for this community type has been mapped along the Hudson River 1.8 miles to the north of the Golub parcel in Schaghticoke. One patch of this community is believed to be present on the Golub tract (but was under snow during the December 20, 2020 field survey). If intervening patches are present upstream within 1.0 miles, the Golub patch would be lumped into this exemplary occurrence. The community was mapped using air photos; field surveys allow a much more precise mapping of this community, which typically occurs as narrow, linear bands that are difficult to detect on air photos.

C. Rare Plants.

Although no rare plant concentration area has been mapped yet to this aquatic-based site, pending sufficient surveys of its shoreline and nearshore areas, at least one county-rare plant was observed on the Golub tract within this site: cocklebur. Several individuals of this county watch list plant were observed on a shoreline community of the Hudson River, probably Riverside Sand/Gravel Bar (but buried under deep snow during the December 2020 field survey). Other county-rare shoreline plants are suspected from this site and would be most detectable during the growing season.

D. Important Animal Habitats

County Importance: Conservation priority 4 of 7

("concentrated").

Size: 949 acres. (corresponding to Unconfined River)

Animal Concentration Area Composition:

1 known probable animal concentration area (odonates).

Other potential concentration areas are likely (large river fish, shorebirds, riparian birds), but information is not yet available for analysis. Additional areas would raise the importance level of this site, if confirmed.

Rare Species Composition:

3 known state & county-rare animal taxa (odonates), all documented with NY Natural Heritage Program.

Location:

Boundary follows that for exemplary Unconfined River community.

Extent on Golub Parcel:

<<1% of tract (borders entire W edge of tract; tract influences

Site 2. **Hudson River Schaghticoke.** p. 3.

local quality of large site).

Contribution of Golub Parcel: <<1% of habitat.

E. County-Important Aquatic Network

Hudson River Main Channel (Network AN62) (Map 6)

Network type: main channel, non-tidal network.

Size: 4002 acres/14.5 stream miles.

County Importance: Priority Tier 1 of 4 (most important).

Extent on Golub Parcel:

NW 70% of tract (as coarsely modelled with assistance from RLT).

Contribution of Golub Parcel: <<1% of network.

Network Composition (on Golub parcel):

forested "riparian strips" coarsely mapped based on regional land cover database; a more precise local mapping using air photos and field evaluation would probably extend the forested buffer boundary eastward to cover 80% to 90% of the tract.

F. County-Important Roadless Blocks (Map 7)

Although the Golub parcel is not situated within a Level-4 (strictest level) regionally important forest matrix block, it is mapped within a large "aquatic matrix block", the Hudson River Northern Rensselaer County block.

Hudson River Northern Rensselaer County Block.

Location:

This block includes the Hudson River from the Washington County line south to the Federal Dam in Troy, plus lands eastward to the first public road, constituting a narrow buffer inward of the river. While the concept should ideally include similar land N of the county line in Washington County and W of the river in Saratoga and Albany Counties, only the Rensselaer County "subsite" was precisely mapped.

Size: 11089 acres.

County-Importance: Priority Tier 1 of 4.

Extent on Golub Parcel: 100% of tract.

Contribution of Golub Parcel: <<1% of block.

G. County-Important Forest Corridors.

Although the parcel is not within a mapped regionally important forest corridor, being situated in the general urban setting of Troy, it is contained within an important "aquatic corridor" (see information on county-important aquatic networks and

Site 2. **Hudson River Schaghticoke.** p. 4.

roadless blocks).

H. County-Priority Conservation Site Hudson River Corridor. (Map 8)

Site type: Level-1 site (large regional landscapes).

Description: large important aquatic corridor.

County-Importance: Tier 1 site (highest county priority).

Size: 13662 acres.

Site Composition:

includes river plus adjacent areas, especially with natural cover, deemed important to maintain the high water quality and native biota of the river. includes a strip throughout the W edge of Troy.

Extent on Golub Parcel: 100% of parcel.

Contribution of Golub Parcel: <<1% of conservation site.

Feature Concepts and Definitions.

County-Important Restricted Ecosystem Complexes
the largest, most intact, and most ecologically-important examples of ecosystem complex types with restricted distribution and total size in Rensselaer County, thought to be the best set of sites necessary to conserve the complete diversity of natural community types and native biota of those complexes in the county. Restricted types include rocky summit/slopes, wetlands, lakes, and riparian areas. Habitats typically delineated based on air photo interpretation of natural community types, hydrology, topography, geology, and soils.

County-Important Natural Communities
the largest, most intact, and most ecologically important ("exemplary") examples of every natural community type in Rensselaer County, representing the "benchmark" for its biodiversity composition, condition/quality, and landscape setting relative to all other examples of the community type within the county. Types follows standard state classification of ecological community types (New York Natural Heritage Program).

Rare Plant Concentration Areas
the largest concentrations of "rare" plant taxa in Rensselaer County, those that are rare at least at a county level, with sites prioritized by rarity level and abundance of rare species, giving highest priority to global and state rare plants. includes all groups of vascular plants and limited groups of non-vascular plants. Rare plants at 3 levels (global, state, and county) are divided into "active list" species (actively tracked as "very rare" and the highest priority for conservation) plus "watch list" species (others that are "moderately rare" and monitored over time to assess their trends in status, either decreasing, stable, or increasing). Species concepts follow the 2017 New York state flora. Global and state rarity assessments are derived and maintained by the New York Natural Heritage Program. County rarity assessments are derived and maintained by the Rensselaer County Biodiversity Greenprint Project, following standard methods of the natural heritage network.

County-Important Animal Habitats
the most ecologically important habitats in Rensselaer County for sets of animals and/or animal behavior types with restricted distribution in the county. Includes rare animal populations, dense animal concentration areas, and important animal behavioral features such as dens and breeding areas.

County-Important Aquatic Networks
the largest, most intact, and most ecologically important aquatic landscapes in Rensselaer County, thought to be the best set of sites necessary to conserve the complete diversity of natural aquatic community types (especially river types) and native aquatic biota of the county. Sites include the central waterway of the network ("stream system") plus two key surrounding land features that

contribute most to the high water quality and native biota composition of the stream system: 1) riparian corridors [buffer strips] directly along the stream system, typically its mainstem, and 2) wider intact subcatchment areas, typically in headwater positions.

Feature Concepts and Definitions. p. 2

County-Important Roadless Blocks

the largest, most intact, and most ecologically-important "blocks" in Rensselaer County, thought to be the best set of sites that 1) contain a matrix of natural communities characteristic of the local physiographic area and 2) are necessary to conserve the complete diversity of native biota of the county (especially large forest mammals and species vulnerable to disturbances associated with disturbance corridors such as roads). Roadless blocks, like "city blocks", are bounded by public roads and have no internal public road "bisections". "Aquatic blocks" are bisected by dams rather than roads, specifically those with high bridges over water that do not impede water flow and movement of aquatic biota.

County-Important Forest Corridors.

the widest, most intact, and most ecologically important forest ("wildlife") corridors in Rensselaer County, connecting a related set of county-important forest landscapes to form one connected "forest network".

County-Priority Conservation Sites

the most important ("priority") large to moderate-scale biodiversity conservation sites in Rensselaer County, the complete set of which is designed to represent a group with the least amount of sites needed to conserve all native/natural biodiversity and ecological features of the county.

Table 1. Rare Species of Pleasantdale Bluffs Ecosystem Complex site.

Species Name		Subsite Presence (# individuals)	
Scientific	Common	Schaghticoke	Golub Parcel
1. State Rare (3)			
Juglans cinerea	Butternut	1	not yet found
Polygonum tenue	Pleated-Leaved Knotweed	8	not evaluated
Rosa acicularis	Bristly Rose	50	not evaluated
2. County Active List (8)			
Carex umbellata	Parasol Sedge	present	not evaluated
Crocanthemum canadense	Frostweed	10	not evaluated
Cyperus lupulinus	Eastern Flat Sedge	50	not evaluated
Galium pilosum	Hairy Bedstraw	40	present
Quercus prinoides	Dwarf Chinquapin Oak	present	not yet found
Selaginella rupestris	Rock Spikemoss	present	not evaluated
Solidago squarrosa	Stout Goldenrod	5	probably found
Symphotrichum patens	Late Purple Aster	present	not evaluated
3. County Watch List (13)			
Abietinella abietinum	Wiry Fern Moss	present	not evaluated
Amelanchier sanguinea	Round-Leaved Shadbush	present	probably found
Andropogon gerardi	Big Bluestem	present	not evaluated
Arabidopsis lyrata	Lyre-Leaf Cress	100	not evaluated
Asplenium trichomanes	Maidenhair Spleenwort	50	not evaluated
Borodinia canadensis	Sicklepod	present	not evaluated
Drymocallis arguta	Tall Cinquefoil	not yet found	~10
Houstonia longifolia	Long-Leaved Bluets	present	not evaluated
Lechea intermedia	Large-Podded Pinweed	5	not evaluated
Lespedeza violacea	Wand-Like Bush Clover	5	not evaluated
Polygonatum biflorum (commutatum)	Large Solomon's-Seal	present	not evaluated
Quercus ilicifolia	Scrub Oak	present	~5
Woodsia ilvensis	Rusty Woodsia	20	not evaluated

Ecological Survey Updates Jan 2021

FROM: David Hunt, **Ecological Intuition & Medicine**
Rensselaer County Biodiversity Greenprint Project
RE: Pleasantdale Bluffs, City of Troy. (Golub Parcel).
Supplemental Biodiversity Information
DATE: January 14, 2021

Thanks for requesting more of my help to provide information on the ecological importance of the Golub parcel in North Troy, part of the larger "Pleasantdale Bluffs" important ecosystem complex. As promised, I now provide more detailed biodiversity information, updated from our January 12, 2021 field visit, with improved abilities to make field observations due to melting of the prior snow cover. As mentioned, field observations that contribute any further detailed important information, such as rare species, would likely need to be made during the growing season (May to September), after plants have emerged to a more easily identifiable state. The only further improvements I can think of at this time of year would be to acquire any animal sampling information from state agencies (NYS DEC and the NY State Museum), especially for fish and macroinvertebrates associated with the adjacent reach of the Hudson River.

As part of the expanded information, I focused on 3 smaller-scale ecological features: ecological communities, rare species, and important animal habitat components. Accordingly, I provide 1) a summary of key findings from our last visit, 2) revised excerpts from my prior summary text, 2) detailed information tables, and 3) maps of specific parcel locations for these features. For excerpts, I expanded, updated, or revised relevant portions of the summaries provided for the recent public hearing.

With more time, I could consolidate this into one updated summary document, like before. Next, I provide 4 tables, two for ecological communities, one for rare species, one for important animal habitats. One community table focuses on all community types observed onsite and includes their size and estimated importance at various geographic levels. The second community table focuses on the 3 natural communities observed onsite that have county to state importance, documenting my analyses to back up claims of any "regional importance".

The rare species table, updated from my prior version, now includes animals (expanding the prior table from only plants), species from the Golub parcel that are new to the larger complex noted on our January visit, additional species to the Golub parcel noted on our January visit but already known elsewhere in the larger complex, and an estimate of identity certainty, based, in part, on my recent examination of specimens using multiple technical identification references. The important animal habitat table is new, based on much improved field observations from our January visit. It presents several types of animal habitats that may be present onsite, an estimate of their certainty, and any features observed to date to support those certainties. Lastly, I provide 2 new detailed maps, one for ecological communities, one for rare species. The community map is comprehensive for the entire parcel, based on our 2 field visits, coupled with air photo interpretation plus topographic contours. The rare species map, which includes both plants and animals, attempts to

delineate areas where I have observed rare species to date, relying heavily on the community map plus also air photo interpretation and topographic contours. No map of specific important animal concentration areas has yet been created, due to the high uncertainty of both the identity and any associated boundary of many types. However, the observed beaver lodge was added to the rare species map (Code=BL*). All of these areas fall within the larger "Hudson River Schaghticoke" important animal habitat site.

Sincerely in Biodiversity Conservation,

David Hunt, Ph.D. Ecologist. Grafton, NY.
Rensselaer County Biodiversity Greenprint Project
(Designing an Ark for the Native Species of Rensselaer County)
348 Jay Hakes Road; Cropseyville, NY 12052; (518) 279-4124

Pleasantdale Bluffs: Significance of Ecological Features

Key Ecological Findings from the Golub Parcel, January 12, 2021 Survey
January 14, 2021

Key updated findings from observations of small-scale ecological features during the January 12, 2021 field survey are summarized below.

- 1. Ecological Communities** (Map 1, Tables 1-2). More precise and detailed information on the 3 natural communities observed onsite that have county to state importance (Shale Cliff & Talus Community, Riverside Sand/Gravel Bar, and Pitch Pine-Oak-Heath Rocky Summit) include precise maps and analyses to confirm their regional importance. The Riverside Sand/Gravel Bar probably meets the criteria for "state significance", although not yet documented in the databases of NY Natural Heritage Program (of NYS DEC). All 3 community types are "county rare" and the cliff community is also "state rare". The example of latter community onsite comes close to meeting criteria for "state significance". Although the patches of Pitch Pine-Oak-Heath Rocky Summit onsite are very small and narrow, especially compared to those to the north within the Pleasantdale Bluffs complex, sufficient observations have now been made to map this community on the Golub parcel.
- 2. Rare Species** (Map 2, Table 3). Several updates to the rare species table for the larger Pleasantdale Bluffs complex were made, including 5 additional species not previously known from the Golub parcel, most being covered by snow during the December 2020 field survey. A total of 3 species were found that are new to the Golub parcel but known from the main patch of the ecosystem complex in Schaghticoke, the most interesting being rock spikemoss (**Selaginella rupestris**), the others being lyre-leaf cress (**Arabidopsis lyrata**) and rusty woodsia (**Woodsia ilvensis**). Two species were found on the Golub parcel that are new to the entire complex, one plant on the shale cliffs, rock sandwort (**Sabulina michauxii**), and one animal, identified as state rare, sharp hornsnail (**Pleurocera acuta**), the elongate snail shell found along the Hudson River shore. The rare species population map for the parcel best reveals the most ecologically-sensitive part of site, from a practical perspective. I still have several specimens of potentially rare mosses to evaluate, relying on a close colleague to expedite any identifications. I expect 1 to 5 county rare species among the collections, possibly 1 state rare species.
- 3. Important Animal Habitats** (Table 4). Animal habitats are more flexibly defined than other features and harder to determine. Key observations often depend on specific times of the year or day (e.g., nocturnal) and specific microhabitats (e.g., the bottom substrate of the Hudson River). Confirmation of "important habitat" is also complicated by the need for a minimal number of different species and number of individuals, which can be seasonally and annually highly variable. As Table 4 shows, to date the most certain important habitat is a "bald eagle feeding territory", backed up not just by the one local report/observation but probably also by mapping of the entire habitat by the NY Natural Heritage Program. Similarly, although no onsite observations of odonates (dragonflies and damselflies) have been made, mapping of the entire nearby Hudson River habitat by the NY Natural Heritage Program of 3 state-rare odonates suggests the presence of an "odonate concentration area" in the river along the Golub parcel. Based on my observations of

abundant spent shells, I suspect a "riverine mollusk concentration area" in the river next to the site, however, confirmation would need to involve shallow underwater observations, best made between May and September. Although the beaver lodge was mapped and it could be a component of an "aquatic mammal concentration area", observations of other species would be needed for this designation. Many pieces of information needed for confirmation of important animal habitat require patience and the presence of someone onsite for extended periods of time or the perfect time for observations.

Pleasantdale Bluffs: Significance of Ecological Features

Revisions and Additions to December 2020 Summary.
January 14, 2021

Revisions and additions to the December 2020 summary submitted to the Troy City Council are made to excerpts from that document and noted below by the symbol "****".

Site 1. Pleasantdale Bluffs.

B. Constituent Exemplary Natural Communities. (see Map 1)

Shale Cliff & Talus Community (SCTC4)

Size: 6.3 acres. ****corrected to 1.6 acres.

Location:

(Dec 2020) corrected 2020 from 2017 mapping to bluffs just W of W end of River Bend Road in Schaghticoke plus bluffs along SW edge of Golub tract.

***Jan 2021: additional small patch added at NW corner of Golub tract in town of Schaghticoke. patch along SW edge of Golub tract slightly expanded based on more precise air photo interpretation coupled with ground truthing.

Extent on Golub Parcel:

***5% of tract (SW edge and NW corner). presence confirmed during December 2020 and January 2021 field surveys.

Contribution of Golub Parcel:

***60% of community (S and middle patches).

Pitch Pine-Oak-Heath Rocky Summit.

Size: 2.7 acres. ****corrected to 1.0 acres.

Location:

(Dec 2020) corrected 2020 from 2017 mapping to knoll just W of W end of River Bend Road in Schaghticoke.

***Jan 2021: two additional small patches added: one at NW corner of Golub tract in the Town of Schaghticoke, one at the crest of the cliff along SW edge of Golub tract, both with narrow width and transitional in nature; mapped based on more precise air photo interpretation coupled with ground truthing.

Extent on Golub Parcel:

***newly mapped on tract, on upper crest of cliff patches based on December 2020 and especially January 2021 field surveys. transitional in nature between cliff and forest communities, but areas with canopy naturally open enough in both patches, the NW corner patch due to exposed shale surface, the SW edge patch due, in part, to beaver cuttings. An additional area on the highest knoll of the tract is deemed to have probably undergone succession to Appalachian Oak-Pine Forest but was likely this community type in the past, now with species like scrub oak as a suspected remnant of this former community type.

Contribution of Golub Parcel:

***20% of community (S and middle patches).

Site 1. Pleasantdale Bluffs. p. 2.

C. Rare Plant Concentration Area. (see Map 2)

Species Composition:

(Dec 2020) with 17 county rare species/1 state rare species (1 state watch list, 7 county active list, 10 county watch list) documented for 2017 county conservation plan; expanded in December 2020 to 24 county rare species/3 state rare species (1 state active list, 2 state watch list, 10 county active list, 14 county watch list).

***January 2021 update (see Table 3): 5 of these taxa were found on the Golub tract during a December 2020 survey (1 county active list, 4 county watch list); 4 additional rare plant species were found on the tract during the January 2021 survey (2 county active list, 2 county watch list). One plant species new to the entire ecosystem complex was found on the parcel: rock sandwort (Sabulina michauxii), located on the Shale Cliff & Talus Community. cumulative tally for the complex expanded in January 2021 to 25 county rare species/3 state rare species (1 state active list, 2 state watch list, 10 county active list, 15 county watch list). Information on individual species, updated from the January 2021 survey, are shown in Table 3, along with the newly added certainty of their identifications.

(Dec 2020) Several additional rare plant species are expected, associated with historical specimens at the NY State Museum labelled "Lansings Grove", reportedly the local name for this site, that have not yet been attached to this site.

Extent on Golub Parcel:

(Dec 2020) 40% of tract (N half); as ecosystem complex. presence confirmed during December 2020 field survey.

***presence on parcel strengthened January 2021 with additional species of concentration area also found onsite.

Location:

(Dec 2020) corrected 2020 from 2017 mapping to match corresponding patch of rocky summit/slope ecosystem complex along Hudson River.

***minor changes in the site boundary to match the known extent of rare species populations are pending.

D. Rare Animals.

(Dec 2020) No rare animals have yet been identified from Pleasantdale Bluffs, most of the field surveys being focused on natural community types and vascular plant species. The observed presence of several individuals of scrub oak on the rocky summit and cliff community types suggests the potential for the state-rare moth "inlandbarrens buckmoth", which is known to feed primarily on that shrub. Similarly, no surveys for Karner blue butterfly, a globally-rare moth characteristic of pitch pine barrens, are known to date from the site. ***January 2021 update: See Site 2 for the relevance of any observations of animals onsite.

Site 2. **Hudson River Schaghticoke**B. Constituent Exemplary Natural Communities. (see Map 1)**Riverside Sand/Gravel Bar**

(Dec 2020) A 37-acre county co-exemplary site for this community type has been mapped along the Hudson River 1.8 miles to the north of the Golub parcel in Schaghticoke. One patch of this community is believed to be present on the Golub tract (but was under snow during the December 20, 2020 field survey). If intervening patches are present upstream within 1.0 miles, the Golub patch would be lumped into this exemplary occurrence. The community was mapped using air photos; field surveys allow a much more precise mapping of this community, which typically occurs as narrow, linear bands that are difficult to detect on air photos.

***January 2021 update: Two narrow, linear patches of this community, previously under deep snow cover, were confirmed on the Golub tract during a January 12, 2021 field survey, in a shoreline mosaic with smaller patches of Cobble Shore and Shoreline Outcrop. If small intervening patches are present upstream within 1.0 miles, as expected, the Golub patch would be lumped into this exemplary occurrence, representing the southern extent of that long occurrence. Patches on the Golub tract were newly mapped using air photo interpretation coupled with ground truthing from the field survey. The community occurrence was originally mapped in 2017 using only air photos, pending field surveys which are necessary to allow a much more precise mapping of this community type, which typically occurs as narrow, linear bands that are difficult to detect on air photos (such as any aforementioned intervening patches).

C. Rare Plants. (See Map 2)

(Dec 2020) Although no rare plant concentration area has been mapped yet to this aquatic-based site, pending sufficient surveys of its shoreline and nearshore areas, at least one county-rare plant was observed on the Golub tract within this site: cocklebur. Several individuals of this county watch list plant were observed on a shoreline community of the Hudson River, probably Riverside Sand/Gravel Bar (but buried under deep snow during the December 2020 field survey). Other county-rare shoreline plants are suspected from this site and would be most detectable during the growing season.

***The January 2021 field survey revealed cocklebur in a mosaic of Riverside Sand/Gravel Bar, Riverside Mudflats, and/or Shallow Emergent Marsh. Other shoreline plants were not detected but potential habitat exists for numerous rare species, all known from riverside communities in the larger site not far to the north in Schaghticoke such as the 3 state-rare plants northern shore quillwort (*Isoetes septentrionalis*), red-rooted flatsedge (*Cyperus erythrorhizos*), and Davis's sedge (*Carex davisii*) plus the 13 county-rare plants sandbar lovegrass (*Eragrostis frankii*), red-topped panic grass (*Coleataenia rigidula*), shining flatsedge (*Cyperus bipartitus*), intermediate spikerush (*Eleocharis intermedia*), three-square bulrush (*Schoenoplectus pungens*), golden hedge hyssop (*Gratiola aurea*), false pimpernel (*Lindernia dubia*), germander (*Teucrium canadense*), northern wild senna (*Senna hebecarpa*), common silverweed (*Potentilla anserina*), thin-leaved sunflower (*Helianthus decapetalus*), green-headed coneflower (*Rudbeckia laciniata*), and sandbar willow (*Salix interior*). Many of these species may be difficult to

detect in winter condition. Several additional state- to county-rare aquatic plants have strong potential to be present in the adjacent Hudson River waters and would ideally require searches between May and September.

Site 2. **Hudson River Schaghticoke.** p. 2.

D. Important Animal Habitats

Animal Concentration Area Composition:

(Dec 2020) 1 known probable animal concentration area (odonates). Other potential concentration areas are likely (large river fish, shorebirds, riparian birds), but information is not yet available for analysis. Additional areas would raise the importance level of this site, if confirmed.

***January 2021 additions: observations and reports of multiple characteristic animals may suggest the potential for additional "animal concentration areas" within this mapped site, but more information is needed on any additional species or concentration abundances. The following need further evaluation.

1. Aquatic mammal concentration area. a beaver lodge, suspected to be currently active, was noted at the base of the Intermittent Stream on the Golub parcel. Coupled with evidence of numerous beaver-cut trees along most of the western edge of the tract and first-hand observations of beaver along the shore of the tract, it is certain there has been an active resident beaver on the tract in recent times. Presence of another aquatic mammal, usually otter and/or muskrat, is usually necessary to designate an "aquatic mammal concentration area". Observations of a muskrat to the north at Pleasantdale Bluffs proper during a September 2020 field survey further suggests the presence of such an area.
2. Riverine mollusk concentration area. numerous spent shells of two mollusk species were found along the shoreline of the river on the Golub parcel: pea (or pill or fingernail) clam (*Sphaerium* sp.) and sharp hornsnail (*Pleurocera acuta*), suggesting that these two species are abundant in the bed of the adjacent river and the presence of a nearby mollusk concentration area. Confirmation of such an area would be strengthened by further evidence that the shells are derived from living individuals in adjacent or nearby upstream areas of riverbed plus observations of additional mollusk species, with common elliptio (*Elliptio complanata*) most expected. Such records of mollusks might be kept in files of the NYS DEC water quality unit or NY State Museum, if any nearby sites have been historically sampled. Inferences might be made, for example, from the reference "Freshwater Snails of New York State", which has statewide dot maps for all freshwater snail species.
3. Shorebird concentration area. the call and tracks of spotted sandpiper were noted during the January 2021 field survey, suggesting potential for a shorebird concentration area. Further evidence would be needed to determine if such an area exists onsite, especially during ideal times of the year, thought to be between April and September. Key evidence would include any abundance of shorebird individuals and the diversity of shorebird species, especially distinguishing shorebirds from waterfowl and riparian bird species, treated as separate concentration area types.
4. Bald eagle habitats. one report of a bald eagle feeding on a fish in the river offshore of the tract has been made. To date, only nesting sites have been designated as county important for bald eagle, and they are also state important. Although feeding territory for bald eagle was not designated an important animal habitat in the county conservation plan, such areas have some county importance, often correlated with other county-important ecological features, especially aquatic-based ones. However, the specific feeding territory in the adjacent Hudson River is apparently mapped as "state-important animal habitat" at NYS DEC and probably follows a "feeding territory" concept, especially for nesting individuals. A nesting site is known about 1.5 miles to the north of the Golub parcel and has

been field confirmed by multiple experts. Those nesting individuals are suspected to be using a long stretch of the river for feeding territory. I am less sure of any "roosting territory" which could include large trees along the river that could serve as a vantage point to scout fish for food, such as the several large trees, especially red oak, observed along the shore of the Golub tract. No nests have been observed on the Golub parcel to date.

An additional odonate concentration area is apparently inferred from the adjacent Hudson River based on important animal habitat mapped by the NY Natural Heritage Program (of NYS DEC). Onsite assessment of odonate presence and abundance are ideally made from about June to August.

Site 2. **Hudson River Schaghticoke.** p. 3.

D. Important Animal Habitats (continued)

Rare Species Composition (see Map 2):

(Dec 2020) 3 known state & county-rare animal taxa (odonates), all documented with NY Natural Heritage Program.

***January 2021 additions: Bald eagle (*Haliaeetus leucocephalus*) is a state rare animal. Its feeding territory, although not explicitly mapped as a county-important animal habitat, as noted above, has apparently been mapped as a state-important animal habitat by NYS DEC. The sharp hornsnail (*Pleurocera acuta*), mentioned under a potential riverine mollusk concentration area above, is also state rare. It is tracked by the NY Natural Heritage Program of NYS DEC as a "state watch list" species (i.e., a "moderately state rare" species), with a rarity rank of "S3", thus it would also be designated as "county rare". Although I used two technical keys for its identity, I am less skilled with animal identifications than with plants, but I am relatively certain of this species and I intend to forward a specimen to a statewide mollusk expert for confirmation/evaluation. The technical reference book I used, the prime taxonomic reference for NY freshwater snails (Jokinen 1992: The Freshwater Snails of New York State), cites historical observations of this snail from the adjacent reach of the Hudson River in North Troy during the 1980s, so it makes sense that it could still be here 40 years later.

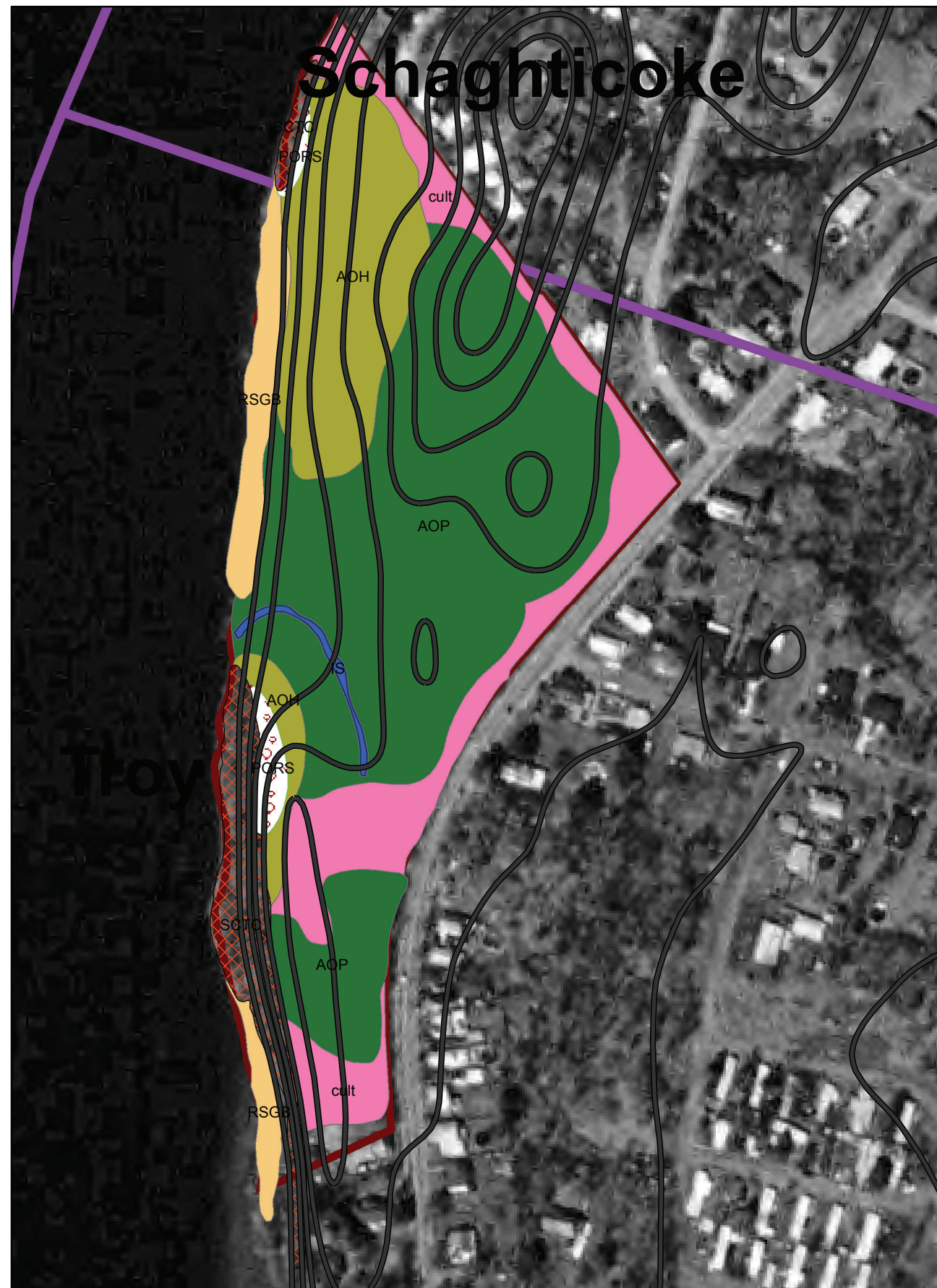
G. County-Important Forest Corridors.

(Dec 2020) Although the parcel is not within a mapped regionally-important forest corridor, being situated in the general urban setting of Troy, it is contained within an important "aquatic corridor" (see information on county-important aquatic networks and roadless blocks).

***January 2021 additions: Observations of multiple dens and abundant tracks of what was suspected to be a red fox were noted along the soiled clay banks of the river on the Golub parcel during a December 20, 2020 field survey, suggesting the presence of a potentially viable forest corridor associated with the aquatic network (Feature 2-E) and aquatic matrix block (Feature 2-F).

***January 2021 additions: Observations of one pileated woodpecker, a characteristic forest-interior bird, on the Golub parcel during a January 12, 2021 field survey also suggest the presence of a potentially viable forest corridor associated with the aquatic network (Feature 2-E) and aquatic matrix block (Feature 2-F).

Map 1. Ecological Communities



Map 2. Rare Species Populations

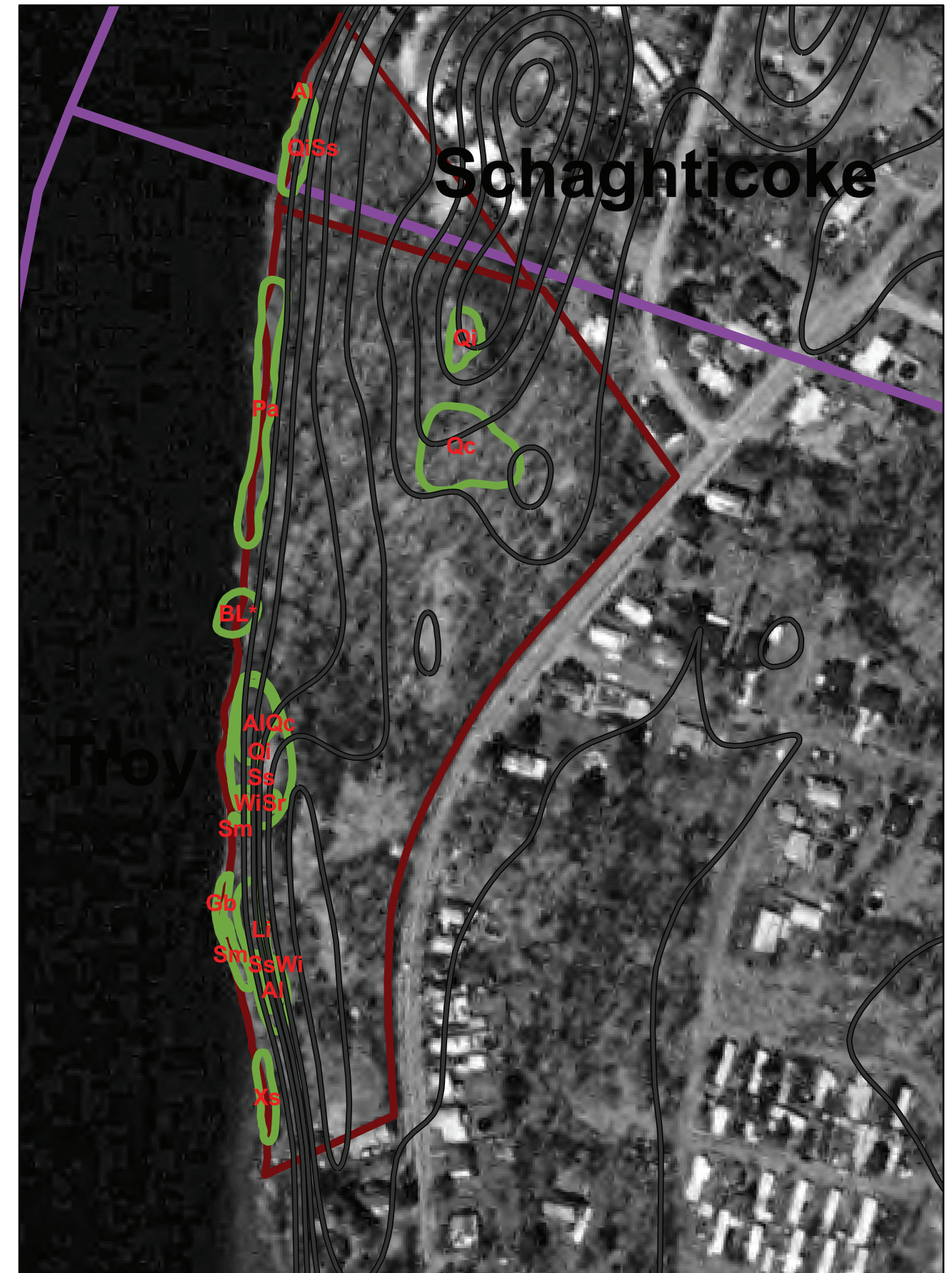


Table 1. Ecological Communities of the Parcels. Composition & Importance.

Community Name (Parcel Map Code)	Community Type	Acres	Est.Rank	Est.Max.Importance	
Appalachian Oak-Hickory Forest (AOH) local (Troy riverfront)	Natural/Upland Forest	2.1/~10		C	
Appalachian Oak-Pine Forest (AOP) local (Troy riverfront) (includes Successional Southern Hardwoods)	Natural/Upland Forest	6.0/~50		CD	
Intermittent Stream (IS)	Natural/River	0.09/0.09D	local (Troy riverfront)		
Pitch Pine-Oak-Heath Rocky Summit (PORS) county (co-exemplary)	Natural/Upland Barrens	0.2/1.0		C	
Riverside Sand/Gravel Bar (RSGB) (includes Shoreline Outcrop and Cobble Shore)	Natural/Upland Open Canopy	0.7/38.0B	county (co-exemplary) /state significant		
Shale Cliff and Talus Community (SCTC) county (near-exemplary)	Natural/Upland Open Canopy	0.9/1.6		C	
cultural (cult) (includes younger successional areas)	Cultural	1.9/-	NA	none	
	Natural/Upland successional				

Notes: Acres = on parcel/entire occurrence; Rank estimated for entire occurrence.

Table 2. Natural Community Regional Importance Analyses

Complete Occurrence.....									
Community.....									
Rank Estimates..... Significance.....									
Rarity.....									
Community Name	Acres	Size	Condition	Landscape	Occurrence	County			
	State	County	State						
Pitch Pine-Oak-Heath Rocky Summit N~	1.0	D	BC	BC	C	Y**	N	Y	
Riverside Sand/Gravel Bar	38.0 AB	BC	BC	B	Y**	Y	Y	N~	
Shale Cliff and Talus Community	1.6	D	B	BC	C(BC)	Y*	N?	Y	Y

Notes: * = also county near-exemplary; ** = also county co-exemplary.

Table 3. Rare Species of Pleasantdale Bluffs Ecosystem Complex site.

Species Name		Subsite Presence (# individuals)	
Scientific (Parcel Map Code)	Common	Schaghticoke	Golub Parcel/ID
1. State Rare (4)			
Plants (3)			
Juglans cinerea	Butternut	1	not yet found
Polygonum tenue	Pleated-Leaved Knotweed	8	not yet found
Rosa acicularis	Bristly Rose	50	not yet found
Animals (1)			
Pleurocera acuta (Pa)	Sharp Hornsnail	not yet found	~100 confirmed Jan 2021 (80% certainty)
2. County Active List Plants (8)			
Carex umbellata	Parasol Sedge	present	possibly observed Jan 2021 (20% certainty)
Crocianthemum canadense	Frostweed	10	not yet found
Cyperus lupulinus	Eastern Flat Sedge	50	not yet found
Quercus prinoides	Dwarf Chinquapin Oak	present	probably not present
Sabulina michauxii (Sm)	Rock Sandwort	not yet found	~30 confirmed
Jan 2021 (80% certainty)			
Selaginella rupestris (Sr)	Rock Spikemoss	present	
3 confirmed Jan 2021 (100% certainty)			
Solidago squarrosa (Ss)	Stout Goldenrod	5	
~200 confirmed Jan 2021 (90% certainty)			
Symphyotrichum patens	Late Purple Aster	present	not yet found
3. County Watch List Plants (14)			
Vascular Plants (13)			
Amelanchier sanguinea	Round-Leaved Shadbush	present	
not yet found			
Andropogon gerardi	Big Bluestem	present	
probably not present			
Arabidopsis lyrata (Al)	Lyre-Leaf Cress	100	~50
confirmed Jan 2021 (100% certainty)			
Asplenium trichomanes	Maidenhair Spleenwort	50	
not yet found			
Borodinia canadensis	Sicklepod	present	
not yet found			
Drymocallis arguta (Da)	Tall Cinquefoil	not yet found	~10 confirmed
Dec 2020 (90% certainty)			
Galium boreale (Gb)	Northern Bedstraw	40	~20 confirmed Jan
2021 (95% certainty)			
Houstonia longifolia	Long-Leaved Bluets	present	
not yet found			
Lechea intermedia (Li)	Large-Podded Pinweed	5	~5 confirmed Dec 2020
(95% certainty)			
Lespedeza violacea	Wand-Like Bush Clover	5	
not yet found			
Polygonatum biflorum			
var. commutatum	Large Solomon's-Seal	present	
not yet found			
Quercus ilicifolia (Qi)	Scrub Oak	present	~30
confirmed Jan 2021 (100% certainty)			
Woodsia ilvensis (Wi)	Rusty Woodsia	20	~50 confirmed Jan
2021 (70% certainty)			

Non-Vascular Plants (1)			
Abietinella abietinum	Wiry Fern Moss	present	not yet found

- Notes:
- Any state to county rare mosses, among several ones potentially found onsite, are pending examination and evaluation of specimens from the foremost county bryophyte expert, Tom Phillips, DVM.
 - Any additional expansion of the list of taxa known from the Golub Parcel would likely require observations of the site during the growing season (May to September).

Table 4. Important Animal Habitats on and near the Golub Parcels.

<u>Animal Group</u>	<u>Habitat Type</u>	<u>Certainty</u>	<u>Ecosystem</u>	<u>Known Component Features</u>
Bald eagle	feeding territory	90%	river	feeding on fish/state-mapped important habitat
Odonates	concentration area	80%	river, shore, banks	inferred from multiple nearby state-documented populations of 3 state-rare odonate taxa/state-mapped important habitat
Riverine mollusks			concentration area	70% river abundant spent shells of 2 taxa
Large river fish			concentration area	30% river suspected from nearby observations of river
Aquatic mammals			concentration area	20% river, shore, banks beaver lodge/abundant cut trees/swimming individual; nearby muskrat
Shorebirds	concentration area	5%	river shore, river	tracks and call of spotted sandpiper
Large mammals			denning concentration	<5% riverbanks, forest multiple holes under large tree roots thought to be potential dens of red fox
Bald eagle	nesting territory	<5%	riverbanks	large potential nesting trees but without observed nests
Forest birds	breeding concentration		<1%	forest pileated woodpecker fly-through, suggesting potential small forest-interior area

Notes: certainty = certainty of habitat type on and/or adjacent to the parcel (e.g., a "concentration" area)

COMPREHENSIVE PLAN ANALYSIS



SAVING THE LAND THAT MATTERS MOST

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September 9, 2020

By email: citycouncil@troyny.gov

Ms. Carmella Mantello, President
and Members of the City Council
City of Troy
433 River Street, Suite 5001
Troy, NY 12180

Subject: Ordinance Authorizing Amendment Of City Of Troy Zoning Map Established By Troy Code
Section 285-49 (A) To Rezone Tax Map Parcel Number 70.64-1-1 On 2nd Avenue In North Troy
From R-1 Single Family Residential Detached To P Planned Development

Dear Ms. Mantello and Members of the City Council:

Scenic Hudson is writing to urge the Troy City Council to deny the rezoning request referenced above on 2nd Avenue from R-1 (Single Family Development--Detached) to P (Planned Development). Such a rezoning would not be in accordance with the recently adopted *Realize Troy Comprehensive Plan* (2018) as required by N.Y. General City Law Section 28-a(12).

Realize Troy Comprehensive Plan—its purpose and how it was created

Urban Strategies, Inc., the planning firm hired by the City to craft *Realize Troy*, describes the Comprehensive Plan as a three-part community planning initiative: an economic strategy, a waterfront master plan, and a city-wide comprehensive plan. According to Urban Strategies, the planning process was based on a “*strong focus on public consultation, both in-person and using a variety of social media channels, and aimed to establish a clear vision and set of action strategies to address both the current and future needs of the City*” (emphasis added).

Further, Urban Strategies’ website states that the Comprehensive Plan established “*a clear community-based vision and action plan to guide the city’s overall development over the next 20 years*” (emphasis added) and *Realize Troy* identified “*short and longer-term community needs, reinforced and confirmed a set of broadly supported community goals and created a blueprint for future government actions*” (emphasis added).

SOURCE: <https://www.urbanstrategies.com/project/realize-troy/#:~:text=Realize%20Troy%20is%20a%20three,a%20city%2Dwide%20comprehensive%20plan.&text=It%20will%20establish%20a%20clear,over%20the%20next%2020%20years.>

Scenic Hudson’s recommendations are prefaced with the City’s Planning consultant’s description of the Comprehensive Plan’s purpose, as well as and the robust public participation on which the plan, its vision for the City, and its land use recommendations are based.



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Rezoning must be in accordance with Comprehensive Plans

The requested rezoning would directly conflict with *Realize Troy’s* recommendations—and, therefore, the community’s vision—for the subject parcel. If it were to be in the best interest of the City of Troy and its residents to commit this undeveloped, wooded parcel to high density development, in this case 240 apartments, one would think that *Realize Troy* would have recommended this parcel for higher density uses as a Major Reinvestment Area. However, *Realize Troy* envisions just the opposite.

N.Y. General City Law Section 28-a(12) requires that “*All city land use regulations must be in accordance with a comprehensive plan adopted pursuant to this section.*” Scenic Hudson believes that a rezoning from Single Family Residential to Planned Development would not be in accordance with the Comprehensive Plan’s designation of Low Rise Residential and would therefore violate N.Y. General City Law Section 28-a(12).

Further, according to the New York State Department of State “*New York’s zoning enabling statutes (the state statutes which give cities, towns and villages the power to enact local zoning laws) require that zoning laws be adopted in accordance with a comprehensive plan. The comprehensive plan should provide the backbone for the local zoning law.*” https://www.dos.ny.gov/lg/publications/Zoning_and_the_Comprehensive_Plan.pdf

Realize Troy’s vision for the subject parcel

First and foremost, the Comprehensive Plan (Map 14) identifies the subject tax parcel as “low rise residential” (see Appendix A attached to this letter). The parcel is currently zoned R-1 (Single Family Residential—Detached) which would permit approximately 10 single family homes on the site. The concept plan submitted in association with this rezoning requests proposes 240 multi-family units, a land use with density wholly inconsistent with low rise residential and would therefore not be in accordance with the Comprehensive Plan as required by N.Y. General City Law Section 28-a(12).

Further, one of the “action strategies” proposed in *Realize Troy Comprehensive Plan* is the establishment of seven “Major Reinvestment Areas.” According to *Realize Troy*:

“Major reinvestment areas are locations in the city in most need of renewal and which also have the potential to accommodate most of the population and employment growth planned for Troy. Strategic initiatives in these areas are intended to catalyze neighborhood revitalization, transform derelict portions of the waterfront and spark economic development. They include large-scale redevelopment opportunities that can result in distinct new employment and mixed-use areas, sites appropriate for significant park and other public realm improvements and areas for neighborhood growth and revitalization.”

Realize Troy, page 68

These Major Reinvestment Areas are the places envisioned by the community as priorities for renewal, neighborhood revitalization and large-scale development.



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Attachment A

Realize Troy, Map 14, Land Use

The Plan identifies two Major Reinvestment Areas in Lansingburgh. One area includes the Hannaford’s parcel immediately to the south of the subject parcel. *Realize Troy* conceptually proposes redeveloping the Hannaford’s site with a large building fronting 126th Street, parking behind the building, and mixed-use 1-4 story residential buildings with required ground floor retail fronting 2nd Avenue (see *Revitalize Troy*, page 71 and 72; also attached here as Appendices B-1 and B-2). *Realize Troy* does NOT propose extending this mixed-use development—nor any high-density development, including apartments as proposed in this rezoning—onto the undeveloped, wooded parcel to the north.

Conclusion

During the development of the *Realize Troy*, undertaken with robust public involvement and adopted by the City Council just two years ago, it was not anticipated that the undeveloped, wooded subject parcel (Tax Map Parcel Number 70.64-1-1), zoned R-1 and identified in the Comprehensive Plan as Low Rise Residential, would be an appropriate place for intense development. If so, the adjacent Major Reinvestment Area would have been extended to include this parcel. Further, *Realize Troy* specifically includes this parcel in the “Low Rise Residential” land use category. Therefore, the requested rezoning would not be in accordance with the Comprehensive Plan.

In light of the above Scenic Hudson urges the Troy City Council to deny the application to rezone Tax Parcel Number 70.64-1-1 on 2nd Avenue from R-1 (Single Family Development) to P (Planned Development). Such rezoning would not be in accordance with the Comprehensive Plan as required by N.Y. General City Law Section 28-a(12).

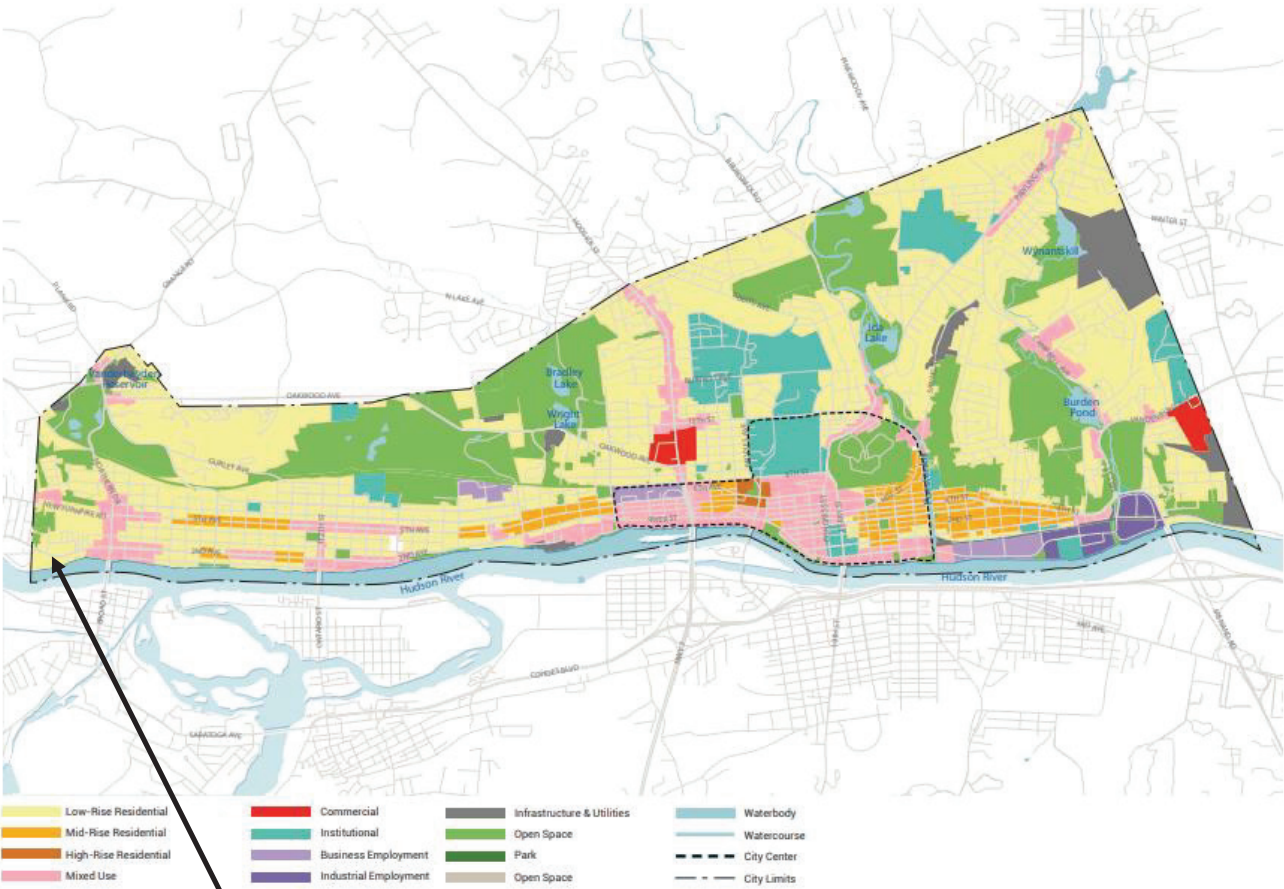
Thank you.

Sincerely,

Jeffrey Anzevino, AICP
Director of Land Use Advocacy

- Attachments
- Appendix A
 - Appendix B-1
 - Appendix B-2

Map 14 - Land Use



Note: Subject parcel is designated in area for Low-Rise Residential

Attachment B-1



Realize Troy, Map 14, Land Use

Note: Adjacent Hannafords site in Major Reinvestment Area and proposed for redevelopment with building fronting 126th Street, parking behind, and 1-4 story residential; buildings with ground floor retail

Note: Subject parcel is NOT in Major Reinvestment Area and designated as for Low-Rise Residential

Attachment B-2



> Concept plan for the 126th Street District

PART C : MAJOR REINVESTMENT AREAS 72

Realize Troy, Major Reinvestment Areas

Note: Adjacent Hannafords site in Major Reinvestment Area and proposed for redevelopment with building fronting 126th Street, parking behind, and 1-4 story residential; buildings with ground floor retail

Note: Subject parcel is NOT in Major Reinvestment Area and designated as for Low-Rise Residential

Appendix 3

Department Of State Opinion

From: **Oneill, Kristin (DOS)** Kristin.O'Neill@dos.ny.gov
Subject: RE: Residents-Only restriction for public meeting at public meetings at the City of Troy
Date: September 9, 2020 at 3:11 PM
To: [redacted: email address]



Good Afternoon [REDACTED: NAME],

Thank you for contacting the Committee on Open Government. The Open Meetings Law provides a right to attend to the "general public." (Open Meetings Law Section 103(a)). A resident Schenectady, Albany, or even Buffalo or New York City would have the same right to attend a meeting of the Troy City Council as a resident of the City. That being so, I do not believe that a public body could validly require that those who attend or seek to attend identify themselves by name, residence or interest. In short, it is my view that any member of the public has an equal opportunity to partake in an open meeting, and that an effort to distinguish among attendees by residence or any other qualifier would be inconsistent with the Open Meetings Law and, therefore, unreasonable. Moreover, people other than residents, particularly those who own property or operate businesses in a community, may have a substantial interest in attending and expressing their views at meetings of City Councils and other public bodies. Prohibiting those people from speaking, even though they may have a significant interest in the topics being discussed, while permitting residents to do so, would, in my view, be unjustifiable.

In addition, I note that Section 110(1) of the Open Meetings Law states “Any provision of a charter, administrative code, local law, ordinance, or rule or regulation affecting a public body which is more restrictive with respect to public access than this article shall be deemed superseded hereby to the extent that such provision is more restrictive than this article.” In other words, any aspect of the City Code that is more restrictive with respect to public access (i.e., a residency requirement), is superseded by the Open Meetings Law.

I hope this information proves useful.

Sincerely,

Kristin O’Neill
Assistant Director, Committee on Open Government

New York State Department of State
One Commerce Plaza, Albany, NY 12231
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Appendix 4

STORMWATER AND ECOSYSTEMS

Statement of
James Kruegler
108 3rd Street, Troy NY 12180

City of Troy Planning Commission

SPECIAL MEETING
December 29, 2020

“1011 Second Ave. (101.38-9-10) Planning Commission Recommendation to the City Council for Zone Change. Kevin Vandenburg is proposing a zone change from R-1 (Single Family Residential Detached, §285-52) to P (Planned Development, §285-57). Pursuant to §285-27 of the City Code a public hearing is required. The applicant is represented by Jamie Easton, P.E. of M.J. Engineering.”

Dear Member of the Planning Commission. My name is James Kruegler, I live at 108 3rd Street and I want to speak today in opposition of the proposed change in zone code. I want to strongly urge the Planning Commission to recommend against the requested zone change.

In general, the negative impacts of rezoning and the associated proposed development project - on the property, its unique history and ecology, the surrounding communities and neighborhoods, and the City of Troy overall -- are far too great.

In particular, I want to draw attention to how the rezoning and proposed development would destroy the ability of this land to provide considerable ecosystem services to the people of Troy. Currently the land at 1011 Second Avenue is highly forested with over 90% tree canopy cover. These trees filter common harmful air pollutants, intercept rainfall and subsequently avoid stormwater runoff, and act as a vegetative buffer keeping sediment- and water-borne pollutants from entering the Hudson. Severely deforesting this land on the scales proposed in this development plan would necessarily degrade these ecosystem services already being rendered at no cost to anyone. There are provisions in this development plan for negating some (but not all) of these adverse effects of rapid deforestation at the edge of a major river network. For example, it is stated the development “would be designed so that the total site runoff of stormwater will be less than or equal to existing conditions”. However, this is a vague claim that is not supported with any verifiable details anywhere else in the plan. The “Project Narrative” currently before the Planning Commission promises a lot, but provides so little supporting information that these promises cannot hope to be investigated with any rigor. On this point alone, the Planning Commission and the City Council should not consider rezoning until a more detailed, quantitative assessment of the proposed development is put forward.

Considering the potential negative impacts of the proposed rezoning and associated development, I also strongly urge the Planning Commission and the City Council to make a positive SEQRA (State Environmental Quality Review Act) declaration. Per the SEQRA, when a development project of this size requires a property be rezoned, the rezoning is a reviewable action under the SEQRA. The developer must also identify the zoning change they need as part of the project’s Environmental Assessment Form (EAF). It is critical that all anticipated decisions are identified from the start in the EAF so that the potential environmental impacts associated with them can be considered together. For a project of this size, rezoning cannot be considered separately from the proposed development itself; this would constitute “segmentation”, contrary to the intent of SEQRA.

It is my opinion that a change in zoning code would be an enormous mistake, and so the Planning Commission should recommend against it. The unique ecology, history, and archeology of this site; its location along the Hudson River; and its ecosystem services all would be degraded or lost by a high-density zoning. For over three hours on September 10th, 2020 the public commented in opposition to this zoning change and the development. There was not one comment by a member of the public in support of this zone change and the associated development. The losses we would incur from rezoning and development are far too high. It is abundantly clear the public is not willing to pay that price, and neither should the city.

Thank you for your consideration.

James Kruegler

Appendix 5

WRITTEN OPINION BY Dr. JOHN GOWDY

The economics of development favor the short-run over the long-run

Economic theory, and the market economy it describes, looks at the world through the eyes of a single person making decisions from the point of view of the immediate present. In economic jargon this is called “discounted present value.”

The question is “How much is it worth to me now to get something in the future?” The discount rate indicates how quickly something loses value the further into the future we receive it. For example, at a 5% discount rate, something worth \$100 million if I get it today is worth \$78 if delivered five years from now, and only \$61 million if received 10 years from now.

Consider the benefits of developing a natural, forested area, compared to the benefits of preserving it. The economic benefits of development are received almost immediately—construction jobs, tax revenue, more customers for local businesses. The benefits of development are relatively large, but generally last only a few years. The benefits of preservation are relatively small, but they last indefinitely. With even a relatively low discount rate (the lower the rate the less something loses value through time) the benefits of development will overwhelm the benefits of preservation in a purely economic cost-benefit study.

But should short-term economic benefits be the only criterion for making a choice between development and preservation? Another way is to consider a development project from the point of view of someone living in the future, say 25 years from now. Using the example above, preserving something worth \$100 million now will be worth only \$29 million in 25 years. But from the point of view of a person living 25 years from now, its value would be \$100 million. The question is “What kind of world do we want to leave for the future?” Imagine your daughter or granddaughter living in Troy 25 years from now. Would her life be better with an apartment complex or a natural wooded area?

Certainly, the economic benefits of a new apartment complex should be considered, but so should the non-monetary benefits of preserving natural areas. Studies of the benefits of even short walks in wooded areas have produced some remarkable results. For example, researcher found that people who live in cities with fewer trees have greater death rates from lower respiratory tract and cardiovascular illness. (<https://www.asla.org/ContentDetail.aspx?id=39564>)

Life is becoming more sedentary, and wooded areas in and near cities are becoming more scarce. Undeveloped open space will be even more important in the future to human well-being. The question is, what kind of city do we want to leave our children and grandchildren?

A discount rate calculator can be found at: <https://www.aqua-calc.com/page/discounted-present-value-calculator>

- Donovan, G. et al. 2013. *American Journal of Preventative Medicine*, 44(2),139-145. DOI: 10.1016/j.amepre.2012.09.066

John Gowdy, Professor of Economics, Emeritus, Rensselaer Polytechnic Institute